

**The TI-99/4A
Game Shelf Book
for the
Texas Instruments
TI-99/4A Home Computer**

<http://tigameshelf.net/index.htm>

TI Game Shelf Book to use with the Mega Menu system
Revision 3, 06.08.2020
for Texas Instruments TI-99/4a Home Computer

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TI-99/4A – Game Shelf

My two cents!

This book is a summary of all games from the excellent website www.tigameshelf.net for the Texas Instruments TI-99 / 4A home computer.

As on the website, the games are divided as follows:

Part I	=	Assembly / c99 / Forth Games
Part II	=	Extended Basic Games
Part III	=	TI Basic Games
Part IV	=	Edutainment

The order of the games corresponds mostly to the listing on the Internet pages.

At the end of the book there is an index with all games in alphabetical order.

I've created this summary to get a quick overview of the TI games and to be able to quickly locate and launch the games on my TI-99/4A home computer with a TIPI extension. Easily run most games with three keystrokes!

For this I use my compiled Extended Basic Program "MEGA MENU".

With the TI-99/4A Game shelf book there is a program package which includes the program MEGA MENU and most of the Game shelf games. To install the program package, please unpack the ZIP archive "**TI-GameShelf_MegaMenu_v1.zip**" into your TIPI directory. The program package creates the subdirectory TIPI.MM. in the TIPI root directory as well as further subdirectories TIPI.MM.P.xx.

System requirements for the installation of the program package:

TI-99 / 4A Console

32KB RAM

TIPI card (Sidecar or TIPI-PEB)

XB, RXB or FinalGROM with XB, RXB

optional:

Speech module

Disk system

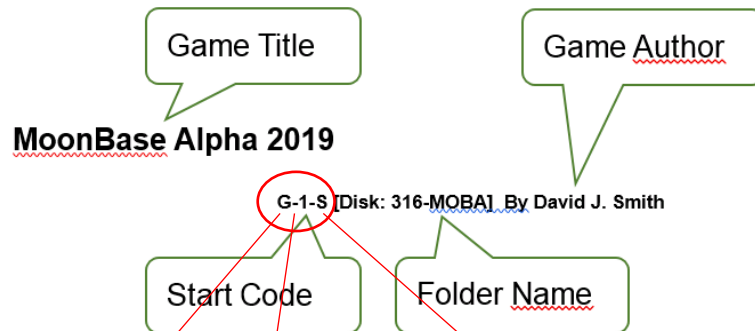
*) For more information about the TI-GameShelf_MegaMenu program package please show the extra manual to the Mega Menu Workshop three: "WS-MM-03_Mega menu_Game Shelf_add on.pdf"

TI-99/4A – Game Shelf

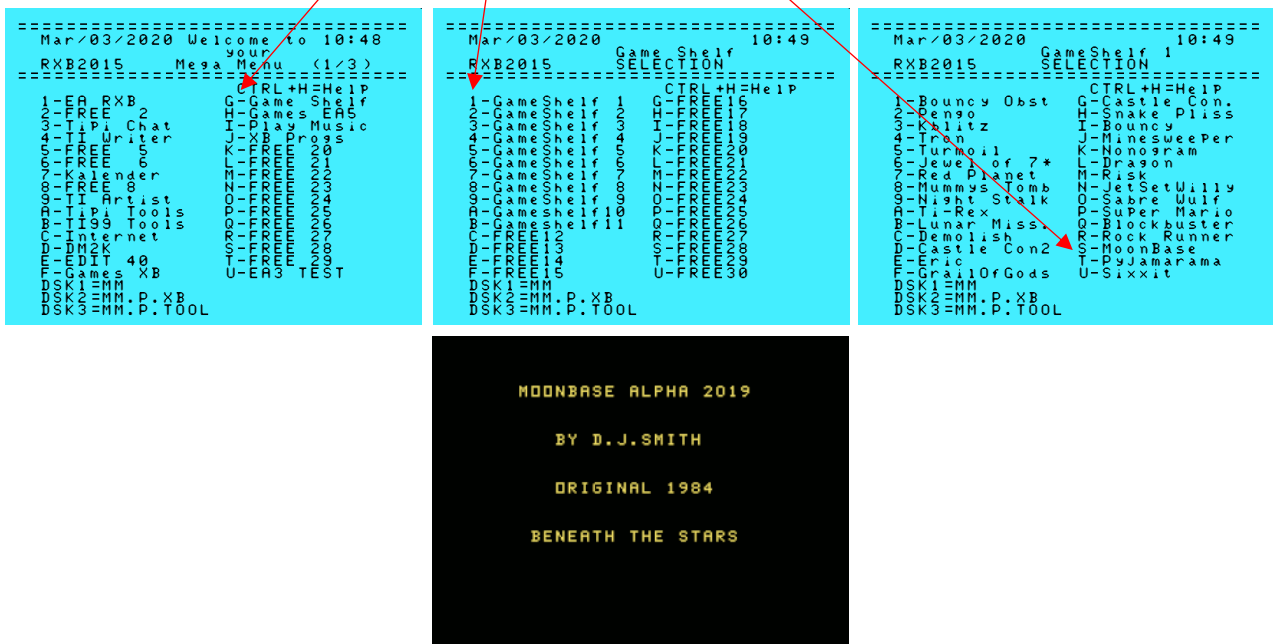
After starting the home computer with Extended Basic or RXB 2015, MEGA MENU loads automatically or type RUN "TIPI.MM.MM-X".

From the first screen you get with 3 keystrokes to each game!

Find your Game in this Game Shelf Book and look for the **Start Code**.



Start Mega Menu on your TI-99 / 4a and choose the start code for your favorite game:



Note:

A few games are only available in a Cartridge version. These games can therefore only be started with the corresponding Cartridge or with the Final GROM module.

Some games are available in an EA3 version and require the Editor Assembler module. If the MEGA MENU program is started by XB, then for these games the Editor Assembler module from the TIPI directory is automatically started and the start name must be entered as described for loading the game. If the program MEGA MENU is started by RXB 2015, then the game can be reconfigured to load automatically.

The Games for TI-Basic mostly can't run with XB loaded. But these games can run with RXB 2015!

My thanks go to the many authors of the games and to the creators of the TI Game shelf Internet site. With you all, the hobby with the TI-99/4A home computer makes the fun even more fun.

Wolfgang Hess, August 2020

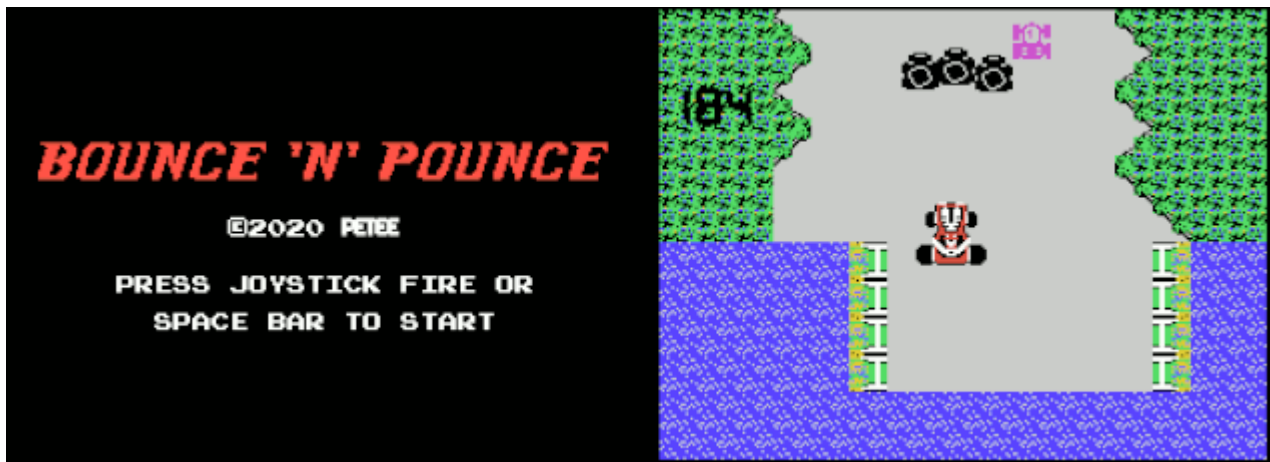
Part I - Assembly / c99 / Forth Games

TI-99/4A Game Shelf

Assembly-
c99-
Forth-
Games

Bounce ,N' Pounce

G-B-7 [Disk: 319-BONP] By PeteE



In a very colorful and fast-paced remake of the classic arcade game Bump 'N' Jump, you are a very harried driver at the wheel of a speedy car trying to make it to your destination through dangerous traffic. Unfortunately, you have no qualms about bouncing other cars in your way to their ultimate doom while avoiding getting thrown yourself off-road. To complicate matters, all bridges across waterways have inexplicably disappeared, so you have to gather enough speed in order to be able to jump across the gaps lest you meet a watery grave. The traffic is interesting to say the least, with tanks and bomb throwing gang cars freely sharing the road with no cops anywhere in sight. Since this is probably all a dream, you might as well enjoy it, and I guarantee that you will! The action is relentless, with simple controls, great smooth animations and graphics, and an engaging sound track sucking you into a bottomless black hole of entertainment. Very hard to put down. Awesome game! Requirements: Finalgrom 99 cartridge, 32K RAM, joysticks Executable to run: Autorun

Download Bounce 'N' Pounce:
Cartridge binary file
Cartridge may be purchased here

Start from mega menu: G - B - 7

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1

Tranquility Base

G-B-6 [Disk: 318-TRAB] By Calgary 99ers User Group



This game is by far the best version of Lunar Lander I have ever seen on the TI. The premise is the same time-honored one where you control a lunar module and attempt to land safely on a platform. The controls are simple, with E and S used for lateral rotation and P for thust. What distinguishes this version from the others is that it has several automatic zoom levels, starting with an overall view of the surface with all the possible landing zones blinking in white, and as you descend, the zoom level and detail increases. The gameplay is highly responsive and the motion physics seem right, but unfortunately the fuel and velocity information is not available except at the lowest zoom level, making landings more of a feel thing. Nonetheless, it remains supremely entertaining with impressive graphics and good sound effects. My favorite in this genre.

Requirements: XB cartridge or Finalgrom 99 cartridge, 32K RAM.

Executable to run: XB Autoload

Download Tranquility Base:

Disk Image

Cartridge binary file

Start from mega menu: G - B - 6

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard

MoonBase Alpha 2019

G-1-S [Disk: 316-MOBA] By David J. Smith



While this game's inspiration clearly lies in Space Invaders, the final product is however a much more engaging and challenging concept where you are the lone defender of an isolated moonbase under relentless attack from space aliens. Your arsenal consists of a laser, a powerful cannon and a limited supply of missiles, but in an original twist you also have repair droids which can repair damage to the shield to prevent the attackers from reaching the base and destroying it. Without these droids, the game will be over very quickly since your laser base cannot move across shield gaps and if it falls through then it's game over. The gameplay is frenetic, enhanced by great graphics and sound effects. However, you have no less than 8 different keyboard keys to contend with which can take a while to get used to, but fortunately you can re-assign the key bindings to your liking which helps a lot. The one issue I noted was that there was a noticeable lag with some of the keys, particularly the movement and laser firing ones, which could lead to some frustration, but one quickly learns to compensate. Overall a truly fun and engaging game. Very well done indeed!

Requirements: XB cartridge or Finalgrom 99 cartridge, 32K RAM, disk drive (for XB)

Executable to run: XB autoload

Download MoonBase Alpha:

[Disk Image](#)

[Cartridge binary file](#)

[Instructions](#)

Start from mega menu: G - 1 - S

Features: Title Screen, XB compiled, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

MOONBASE ALPHA (2019) - Instructions

WHAT's NEW in 2019 - 35 years after my original from 1984?

- *New aliens - now 8 different aliens to shoot with higher score levels!
- *Moonbase shield is now €double€ layered, aliens require two laser blast hits to make a hole through the shield before they can destroy the Moonbase
- *Aliens can now laser blast the Moonbase when a hole is in the shield, partially destroying the Moonbase prior to landing and ending the game
- *Easier to play, with the Repair Droid now automatically repairing the shield when moved over the shield
- *Shield power level now red, amber, green - as power level rises and falls with aliens zapping the shield energy.
- *Use the Repair Droid to maintain power for the shield and laser cannons
- *Laser base station and Repair Droid can now exit screen left to right and right to left to quickly reach the opposite side of the Moonbase
- *Missile now with thrust control, keeping pressing the "missile key" to speed up or slow down the missile to hit aliens
- *New colour scheme and re-designed Moonbase and score layout
- *Updated on-screen display for HISCORE, SCORE, ALIENS.
- *When 100 Aliens hit, game advances to the next level making the game harder as you play
- *Hall of Fame now features score and level achieved, e.g. 20,000 / 5 - 20,000 points at level 5
- *Lower memory footprint
- *Faster navigation and player response with bias towards the gamer
- *many bugs fixed from 1984!

GAME TIPS

Your Repair Droid is your lifeline, look after them to ensure your power levels are maintained at maximum level for the laser base station and laser cannon. Once they are gone, defending Moonbase Alpha becomes increasingly challenging.

Sharpshooting! Aim carefully, fire too much or miss the aliens then the laser power is reduced, decreasing firing range.

Guided missiles are essential for maintaining the right hand side of Moonbase Alpha use "missile" fire key to speed up or slow down to guide them to the alien target.

Use the covered laser cannon to destroy the aliens as they head towards the shield. Keep the power levels at maximum using the Repair Droid to ensure you have maximum range. The laser cannon is your last line against of defence against the alien break-through and landing on Moonbase Alpha!

Start from Level 1 and move your way through to level 5. Rewards and extra lives (Laser Bases Stations, Repair Droids and Missiles) are obtained when reaching 10,000 points on level 1, 20,000 points on level 2 or destroying 100 aliens at each level.

Extra lives are awarded as follows:

- Level 1 - every 10,000 points
- Level 2 - every 20,000 points
- Level 3 - every 30,000 points
- Level 4 - every 40,000 points
- Level 5 - every 50,000 points

All levels - every 100 aliens destroyed

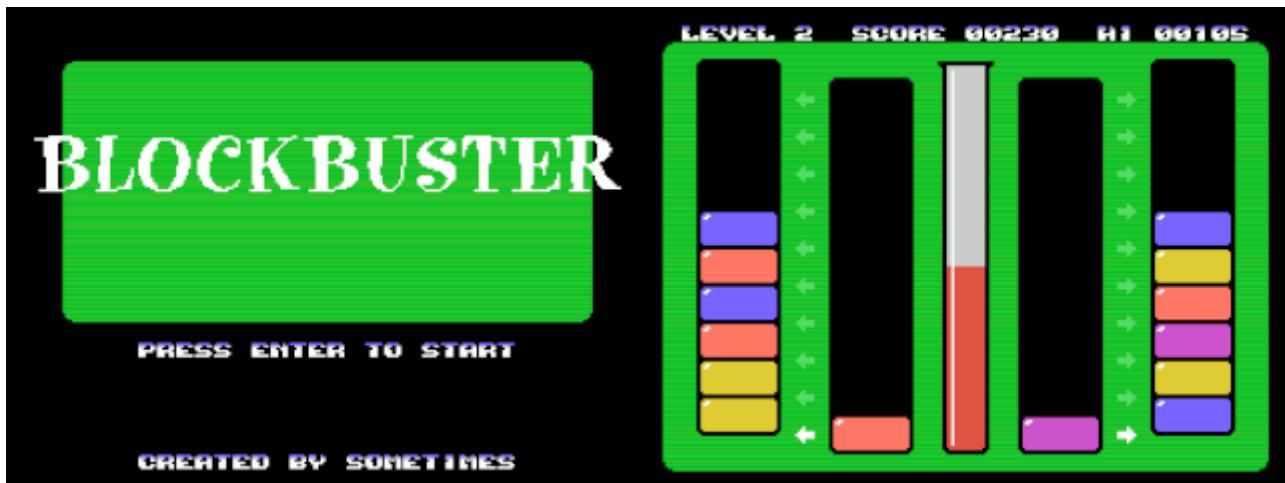
Enjoy Moonbase Alpha 2019!

Comments, feedback and bug reports welcome!

David J. Smith

Blockbuster

G-1-Q [Disk: 314-BLOC] By Sometimes



Yet another easy to pick up but supremely addictive game by Sometimes. The premise is based on stacking 3 or 4 same-colored tiles in a rapidly extending stack, with the twist being that you will be dealing with two, not one stack! There is a time limit which gets progressively shorter with each level, so quick thinking will be a must here. Beautifully rendered in vibrant colors and silky smooth animations accompanied by excellent sound effects. Love it!

Requirements: Finalgrom 99 or Editor/Assembler cartridge.

Executable to run: BLOCK (E/A Option 5)

Download Blockbuster:

[Cartridge binary file](#)

[Disk Image](#)

[Blockbuster instructions](#)

Start from mega menu: G - 1 - Q

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard

Blockbuster 1.0

BLOCKBUSTER

Introduction

Blockbuster is a puzzle game. The objective is to construct groups of 3 or 4 blocks of the same color to get rid of them and gain points. You have two piles to build on and the blocks come in two's. There's a time limit for you to place them as well.

There are 5 levels. The time limit gets smaller with each level.

Removing 3 blocks gets you 5 points. Removing 4 blocks gets you 150 points. Emptying a pile gets you 25 points. Emptying both piles gets you 75 points.

Requirements

No extras required - not even the Memory Expansion. Insert cartridge and power up your console.

Quick reference guide

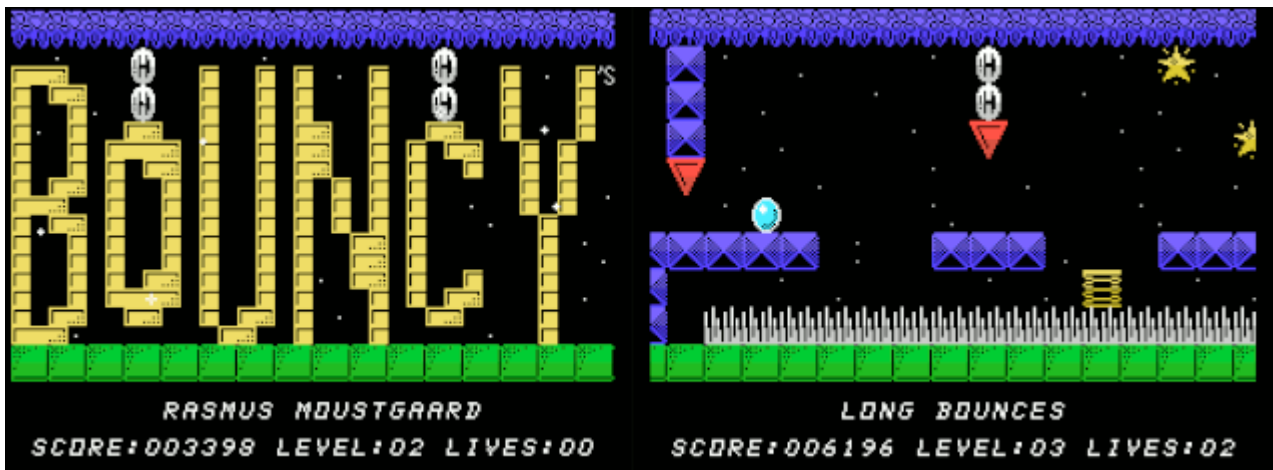
Joystick and ESDX	Move blocks up, down, and exchange the two.
Fire, Q or Space	Insert the blocks.
Fctn = (Quit)	Returns the computer to the master title screen.

Credits @ AtariAge.com

Software	Karsten aka sometimes99er
----------	--

Bouncy's Obstacle Course

G-1-1 [Disk: 001-OBST] By Rasmus Moustgaard



Here's another gem of a game by the talented and prolific Rasmus, picking up on a previous concept of his (Bouncy) and expanding it into a horizontal scroller. You control a, ahh..., bouncy ball which you can make jump, slow down and accelerate as you attempt to maneuver the progressively more challenging trap laden obstacle courses ahead of you, utilizing a combination of reflexes and planning in a wonderfully animated and colorful environment with an enticing background sound track. It starts off pretty easy but ramps up quickly, so you will die often and hard, but you will keep coming back for just one more try because the gameplay is incredibly addictive. This is a game you have got to try.

Requirements: Finalgrom 99 or Extended Basic cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB Autoload

Download Bouncy's Obstacle Course:

[Cartridge binary file](#)

[Disk Image](#)

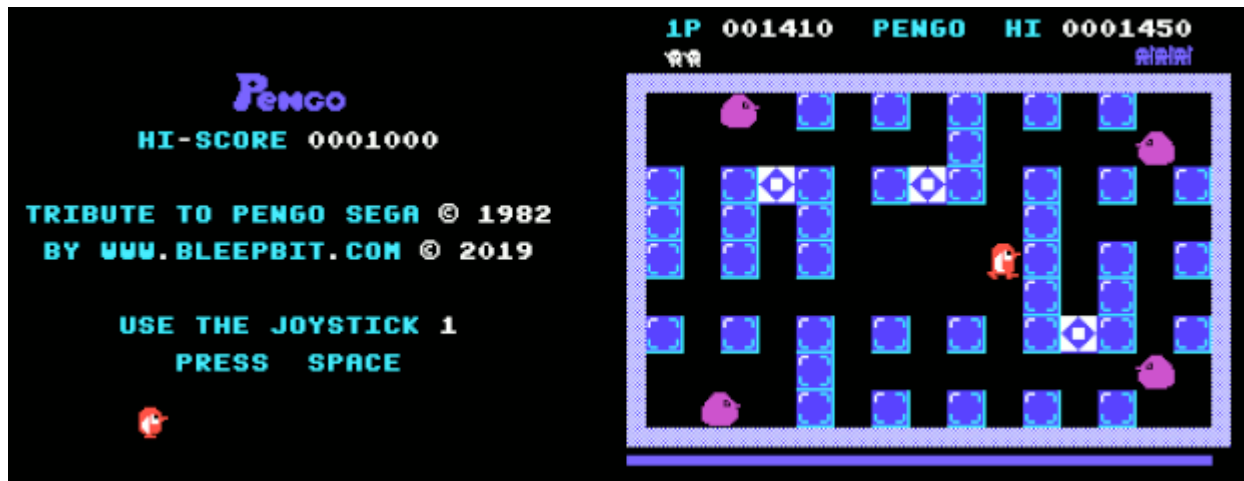
Start from mega menu: G - 1 - 1

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1

Pengo

G-1-2 [Disk: 002-PENG] By Bleepbit



In a tribute to the 1982 Sega arcade title of the same name, this recreation gets pretty close to the original. You are a red penguin in the arctic trying to get rid of the pesky blob-like Sno-Bees by pushing blocks onto them and crushing them before they manage to catch up with you. Easier said than done given that the Sno-Bees are slowly destroying the blocks to get to you, so you have to strategically position yourself and lure them behind a block while keeping an eye on the other Sno-Bees sneaking up on you. There are also 3 diamond blocks which, if you manage to line them up, will give you a large bonus. The action is pretty frenetic and the speed at which the Sno-Bees move increases with each level. The graphics are meticulously done and the music is very faithful to the original. A really fun and engaging game. Well done! Programmed in compiled Extended Basic. Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks. Executable to run: PENG0

Download Pengo:
[Disk Image](#)

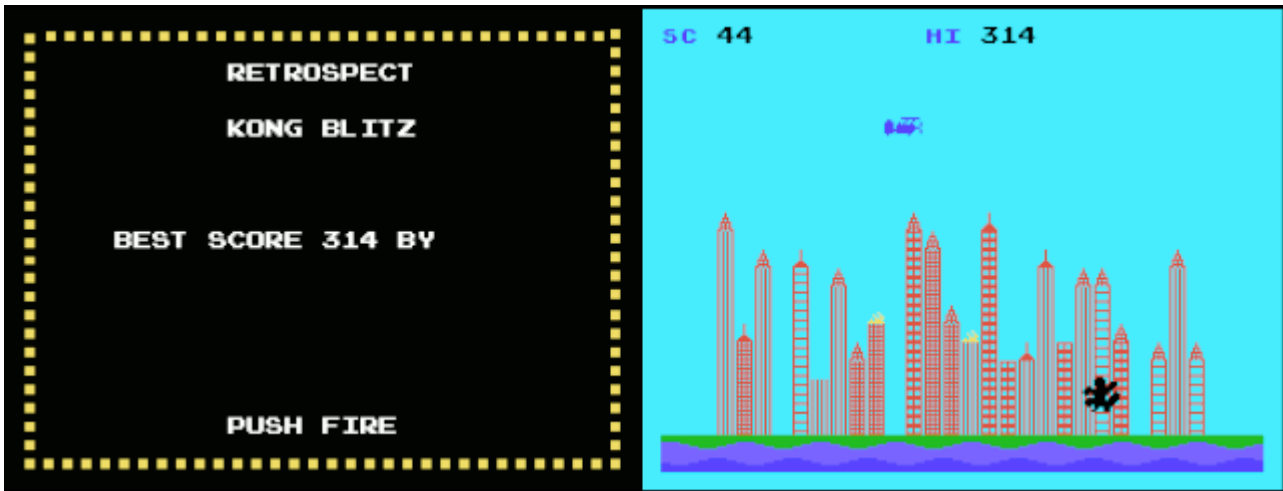
Start from mega menu: G - 1 - 2

Features: Title Screen, XB-compiled, One Player, Sound, Music

Controls: Joystick 1

Kblitz

G-1-3 [Disk: 003-KBLI] By Retrospect



Planes bombing cities, burning buildings, Kong climbing skyscrapers and trying to grab your plane, basically total mayhem... What's not to like in this game? The premise is very simple: bomb every building in the city to the ground as you fly overhead lest your gradually descending plane runs into one of them, avoid Kong or better yet drop a bomb on him to put him in his place, and that's all there is to it! Clean simple fun, and all you need is a joystick button. Programmed in compile Extended Basic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Executable to run: KBLITZ

Download Kblitz:

[Disk Image](#)

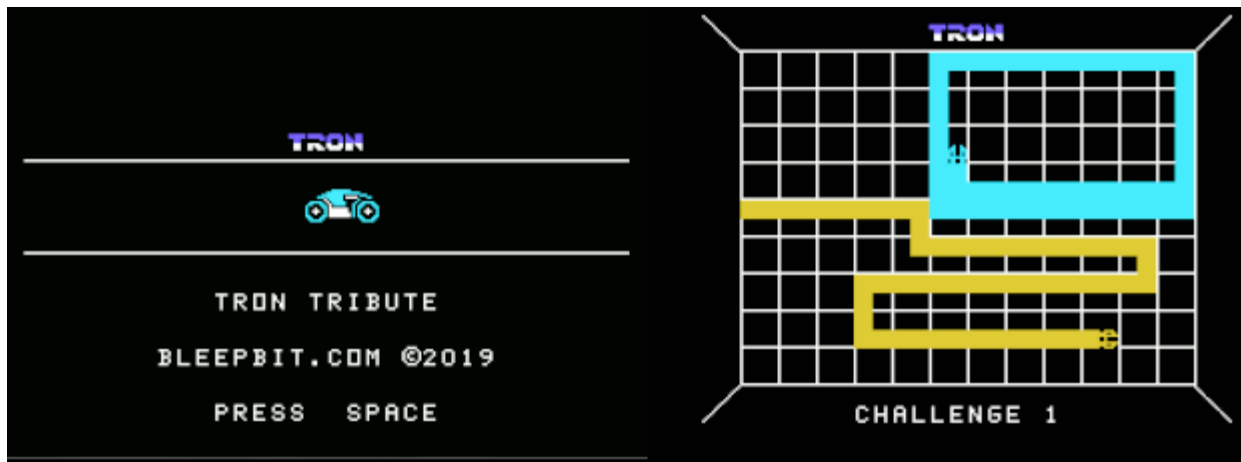
Start from mega menu: G - 1 - 3

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Joystick 1

Tron

G-1-4 [Disk: 004-TRON] By Bleepbit



This is a very smooth take on the classic Tron light cycle battle game. In essence, maneuver your light cycle to trap the computer opponent into its own trail until it hits it and dies. The graphics are crisp and the keyboard controls very responsive, but it is a difficult game to master because the screen real estate is fairly small. Excellent sound effects. Enjoyable. Programmed in compiled Extended Basic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: TRON

Download Tron:

[Disk Image](#)

Start from mega menu: G - 1 - 4

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Keyboard

Borzork

[Disk: 005-BORZ] By NanoChess



Here's an excellent port of the timeless game from 1980, Berzerk. You suddenly wake up in a labyrinth filled with murderous robots intent on destroying you, and the only way to survive, at least for a while, is to dodge their fire and try to shoot them yourself using your laser gun then escape to the next room via one of the many exits available. But be careful to avoid exploding robots and the deadly electrified walls! Also loitering is strongly discouraged lest the Evil Otto appears disguised as a happy face who will relentlessly chase you through walls and cannot be killed... You have been warned. Yes, it is a nightmare, but hey you might as well have fun with it! Very faithful graphics and sound effects, along with taunting speech if you happen to have the speech synthesizer connected. I very much enjoyed it. Programmed in compiled Extended Basic.

Requirements: Finalgrom 99, 32K RAM. Joysticks optional.

Executable to run: None

Download Borzork:

[Cartridge binary file](#)

[Instructions](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

Borzork for TI-99/4A

by Oscar Toledo G. (nanochess)
Last revision: Oct/26/2018.

You just went to sleep at your house, but you feel something strange and when you awake, you've been placed into a labyrinth filled with killer robots!!!

Fortunately someone left a laser pistol and now you can defend yourself!!!

But where are you going to run? this place looks endless and walls are electrified...

Turn off your TI-99/4A before inserting the cartridge, turn again your computer and press any key to pass from first screen, the press 2 for playing Borzork.

You can use the keys E-S-D-X and Space or Q for controlling your man, or use the joystick. If you have a voice synthesizer you'll have an enhanced experience with robotic voice taunting you!!!

To shoot you must press Fire and at same time the direction for shooting. (with keyboard you can combine E+S, E+D, X+S, X+D for getting diagonal directions)

If you stay too much time in a room, a friendly face will appear with very evil intentions!!! it can kill you but also robots. Don't try to stop it, it's immune to all your attacks.

Each robot killed will get you 50 points, even if them shoot themselves or the friendly face passes over them. Completing the room killing all robots will get you an extra bonus of 10 points per robot.

You'll get an extra life each 5000 points.

The difficulty level is determined by your current score.

Less than points	Robot color
300	Yellow (doesn't attack)
1500	Red (1 shot at a time)
3000	Turquoise (2 shots at a time)
4500	Green (3 shots at a time)
6000	Purple (4 shots at a time)
7500	Pale yellow (5 shots at a time)
9000	White (1 shot at a time, faster)
10000	White (1 shot at a time, faster)
11000	Turquoise (2 shots at a time, faster)
13000	Purple (3 shots at a time, faster)
15000	Grey (4 shots at a time, faster)
17000	Yellow (5 shots at a time, faster)
19000	Red (5 shots at a time, faster)
Beyond	Turquoise (5 shots at a time, faster)

If you're good enough you'll be able to enter your name into the high-score table. Caveat! these scores will be lost once the computer is turned off. Maybe take a picture?

Thanks to Opry99er for providing a voice synthesizer that helped a lot to debug the voice code.

Beta testers:
* arcadeshopper.
* ti99iuc.

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

* broettger.

* --- î© --- (this name never has been entered by keyboard, it always has been cut&paste per the legend)

Dan2 compression format and compressor by Daniel Bienvenu, Dan2 decompressor for TI-99/4A by PeteE.

Speech synthesizer routines based on code from Spectra2 library by Filip Van Vooren and Mark Wills.

This game appeared first in a very primitive version in the Sweet&Short Contest 2nd edition at Atariage.

Pyjamarama

G-1-T [Disk: 006-PYJA] TI 99/4A Conversion by Rasmus Moustgaard



Good old Wally of Spectrum fame is stuck in a nightmare he is struggling mightily to wake up from. As is common in such unfortunate situations, things don't quite make sense at first as you roam the different rooms in your house populated by a variety of seemingly random and oversized objects, and you have to figure out how to collect them and use them in a certain order in order to snap back to reality. Welcome to Wally's world... An excellent and very faithful remake of the original game that is eminently playable. An outstanding feat of programming.

Requirements: Finalgrom 99 or Editor/Assembler cartridge

Executable to run: PYJA1 (EA Option 5)

Download Pyjamarama:

[Cartridge binary file](#)

[Disk Image](#)

[Instructions](#)

PYJAMARAMA

Start from mega menu: G - 1 - T

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

5

RUN PROGRAM FILE

FILE NAME?

DSK1.PYJA1

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

To load, type
LOAD "PYJAMARAMA" ENTER or
LOAD "" ENTER.

If you have any difficulty, refer to Chapter 20 P.105 of your Spectrum Manual.

Welcome to the nightmare world of Wally Week.

Even Wallys have to sleep - the trouble is, being a Wally nightmares are more troublesome than you would think.

Sweet dreams, Wally? NO CHANCE.

Being a Wally, nightmares are more common than pleasant dreams, and the one you are entered is the worst ever. Not only are you still looking and acting like a Wally you can't even sleep like normal people, and you are having the Daddy of all nightmares.

OK Wally, don't you just lie there suffering in your nightmare do something about it.

Well how would you normally wake yourself up? That's right, with an alarm clock. No problem, or is it? Just find the clock, wind it up, and your nightmare is over. Parts of your nightmare may repeat themselves, repeat themselves, repeat themselves. Of course, being a nightmare and you being a Wally things ain't gonna be that easy.

For a start everything suddenly seems larger than life, so even everyday objects somehow present difficulties. And being a Wally, you may find it even harder to release yourself from your predicament. Parts of your nightmare may repeat themselves, repeat themselves, repeat themselves.

You may be totally incapable of working out what order to collect things, use them, or even what you need to use. Can't help you there, Wally, but if you want to wake up you've got to keep trying. Parts of your nightmare may repeat themselves, repeat themselves, repeat themselves.

So straighten your cap, tighten your pyjama cord, slip into your slippers and get moving.

Upon loading you are faced with a menu screen on which you will see:-

Key 1 Sinclair Joystick
Key 2 Kempston Joystick
Key 3 Define your own keys

The programme automatically sets

O-LEFT P-RIGHT M-JUMP

Wally really is in trouble this time. He has fallen asleep and in his nightmare everything is enlarged to many times its normal size. To release himself from torment he must find the alarm clock and wind it up.

This however is nowhere near as simple as it may sound because many objects are needed to achieve different tasks which will become apparent as the game progresses.

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

In many cases a particular object will be needed in order to collect or use another one to satisfy a certain task. A seemingly impossible action may merely require a different approach or object.

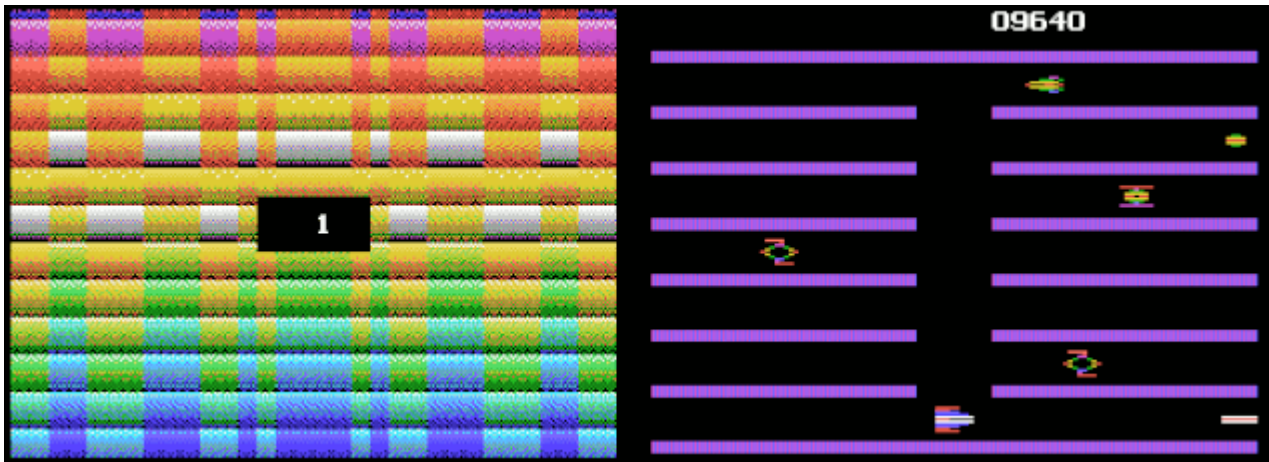
Only two objects can be carried at one time. To change an object, pass over the one required and it will be exchanged automatically (to avoid exchange, jump over the unwanted object).

There are many rooms in the house and a wide variety of "distractions" to overcome. Keys will be required to open some doors, to open others, just jump at the handle.

Even though you are asleep, energy is also a factor in this game. At the top of the screen you will see a glass of milk with "Snooze Energy". A short while after the start of the programme this will begin to decrease. It will also decrease if you are hit by an object or you hit an object. To replenish this lost energy there are items of food in the house, which will appear singly, and in different locations. Once one has been consumed the next will appear elsewhere, but always in its same location. When your Snooze Energy has run out 3 times, losing 3 lives, you will have to start the game again.

Turmoil

G-1-5 [Disk: 007-TURM] TI 99/4A Conversion by PeteE



This is an excellent recreation of the classic game of the same name originally for the Atari 2600 console. A fast paced shooter where you run up and down the lanes shooting waves of various aliens coming at you from both directions. Best to just hold the fire button down and blast away! Extremely frenetic gameplay enhanced by excellent sound effects and authentic visuals. Nirvana for the joystick jockeys, but those with sluggish reflexes need not apply... Very well done!

Requirements: Finalgrom 99 or Editor/Assembler cartridge

Executable to run: TURMOIL (EA Option 5)

Download Turmoil:

[Cartridge binary file](#)

[Disk Image](#)

Start from mega menu: G - 1 - 5

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

Restless II

[Disk: 008-REST] By Sometimes99er



A strangely addictive and visually pleasing game, Restless II is a simple shoot-the-aliens affair in the spirit of Space Invaders, except that the monsters bounce all over the screen and their numbers increase incrementally as you level up. The graphics are top notch and play is smooth as glass. The perfect pick-me-up game for a quick bout of fun. And if you manage to kill all 64 aliens, quite a feat I would say, then you get a trophy to boot!

Requirements: Finalgrom 99 cartridge

Executable to run: Autorun

Download Restless II:

[Cartridge binary file](#)

[Restless II instructions](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

TEXAS INSTRUMENTS HOME COMPUTER Restless II 1.0

RESTLESS II

Introduction

Move your space shuttle left and right. The aliens are trying to hit you. Aliens move in a straight line until they hit the screen space boundary, then they bounces back. Should your space shuttle be hit by an alien, then it's total destruction and the game is over. Fortunately you have your plasma cannon. Fire it to unleash a bolt of incredible power. The bolt continues until it hits an alien, atomizing it, or until it reaches the top of space. You get one shot at a time. Hold down the fire button to achieve auto-fire. Scoring is determined by how far up the screen you hit an alien. Level 1 has 3 aliens, level 2 has 4 aliens and so on. With each level the aliens can move faster. The last level has 11 aliens. You'll get a trophy if you shoot all 63 aliens. **Requirements** No extras required - not even the Memory Expansion. Insert cartridge and power up your console. **Quick reference guide** Joystick or S and D Move shuttle left and right. Fire, Q, Y or Space Shoot. Fctn = (Quit) Returns the computer to the master title screen.

Credits @AtariAge.com

Software Karsten aka sometimes99er

Jewel of Seven Stars

G-1-6 [Disk: 009-JEWE] By Retrospect



This game is a continuation of the adventures of John Banning, the intrepid tomb raider as he delves deeper into the pyramids in search of the fabled Jewel of Seven Stars. Blinded by greed, you have to guide him through 17 chambers, several bonus rooms and a final chamber collecting treasure while facing hoards of mummies chasing you around. You can try to burn a few of them using the torch found in each chamber, but that will only delay the inevitable: they are undead creatures after all! And if that was not enough, you will also have to jump over chasms and serpents connecting some of the chambers, just to add variety to your death throes. Make sure to send my regards to Anubis... Colorful and varied screens with supporting sound effects and smooth gameplay make for an addictive game. Written in compiled Extended Basic.

Requirements: XB cartridge or EA cartridge, 32K RAM, disk drive, joysticks

Executable to run: JEWELX (XB) or JEWEL5 (EA option 5)

Download Jewel of Seven Stars:

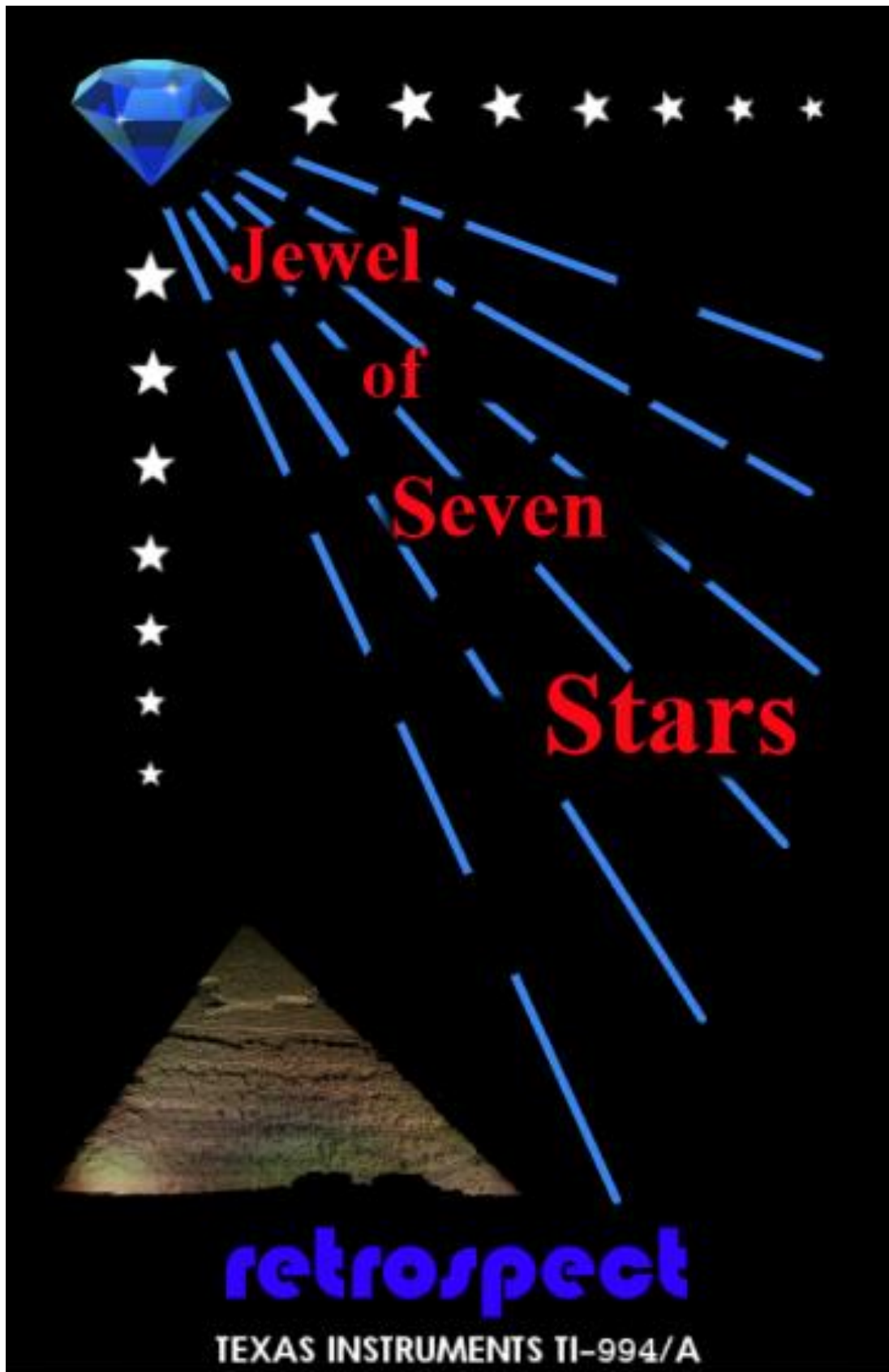
[Disk Image](#)

[Jewel of Seven Stars instructions](#)

Start from mega menu: G - 1 - 6

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Joystick 1



Jewel of Seven Stars

Using Joystick-1, control the player and collect all the treasure within the many chambers of a large pyramid.

Scoring increases the further you get into the game, as well as bonus scores for completion of chambers, you also have Bonus Treasure Rooms with the aim to get as much treasure as possible before the timer runs out.

There are six mummies in each normal chamber, these are much nastier than those encountered in the previous game "The Mummy's Tomb", these will lock onto your character and chase you. They will move diagonally between treasure, or between the end of a wall and treasure, to get to you. They will also jump out at you if you get too close to them.

Mummies can be killed by fire. In each chamber there is a torch at the top right. Collect this torch, and use it to create a fire then lure the mummies into it. Three of the six mummies can be killed. It must be noted, to throw down the torch you **MUST** be running at the same time as you press FIRE. Otherwise you will throw it down at your feet and burn to death.

Some chambers have tight spaces between walls. It's best to lure the mummies out of those spaces, run around the chamber, then go to get the treasure when they are chasing you.

retrospect

Jewel of Seven Stars

Notes about the game

During gameplay, you may notice the execution slow down somewhat at times, this is almost always because of a trapped mummy. As soon as the treasure around the mummy is collected, the game execution will smoothen out. This is normal.

The deviousness of the mummies is normal too, as mentioned previously, it's a trait of theirs to leap out at you or move diagonally through spaces where the player cannot. The game was designed this way so as not to be too easy. Each mummy takes a turn to move, even if it's not the mummy's turn to move if one sees you stood next to it, it might just leap onto you to kill you.

Always make sure you don't get trapped in the upper left part of the chamber where your player spawns.

Very rarely, a mummy can die but it's body be left unburnt. Do not approach it, although apparently dead, it will still kill you.

Scoring : The score value is the number of the chamber you are in, for example, in chamber 1, you get 1 point per treasure taken, in chamber 10, you get 10 points per treasure.

retrospect

Jewel of Seven Stars

There are 17 normal chambers, various Bonus Treasure Rooms, and there is the final chamber.

The final chamber has no mummies, instead it is littered with deadly spike traps that stay visible for only a moment. Your torch will not help you here. You have to memorize where the traps were, and make your way through the chamber to the bottom, where you will find the fabled Jewel Of Seven Stars. Collect this to win the game.



retrospect

Red Planet

G-1-7 [Disk: 010-RPLA] By Retrospect



Red Planet is a quick game somewhat of a mix between Lunar Rescue and Tombstone City, where you have been dispatched to Mars to rescue the scientists scattered across the many sectors of the planet from the alien monsters invading our solar system. With each rescue attempt, you will have to go through the asteroid belt, land, and then track down the scientists hiding behind the rocks and rubble while shooting down a variety of evolutionarily improbable creatures in your way that would make any respectable exobiologist drool. Easier said than done as I've accidentally mowed down more than my fair share of fear-ridden PhD's... Oh the humanity!!! Excellent sharp and colorful graphics as is usual from Retrospect. And fun to boot! Written in compiled Extended Basic.

Requirements: XB cartridge, EA cartridge or Finalgrom 99 cartridge, 32K RAM, disk drive (for XB or EA), joysticks

Executable to run: REDPLANET (XB) or PLANETA5 (EA option 5)

Download Red Planet:

[Disk Image](#)

[Cartridge binary file](#)

[Red Planet instructions](#)

Red Planet Rescue

Start from mega menu: G - 1 - 7

Features: Title Screen, XB-compiled, EA5, One Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

EA5 files

Use Editor/Assembler Cartridge, select option 5, type DSK1.PLANETEA5

FIAD files

Use Extended Basic, type RUN "DSK1.REDPLANET"

Game uses Joystick-1

When you start the game you will be controlling the mothership of your laser base, approaching various sectors of Mars.

Use the joystick to control left/right and pull up for more descent speed. Pressing Fire will slow your speed. Avoid all meteors.

When you land, your laser base will head off to the war-zone.

When in the war-zone, there are scientists to be rescued. They are hiding among the rubble and rocks.

You don't HAVE to collect all the scientists but it will improve your score if you do so.

Note that when you have shot all the Martian Robot's, wether you've collected all the scientists or not, you will automatically be transported back into space heading for the next sector. If you want a higher score make sure you collect every scientist. Care must be taken as scientists can be shot to death by your laser base!

Enjoy the game.

The Mummy's Tomb

G-1-8 [Disk: 011-MTOM] By Retrospect



Launching with an ominous soundtrack, this fast-paced game has you as a tomb raider looking for treasures in a trap and mummy infested Egyptian pyramid with many levels. Not only do you have to avoid the slowly converging mummies, snakes and scorpions, but you also need to avoid the invisible but deadly traps strewn randomly across the level as well as face off with snakes at the end of each level. There are a few torches which will briefly light up your way and uncover the traps, and occasionally you will run across a much needed extra life, but make no mistake: death will eventually find you and your greedy little soul will be condemned to roam the dark musty chambers of the tomb for all eternity. You have been warned... Excellent animation and crisp graphics. Really fun easy to pick up game. Written in compiled Extended Basic.

Requirements: XB cartridge or Finalgrom 99 cartridge, 32K RAM, disk drive (for XB), joysticks

Executable to run: MUMMYTOMB

Download The Mummy's Tomb:

[Disk Image](#)

[Cartridge binary file](#)

Start from mega menu: G - 1 - 8

Features: Title Screen, XB-compiled, One Player, Sound, Music

Controls: Joystick 1

Break Free

[Disk: 012-BFRE] By David Vella



This version of the classic Breakout game has the rare distinction of being programmed entirely in GPL, an intermediary language somewhere between Basic and assembly language unique to the TI 99/4A computer. While the goal is still to hit as many tiles as possible using a paddle and a ball, there are very interesting twists as well, such as hidden keys which need to be found before being able to move on to the next level, several different powerups which strategic use is essential to scoring high, as well as original level designs such as moving monsters and shifting tiles. The graphics are superb and the game presentation is meticulous, combined with a great introductory sound track. While the difficulty level is graduated, it's still a tough game to play, perhaps contributed to by occasionally spotty collision detection and a little lag in paddle movements. Nonetheless, it remains a highly addictive game with huge fun and re-playability potential. Very nicely done indeed!

Requirements: Finalgrom 99 cartridge, 32K RAM, joysticks

Executable to run: Autorun

Download Break Free:

[Cartridge binary file](#)

[Cartridge may be purchased here](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

Flying Shark

[Disk: 013-FLYS] TI 99/4A Conversion by Rasmus Moustgaard



In yet another remake masterpiece, Rasmus takes on the 1987 game Flying Shark by Taito and somehow manages to recreate it in glorious colors and unrelenting frenetic action on the TI 99/4A computer. You are fighter pilot deep into enemy territory and your mission is to destroy as many opposing forces as possible, be it planes, tanks or ships, using your machine guns and a limited supply of massive bombs. There are available power ups along the way if you can get to them which will enhance your fire power and give you extra lives, something you will very quickly sorely need. The animations are silky smooth while the graphics, sound track and overall feel are very representative of the original game, making for a supremely immersive and addictive experience. It is however quite challenging beyond the first level so expect to exercise your joystick quite a bit!

Requirements: Finalgrom 99 cartridge, 32K RAM, joysticks

Executable to run: Autorun

Download Flying Shark:
[Cartridge binary file](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

Night Stalker

G-1-9 [Disk: 014-NIST] TI 99/4A Conversion by LASooner



This game is a remake of the classic Night Stalker on the Intellivision platform. The premise here is to shoot down nasty robots that come in five different varieties while avoiding being hindered by bats and spiders in the setting of a fixed maze. You have limited ammunition which forces you to look for additional guns after every 6th shot, and those appear at random locations and can be very difficult to get at. When you are armed, you can be aggressive and attempt to ambush the robots, but when you are unarmed, then the game becomes more akin to PacMan. The graphics and sounds are very faithful to the original, although the gameplay is somewhat slower. It starts in a sedate manner, but things get interesting rather quickly where path planning and quick reflexes become essential. Extremely well done! Created in compiled Extended Basic.

Requirements: Finalgrom 99 cartridge, 32K RAM, joysticks

Executable to run: Autorun

Download Night Stalker:

[Cartridge binary file](#)

[Disk image](#)

[Manual](#)

Start from mega menu: G - 1 - 9

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Joystick 1





CREDITS

Night Stalker

Programming, Art, Sound and Design
John McGinley - LASooner

XB256 Game Developer Package V3.3
Harry Wilhelm - Senior Falcon

Magellan Graphics Design Package
Howard Kistler / Dream Codex Games retroclouds
sometimes99er
Rasmus Moustgaard
David Vella

TI Manual Template Courtesy of OLD CS1

Additional Programming and Guidance
Users at the Atari Age, TI 99/4a Forums
<http://atariage.com/forums/forum/164-ti-994a-computers/>

This game Non Commercial

NOT FOR RESALE

Based on the game
'Night Stalker' by Mattel Electronics



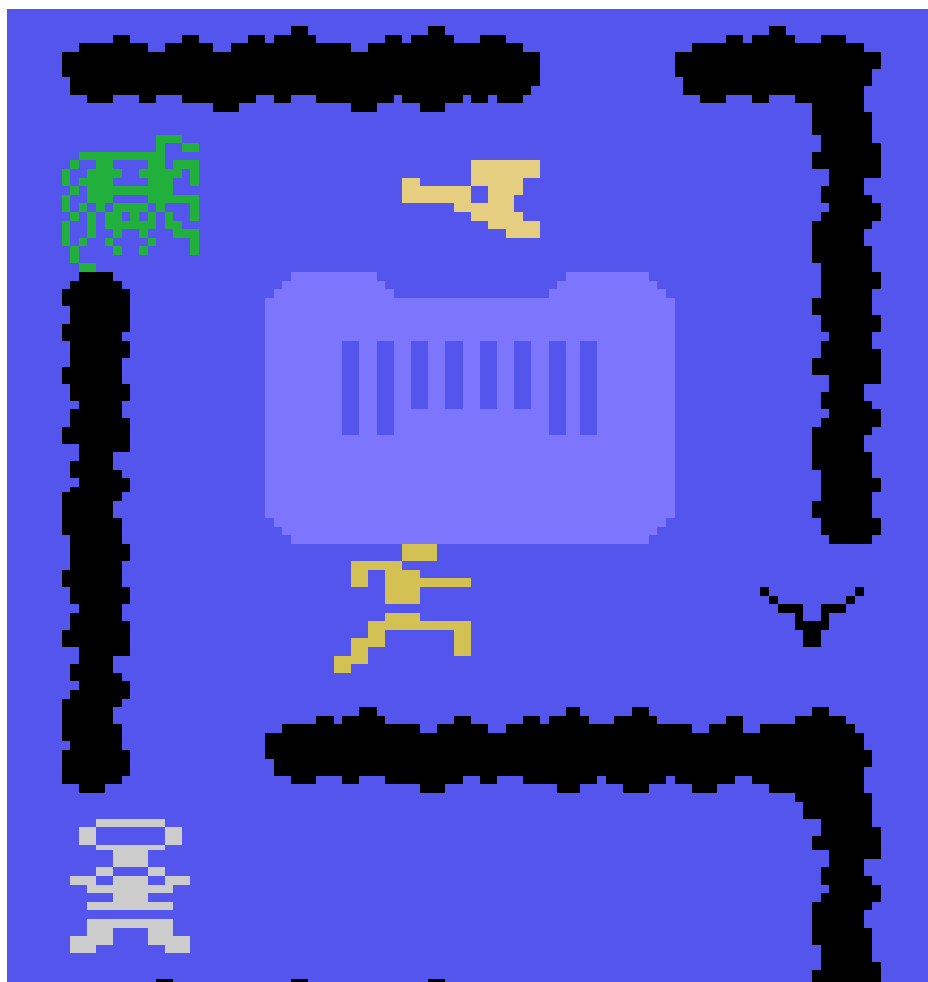


Night Stalker

OBJECT OF THE GAME

Your man is trapped in the maze. Robots relentlessly track him down. Keep him away from spiders and bats. Watch out for robot fire! React quickly. The key to survival is to destroy them -before they get the man! Rack up as many points as you can!

It's you against them ... to the end





Night Stalker

HOW TO PLAY:



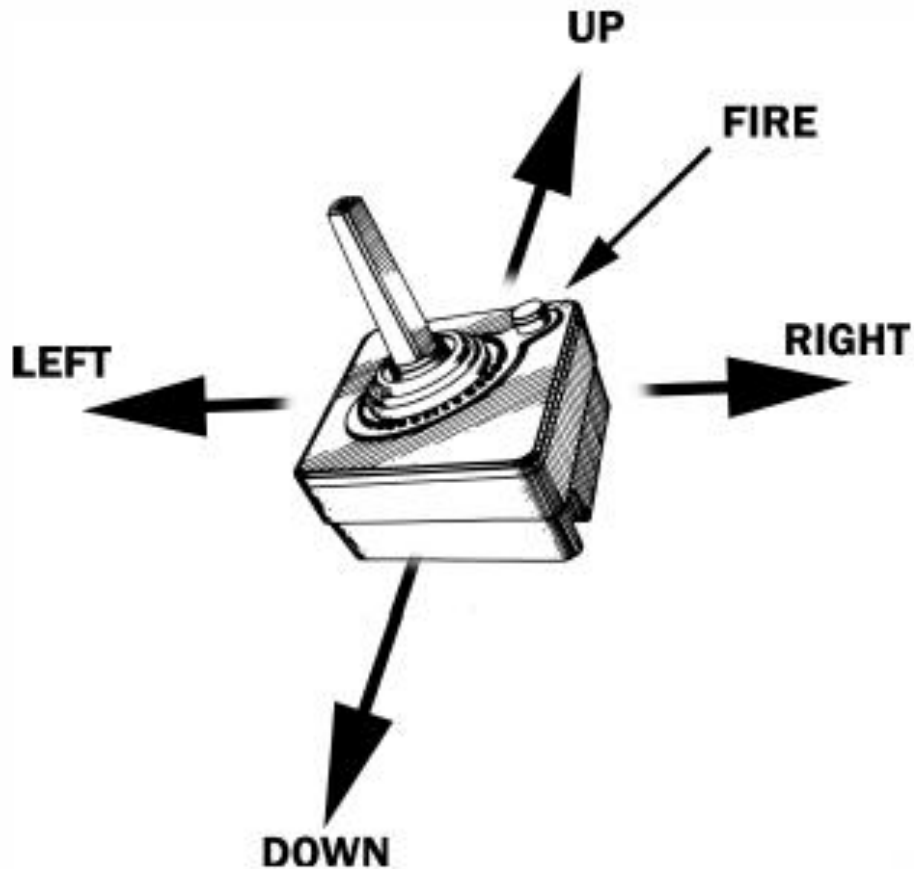
The game begins immediately, with the man inside the center bunker. His loaded weapon is lying in the maze and is flashing. The man must leave the bunker and land on the weapon to pick it up.





Night Stalker

The game requires a 4 way joystick with a fire button. Joystick 1 is used. Make sure ALPHA LOCK is disengaged or the player won't go UP.



The player will shoot in the last direction the man moved. So to fire left, the joystick needs to point to the left before pressing the fire button. You can shoot while moving.





Night Stalker

RULES OF THE MAZE



BUNKER: There is only one safe place for the man to hide ... and that's inside the bunker, in the center of the maze. When he's inside, spiders and bats cannot bite him, and the robot's bullets will not harm him (until the Black Robot appears)

IMPORTANT: If your man isn't all the way inside the bunker he can be blasted by robot fire!



MAN: You start off with 6 men. Each man can run and shoot, but he cannot do both at once. After one man is shot, the next one appears inside the bunker, and the number of men you have left shows on the screen at the top right next to the man icon. Each time you rack up about 10,000 points, you get another man. When your last man is downed by robot fire, the game is over!



WEAPON: The man's main defense in the creature infested maze is his loaded weapon. Each weapon holds six shots, and will drop bats, spiders and robots in their tracks. Remember, you can only shoot when the man is standing still!

IMPORTANT: Time your shots carefully! Once you fire, you cannot shoot again until that bullet disappears from the screen. While his bullet is traveling, the man can run to dodge robot fire.

The man is out of bullets when you see the weapon flashing on the screen. The man must then land on top of the weapon to pick it up.

Occasionally you might have bullets left after you have fired off six shots when the weapon ran out of ammo because the next loaded weapon was placed right where your man was standing and he automatically picked it up. Keep on shooting!





Night Stalker



SPIDER: A single menacing spider creeps throughout the maze, ready to bite the man whenever they come in contact. Once the man is bitten he falls down, paralyzed for a few seconds. When he's down, he cannot fire his weapon or run. He's vulnerable to robot attack!

To avoid being bitten, fire off a shot. If it hits the spider, he vanishes. But another quickly appears in the spider's web and begins to crawl around. The robot's shots do not zap the spider! The spider web is a semi-protected area. All the maze creatures and the man can enter the web. Sometimes the bullets from the man and the robot will penetrate the web. Usually they will not.



BATS: Two bats, hanging upside down, awaken and wing their way through the pathways of the maze. Either bat can bite the man when they come in contact. The man falls down and is paralyzed the same as when bitten by a spider. He cannot shoot or move. After you shoot a bat, or a bat is hit by robot fire, it is replaced by another. But if it isn't a direct hit, he's still there to torment you!



IMPORTANT: The game changes once your score is over 5,000 points. Now when the robot fire or your shot hits a bat, a grey robot takes its place. If both bats get hit, you will have 3 robots and no bats after the man!

ROBOTS: The man's most persistent enemy in the maze is the robot. In the course of the game you will encounter five different types. As your score gets higher, the robots become more and more sophisticated. Each new robot has all the characteristics of the previous robot, plus new features.

All robots fire at the man! They have unlimited ammunition. Their shots are the same as the man's ... only one bullet shows on the screen at a time. When the man's bullet hits a robot, he explodes. Then quickly, another robot replaces him. Robots always enter the maze at the lower left corner.





Night Stalker

Now let's take a look at these adversaries:



Grey Robot: This robot is slow on the attack. He patrols the maze at random, shooting only when he sees the man. After 5,000



Blue Robot: After 5,000 points, a blue robot appears on the screen. He's more determined to track the man wherever he goes! He's hard to lose!



White Robot: After 15,000 points, the white robot appears and aggressively seeks out the man. The white robot's shield protects him from the man's bullets. It takes 3 bullets to penetrate the shield and blow this robot away!



Black Robot: After 30,000 points, the black robot appears and advances with power! He is capable of firing white "energy bolts" that absorb the man's bullets on contact. These can now crash into the bunker and slowly wear it away. Once the bunker is gone, there's no safe place for the man to hide



Invisible Robot: He's in the maze after 80,000 points, and is the ultimate aggressor! It's a sneak attack! His bullets are visible. That's your only clue about where he is!





Night Stalker

SCORING:



Destroy a spider and it's 100 points



Destroy a bat and it's 300 points



Destroy the grey robot and it's 300 points.



Destroy the blue robot and it's 500 points.



Destroy the white robot and it's 1000 points.



Destroy the black robot and it's 2000 points.



Destroy the invisible robot and it's 4000 points.





Night Stalker

RUNNING THE GAME:

COMMAND MODULE:

Place the command module in the TI 99/4a

Turn on Power, select #2 from the main menu



TEXAS INSTRUMENTS
HOME COMPUTER

PRESS

1 FOR TI BASIC

2 FOR NIGHT STALKER





Night Stalker

DISKETTE:

Place the disk in your main disk drive (DSK1)

Place the Extended Basic Command Module in the TI 99/4a

Turn on Power, select Extended Basic from the main menu



TEXAS INSTRUMENTS
HOME COMPUTER

PRESS

1 FOR TI BASIC

2 FOR TI EXTENDED BASIC

The game should run automatically, however if it does not, you can run the game from the command line

```
* READY *  
>OLD DSK1.LOAD  
>RUN
```



Your man is trapped in the maze. Robots relentlessly track him down. Keep him away from spiders and bats. Watch out for robot fire! React quickly. The key to survival is to destroy them before they get the man! Rack up as many points as you can! It's you against them ... to the end!

NIGHT STALKER module features let you

- Fight 5 Levels of Robots
- Kill Bats and Spiders
- Find Safety in your Bunker
- Find Weapons in the Maze
- Try to Stay Alive!

Activities in this module are designed to work with the Wired Remote Controllers.

System Requirements:

32K Memory Expansion
Disk Version Requires Extended Basic



Texas Instruments

TI-Rex

G-1-A [Disk: 015-TIRE] By Francesco Ugga



Those of you with Chrome based computing devices should be very familiar with this one. It's a very good remake of the popular offline Chrome game Dinorunner, where you, as a cute T-Rex dinosaur, have to run the longest distance possible while jumping over obstacles like cacti and pterodactyls. Extremely simple gameplay using just the spacebar to jump, but also surprisingly entertaining. The graphics are clean, the animations are smooth and I'm really partial to that crisp and bright monochrome look. Nicely done. Created in Extended Basic with the XB256 extensions.

Requirements: Editor/assembler cartridge, 32K RAM, disk drive.

Executable to run: TIREX-A (E/A Option 5)

Download TI-Rex:

[Disk Image](#)

Start from mega menu: G - 1 - A

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard

Lunar Mission

G-1-B [Disk: 016-LMIS] By Retrospect



In an extremely well crafted take on the lunar rescue theme, this game has you piloting a landing module down to a planetary body to rescue stranded colonists. This mission is further complicated by the fact that each planet or moon is ringed by roaming asteroids which have to be manoeuvred around in order to avoid disaster. You have a limited amount of fuel to complete each mission, and should you succeed, then you are moved to another planet with an increasing level of difficulty and a new mission. It seems that the solar system is choke full of inept colonists in constant need of rescue. Weird... You even get a bonus shooting stage at the end of each level vaguely reminiscent of Galaxian. A super addictive game that will keep you coming back for more time and time again. Created in compiled Extended Basic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Executable to run: LUNAR-M

Download Lunar Mission:

[Disk Image](#)

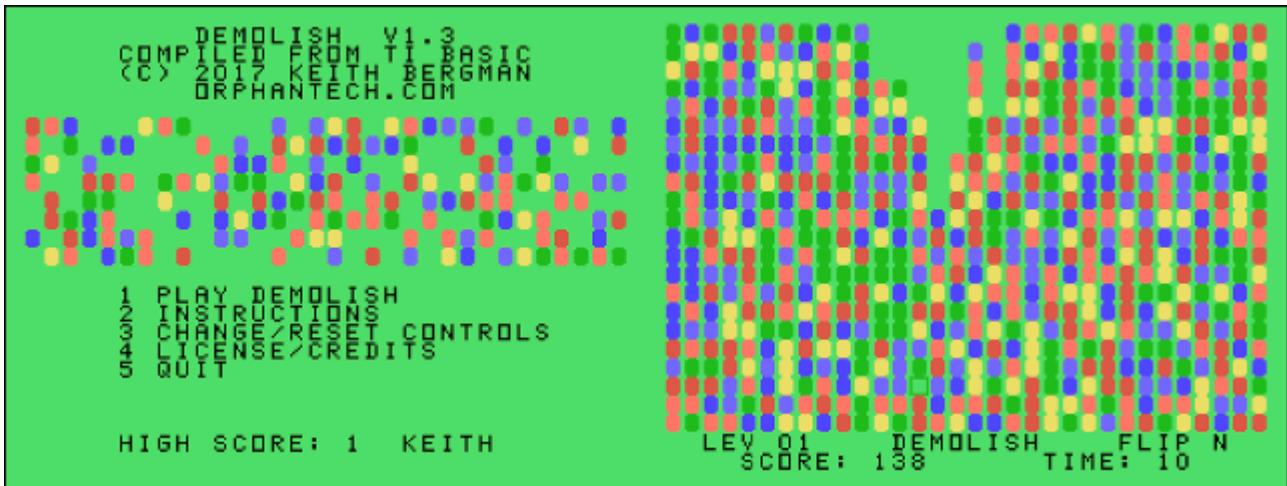
Start from mega menu: G - 1 - B

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Joystick 1

Demolish

G-1-C [Disk: 017-DEMO] By Keith Bergman



This is an interesting variant of the tile games in that you only have to clear a number of columns equal to your level in order to advance to the next level. You do so by selecting adjacent groups of same colored tiles and demolish them by setting explosive charges. Any tiles above them will move down. You get points for each tile demolished, and every 100 points you get the option to flip a couple of tiles and take them out. You only have about a minute to complete the level which I have found to be extremely challenging, and as a matter of fact I have yet to be able to clear level 1! Very clever concept. Created in compiled TI Basic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: DEMOLXB

Download Demolish:

[Disk Image](#)

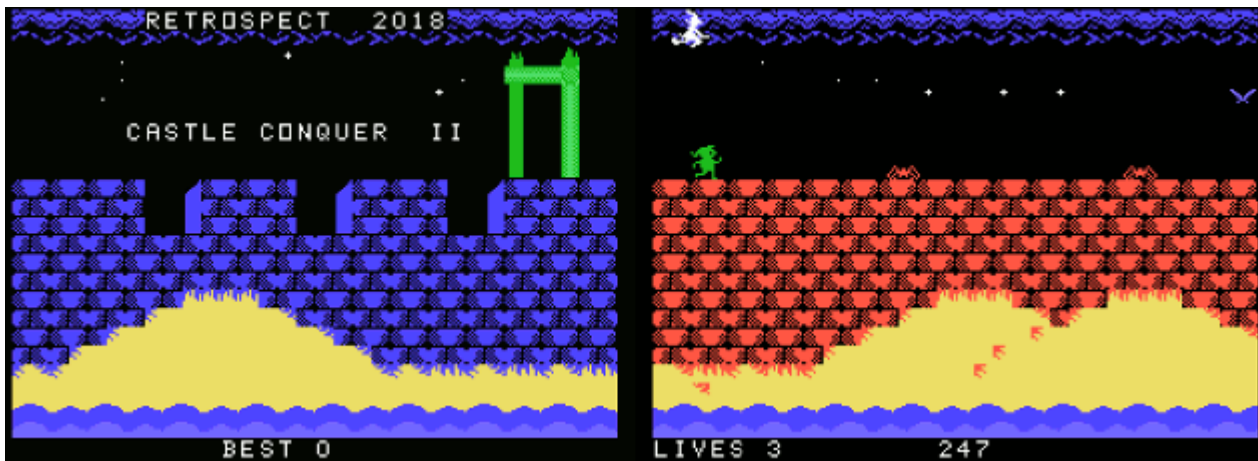
Start from mega menu: G - 1 - C

Features: Title Screen, XB-compiled, One Player, Sound, Instructions

Controls: Keyboard

Castle Conquer II

G-1-D [Disk: 018-CONQ] By Retrospect



A follow up to the original Castle Conquer, this sequel ups the ante with even better graphics and animations, as you face a variety of monsters and obstacles in your quest to save the princess. The gameplay is smooth and the controls intuitive, which makes for a really fun experience. It is however quite challenging and your timing has to be perfect along with quick reflexes. Created in compiled Extended Basic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Executable to run: CONQUERII

Download Castle Conquer II:

[Disk Image](#)

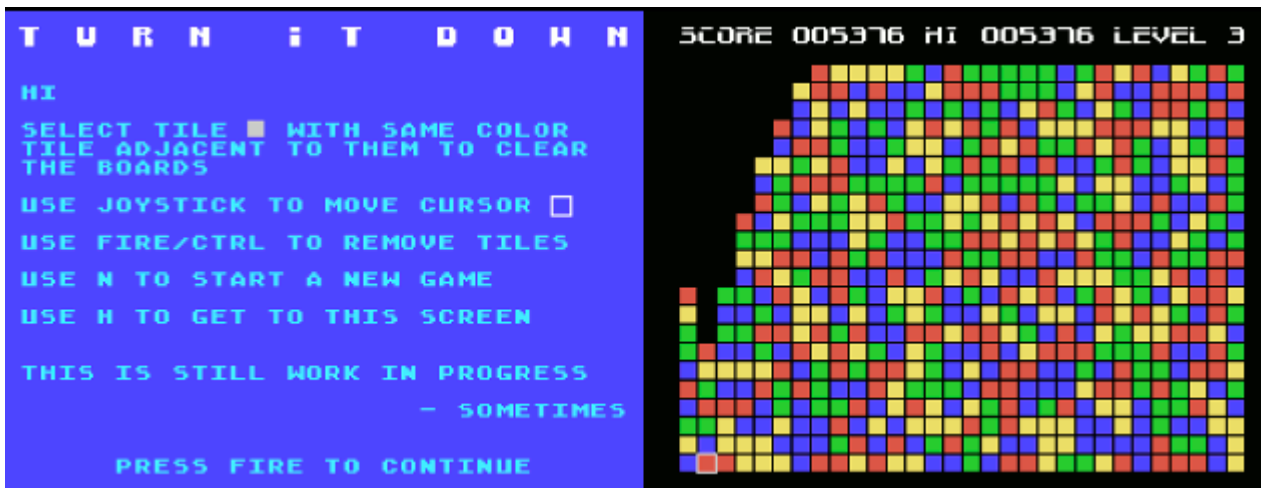
Start from mega menu: G - 1 - D

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Joystick 1

Turn It Down

[Disk: 019-TITD] By Sometimes99er



This game is another variant of the popular tile game concept, where you have to click on tile groups of the same color to remove them, resulting in the tiles on top cascading down. The goal is to clear the board entirely, and while this is fairly easy at the first level with only 2 color tiles, each level adds an additional color resulting in rapidly increasing difficulty. You really cannot just click willy nilly at tile groups, but rather you have to try to have a long term objective of maximizing color groupings. Colorful and extremely addictive.

Requirements: Finalgrom 99 cartridge, 32K RAM, joysticks

Executable to run: Autorun

Download Turn It Down:

[Cartridge binary file](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

Skyway

[Disk: 020-SKYW] By Rasmus Moustgaard



In a similar vein to Bouncy by the same author, this isometric vertical scroller has you maneuvering a ball around gaping holes or jumping over them trying to capture as many colorful tiles as possible in increasing levels of difficulty. Some tiles are worth points and others have different effects such as slowing or speeding you down. Very smooth meticulously rendered graphics and an engaging soundtrack by Tursi really round up this excellent game. How far can you go?

Requirements: Finalgrom 99 cartridge, 32K RAM, joysticks

Executable to run: Autorun

Download Skyway:
[Cartridge binary file](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

Sparkdrummer's Challenge Rescue At AtariAge

[Disk: 021-SCRA] By Airshack



A very interesting take on the classic lander game indeed. Your mission is to retrieve enough of Sparkdrummer's mojo in order for him to continue his excellent work on AtariAge. In order to do so, you have to navigate several gravitational mazes, avoid being walled in by Sparkdrummer's nemesis and execute perfect mojo drops. The graphics and animations are very well made, and the controls are very easy. However, the game is very challenging and requires quick reflexes even on the lowest of the 3 levels. Includes 5 levels for each difficulty setting, so you are in for a lot of action. You have been warned!

Requirements: Finalgrom 99 cartridge, 32K RAM, joysticks

Executable to run: Autorun

Download Sparkdrummer's Challenge Rescue At AtariAge:

[Cartridge binary file](#)

[Sparkdrummer's Challenge Rescue At AtariAge manual](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

GAME MANUAL



Program and manual by: Airshack
April 29, 2017

SPARKDRUMMER'S CHALLENGE: RESCUE AT AtariAge

MISSION BRIEF:

The year is twenty one & seventeen, and all is not well for the little community hell-bent on preserving the legacy of Lubbock's quintessential orphan computer. Specifically, the AtariAge.com sites TI-99/4A community has but a couple of user group style newsletters remaining in publication. One of these publications may die an untimely death, as did the Valley of the Sun TI Users Group - VAST.

Evil Omega, the alter-ego of one of the TI community's most rabid advocates, has kidnapped Sparkdrummer, who happens to author one of our beloved periodicals known by the TI faithful as *YESTERDAY'S NEWS*. Your goal in the game is to locate, supply, and rescue Sparkdrummer, thus saving *YESTERDAY'S NEWS*.

HOW DO WE BEGIN?

This risky mission begins in a simple celestial maze. Navigating this maze will successfully open the portal to the rocky desert planet known as Sonoria. It turns out Evil Omega has a thing for desert planets because marooning his victims in such terrain suggests permanent suffering.

MAZE CONTROLS: Simply move up and down with the joystick as your ship drifts from left to right through the celestial maze. You'll collect the most points by drifting and minimizing the use of your thrusters.

MAZE LEVELS: Select your difficulty level carefully. The higher levels of gameplay result in greater challenges and better scoring, while the lower level mazes have wider pathway doors and very little pathway movement.

What's Sparkdrummer's deal?

Many are unaware of Sparkdrummer's thirst for generous amounts of VAST MoJo in order to function and publish his newsletters. His survival on the Sonorian landscape will require generous (VAST) amounts of said MoJo. But where will he get the MoJo?

ORBIT CONTROLS: Move the joystick upwards. Once orbit over Sonoria has been established, you'll be thrust you into Evil Omega's wicked lair of bricklaying death. This is where Evil Omega (not to be confused with the friendly Omega on AtariAge) selfishly stores his booty of stolen VAST MoJo.

LAIR CONTROLS: Fly directionally via the joystick. The joysticks fire button is used to activate the "airbrake" system if things get too weird.

How to collect VAST MoJo?

Fly directly into the MoJo to secure it for transportation, then follow the yellow arrows to return to Sonorian orbit. You must accomplish your task before Evil Omega bricks his lair closed and makes a mockery of you before stealing a ship from your limited fleet.

How to deliver the VAST MoJo to Sparkdrummer?

After returning to Lower Sonorian Orbit with the recovered MoJo, you'll need to airdrop the pallet of VAST goodness down to Sparkdrummer. Completing the airdrop successfully to the prolific one will show his appreciation!

AIRDROP CONTROLS: Press the joystick button to release the MoJo, then steer the falling MoJo pallet left and right with the joystick to land atop the stranded Sparkdrummer.

So wait... I have to go through the Celestial Maze again?

Yes! Upon completing a successful airdrop you must return to the beginning of the celestial maze for refueling, which is automatic. With each level you have an opportunity to deliver more life saving MoJo to the prolific one.

This game has five levels!

Five pallets of VAST MoJo should elevate Sparkdrummer's spirits sufficiently to create a rescue opportunity. Coincidentally, that is why there's five levels of gameplay.

GOOD LUCK!

Rescue Sparkdrummer and you've rescued YESTERDAY'S NEWS!

Fail and he's toast!

Knight Lore

[Disk: 022-KLOR] Conversion by Rasmus Moustgaard



This game is a direct line by line conversion of the classic Spectrum title, making it an extremely faithful conversion visually indistinguishable from the original. The player character Sabreman has forty days to collect objects throughout a castle and brew a cure to his werewolf curse. Each castle room is rendered in isometric view, and you have to navigate it by avoiding obstacles and monsters, moving objects, climbing walls and collecting items. Even though the game speed slows down when the screen gets crowded, overall gameplay is not significantly affected and remains totally enjoyable. The first title of its kind on the TI. Highly recommended!

Requirements: 32K RAM, Finalgrom 99 cartridge. Joysticks optional.

Executable to run: Autorun

Download Knight Lore:
[Cartridge Binary Image](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

Eric in Monsterland

G-1-E [Disk: 023-ERIC] By Retrospect



In the same vein as Castle Conquer by the same author, this beautiful platformer has you running around in a forested landscape creeping with a variety of monsters and obstacles in your quest to save the princess. The controls are very simple using a joystick, and the gameplay is meticulously crafted to keep you on your toes throughout the entire game. Each screen will require a specific strategy in order to get through, and you are rewarded with extra points for speed of completion by beating a flying witch overhead. The graphics are gorgeous and the animations spot on. An absolute pleasure to play. Well done!
Created in compiled Extended Basic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks

Executable to run: MONSTER

Download Eric in Monsterland:

[Disk Image](#)

[Eric in Monsterland instructions](#)

[Cartridge may be purchased here](#)

Start from mega menu: G - 1 - E

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Joystick 1

Eric in MONSTERLAND

*Texas Instruments TI-99/4A with 32K
Retrospect*



Controls: Joystick 1 all directions including crouch

Rescue the fair maiden lost in Monsterland!

***Race a friendly witch for bonus points plus
100 points per screen completed!***

Bonus points multiplied by lives left!



Grail Of The Gods

G-1-F [Disk: 024-GOTG] By Majestyx



This Rogue-like dungeon crawler faithfully captures the look and feel of this venerable class of computer adventure games. The display is purely text based like the original and the gameplay is very simple. Move around with the arrow keys and press the space bar for action. But don't let that control simplicity fool you, as you can get easily sucked in trying to get as deep as possible into the dungeons, killing monsters, collecting gold, and gaining experience and strength along the way. The map reveals itself as you move, so you really never know what's behind a corner, particularly at the deeper levels. The monsters get deadlier as you delve further down, so you will have to learn to pick your battles. A really fun well made game, easy to pick up but hard to put down. Created in compiled Extended Basic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive

Executable to run: GOTGXL-X

Download Grail Of The Gods:

[Disk Image](#)

[Cartridge may be purchased here](#)

Start from mega menu: G - 1 - F

Features: Title Screen, XB-compiled, One Player, Sound

Controls: Keyboard

Super Mario Brothers

G-1-P [Disk: 025-MARI] Remake Demo by Rasmus Moustgaard



This game needs no introduction, and the demo by Rasmus is a very faithful reproduction of the original, limited however to the first level and underground cavern. Needless to say that the graphics are top notch and the gameplay smooth as glass, and one would not know this was running on a TI 99/4A computer. It does however require the F18A video replacement board to run, which is becoming very ubiquitous. A masterful tour de force not to be missed.

Requirements: 32K RAM, Editor/Assembler cartridge, joysticks - (disk version) ** F18A required **

Executable to run: MARIO1 (E/A option #5)

Download Super Mario Brothers:

[Disk Image](#)

[Cartridge may be purchased here](#)

[YouTube demo](#)

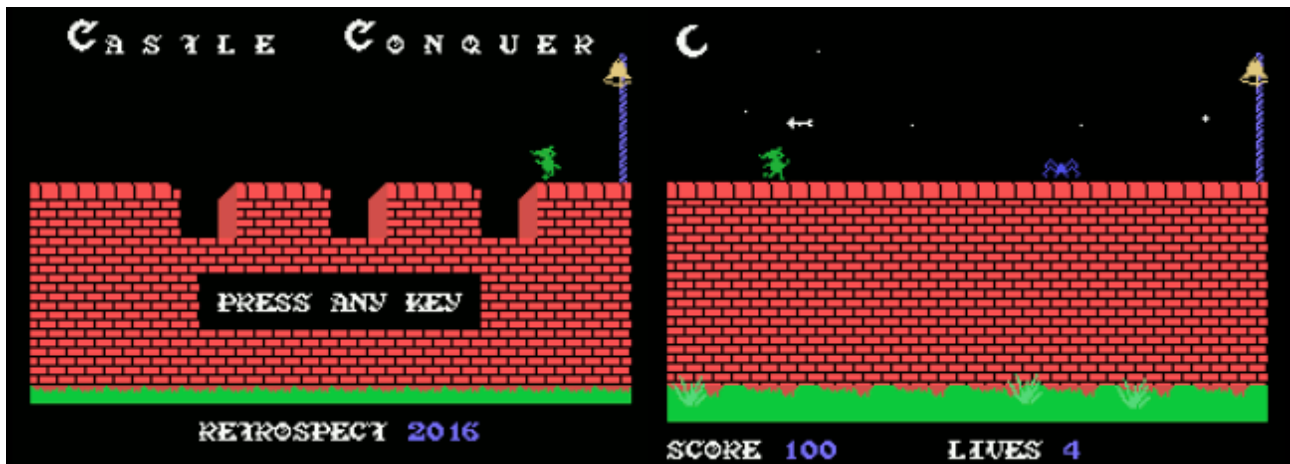
Start from mega menu: G - 1 - P

Features: Title Screen, EA5, One Player, Sound, F18A

Controls: Keyboard

Castle Conquer

G-1-G [Disk: 026-CAST] By Retrospect



Run around, dodge monsters and other hazards, hitch a ride on a dragon, and rescue the princess. That about sums up this compiled Extended Basic game. The graphics and animations are outstanding given XB's limitations, and the game is very challenging to say the least. The control scheme was a little fiddly given that all the needed keys were crowded together and it was easy to press the wrong key in the heat of the moment. Nonetheless, it's a simple game to play with gobs of fun to be had. And there is a more involved sequel in the works as well... Really great execution.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive

Executable to run: CASTLEEA5 (E/A option #5)

Download Castle Conquer:

[Disk Image](#)

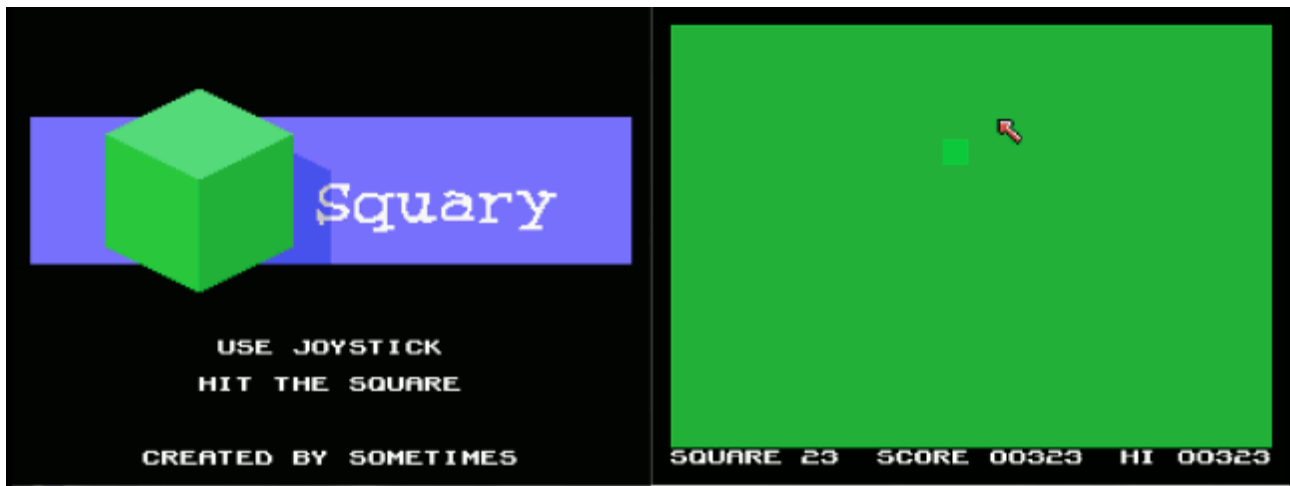
Start from mega menu: G - 1 - G

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard <S D W R>

Squary

[Disk: 027-SQUA] By Sometimes99er



A very simple game where you are chasing around a square with a joystick controlled cursor as fast as you can in order to score the highest number of points. Every time you catch a square and press the fire button, another one pops up at another screen location, and with time the squares keep shrinking in size. The game ends when you click outside of a square. That's it! An attractive feature is the fact the speed of the cursor increases gradually in the direction of the joystick and there is an element of inertia applied as well so you can't just stop on a dime. The game is very colorful, although I would have preferred a better contrast between the squares and the background. And it is that simplicity that makes it so addictive and easy to pick up since the instructions could be summed up with 5 words: click on square for points.

Requirements: Joysticks

Executable to run: None. Cartridge based game.

Download Squary:

[Cart Image](#) --> [Cartridge may be purchased here](#)

[Instructions](#)

Does not start in the Mega-Menu, but runs from FinalGrom 99!

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

Slide the cartridge in your beloved Home Computer, the one that boots in no time, and then get a hold of your joystick. Press 2 to select the game.

Now after an intro screen, youâ€™ll have to maneuver a mouse pointer around the screen, and then try and hit a square. This probably takes some getting used to, but as you know, practice makes master.

You hit the square using the fire button. You can slide in front of the square and hit fire just at the right moment. You might even utilize the bouncy bump, - when the mousy thingy gets edgy.

The registration point of the mouse is the upper left of the white color of the pointer. Just as was default on the Amiga anno 1987.

Each time you hit a square, a new square will emerge. The color combination will be different and often the square itself will get smaller.

If you are quick to hit the square, you will be awarded a good number of points. If you wait around forever, your score may be as low as only 1 point.

If you hit outside the square, itâ€™s game over. Just like that.

Theoretically you could get a high score of 1,900. But a score above 500 is more than okay.

You can memorize the patterns at which the squares appear, and get closer to a super high score.

50 amazing and carefully balanced levels of immense tension. It was 100 levels, but my neck and shoulder told me otherwise.

Snake Plissken

G-1-H [Disk: 028-SNAK] By Sometimes99er



The origin of this game dates back to 1976 with the arcade game Blockade, which has since generated hundreds of clones on almost every classic computing platform. This version is fast and super responsive, along with being colorful and well designed. Maneuver the snake to eat the apples and other fruits for points while avoiding its gradually elongating tail as well as the walls. That's it! It gets progressively harder with each level, but the addictive power remains constant. Very difficult to put down, so you have been warned...

Requirements: 32K RAM (for the disk version), Editor/Assembler cartridge, joysticks

Executable to run: SNAKE (E/A option #5)

Download Snake Plissken:

[Disk Image](#)

[Cart Image](#) --> [Cartridge may be purchased here](#)

[Instructions](#)

[YouTube demo](#)

Start from mega menu: G - 1 - H

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

snake plissken

Introduction

Move the snake around the bordered plane, avoiding walls and the tail of the snake itself. Eat apples, pears and lemons to score points. Eat all apples to advance to the next level. Eat one pear to double future points of apples. Lemons just leave a genuine sour taste in your mouth.

Requirements

No extras required - not even the Memory Expansion. Insert cartridge and power up your console.

Quick reference guide

Joystick	Starts level and moves snake.
Fctn = (Quit)	Returns the computer to the master title screen.

Credits @AtariAge.com

Software	sometimes aka sometimes99er (Karsten)
----------	--

Jet Pac

[Disk: 029-JETP] TI 99/4A conversion by Walid Maalouli



This is a pretty close conversion of the classic ZX Spectrum game Jet Pac by Ultimate, programmed in TurboForth. The 'Acme Interstellar Transport Company' is delivering spaceship kits to various planets in the solar system throughout the Galaxy, and as chief test pilot, all you have to do is assemble the Rockets, and thrust on to your next destination. As you don't often get the chance of a free trip across the Galaxy, this is a great opportunity to get rich! Stop off on several planets on your journey, collect the odd sack of precious gems, elements or gold, and take them back with you. But before you make yourself the richest person in the whole Universe, remember to refuel your Spaceship - with 6 fuel pods - every time you land on a planet. Any other goodies you collect are yours to keep. Upon landing, you will find yourself equipped with the very latest Hydrovac Jet Pac, which can automatically air lift almost any rocket stage, fuel pod or valuables that you care to land upon, and release them over the rocket ship base. Don't forget your mega-powerful, Quad Photon Laser Phasers can blast any nasty, mean aliens who might object to your visit. Warning: twitchy reflexes are a must!

Requirements: TurboForth cart version 1.2.2, 32K RAM, disk drive. Joysticks optional.

Executable to run: TurboForth AUTORUN

Download Jet Pac:

[Disk Image](#)

[Cart Image](#) --> [Cartridge may be purchased here](#)

[Instructions](#)

[YouTube demo](#)

Does not start in the Mega-Menu, needs the Turbo Forth cartridge!

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

Jet Pac running instructions:

To run it from disk, just place the Jetpac.dsk file in DSK1 for Classic99 or MESS, insert the TurboForth cartridge version 1.2.2 (latest version), and reset the computer. Jet Pac will auto-boot.

To run as a cartridge, below are the instructions for Classic99:

To load the cart in Classic99, you need to copy the file into the Classic99/MODS folder, then add the following to your classic99.ini file (make sure classic99 is not running):

```
[UserCart3]
name="Jetpac"
rom0=3|0000|10000|MODS\JPCart.bin
```

You may already have a UserCart3 so just change it to the next in the sequence. Once this is done, save the ini file, start classic99, you will then find the cartridge in the Cartridge --> User menu.

If you have a 64K Guidry cart, you should be able to burn the exact same bin file to an EPROM and run it on real iron.

Real cartridges will be soon available at arcadeshopper.com as well.

Jet Pac can be run with a joystick (recommended), or with the keyboard as noted below:

```
W boost left
E boost up
R boost right
S move left
F move right
L fire
```


Bouncy

G-1-I [Disk: 030-BOUN] By Rasmus Moustgaard



Inspired by the Commodore 64 game Bouncer, this game exquisitely leverages the color capabilities of the TI 99/4A computer to create a vibrant game with a superb soundtrack. The main gameplay has you guiding a bouncing ball through a scrolling terrain full of hazards and potential powerups while trying to collect rings for points. The action is a mix of pathfinding as well quick timing, particularly since the upcoming terrain is only revealed gradually as you progress. Hugely addictive game with a masterful execution. Very highly recommended.

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTORUN

Download Bouncy:
[Disk Image](#)

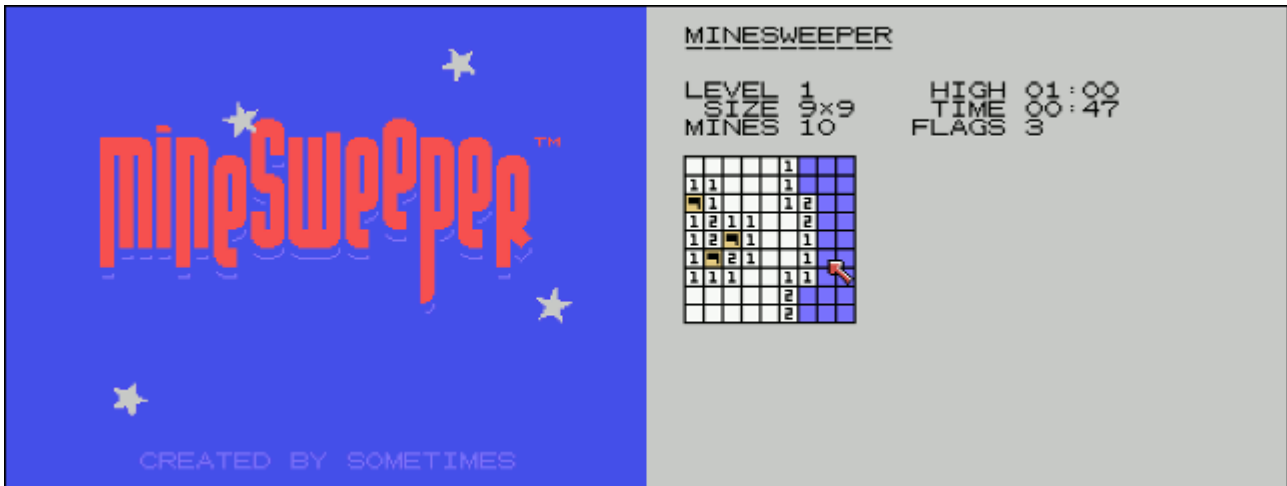
Start from mega menu: G - 1 - I

Features: Title Screen, EA5, One Player, Sound, Speech

Controls: Joystick 1

Minesweeper

G-1-J [Disk: 031-MINS] By Sometimes99er



While quite a familiar game, this version is the best I have seen to date for the TI 99/4A computer. Use your deductive skills with the help of numeric clues to locate and mark the hidden bombs on the grid. There are 3 different levels with increasing grid size. Beautiful presentation with uncluttered animation. An instant classic.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: MINE (E/A OPTION #3)

Download Minesweeper:

[Disk Image](#) --> [Cartridge may be purchased here](#)

[Minesweeper instructions](#)

Start from mega menu: G - 1 - J

Features: Title Screen, EA3, One Player, Sound

Controls: Keyboard

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.MINE

FILE NAME?

<ENTER>

PROGRAM NAME?

MINE

mine sweeper

Introduction

The goal of the game is to uncover all the squares that do not contain mines without being "blown up" by stepping on a square with a mine underneath. The location of the mines is discovered by a process of logic. "Q" will reveal what is hidden underneath the chosen square. A large number of blank squares may be revealed in one go if they are adjacent to each other. Some squares are blank but some contain numbers, 1 to 8, each number being the number of mines adjacent to the uncovered square. To help avoid hitting a mine, the location of a suspected mine can be marked by flagging it with "W". The game is won once all mines have been flagged.

Requirements

No extras required - not even the Memory Expansion. Insert cartridge and power up your console.

Quick reference guide

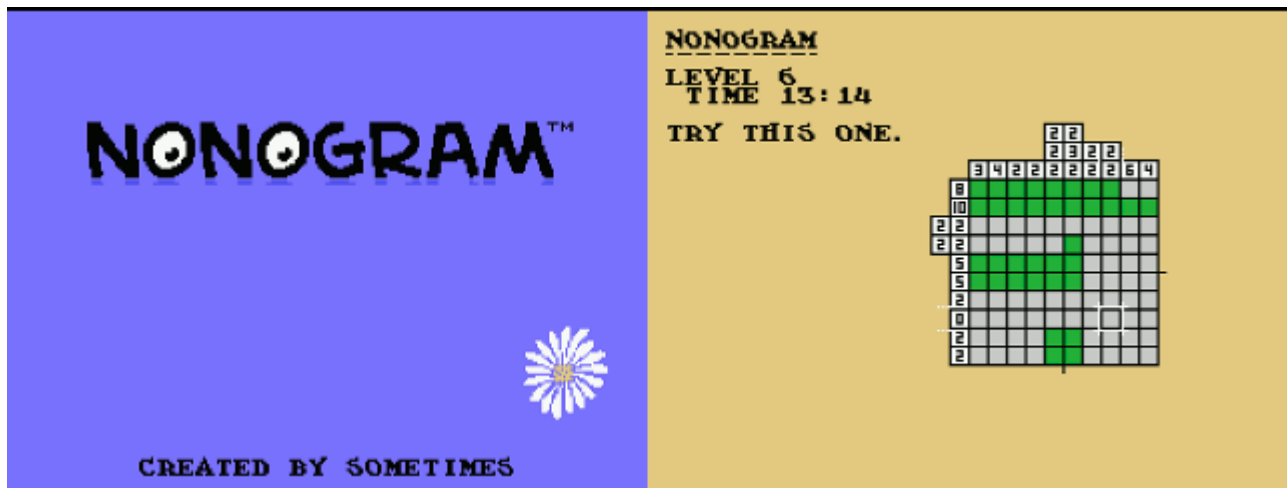
ESDX or UKL Move cursor.
1, 2 or 3 Start a new game at any time. The number match the level.
Q Reveal square.
W Flag square (or clear flag).
Fctn = (Quit) Returns the computer to the master title screen.

Credits @AtariAge.com

Software Karsten aka sometimes99er
Hardware and distribution Jim aka ksarul
 Greg aka arcadeshopper (arcadeshopper.com)

Nonogram

G-1-K [Disk: 032-NONO] By Sometimes99er



This is a picture logic puzzle where cells in a grid must be colored or left blank according to numeric clues on the sides of the grid to reveal a hidden picture. Simple and clear presentation, but absorbing gameplay. It's gets pretty tough beyond level 5, but you are always tempted to try one more level. Very well done.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: NONO (E/A OPTION #3)

Download Nonogram:

[Disk Image](#) --> [Cartridge may be purchased here](#)

[Nonogram instructions](#)

Start from mega menu: G - 1 - K

Features: Title Screen, EA3, One Player, Sound

Controls: Keyboard

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.NONO

FILE NAME?

<ENTER>

PROGRAM NAME?

NONO

NONOGRAM

Introduction

Nonogram, also known under many other names such as Hanjie and Picross, are picture logic puzzles in which cells in a grid must be colored or left blank according to numbers at the side of the grid to reveal a hidden picture. The numbers form a measure of how many unbroken lines of filled-in squares there are in any given row or column. For example, a clue of "4 8 3" would mean there are sets of four, eight, and three filled squares, in that order, with at least one blank square between successive groups. - Try and solve all puzzles in less than 100 minutes.

Requirements

No extras required - not even the Memory Expansion. Insert cartridge and power up your console.

Quick reference guide

ESDX or IJKL	Move cursor.
Q	Color square (or remove color).
W	Flag square as blank (or clear flag).
R	Reset puzzle.
B	Blinking off (or on).
N	Next color when blinking is off.
Enter	Next puzzle when solved.
Fctn = (Quit)	Returns the computer to the master title screen.

Credits @ AtariAge.com

Software	Karsten aka sometimes99er
Hardware	Jim aka ksaru

Dragon

G-1-L [Disk: 033-DRAG] By Unknown author



With definite inspiration from Scramble, you control a dragon obsessed with burning down hot air balloons. An odd fixation if you as me... You can shoot fireballs or lay down explosive eggs, whichever does the job at any one time. You have limited ammunition however, unless you go through the cylinders that pop up intermittently. Interestingly, this game was programmed using the multi-color screen mode which makes it rather blocky, although overall the feel is quite nice. Scrolling is smooth and the controls very responsive. Not bad at all.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks.

Executable to run: DRAGON (E/A OPTION #3)

Download Dragon:

[Disk Image](#)

Start from mega menu: G - 1 - L

Features: Title Screen, EA3, One Player, Sound

Controls: Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.DRAGON

FILE NAME?

<ENTER>

PROGRAM NAME?

“autostart”

Risk

G-1-M [Disk: 034-RISK] By Oliver Arnold



This gem of a game brings the classic board wargame which has been a staple of many a childhood to life on the TI 99/4A computer screen. In a nutshell, gather your armies and conquer your enemies in a mix of strategy and luck. This is a full featured version for up to 6 players but without a computer opponent. All actions and inputs are done using two joysticks so as not to have the players crowd the keyboard. The computer manages the dice, computes the battle outcomes and moves the armies around. The world map is very nicely rendered and clear, making it a snap to quickly overview the state of the game for all the players. Very nicely done indeed, and as engrossing as the original. The documentation file is included in the disk image.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks.

Executable to run: RISK (E/A OPTION #5)

Download Risk:

[Disk Image](#)

Start from mega menu: G - 1 - M

Features: Title Screen, EA5, Two to six Player, Sound, Music

Controls: Joystick 2

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

RISK V1.02

(c) 1994 O. Arnold

RISK is a strategy game for two to six players. The object of this game is a war of liberation. The aim is reached by luck and tactical maneuvers. If you have success both will destroy the other armies..

RISK is a fairware program for the TI-99/4A. It is written in assembly language and needs 32k memoryexpansion, a diskdrive, a programfileloader and two joysticks. If you like this game please send a contribution to the following adress. If you have new ideas or some questions please feel free to write me. .

.....
. Oliver Arnold
. Hauptstra~e 44
. 69517 Gornheimertal
. Germany
. or via E-Mail
. oliver@@thorin.swb.de
.....

Please note: On the disk is also the German version called RISIKO of this game in an archived format.

Start of the program:

You start the program from disk number one. After loading the title screen the program asks you to input the player names.

The sequence of the players is mixed by the program itself. If you have typed all names in correctly the program loads the next screen. Than you will see a world map with colourd frontiers and numbers. These numbers represent how many armies are in the country. All input on this screen is done by joysticks. You enter numbers by pressing the joystick forward (increasing) and backwards (decreasing). With the fire button you complete the input. The music can be turned off by moving the arrow on the small circle in the gramophone and pressing the fire button.

But this is only possible in the beginning of every round.

A game consists of the following parts:

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

A) New armies

The first player gains new armies. The number of the armies depends on the number of the occupied countries. This number is divided to three plus continental bonus. You get a continental bonus if you have occupied a whole continent.

B) Rescue other countries.

A neighboring country can be rescued by the player if he has a minimum of two armies in his country. The number of the attack dices (maximum 3) depends on the number of your armies. Due to the fact that one army must stay in your country you can only attack with one dice if you have two armies. The defender player can use the number of his armies (maximum 2) to defend the attack.

You end this point if you want to attack your own country.

C) Moving your armies

On the end of a round you can move your armies to the neighbor country.

You end this point if you want to move to a foreign country.

End of game:

The aim is reached if one player has occupied all countries.

Pressing QUIT leaves the game and goes back to the TI title screen.

Closing words:

This game is developed on a TI-99/4A with Horizon Ramdisks, 80-Column-Card from Mechatronic and the Funnelweb package from Tony McGovern. Many thanks to him for his great work.

Jet Set Willy

G-1-N [Disk: 035-JSWI] By Rasmus Moustgaard



This game is a remake of the Classic Jet Set Willy by Matthew Smith for the Sinclair Spectrum computer. A tired Miner Willy has to tidy up all the items left around his house after a huge party. With this done his housekeeper Maria will allow him access to his bedroom. Willy's mansion was bought with the wealth obtained from his adventures in Manic Miner but much of it remains unexplored and it appears to be full of strange creatures, possibly a result of the previous (missing) owner's experiments. Willy must explore the enormous mansion and its grounds (including a beach and a yacht) to fully tidy up the house so he can get some much-needed sleep. This remake is very faithful to the original game in almost every respect, and manages to reproduce the intended look and feel of this classic title. It does require nearly pixel perfect reflexes, so it will take a while to get through it. Absolutely brilliant!

Requirements: Extended Basic cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB AUTOLOAD

Download Jet Set Willy:

[Disk Image](#) --> [Cartridge may be purchased here](#)

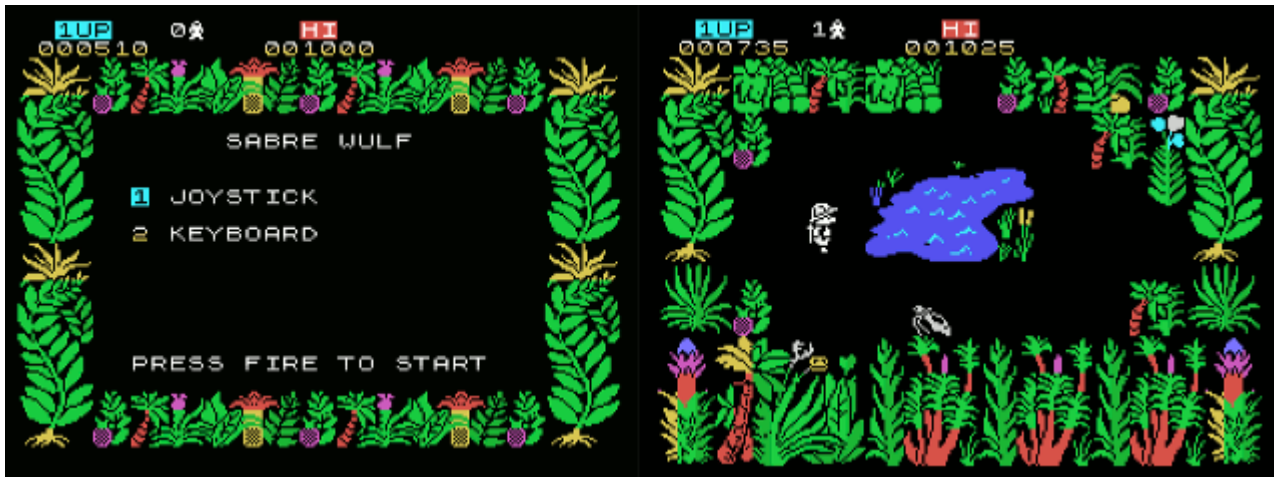
Start from mega menu: G - 1 - N

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 1

Sabre Wulf

G-1-O [Disk: 036-SABW] By Rasmus Moustgaard



In this excellent remake of the original Sinclair Spectrum game by Tim and Chris Stamper, you take on the role of Sabreman trying to recover the four pieces of a lost amulet scattered around a deadly jungle. Navigate your way while avoiding all manners of nasty creatures and plants, using your sabre as needed to clear the way. Very colorful fast paced game where quick reflexes are a must. Simply superb! **NOTE: The disk image is considered a demo. The full game is available in cartridge format only.**
Requirements: Extended Basic cartridge, 32K RAM, disk drive. Joysticks optional.
Executable to run: XB AUTOLOAD

Download Sabre Wulf:
[\[Cartridge format\]](#) --> [Cartridge may be purchased here](#)
[\[v9t9 .DSK format\]](#)
[Sabre Wulf instructions](#)

Start from mega menu: G - 1 - O

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1

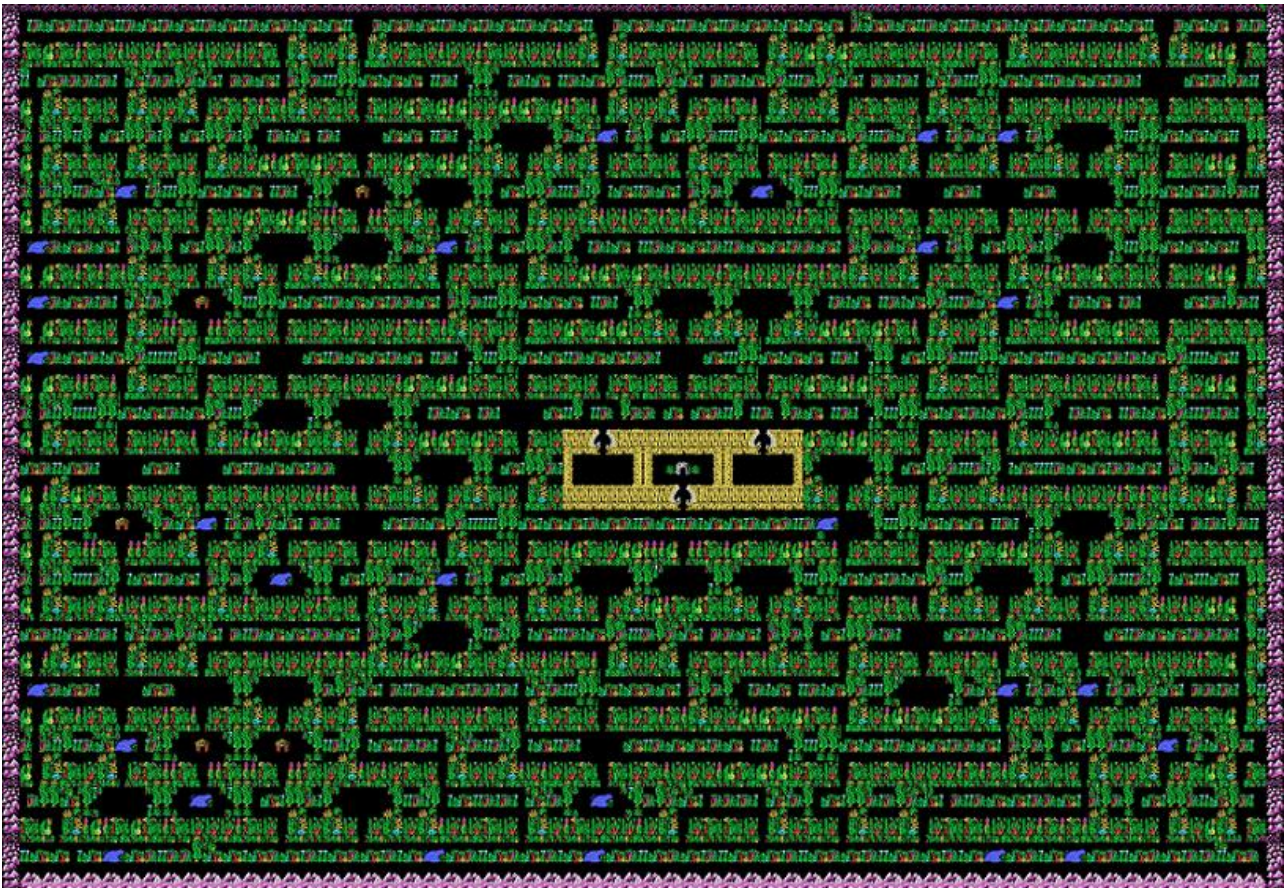
Sabre Wulf:

Taking on the role of Sabreman, players must navigate an intensely colourful flip-screen jungle maze (256 screens) to recover four pieces of a lost amulet (which depicts the titular Wulf). Once all four have been collected and assembled, the Keeper guarding the maze exit can be safely passed. However, between the entrance and exit, Sabreman must fend off a constant army of tropical foes that emerge regularly from the undergrowth with his sabre. Some enemies such as scorpions, snakes and spiders are easily dispatched, but larger adversaries such as hippos, rhinos and natives can only be made to run away by fencing. Furthermore, if the player remains in one screen for too long, an invincible and lethal bushfire appears and moves around the screen, visiting all space the player can occupy, forcing the player to leave the screen. The appearance of the bushfire effectively prevents the player from 'camping', or placing Sabreman in a corner with the fire button depressed and amassing points from dispatching the constant stream of jungle creatures that appear. Along the way, the player also encounters the Wulf's territory at the bottom of the map. Unlike other guardians, the wulf is unaffected by Sabreman's sword and so must be avoided.

Collectables

As well as searching for the amulet, players can collect treasure for bonus points and extra lives to prolong their jungle adventure. Also available are jungle orchids that periodically grow and flower in forest glades and just need to be run over. There are several varieties of these each in a different colour and with a different effect on the player. Some give immunity to the jungle beasts or increase movement speed, while others cause negative effects such as paralysis or disorientation (reversed controls). Used wisely, they can make progress through the jungle much easier.

Sabre Wulf Map





Sabre Wulf for the TI-99/4A Home Computer



THE HAPPENING

Down and down I plunged, through Rocky Glades, Steep Ravines and
Shady Hollows... No grip, no footholds, slipping, tumbling, spinning,
darker and darker, deeper and deeper.

Glinting eyes, clutching hands, clasping claws, clawing my all, as I swiftly
twist and tumble onwards.

Darker and darker, deeper and deeper. It is the end that I fear, of this
untroden voyage... to where I do not know... AARRRGGGG... THUDDD...

Fall and end meet on soft mossy soil... with weapons drawn and senses
full I move quickly and quietly around the mounded clearing... All safe
except a message... An ancient warning etched deep into the lifeless
stone.

THE WARNING

THY PATH IS LONG SO TREAD WITH CARE
BEWARE THE WULF AND PASS HIS LAIR
DANGER THREATENS ALL AROUND

SO TAKE YE FROM THIS HIDDEN MOUND
TO FREE THEE FROM THIS SUNKEN GATE
BY WAY OF CAVE OR MEET THY FATE

AN AMULET TO SEEK THY WILL
'T WAS SPLIT BY QUAD AND HIDDEN STILL
PASS THE KEEPER WROUGHT WITH HATE

TO GAIN AN ENTRANCE TO THE GATE
THE PIECES LOST MUST THEE AMAS
FOR IF NO CHARM THEN NON SHALL PASS

Sabre Wulf for the TI-99/4A Home Computer



THE EXPLORATION

I edge through the shady mounded clearing and on through the dense thickets of hot house rain forest undergrowth, of sorts I cannot tell, and wait... and listen... Distant rumblings of heavy feet crashing, large animals leap from the damp green stubble, to fight and kill.

I stay hidden... The rumblings grow louder and louder, as a huge Goliath animal crashes past, horns swiping and tail lashing, still I hide as its thunderous noise dies away.

All was clear as I leapt over the clumps and onto the well trodden pathway, its deep ruts and prints reveal the multitude of life forms inhabiting this hollow. Danger threatens so I should move quickly... But
Where???

THE EXPEDITION

Wide eyed, I stare, as the dense surroundings reveal their hidden secrets ... Strange food orchids suddenly bloom, their staining toxins, strong on the air, then, in an instant, are gone.

Hunters, killers, vampire bats and huge beasts spring forth from the very ground, swimming, slithering, diving and crawling... I must hide... Stay safe... With weapon strong and cunning nature, I will survive...

Sabre Wulf for the TI-99/4A Home Computer



GETTING STARTED



On the start screen you can choose between joystick or keyboard control by pressing 1 or 2.

Options 3 and 4 will only appear on systems with the F18A video board installed. If you press 4 the colour palette will change to one of more radiant colours. The number of sprites on a line will also be set to 32. If you press 3 the F18A will revert to the standard palette and jumper settings.

To start a game, press fire on joystick 1 or Q on the keyboard.

To leave the game, press FCTN + = from the start screen.

Sabre Wulf for the TI-99/4A Home Computer



CONTROLLING YOUR EXPLORER

KEYBOARD CONTROLS

LEFT	Your Explorer will move left using the S key
RIGHT	Your Explorer will move right using the D key
DOWN	Your Explorer will move down using the X key
UP	Your Explorer will move up using the E key
SWORD FIGHT	Your Explorer will fight using the Q key
PAUSE	The whole game can be paused by using the P key. Press fire to resume the game.
SHOW AMULET	The collected amulet pieces can be shown using the A key. Press fire to resume the game.
PICK UP	Your Explorer will automatically collect any useful objects required by passing over them.

JOYSTICK CONTROLS

Your Explorer can be fully controlled by using joystick 1, by replacing the **LEFT**, **RIGHT**, **UP**, **DOWN** and **SWORD FIGHT** commands. Remember to release the **ALPHA LOCK** key to enable the joystick to move up.

Sabre Wulf for the TI-99/4A Home Computer



SPECIAL ITEMS

	Valuables
	Extra life
	Amulet piece
	Immunity
	Speed
	Confusion
	Paralysis
	Cure all

Sabre Wulf for the TI-99/4A Home Computer



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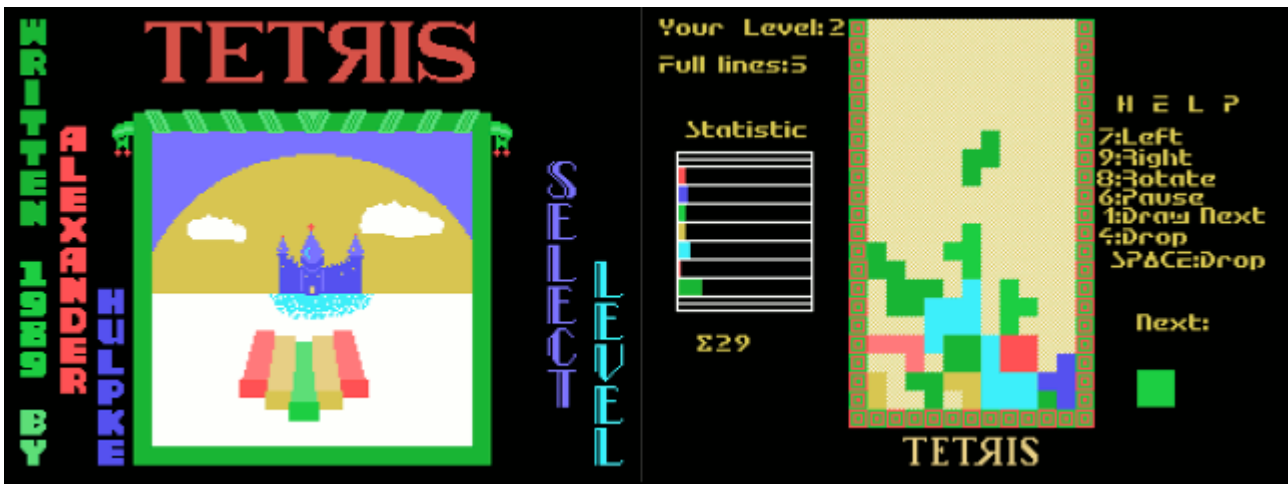
SABRE WULF Copyright, ULTIMATE PLAY THE GAME, Copyright & Trade Name, 1984 Ashby Computers & Graphics Ltd.

TI-99/4A remake by Rasmus Moustgaard, 2014.



Tetris

G-2-1 [Disk: 037-TETR] By Alexander Hulpke



While certainly not an original breakthrough game, this version however is the best I have seen by far for the TI. Smooth animation, colorful graphics, nice music and a full set of features set it apart from other versions. A timeless classic.

Requirements: Extended Basic cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB AUTOLOAD

Download Tetris:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

Start from mega menu: G - 2 - 1

Features: Title Screen, EA5, One Player, Music

Controls: Keyboard, Joystick 1

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

Alicomputer Wuppertal Software Systems presents:

T E T R I S

The Tetromino Game

(C) 1988 by Alexander Hulpke

Software for the TI-99/4A and GENEVE 9640

Version 2.0

The following is an abbreviated translation of the original German docs

1. INTRODUCTION

TETRIS (or Tetromino) is based on the same principles as Domino, that is, it is played with tiles. But unlike Domino which uses rectangular tiles (2 squares forming a rectangle), Tetromino utilizes tiles which combine four squares in a variety of shapes. As in Domino the tiles are placed next to each other, not one on top of the other.

Aside from adventure games, I think that TETRIS is one of the best ever computer games. Game aficionados will be aware that it has been available for a number of personal and home computers but its makers did not deem it necessary to include the TI or Geneve. This led me to write this one on the Geneve and also to adapt it for the TI99/4A.

A word of caution: This game can drive you nuts! It is highly addictive. I will NOT be responsible for whatever effect it may have on you. Consider yourself warned. You may want to erase it now before you get hooked!

2. FAIRWARE INFORMATION

TETRIS is freeware. You may use it, pass it on (or erase it!) as long as you adhere to the following rules:

- a) The program must be passed on at no cost except what is reasonable for the disk and/or postage. But no charge may be made for copying it.
- b) The game (and the disk) MUST be passed on unaltered. I know that with sector editors and the like any idiot can modify it. If your ego is such that you'd like to see your name on the screen, I don't care but don't do it on the copy you pass on.
- c) If you like the game (and don't erase it right away) a contribution to the author would be appreciated. The going rates being what they are, I would suggest no more than DM 10-15 DM (\$5-7.50 - Aug 1989), though I will not object to anything above that amount. Mail to:

Alexander Hulpke.
Sadowastrasse 68.
D-5600 Wuppertal 1.
Federal Republic of Germany

Remember that - if you are still trying to figure out whether or not

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

to send a contribution two years from now - freeware authors may not develop any more software while waiting for some kind of response to their efforts.

3. CAN I GET THE SOURCE CODE?

The answer is yet, but. I will share the source code if you will sent me some of yours. Please, no programs you typed in from "Assembly made easy" or the like. It must be original and yours. If you want the source for learning purposes, write and perhaps we can find a way to accommodate you.

4. LOADING, STARTING AND PLAY

First a word for Geneve users: this program was written on the 9640 and should run without any problems. As a few MDOS programs, FRACTALS by A. L. Beard, is one of them , set the VDP registers in a strange manner you may not see any sprites displayed. Should this happen to you, power down and do a cold boot. There is only one problem I am aware of and that is the fact that the Geneve normally runs at twice the speed of the TI. In order to make TETRIS usable on both the Geneve and the TI I use a fairly short delay loop. Geneve owners should select speed 1 with the GPL loader.

The complete set of TETRIS files consists of the following:

CHARA1 - Character set
TETDOCSENG - This file
LOAD - XB loader
TETIT_C - Title screen
TETIT_P
TETRIS - Main program (E/A 5 : Load and run)
TETRISDOC - Original docs (German)
TETRIS_C - Game screen
TETRIS_P
YLOAD

Load from either XB with the LOAD program or E/A option 5, TETRIS. While the freeware screen is on display, the program loads the picture files and once that is done a keypress produces the title screen.

At this point, select the degree of difficulty by pressing 0 - 9 with zero being the easiest (slowest).

Now the game begins. Tetromino tiles will be dropping from the top of the screen. The object of the game is to pack each line without leaving any voids. Full lines are removed which means if you succeed you will be working near the bottom of the screen with plenty of time to steer the tiles left or right (with the 7 and 8 key, respectively) or rotate them (8) to make them fit. The 4 key or the spacebar can be used to drop a tile without delay. No. 6 is the 'pause' key (any key to resume).

You may also play with the joystick: right/left is simple, up will draw a new tile, down will drop it. The button rotates the tile.

These keystrokes are also shown to the right of the play area.

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'Statistic' on the left side of the screen serves as a scoring device of sorts.

5. APPENDIX

You may wish to modify the program. For instance, if you use a green monitor it may be difficult to differentiate the colors. Principally, that should not be a problem, the picture files used were produced with TI-Artist. However, some items were not drawn in the normal manner but in a form which enables TETRIS to better utilize the data. Still, you should be able to select other colors. For the bars of the 'Statistic' this is done in the picture files, for the tiles it must be done in the program. If you examine the first sector of the TETRIS file you will see something like:

```
0000 1370 A000 0460 A7F4 000A 000A 0804 020A 0709 0C00.  
| Don't change this | | Speed | | Colors, top to bottom
```

The two words (>000A) set the delay while and after a tile is dropped. The value shown is the minimum. Speed decreases as these values are increased.

A couple of cautions:

- a) make these changes on a backup copy - just to be safe - and
- b) don't change anything else, the program might refuse to run if you do.

6. CONCLUSION

Thanks are due Harald Glaab, Bleichstr. 5, 8750 Aschaffenburg, who found the bug which prevented this program from running on the TI99/4A. If it runs on your 4A it is due to his efforts.

Once again, let me say that TETRIS is very addictive. My personal record at the moment is 340 tiles played at level 3.

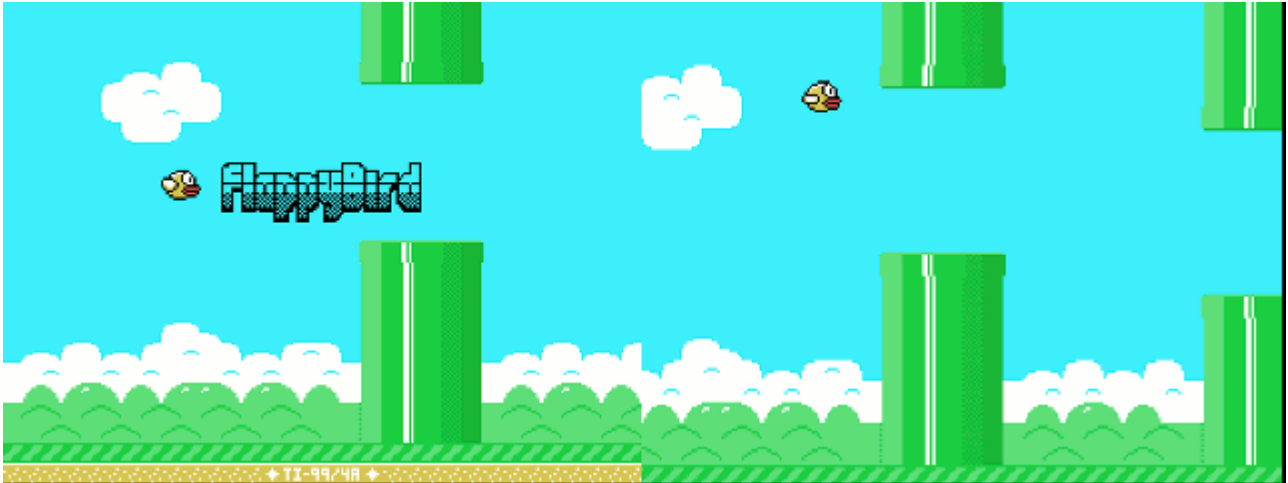
Finally, I'd like to thank Lutz Winkler for translating these DOCs from my German gibberish into readable english.

Enjoy the program,

Alexander Hulpke

Flappy Bird

G-2-2 [Disk: 038-FLAP] By Rasmus Moustgaard



I suppose the title says it all, unless you have been living under a rock for the past few years... Press the space bar to flap the bird's wings and keep it aloft as it tries to fly through a series of obstacles. Beautifully executed version for the TI, but I found it incredibly hard to play and the repetitive music drove me nuts. Addictive to some, mind numbing to others: that's up to you.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.
Executable to run: XB AUTOLOAD

Download Flappy Bird:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#) --> [Cartridge may be purchased here](#)

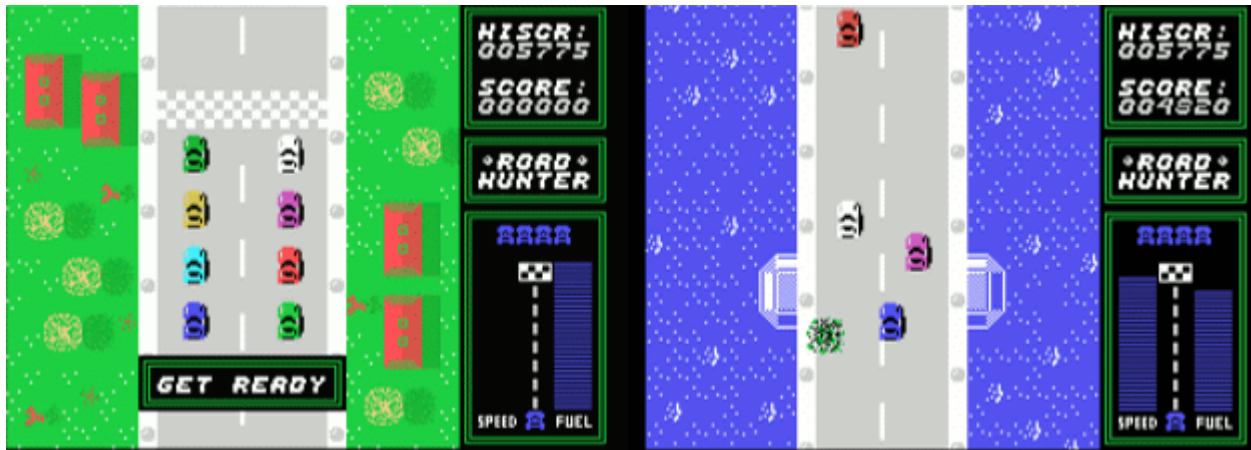
Start from mega menu: G - 2 - 2

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 1

Road Hunter

G-2-3 [Disk: 039-ROAD] By Rasmus Moustgaard



Heavily inspired by the 80's arcade game Spy Hunter, this game puts you in the driving seat of a car on an endless road as you try to avoid other cars and collect enough fuel to get past each increasingly difficult stage. If you are able to pick up the occasional gun lying on the street, then you will have the pleasure of shooting your way clear in a very satisfying manner. You can also bump the other cars off the road if you are careful enough. Brilliant gameplay and great soundtrack. An absolute blast to play! Yet another masterpiece from Rasmus.

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Road Hunter:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#) --> [Cartridge may be purchased here](#)

[Road Hunter manual](#)

Start from mega menu: G - 2 - 3

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 1



ROAD HUNTER

© 2014 By: Rasmus Moustgaard
rasmus.moustgaard@gmail.com
Version 1.0, February 21, 2014
Original manual modified by: Kevin Coleman

Introduction

Road Hunter is a racing game for the TI-99/4A home computer where you score points by bumping into other cars, knocking them off the road or even shooting them out of the way! You'll need good driving skills and fast reflexes to avoid ending up on the side of the road yourself. You'll also have to make sure that you don't run out of fuel, because if you do, it's game over! Fortunately for you, the car is equipped with an advanced system that allows you to refuel on the fly, by using fuel drums that others have dropped on the road. Occasionally, guns may even turn up on the road, and these make it easy to clear a path ahead of you. Be aware, if you bump into other vehicles while carrying a gun, you'll probably lose it.

The game is not all about destruction; you should also attempt to finish the track to collect the bonus (depending on the amount of fuel you have left). Watch out for that next track, it might be even harder than the last to complete.

Program Loading

To load and run the game you have three options:

- 1) Editor/Assembler option # 3 : DSK1.RH
- 2) Editor/Assembler option # 5: DSK1.ROADHUNT
- 3) Extended BASIC loader

Note: The game requires the 32K RAM memory expansion to operate.

Game Controls

	KEYBOARD	JOYSTICK
Accelerate	E	UP
Braking	X	DOWN
Steer Left	S	LEFT
Steer Right	D	RIGHT
Fire	SPACE	FIRE
Pause Play	P	

Press accelerate or fire to start the game. After 10 seconds with no activity, the game will enter into the demonstration mode.

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

Playing Tips

- ° Hitting other cars from the side is the easiest way to push them off the road, but be careful if you're driving too near the road side, you could bounce off the other vehicle and crash.
- ° Avoid colliding into other cars from the rear since this might send your own car off the road.
- ° If you hit a car in the front end it will explode immediately.
- ° Shoot if you can, but avoid shooting the fuel drums or you may run out of fuel.

Rasmus Moustgaard
Copenhagen, February 2014

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

Technical Notes

- ° The game was written in TMS9900 assembly language, and was assembled/compiled using WinAsm99. Testing and debugging was primarily done using Classic99, but the game has also been tested in MESS 0.150 and on a real TI-99/4A.
- ° The game runs at 60 frames per second (FPS), or 50 FPS on EU consoles without the F18A. Timing is done by polling the VDP status register. Interrupts are disabled at all times. All 256 bytes of scratch pad memory are used, but a copy of the original content is saved and restored again before file operations.
- ° The maps were made in the Magellan map editor and exported using the "Assembler Character Transition Data" option. Because of the smooth scrolling, each unique pair of neighboring characters in the vertical direction uses up one of the 256 characters, and the characters beyond 192 are reserved for the left side panel. The game is running in the normal graphics mode so to avoid color spills, two characters next to each other must have compatible color sets.
- ° Each map consists of 24 24x24 screens. Each track consists of 104 screens in a fixed order specified using a list of screen memory addresses. The maps are 13.5 K each so they have to be loaded from disk for each level to fit into RAM.
- ° The map is not read in order to detect if a car hits the side of the road. For each track, only the starting position of the left side of the road and the (fixed) width of the road is used. For each screen, the direction of the road (left, straight, right) as one number. From this information the program can calculate the position of the road sides at any point.
- ° Reading from VDP is kept at a minimum. Except for file operations, only the VDP status register is read.

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

- ° The first 8K of the VDP RAM is used for storing character definitions, in 4 character sets, each corresponding to a different scroll offset (0, 2, 4, 6 pixels). A routine scrolls the original patterns and uploads the data to VDP RAM once before each level. Scrolling is done simply by changing the address of the pattern table. After 4 times or 8 pixels it moves back to the first character set and switches to another name table scrolled one character or 8 pixels.
- ° There are two name tables in VDP RAM (one at >2000 and one at >2400). I alternate between them each time I have scrolled the screen 8 pixels. I show one table while updating the other. To even out the work between frames I update 1/4 or 1/2 of a table each frame, depending on whether the scroll speed is 2 or 4 pixels. Copying from CPU RAM to VDP RAM is done using a routine in scratch pad RAM that has 8 consecutive MOVB instructions in the loop body.
- ° There are also two sprite attribute tables that are alternated between. Each frame I switch to one of the tables while uploading data to the other from CPU RAM. The CPU RAM copy of the table is actually stored in scratch pad memory. The game uses a flicker (reducing) routine where I cycle the quarter of the table that gets the lowest sprite numbers, i.e. the quarter that is uploaded to the beginning of the VDP RAM table.
- ° Sound and music is played using my own sound list player. This is based on the format of standard sound lists but also supports loops and calls. Allowing the 'drums' to play continuously without being disrupted by the explosions required a little special coding. Keyboard and joystick are read directly using CRU. A single call to KSCAN would reduce the frame rate by a factor two because of the delay.
- * During game development I have continuously kept an eye on the number of CPU cycles used by the main loop using the debugger in Classic99. I find this essential if you want to make a fast moving game on the TI. It's easier to fix any speed issues immediately, rather than later when the code has become more entangled.

Junkman Junior

G-2-4 [Disk: 040-JMAN] By Merlin Magicware



This game is another variation on the classic platformer game, where you have to climb ladders, jump platforms and avoid projectiles in order to collect various items on each level. The animations are quite well done and the gameplay is very smooth and responsive. It gets pretty difficult with each successive screen as new challenges are added, thus avoiding the common trap of tiring repetition. Very well executed and fun to play.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: JMANJR (EA option #5)

Download Junkman Junior:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

Start from mega menu: G - 2 - 4

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 1

Bouncing Babies

G-2-5 [Disk: 041-BAB] Original Game By Dave Baskin / TI 99/4A Remake by John Chase



Bouncing Babies seems to be vaguely reminiscent of Circus Atari, but with a twisted theme where you have to save babies from a building fire by catching them as they fall down from the top floor apartment. No pressure! You have to deal with multiple waves of falling babies coming down in rapid succession while you move the trampoline back and forth in an attempt to catch them and bounce them into the waiting ambulance. Great graphics, but a very difficult game to master beyond the first wave. What will you tell those poor mothers???

Requirements: Extended Basic, 32K RAM, disk drive.

Executable to run: BABIES

Download Bouncing Babies:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

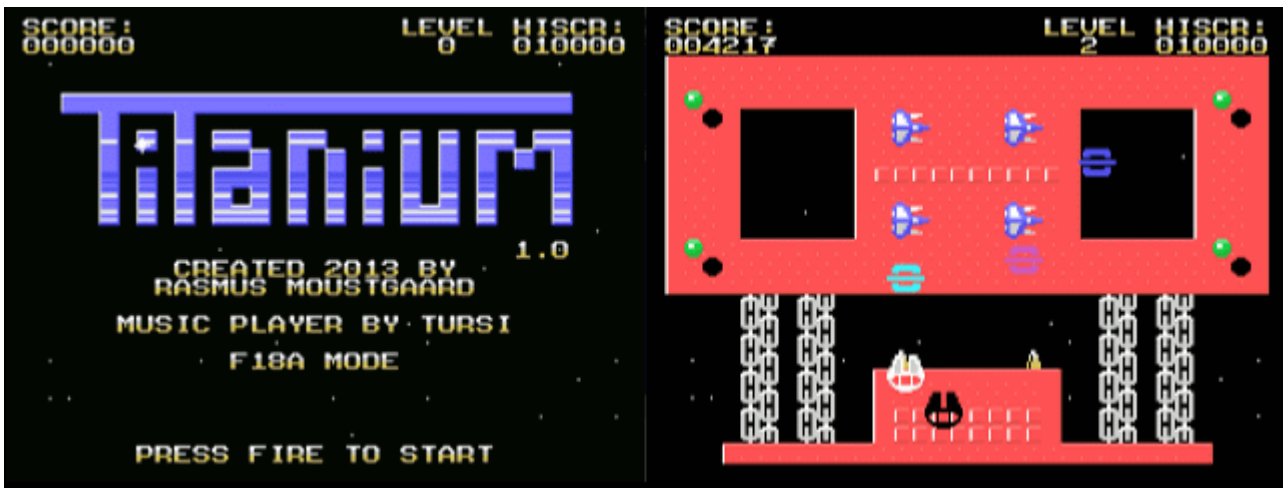
Start from mega menu: G - 2 - 5

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard

Titanium

G-2-6 [Disk: 042-TITA] By Rasmus Moustgaard



Titanium is heavily inspired from the Commodore 64 game Uridium, as you race from one platform to another destroying structures and ships while assiduously avoiding obstacles and defending ships. Gameplay is frenetic but smooth with impressive animations and great introductory as well as background music. Furthermore, the game will take advantage of the F18A VGA board if available on your system for ever more enhanced graphics. The difficulty ramps up pretty rapidly, so you'd better have good reflexes. And given that this is the author's first TI 99/4A assembly game, it is all the more incredible! Georgous game!

Requirements: Extended Basic, 32K RAM, disk drive. Joysticks and F18A optional.

Executable to run: XB autoload

Download Titanium:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#) --> [Cartridge may be purchased here](#)

Start from mega menu: G - 2 - 6

Features: Title Screen, EA5, One Player, Sound, Music, F18A

Controls: Keyboard, Joystick 1

TI Scramble

G-2-7 [Disk: 043-TISC] By Rasmus Moustgaard



You probably recall the arcade game Scramble from Konami first introduced in 1981 to critical acclaim, so here's a treat for you: a pretty faithful port for the TI 99/4A computer which will take you back a few decades in time. Your mission is to guide your ship through scrolling terrain, destroying everything in sight using lasers and bombs, while capturing enough fuel to keep you flying, until you finally reach your base then start over again with increased difficulty. Each stage is greeted with speech. Sound effects and animations are superb, and the game will also take advantage of the F18A VGA board for even more faithful graphics to the original arcade game. Yet another tour de force from this author. I cannot recommend this game enough.

Requirements: Extended Basic, 32K RAM, disk drive. Joysticks, speech synthesizer and F18A optional.

Executable to run: XB autoloader

Download TI Scramble:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#) --> [Cartridge may be purchased here](#)

[TI Scramble instructions](#)

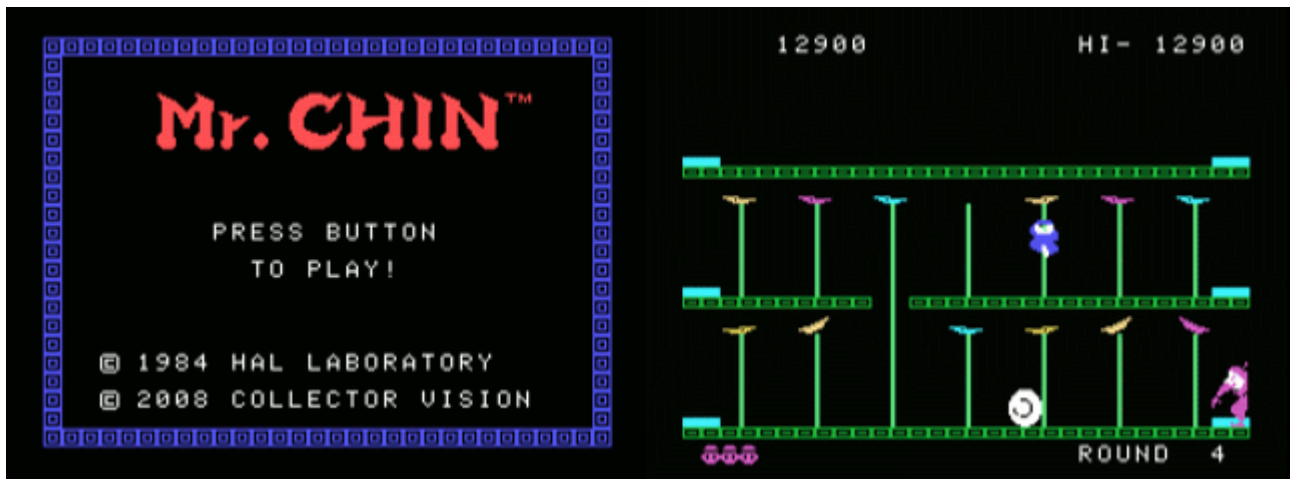
Start from mega menu: G - 2 - 7

Features: Title Screen, EA5, One Player, Sound, F18A, Speech

Controls: Joystick 1

Mr. Chin

G-2-8 [Disk: 044-MRCH] By HAL Laboratory / TI 99/4A conversion by Mike Brent



This game is yet another conversion of a timeless classic, Mr. Chin originally produced for the ColecoVision game console. The premise here is simple but original: you seem to fancy balancing plates on poles, and there is a jealous person determined to make you fail by throwing deadly objects at you. Very addictive, with multiple levels to help ease you into the game and clean graphics and sound effects. It seems to strike a nice balance between strategy and pure reflexive play, and I found it quite fun! **Note: A collector's edition of this game including a box, manual and disk will soon be available for purchase here.**

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: MRCHIN (EA option #5)

Download Mr. Chin:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

[Mr. Chin instructions](#)

Start from mega menu: G - 2 - 8

Features: Title Screen, EA5, One or two Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf Assembly / c99 / Forth Games

Run EA#5: MRCHIN

To be brief - Mr Chin is a plate-spinner. Your goal is to place a plate atop each pole on the screen, while avoiding the obstacles thrown at you by your jealous rival. Over time, the spinning plates will slow down, and if not re-spun, they will eventually fall.

To pick up a plate, walk over the plate dispenser at either each of the screen on each level. To place a plate, climb to the very top of a pole while carrying one.

Controls are simple: Up/Down climbs poles, Left/Right walks, Fire jumps. When on the ground, pulling down will duck (allows you to duck under a HIGH sword), and at the top of a pole, pressing up will spin a plate already there.

Each time you fill an entire row with plates, that row and the row beneath you will magically be re-spun to give you time to move on! When all three rows are filled, the level is complete. (This is an ADDED feature that the ColecoVision did not have). The next level will be faster and your rival more aggressive.

Use joysticks or E/S/D/X and Space bar. In two player mode, both joysticks are used, or players take turns on the keyboard.

This is a more-or-less direct port of the ColecoVision C code, compiled using Insomnia Labs' GCC port (<http://insomniablabs.blogspot.com/>) and my own libti99 (<https://github.com/tursilion/libti99>)

It worked pretty well, a couple of minor compiler issues easily worked around (and it found a bug in MY code that SDCC didn't).

The ColecoVision cartridge was published by CollectorVision and they have given permission for this TI port to be released. You can find information here: <http://www.collectorvision.com/game-mrchin.htm>

and here: <http://www.colecovision.dk/mrchin.htm>

You can even find the original manual here: <http://www.beeslife.com/colecovision/colecovision.php>

There's one known issue, where a bouncing plate will cause the background music volume to decrease for a while. It's a minor issue that isn't addressed in this release.

Mad Marvin's Great Escape

G-2-9 [Disk: 045-MARV] By Marc Hull



In a super twist on the classic Lunar Lander game, you are trapped in your saucer inside giant caverns, and the only way out is to open the door of each one by landing on each of the platforms in order. You battle gravity by applying thrusters and land by deploying your landing gear. This is a monstrously addictive game that will task your reflexes and sense of timing to the maximum. The version presented here is a demo, and **you can purchase the full version here.**

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: MARVIN1 (EA option #5)

Download Mad Marvin's Great Escape:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

Start from mega menu: G - 2 - 9

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 1

Mad Marvin's Great Escape...

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The game Mad Marvin's Great Escape is a copyright work of DSAPSC. Please feel free to distribute or post the DEMO version only of the game as well as these instructions. Please do not post or distribute the full version of the Game.

STORY.....

In the year 2525 an Earth man was convicted of crimes against the Martian Bureaucracy and subsequently confined to the Penal colony on Phoebeos until he swore loyalty to the system.

Not being prone to confinement nor swearing oaths, He vowed to escape the colony at his earliest opportunity. This is the story of that Earth man, Marvin and his great escape.

At approximately 10:25 AM Central Martian Time on August 12 2525 a Martian Highway patrol cruiser docked at a local donut shop in the penal colony where Marvin had been conscripted to remove graffiti. Being somewhat complacent and having to really take a pee, the officer unwisely left his vehicle and entered Carl's house of dough. Seizing the opportunity, Marvin jumped into the cruiser and made for the nearest exit.

Witness to the incident claim that Marvin was laughing joyfully and giving some kind of unknown sigh language to the officer as he sped away.

LOADING.....

Mad Marvin's Great Escape is an EA5 executable. It can be loaded via DSKx.MARVIN for the full game or DSKx.MARVINDEMO for the free 6 level demo. Once loaded the game will auto start. Requirements for the game are a TI99/4A, 32K memory, Disk system and joysticks.

GAME PLAY AND CONTROLS.....

To start the game, simply press the fire button on Joystick #1 at any point you can see the title screen. The game will begin at the lowest level of the colony with Marvin driving the stolen Martian Highway Patrol cruiser.

The object of the game is to escape from the level you are on and into the level above you. You may notice that both exits are currently guarded by a destructive force field known as the "Shocker." In order to disable the "Shocker" at the top of the screen, Marvin must land on each pad in order (pad 1 followed by pad 2 etc...) Once all 5 pads have been landed on then the "Shocker" will deactivate and the exit will be safe to pass through.

When Marvin enters a new level, the timer (lower right portion of the screen) is immediately started. If this timer reaches zero while Marvin is still navigating the level then the room will be flooded with ionizing radiation, vaporizing everything, including Marvin.

There are 21 levels to the full game (6 for the free demo.) Complete all 21 levels to escape and win the game.

You control the stolen cruiser with joystick #1. To thrust and direct the ship upward then press the stick up. Left is left and right is right. Down has no effect. Gravity and inertia are in play so you need to be cautious. The button toggles the landing gear.

In order to land on a pad then the gear must be down and the ship completely over the pad. The more centered in the pad the safer.

A note about the landing gear. When deployed they cover the horizontal thrusters of the cruiser and prohibit any left or right change in motion. To control horizontal movement with the joystick then the gear must be up.

SCORING.....

Marvin scores points by landing on the pads. Each pad has an initial value of 1500 points. When pads are landed on in the correct order then the value of the pad is increased. If a pad is landed on out of order then the value is reset to 1500.

When Marvin escapes a level then the time remaining is awarded to your score as a bonus. Each subsequent level contains a bonus multiplier, which makes the time left worth more than it was in the last level. High scores are achieved by navigating levels quickly and efficiently.

For every 100,000 points earned an extra ship is awarded up to a maximum of nine ships at one time.

GAME OVER.....

If Marvin loses all of his cruisers (remember it's a video game) then the game is over.

If Marvin exits the last level of the game then a message is flashed and a song is played. Additionally the game awards special bonus points for every ship you have remaining

After the end of game sequence is displayed the game goes back into attract mode with the title sequence.

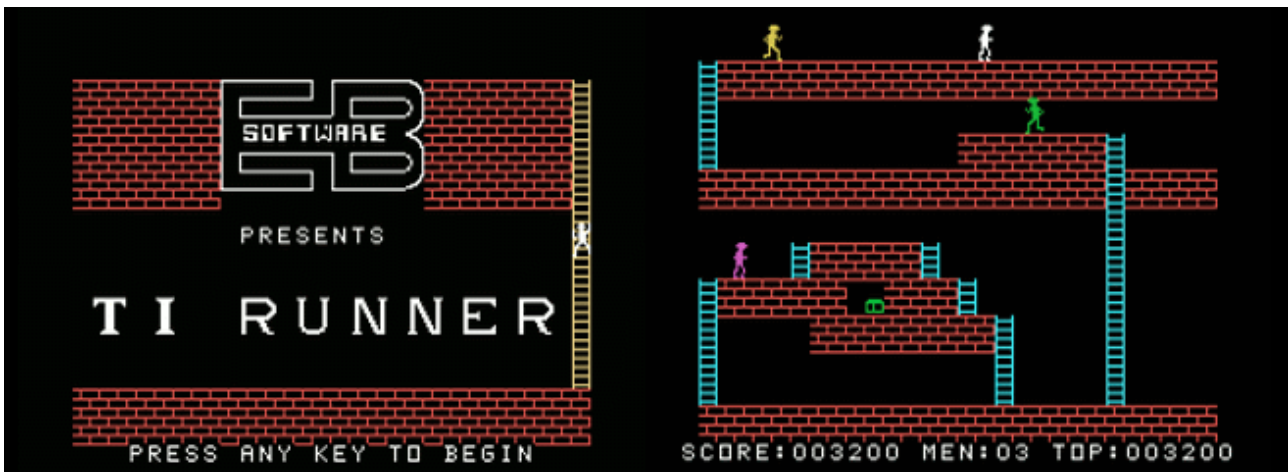
Level select mode.....

While in attract mode, if you press up on joystick 1 then a special level select mode is activated. Simply drive the cursor over the level you wish to try and press fire. You will be warped there and game play will begin.

Mad Marvin's Great Escape is made available on an as is basis. No guarantee is made as to functionality or suitability of this product.

TI Runner

G-2-A [Disk: 046-TIRU] By EB Software



You are a highly-trained commando who has been captured and imprisoned deep in the catacombs of the evil Kryon Empire. Will you be able to mount a successful escape and still get away with the Kryon booty? While superficially it seems to mimic your usual platformer, the gameplay has very interesting features such as the ability to create holes in the ground to trap your pursuers and walk over them, among other things. Advancing much further than the first level will require skill and strategy, and you will soon find yourself glued to your screen and uttering unrestrained profanities. Excellent animations. In other words, try it out!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: TIRUNNER (EA option #3)

Download TI Runner:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

[TI Runner instructions](#)

Start from mega menu: G - 2 - A

Features: Title Screen, EA3, One Player, Sound

Controls: Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.TI-RUNNER

PROGRAM NAME?

“autostart”



for the TI-99/4A and it's Emulators

You are a highly-trained commando who has been captured and imprisoned deep in the catacombs of the evil Kryon Empire.

Will you be able to mount a successful escape and still get away with the Kryon booty?

There are 50 completely different levels awaiting you on your quest for fun and adventure. However, there are guards that are hot on your trail. You will be running, jumping, drilling passages, and outfoxing life-threatening guards as you escape from the Kryon dungeon.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Minimum System

TI-99/4A

Editor/Assembler or Mini-Memory

32K Memory Expansion (or equivalent)

One Drive (real or virtual)

Setup

To start the game:

- 1) Insert the Editor/Assembler or the Mini-Memory cartridge into the computer.
- 2) Turn the computer and the peripherals (disk, etc.) on.
- 3) Insert or Mount the TI-Runner disk into drive number one.
- 4) Select the LOAD and RUN option.
- 5) Type in the filename DSK1.RUNNER and push ENTER.
- 6) Leave the game diskette in the drive while the game is being played.

Initialization

Once loaded, the game will cycle between the title screen and demonstration mode. It is suggested that you watch the demonstration mode, as it will show you the basic strategy of the game. Start the game by pressing any key. Remember... make sure the ALPHA LOCK is up (off).

Game Play

Either the keyboard, joystick one or joystick two may be used to control your man, Clyde. Once the first level has loaded, Clyde will be the guy in white that is blinking on and off. The action starts when any key is pressed, including the joystick fire button. The keyboard layout is as follows:

	E			
S		D		K L
	X			
	MOVEMENT			BOMBING

When using the joystick, the fire button is used for bombing. You will always bomb the opposite way that Clyde is facing. It may take a short time to get used to this.

You are allowed to both move and bomb using either the joystick or the keyboard.

The game will reset back to the title screen if no key is pressed within four minutes.

Movement

Clyde is allowed to move over bricks and climb up the ladders. Clyde can fall off of any brick or ladder without hurting himself, and he may walk over any guard that has fallen into a bombed brick. To pick up any treasure, Clyde can just walk over it or fall on top of it. Beware of trap doors, as they look just like plain bricks!

Bombing

Bricks are the only things that can be bombed and only certain ones at that. The bricks that cannot be bombed are: bricks under any ladder, trap door bricks, and no-bomb (dark) bricks.

When one of the guards falls into a bombed brick, he will drop any treasure that he may be carrying. Fallen guards will remain stuck in place until the brick fills back in. Once the brick is filled in, the guard will once again be on the prowl. If more than one guard falls into the same hole, one of them will regenerate from the top of the screen. If Clyde falls into a hole that he bombed, he will fall through it.

Scoring

You are given 200 points for each treasure, and a 1000 point bonus for completing each level. The high score is also kept for you. In addition, Clyde gets an extra life as he achieves each level.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Special Keys

The game can be paused at any time by pressing the “P” key. To continue the game, press the “C” key.

If Clyde gets into a situation that he cannot get out of, pressing function “6” (proceed) will terminate Clyde.

Function “8” (redo) will start the game over.

Function “9” (back) will return the game to the title screen.

Function “=” (quit) will end the game.

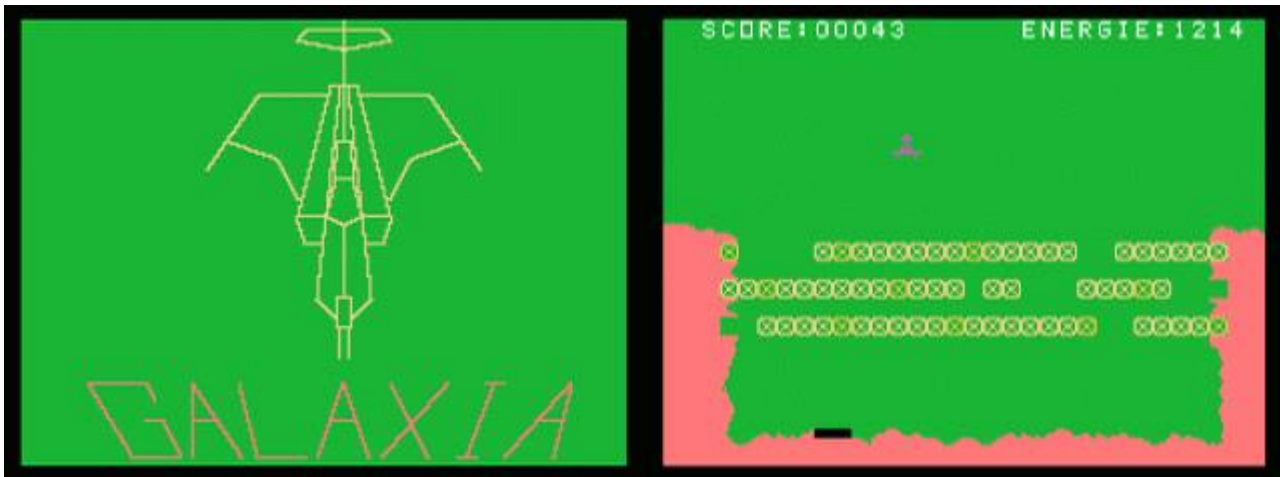
At the beginning of any level, function “5” (proceed) will advance to the next level. There is a way to go to any level, but we will leave it up to you to find it. All levels can be solved.

MINIMUM SYSTEM REQUIREMENT

TI-99/4A
EXTENDED BASIC
32K MEMORY EXPANSION
ONE DISK DRIVE (REAL OR VIRTUAL)

Galaxia

G-2-B [Disk: 047-GALA] By Unknown Author



I'm not quite sure what to make of that game. It has vague roots in Galaxian and Lunar Lander, and essentially consists of 2 stages: In stage one you have to shoot 43 flying saucers before moving on to the next stage which consists of a gravity field and a landing pad, with moving obstructions blocking your way which you have to shoot. You start the game with a set amount of energy, and you lose some of that every time you are hit or you use your thrusters. You can partially replenish your energy stores by landing on the pad, but eventually you will run out. Therefore, your task is to try to survive as long as possible. Overall it's a good game with an interesting premise, but somehow feels a bit unpolished. Definitely worth a try however.

Requirements: Extended Basic, 32K RAM, disk drive, joysticks optional.

Executable to run: XB Autoload

Download Galaxia:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

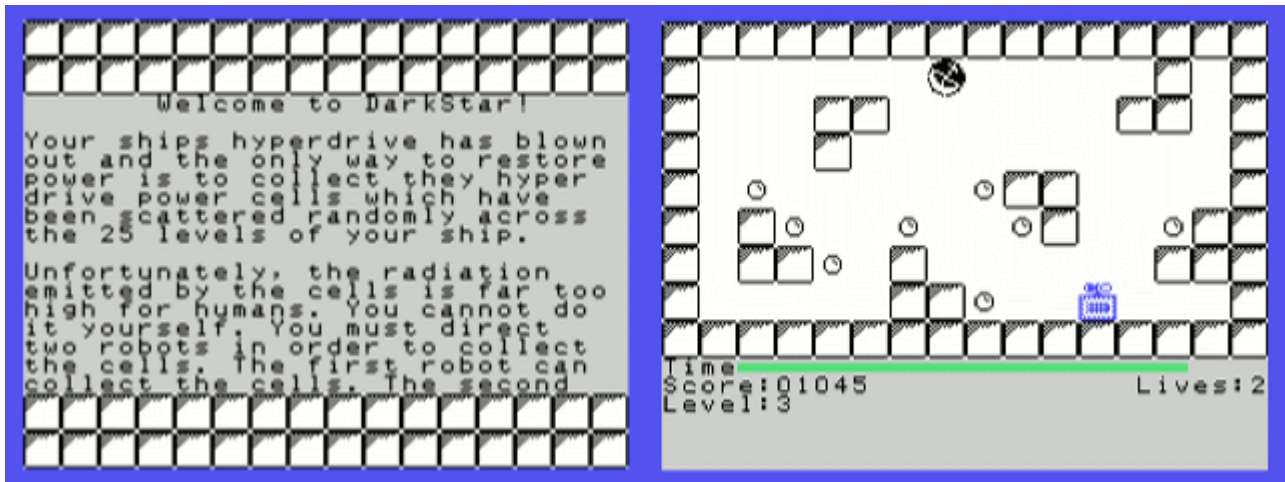
Start from mega menu: G - 2 - B

Features: Title Screen, EA3, One Player, Sound

Controls: Joystick 1

Darkstar

[Disk: 048-DARK] By Mark Wills



This is the first full game developed using Mark Wills' Turbo Forth version 1.2, and it clearly demonstrates the capabilities of this programming language. It is based on an earlier game for the Jupiter Ace computer. In Darkstar, your starship's engines have been damaged and are leaking radiation, and you need to collect energy cells scattered throughout the ship using remote controlled robots. The robots unfortunately do not stop until they hit an obstacle, therefore making your retrieval job that much more difficult. And to make matters worse, the robots have a limited lifespan due to incremental radiation damage. So no pressure... The game includes speech and is quite enjoyable and very challenging.

Requirements: Turbo Forth version 1.2 cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: See instruction file below

Download Darkstar:

[\[Darkstar zip file\]](#)

[\[Turbo Forth 1.2 zip file\]](#)

[Darkstar loading instructions](#)

Does not start in the Mega-Menu, needs the Turbo Forth cartridge!

TI-99/4A – Game Shelf Assembly/c99/Forth Games

These instructions are for use with the Classic99 emulator.

Download the File TF1.2.zip and extract in in the MODS subdirectory of Classic99.

Place the file DARKSTAR in the DSK1 subdirectory of Classic99.

Select the Cartridge menu, then User, then Open. Navigate to the MODS subdirectory and select the TURBOFORTH.C file. This will load the Turbo Forth 1.2 cartridge.

Select Turbo Forth 1.2 from the TI startup screen.

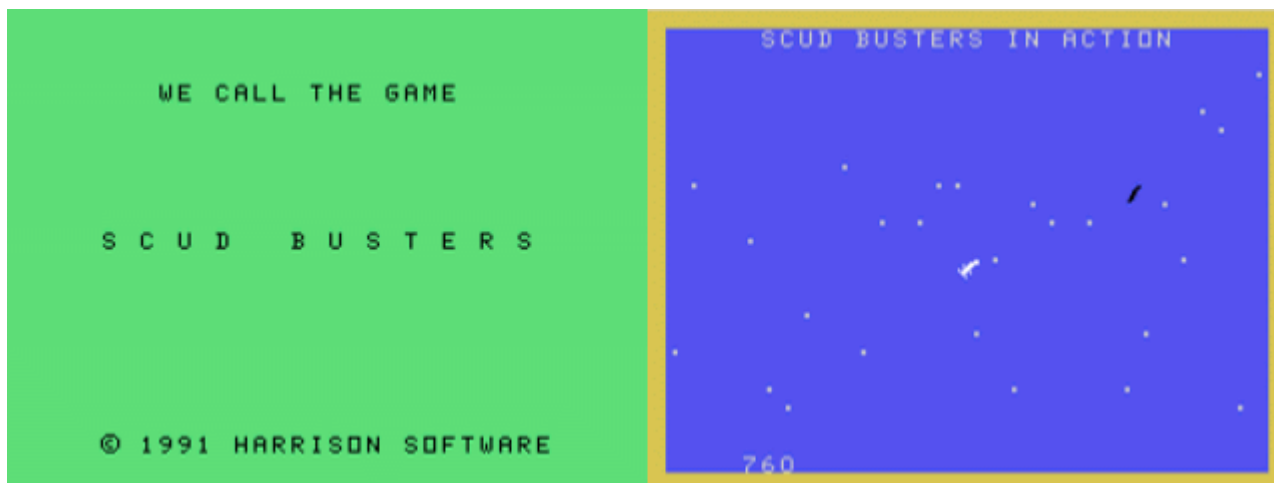
Type EXACTLY as below including the spaces. Press ENTER at the end of each line:

```
S" DSK1.DARKSTAR" USE
40 BLOAD DROP
DARKSTAR
```

The game should launch from there.

Scud Busters

G-2-C [Disk: 049-SCUD] By Bruce Harrison



The US troops positioned in Saudi Arabia are being targeted by Saddam Husein's SCUD missiles, and they have to try to bring down as many of these missiles as possible using Patriot missile batteries. The general concept of this game is somewhat similar to Barrage or Mission Command, except that there is only one missile at a time coming at you and you have an unlimited amount of Patriot missiles. Fast paced action requiring good hand-eye coordination, but can get a bit repetitive after a while. You can spiff things up a bit however by competing against another player.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, Joysticks.

Executable to run: SCUDBUSTER (E/A option #5)

Download Scud Busters:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

Start from mega menu: G - 2 - C

Features: Title Screen, EA5, One or Two Player, Sound, Music

Controls: Joystick 1

TI-99/4A – Game Shelf Assembly/c99/Forth Games

SCUD BUSTERS - from Harrison Software

Game design and coding by Bruce Harrison

Theme music by Dolores P. Werths

The program opens with an animated title screen, followed by its Theme music. The theme is Tchaikovsky's Arabian Dance from The Nutcracker Suite, in a special arrangement for the game. The music may be stopped by pressing any key while it's playing.

After the music, you'll be asked whether you need instructions. If you press Y or y in answer to this question, the game will load in and display its instructions, about five screens full. Pressing any key other than Y or y will skip the instructions.

The game has been designed to be compatible with Ramdisk, and to load and run from any floppy drive. There is an XB LOAD program on the disk, so it will autoload from Drive 1 when XB is selected. The XB LOAD program will load in the main program from whatever drive the disk is in. Alternately, the game may be loaded directly from E/A Option 5 or TI-Writer Option 3 by using the filename DSK1.SCUDBUSTER. (On Geneve 9640 computers, we recommend using E/A Option 5 entry, as the XB Load program may not work on all Geneves. There is an automatic speed calibration in the program, so it should play at about the same pace on a Geneve as on a TI-99/4A.) The main program consists of two files, SCUDBUSTER and SCUDBUSTES, both of which will be loaded by any of the above methods.

The program will then ask whether you'll have one or two players. It can be fun for just one player, but it's lots better with two.

The game's scenario is this: You are a gunner manning a Patriot Missile battery at a remote outpost in Saudi Arabia. Saddam Hussein is hurling Scud missiles in from Iraq just as fast as he can. You have an unlimited supply of Patriots, paid for by your Saudi hosts. For each incoming Scud, you can get off one round only.

The Scuds appear as black cylinders, and come in from the top of your view window, falling in a ballistic arc toward the Saudi Desert. Your job is to intercept as many of them as possible.

There will be a randomly selected interval between 1/2 second and 1 1/2 seconds before each scud enters your view window. Its position and horizontal velocity will have been selected randomly by Saddam's TI-99/4A computer. Your aiming point will show as a small dot in the middle of your screen, slightly brighter than the stars in the night sky. Player one will start first, using Joystick #1 to point his aiming spot, and the fire button of that joystick to shoot his Patriot missiles. The object is to move the aimpoint so that the Patriot will intercept a point on the path of the Scud.

The Patriot, when fired, will rise from its launcher at the bottom left corner of your screen. Its speed will be proportional to the distance to the aimpoint. Thus its flight time to the aimed point will be just about constant.

Scuds which exit on the sides of the screen will not count against your score unless a Patriot was in flight when they exited. Most Scuds will not exit in this manner.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

For each Scud hit, you'll hear an "Air Burst" sound, and get fifty points added to your score. For each Scud that hits the desert floor, you'll hear a louder "Ground Burst" sound, and you'll lose ten points. Both the position of the pointer and the timing of your shot are important. In some cases you'll not have to move the pointer at all, but simply time the release of your Patriot.

The game will proceed in bursts of twenty scuds, then a pause so you can catch your breath or so Player two's turn can begin. At each such pause, a scoring summary for the player whose turn just ended will be shown. This will show cumulative totals for Hits, Misses, and Percentage of hits for that player since the game began. Players will alternate (if two) every 20 scuds, until one of them gets to 10,000 or more points. This will win the game unless player two still has a turn coming, in which case player two will be given one more "at bat" before the game ends. At the end, a short fanfare will signal the winning of the game, and final scoring summaries for one or two players will appear on the screen. The program will ask if you want another game, and pressing Y or y will get you a new game. Any other keypress will cause the program to end, returning you to XB, E/A, or TIW, depending how you entered. Piling up more negative points than 1000 will cause a player to lose the war.

There are three skill levels available. Each player may select his own level for play, from the choices Beginner, Journeyman, Expert.

At Beginner level, Scuds start from the top at a slow downward pace and accelerate slowly. The joystick action is slow enough to be easily controlled, yet fast enough to more than keep up with the Scuds. The tolerance level for interception is greater (8 pixels) than for higher skill levels. The speed and acceleration of Scuds remains constant throughout the game.

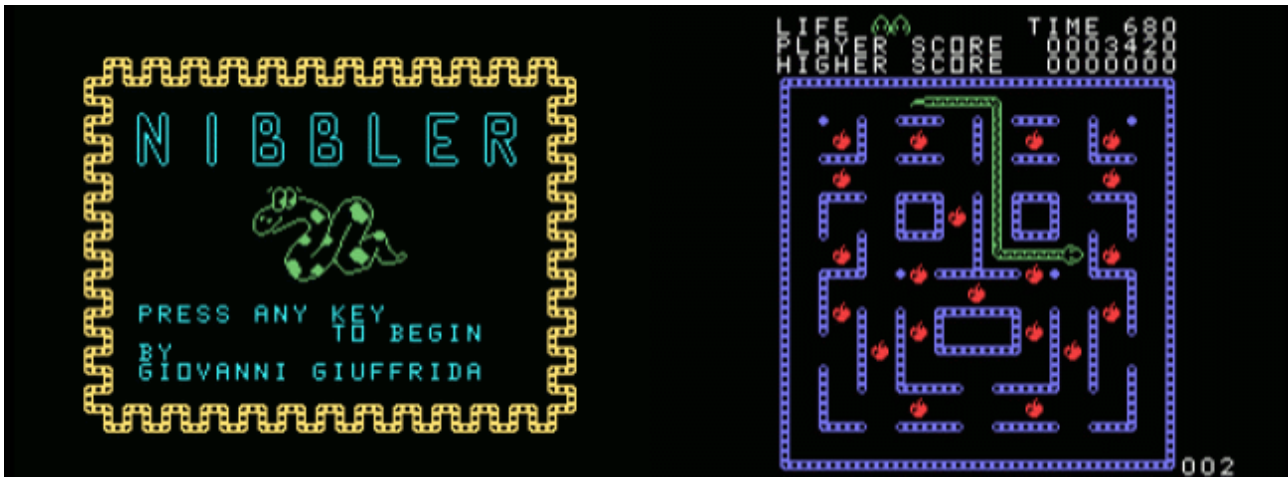
Journeyman level makes the action of the joystick faster, and the Scuds accelerate faster. Interception tolerance is five pixels. As play proceeds, the Scuds' starting vertical velocity increases.

At Expert level, scuds accelerate even faster, and the joystick pointer will move still faster than at Journeyman level. Interception tolerance is five pixels. This makes the game a real challenge, even for more experienced players.

We trust you'll get many hours of enjoyment from our new game. If people enjoy the game, it will be worth all the hours that went into making it.

Nibbler

G-2-D [Disk: 050-NIBB] By Giovanni Giuffrida



This game gives a whole new meaning to "chasing your own tail". You are a hungry snake in a maze looking for food pellets to eat. The problem is that, as many of us have unfortunately found out, the more you eat, the bigger you get, or in this case the longer you get, and if you are not careful you could end up eating your own tail and hence choking to death. The animation is wickedly fast, and you need excellent reflexes to maneuver around the obstacles, get to the pellets and avoid running into your tail. Simple concept, very well done. Another winner.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional

Executable to run: NIBBLE1 (E/A option #5)

Download Nibbler:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

Start from mega menu: G - 2 - D

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1

Perfect Push

G-2-E [Disk: 051-PPUS] By Golden Games



Perfect Push is a devilishly difficult puzzle game where you are marooned underground on a planet in an isolated system and the only way to get home is to assemble your rocket, the APELLO 946, correctly under the only opening to the planet surface and blast off. The problem here is that the rocket parts are strewn all over this very rocky planet, and the only way to get to them is to move or blast the rocks out of the way. And if that was not already difficult enough, when you push a rock, it will continue moving until it hits an obstacle, and the same thing happens with your rocket parts. Really strange gravity at work here... Oh and one more thing, there are also nasty aliens roaming the underground as well, but luckily you can trap them behind rocks and prevent them from using you as a nice protein snack. Beautiful execution, but highly challenging as I have not been able as of yet to get past the first level!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: PUSH1 (E/A option #5)

Download Perfect Push:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

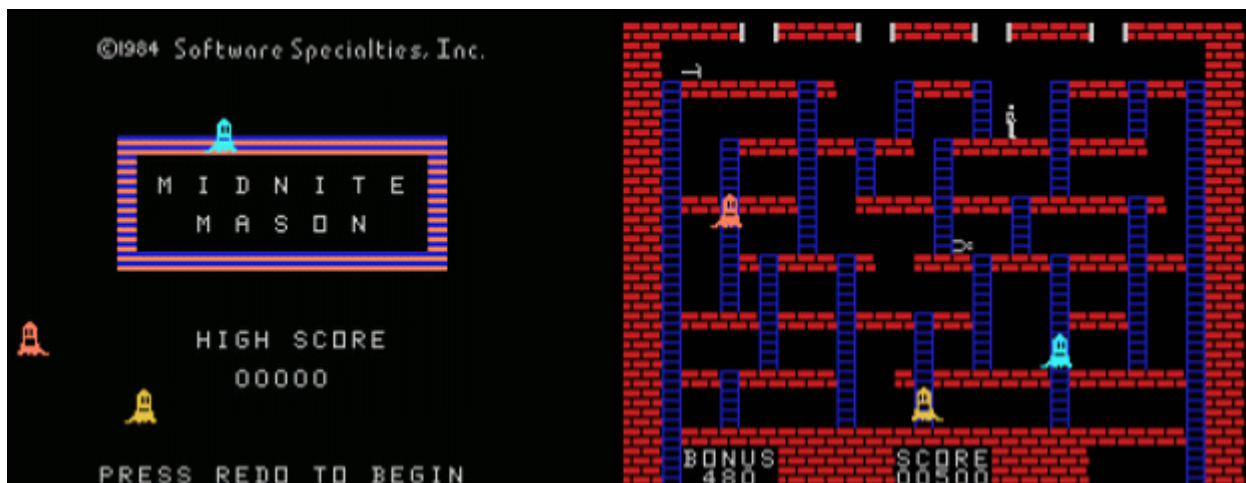
Start from mega menu: G - 2 - E

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard <2,R,T,W,Y> , Joystick 1

Midnite Mason

G-2-F [Disk: 052-MASO] By Software Specialties



Haunted houses are no fun to start with, but they are downright terrifying when you are a mason contracted to work in one. And to further compound your troubles, all your tools have been scattered all over the house, so in order to get done with your work as expeditiously as possible, you will need to collect them one by one. The trouble is that there are nasty ghosts roaming the place who would love nothing more but to steal your soul. In other words, avoid them at all cost! This is a classic platformer with smooth animation and crisp graphics that is highly entertaining, albeit rather difficult to beat. A classic.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: MASON (E/A option #5)

Download Midnite Mason:

[\[TIFILES format\]](#)

[\[v9t9 .DSK format\]](#)

[Midnite Mason Manual](#)

Start from mega menu: G - 2 - F

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard <S,D,E,X> , Joystick 1

MIDNIGHT



MASON

©1984 Software Specialties Inc.
©1987 DataBiotics Inc.

INTRODUCTION

It's the graveyard shift and you are way behind schedule, so you better get busy repairing those walls in the old place. The problem, there are some very hungry vermin intent on keeping you from finishing the job. You'll have to climb, run and break through walls on your merry chase to collect your tools, before the ghosts collect you!

GAME PLAY and CONTROLS

Once you've loaded the game, you can use either the keyboard or joystick to play the game. You are the white character flashing before play begins. To begin game play, press any key or the joysticks fire button.

CONTROLS

E			
S		D	Q T
	X		
= MOVEMENT =		= CHOPPING =	
JOYSTICK		FIRE BUTTON	

MOVEMENT & CHOPPING

You always chop in the direction you are facing. The Mason character can move over bricks and climb up ladders, he can even fall off of bricks and ladders without hurting himself.

If a ghost is chasing the Mason, dig through walls and get away through a hole. You can also use the chopping button to fill in holes and bridge gaps to get away.

The only limitations are: The Mason cannot make holes in the bottom level or chop through ladders.

When a ghost falls into a hole, they stay there until the brick fills back in, then they'll be back on the prowl.

SCORING

If a ghost touches your Mason, you'll lose that 'life' and go on to the next. The game ends when all three Masons expire.

The timer counts backwards from 900 to 000. If the Mason does not collect all 7 tools in the allotted time, that Mason is also lost. When all 7 tools are collected, the remaining time is added to your score. You'll now advance to the next level and start over with a different maze.

Every 3000 points earns you a new Mason.

SPECIAL KEYS

FCTN (8) – Restarts the game

FCTN (=) – Ends the game

Wife Button (P) - This will PAUSE the game play until the SPACEBAR is pressed to resume play.

Who's Behind The Mexican UFO's

G-2-G [Disk: 053-MEXI] By Chris Bodenmiller



UFO's have been appearing all over the world, including... wait for it... Mexico, and you are assigned the task of looking into that unusual situation. You will travel to many cities and make decisions on how to proceed. While well done graphically, this adventure seemed way too short and easy to solve, albeit entertaining. Comes on 2 disks.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: XB autoloader

Download Who's Behind The Mexican UFO's:

[\[DISK 1 - TIFILES format\]](#)

[\[DISK 2 - TIFILES format\]](#)

[\[DISK 1 - V9T9 .DSK Format\]](#)

[\[DISK 2 - V9T9 .DSK Format\]](#)

Start from mega menu: G - 2 - G

Features: Title Screen, XB, AL, One Player, Sound, Music

Controls: Keyboard

Space Agressor

G-2-H [Disk: 054-AGGR] By Brian Lemoff



In this game, you are the space invader trying to overwhelm the planetary defenses of the system you are attacking. Avoid incoming missiles and mines as long as you can, while attempting to destroy the mobile artillery pods. Brilliant graphics and frenetic gameplay. Those with slow reflexes need not apply...

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: AGGR [E/A option #5]

Download Space Agressor:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

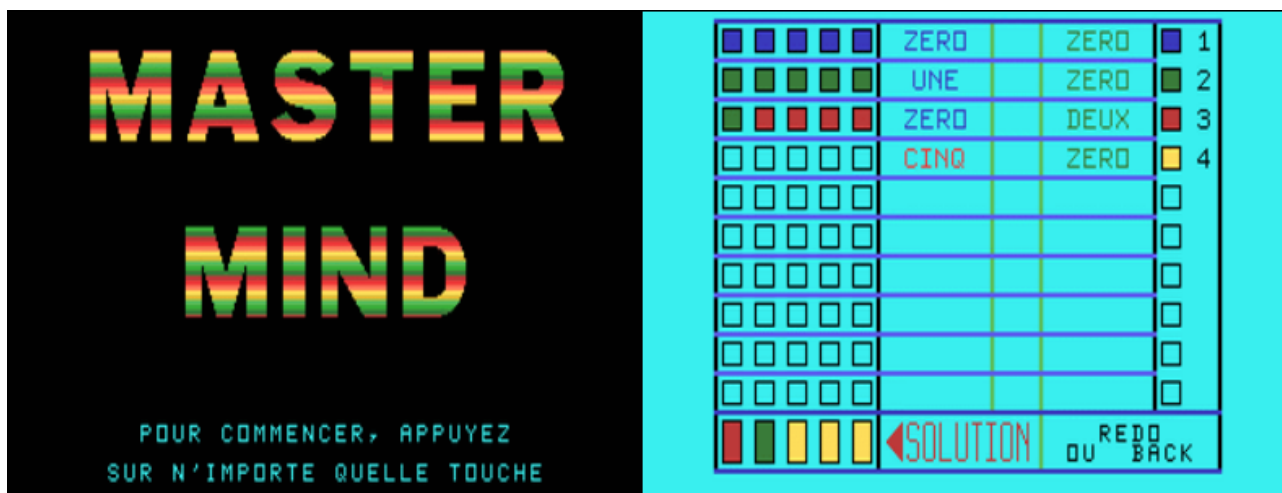
Start from mega menu: G - 2 - H

Features: Title Screen, XB, AL, One Player, Sound, Music

Controls: Joystick 1, Joystick 2

Master Mind

G-2-I [Disk: 055-MIND] By Unknown Author



This time-honored game needs no introduction, and this computer version is the absolute best one I have seen so far. You get to choose the game difficulty, i.e the number of different colors in each code, and you get 10 tries at guessing the code using the clues given to you by the computer. A timeless treasure that is guaranteed to hone your deductive skills. Note: while the game is in French, there is a small english introduction that will give you the needed translation. *{If you happen to know the name of author, please let me know so I can post the appropriate credit}.*

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download Master Mind:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

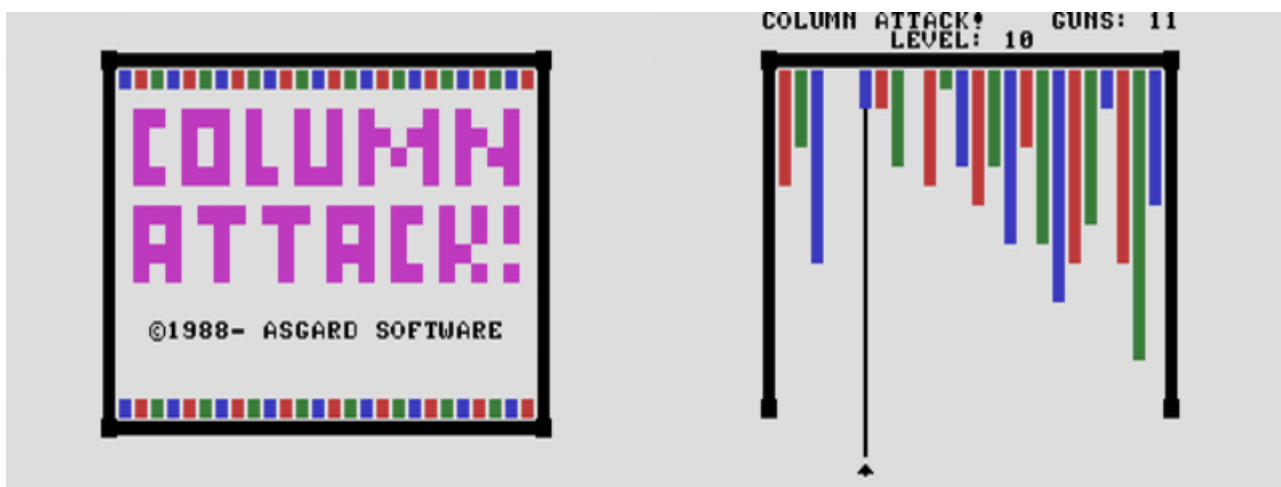
Start from mega menu: G - 2 - I

Features: Title Screen, EA5, One Player

Controls: Keyboard

Column Attack

G-2-J [Disk: 056-COLU] By Chris Bobbitt



The nasty Flugalins have decided to invade the Earth with their battleships, which leave colorful trails as they come down from the sky before they start their bombardment. You have the unpleasant task of stopping this unprovoked attack using the only available planetary defense laser gun. There you have it, so good luck! Note: the level of difficulty increases from 10 to 0.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB AUTOLOAD

Download Column Attack:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

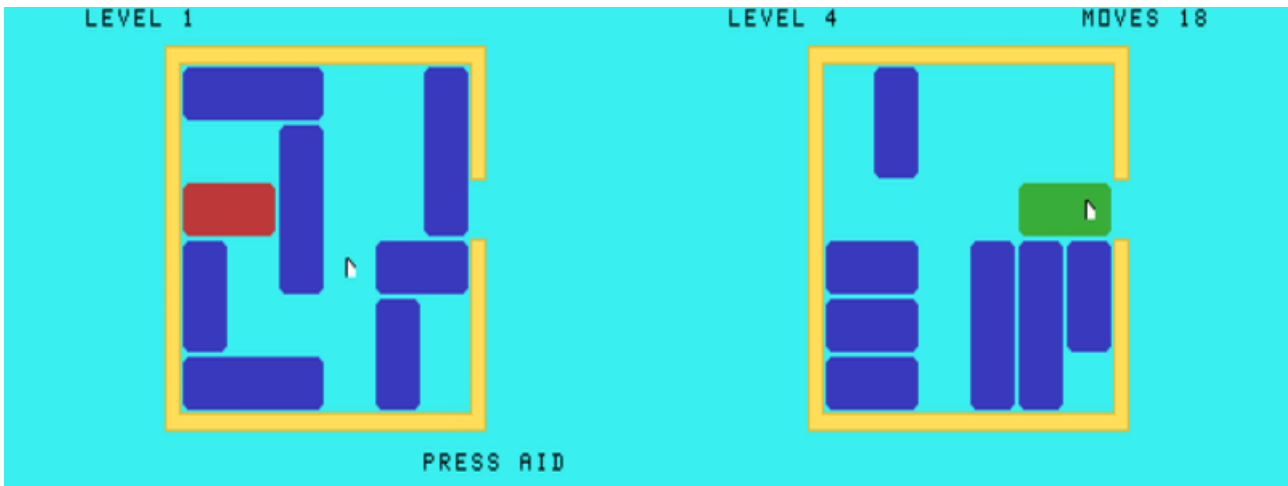
Start from mega menu: G - 2 - J

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1

Rush Hour

G-2-K [Disk: 057-RUSH] By Lucien Baumann



This is a computer version of the classic sliding blocks puzzle, and a very well done one at that. Your goal is to get the green block through the opening on the right by first clearing the way in front of it. This is unfortunately not as simple as it seems, but I'm sure you'll figure it out...eventually. Clean and colorful implementation that is a joy to play. Very well done.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: RUSH_HR [E/A option #5]

Download Rush Hour:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

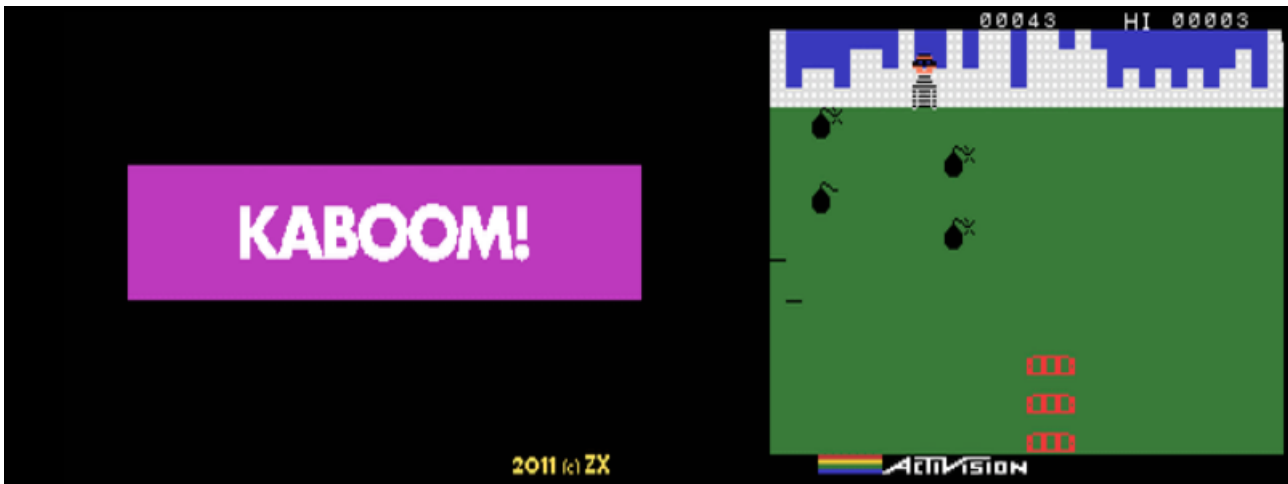
Start from mega menu: G - 2 - K

Features: Title Screen, EA5, One Player

Controls: Keyboard <S,D,E,X,Blank>

Kaboom

G-2-L [Disk: 058-KABO] By ZX Original game by Larry Kaplan



Who amongst you does not remember the fabled Kaboom game on the Atari VCS? In this wonderful and very faithful implementation for the TI, a mischievous thug is throwing bombs off of a tall wall, and you have to catch and destroy them before they hit the ground. You lose a paddle each time you miss, so try to be accurate, will you? As much fun as the original and a great throw back to old times. Note: This game was programmed using the **My Little Compiler by Guillaume Tello** which you can learn more about [here](#)
Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Kaboom:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 2 - L

Features: Title Screen, XB compiled MLC, One Player, Sound

Controls: Joystick 1

Starbase Raiders

G-2-M [Disk: 059-STAR] By Joe Delekto



Alert! Your long term enemies from the Cryogena-4 star system have launched a massive assault on all the starbases in the Galaxy, and as the best galactic pilot and strategist around, you are assigned to halt the tidal wave of aliens using your trusty Explorer class defense ship. You are armed with deadly twin photon cannons, and are assisted by an onboard computer as well as strong shield. You also have the capability to hyperwarp to a random location if it gets too hairy. You start at the galactic map screen which shows you your starbases as well as enemy ships in your sector. Pick the quadrant of your choice with priority to defending your starbases, and press Fire. From there you will be thrown into a 3D space combat environment which you cannot exit from until you completely destroy all the alien ships. Be careful! You shields can only take so much damage before failing, and you can only repair them at starbases, but only for a limited number of times per level. **Commands you need to know: E: Engines C: Computer sights G: External gravity F: Auto firing S: Shields M: Galactic map A: Enemy tracking W: Hyperwarp.** Once you clear a sector completely, you will move on to the next level with more enemies to destroy. Play is frenetic and captivating, although it does get somewhat repetitive. Overall an excellent game a la Star Trek.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: RAIDER (E/A option 5)

Download Starbase Raiders:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

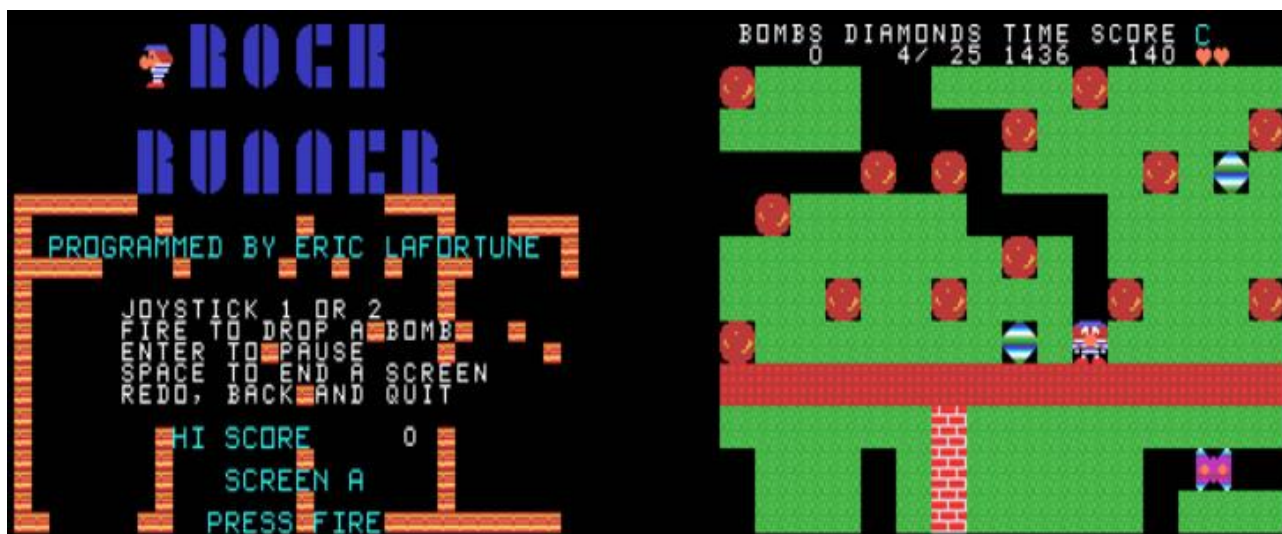
Start from mega menu: G - 2 - M

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1, Joystick 2

Rock Runner

G-1-R [Disk: 060-ROCK] By Eric LaFortune



In this game, you assume control of a character tunneling around in search of diamonds while avoiding mines, falling rocks, walls, acid pools and roaming monsters. Sounds familiar? Yes, Dig Dug definitely comes to mind here. You need to make sure that you collect all the diamonds in the playing field before running out of time in order to proceed to the next level, otherwise you lose one of your initial 5 lives. You can also lay down bombs to help you get past difficult obstacles or kill the monsters. Written in half-bitmap mode, this game is very colorful and responsive to input, but can be brutal to beat within the allotted time. Nicely executed.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: ROCK (E/A Option 5)

Download Rock Runner:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Only with TI-Editor/Assembler cartridge, or the original E/A from 1981 in FG99

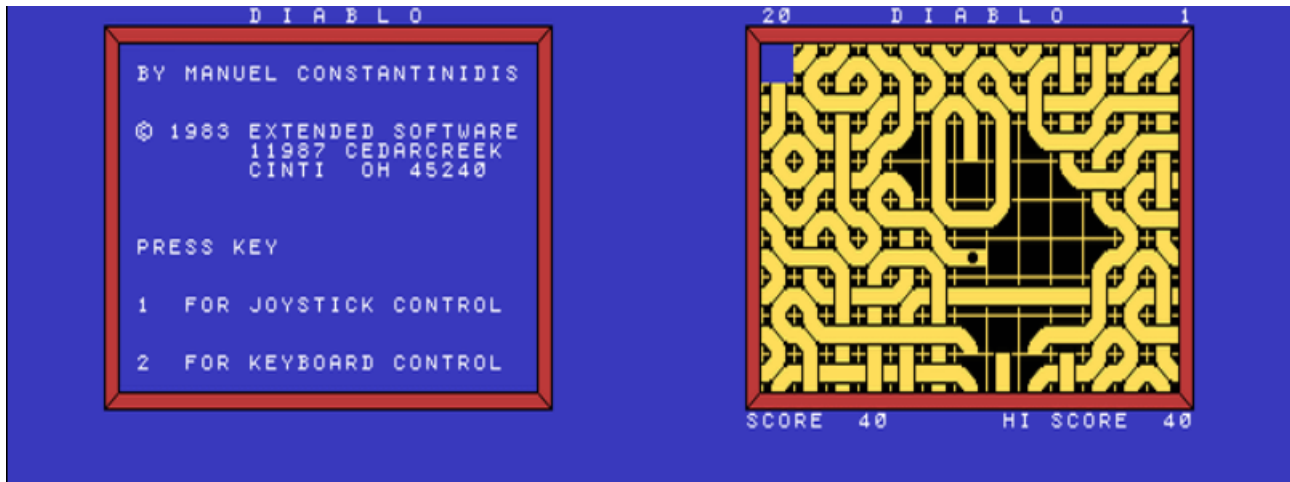
Start from mega menu: G - 1 - R

Features: Title Screen, EA5, One Player, Sound, Speech

Controls: Joystick 1, Joystick 2

Diablo

G-2-N [Disk: 061-DIAB] By Manuel Constantinidis



From an originality standpoint, this game stands out prominently. You control a ball rolling down a complex overlapping track layed out over 16x16 pixel tiles. A tile is cleared once the ball runs down all the tracks on this particular tile, and your objective is to clear as many tiles as possible before the ball falls off the edge of the game field. Interestingly however, the tiles are not fixed in place, but rather can be switched with their immediate neighbors by simply moving the cursor. This allows you to modify the shape of the tracks and hence the direction the ball takes. It's a beautiful and incredibly addictive game that is guaranteed to suck up a lot of your time. Very highly recommended!

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional

Executable to run: XB AUTOLOAD

Download Diablo:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

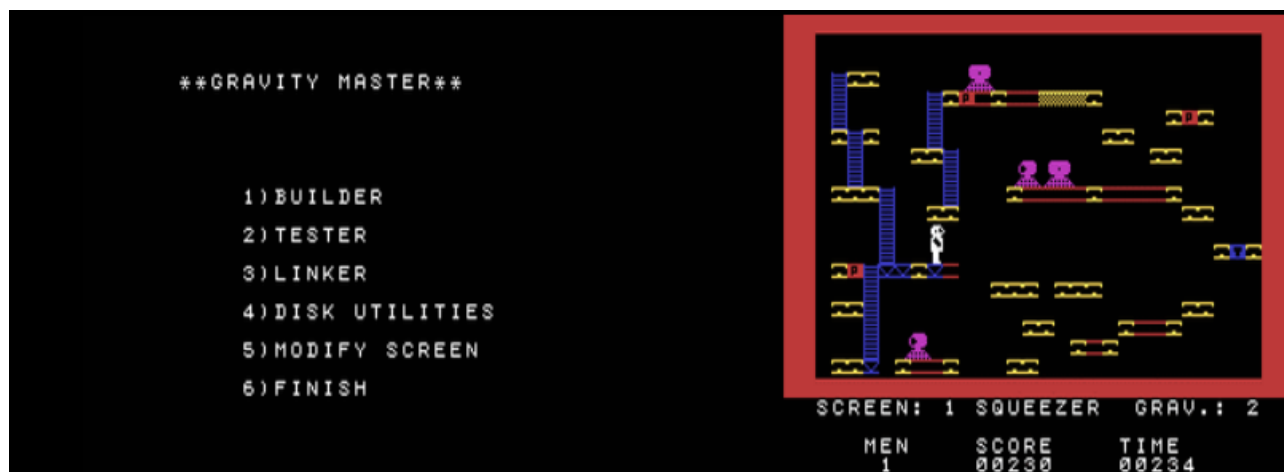
Start from mega menu: G - 2 - N

Features: Title Screen, XB,AL, One Player, Sound, Speech

Controls: Keyboard, Joystick 1

Gravity Master

G-2-O [Disk: 062-GRVM] By CSI Design Group



While playing a game is fun, designing then playing a game has got to be at least double the fun! And this is exactly what you get to do in this unusual piece of software where you get to design challenging platformer games with multiple screens populated by roving killer robots and a variety of other pitfalls. The learning curve is pretty minimal, and the challenge is really in testing the deviousness of your imagination at creating a tough yet playable and enjoyable game. The only issue I have with it is that the finished games cannot be played as stand-alones, which is a shame... Nonetheless, it has quickly become one of my favorites.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional

Executable to run: XB AUTOLOAD

Download Gravity Master:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Gravity Master Manual \(PDF\)](#)

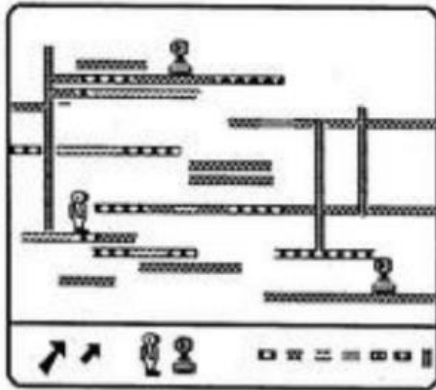
Start from mega menu: G - 2 - O

Features: Title Screen, XB, AL, One Player, Sound, Speech

Controls: Keyboard, Joystick 1

GRAVITY MASTER

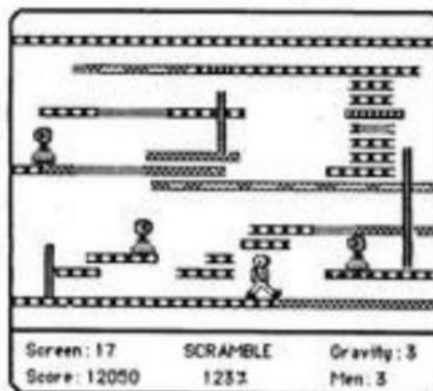
COMPLETE GAME CONSTRUCTION SET FOR THE TI 99/4A



Build an infinite number of screens with the easy to use Editor. Use girders, ladders, energizers, and don't forget to add a few berzerk robot guards. Set Gravity, time, and other factors to make it as tough (or easy) as you want.

Put up to 20 screens together to form your own games.

You have total control over almost every factor of the game.



Gravity Master comes complete with 2 sample games with 20 screens

GRAVITY MASTER REQUIRES:
32K Memory Expansion
1 Disk Drive and Controller
Extended BASIC

©1984 by CSI Design Group, St. Louis, Missouri

Gravity Master Version 1.01

Copyright 1983,1984 CSI Design Group

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2) Quick Start (how to play)	1
3) Editor (creating your own screens)	3
4) Linker (putting screens together)	4
5) Disk Utilities (catalog, delete, etc....)	5
6) Help in times of trouble	5

This documentation is intended to familiarize the user with playing Gravity Master and with creating new screens. The Quick Start section covers the actual Game play. This section also declares a short introduction in using the Linker to load Existing games. Once you've familiarized yourself with the gameplay, you're ready to Try to create a screen of your own. The Editor section covers what you need to know To design your own screens. Once you've designed a screen, you'll want to try it out. This is where the Linker comes in use again. You'll have already used the Linker in Loading the test games (see Quick Start). The Linker documentation will show you how The Linker can also bind new screens together to make games. The Disk Utilities Section shows you how to catalog your disk, delete unwanted files and also contains some general information on the use of the disk system. Finally, there is a section that covers what to do when things don't work quite the way you planned. If you're afraid you just lose a hours work in designing a screen, check this section before you give up hope.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

GETTING STARTED:

Gravity Master is an interactive computer game allowing the user to design a nearly limitless number of playfields with the built-in editor.

To run this program, you need (in addition to your TI99/4 console) the Extended Basic command module., 32K memory expansion, at least 1 disk drive and a monitor.

To load the program, insert the program diskette into drive number one, turn on all peripherals beginning furthest from the computer, turn on the console and select Extended Basic. Do not remove the program diskette from the drive until the main menu is showing and the red light is extinguished.

QUICK START:

This section covers the basics of gameplay in Gravity Master. Before going on to the Editor to design your own screens you should try out the test games included in your package. This will give you the 'feel 'of the game and help you when you try designing a screen. In order to use the test games, you will have to use the Linker to load the games from the Gravity Master disk. If you have any difficulty with the Linker will find more information in the Linker section of the documentation.

LOADING EASYDEMO:

The Gravity Master disk contains two demo games each of which has ten screens. The names of the two games are EASYDEMO and HARDDEMO. As the names imply, EASYDEMO is the easier of the two (though not everybody agrees with this) so it is recommended that you play this game first. To load EASYDEMO follow these steps:

- 1) Turn on all peripherals (if you do not have an expansion box, start with peripherals furthest from the console and work your way towards the console)
- 2) Turn on your console
- 3) 'Insert the Gravity Master disk in drive #1
- 4) Select Extended BASIC and Gravity Master will load automatically (be sure not to open the disk drive or remove the disk before the Gravity Master menu appears on the screen)
- 5) Select the Linker from the menu
- 6) Select the 'Load existing game' option from the Linker menu
- 7) In the space grayided enter the name of the game as DSK1.EASYDEMO (The DSK1. Part of this may already be typed for you, you can use the right arrow (Control-D) to move the cursor to the place to type EASYDEMO or retype the DSK1.)

The game EASYDEMO should now load. Don't worry, it won't start without you. Take a look at the screen. You'll see multi-colored girders joined by ladders and patrolled by crazed robot guards. You're represented by the space suited white figure. Somewhere on the screen you'll see some lose girders with little black T's inside, these are transporters. The first section will tell you how to get your man from where he is now to those vital transporters and how to turn them on so you can get to the next screen.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Playing the Game

In the game your man represents a member of the fearless Space Decontamination Team out to scrub the radiation from the damaged space station. The girders can be cleaned simply by walking over them. The object of the game is to eliminate any contaminated girders on the screen and reach the transporters to take you to the next screen.

Your man can move above the station in several ways. You can move left or right along the girders using either the joystick or the left and right arrow keys [S-left, D-right]. You can climb ladders using the joystick or the up and down arrow keys [E-up, X-down]. You can also activate a jetpack using either the joystick action button or the period [.] key. The jetpack will lift the man into the air either straight up, or when used with the joystick or arrow keys, it can also direct the man up and to the right or left. The distance that the jetpack can lift the man is determined by the gravity setting of the screen. In very high gravity (1), the jetpack can barely get the man off the ground while in low gravity (3) the man can zip around the room in huge spurts. You'll have to experience the different gravities before you know just how far you can jet as a certain setting. The gravity setting also determines how far your man can fall without injuring himself. This distance is about twice as far as the distance he is lifted by the jetpack.

The contaminated girders come in two colors: yellow (lightly contaminated) and red (highly contaminated). Just walking over a yellow girder returns it in the uncontaminated blue color. When you walk over a red girder it changes to yellow and you'll have to walk over it again to turn it blue. If you walk off of higher level and land on a contaminated girder, it will be decontaminated [unless you fall too far and injure the man], but if you have landed on a girder by using the jetpack, it won't be decontaminated.

You'll also notice on some screens a type of girders indicated by a yellow checkerboard pattern. This type is unstable and will disappear when you walk over it. You can land on it without destroying it by using the jetpack. Be careful where this crumbling floor is concerned, if you carelessly walk over a patch you may find yourself trapped with no way back.

There is another danger to your man besides falling – the robot guards. These guys have been driven mad by the radiation and are ready to trap anything they come in contact with. Luckily for you they can't climb ladders or jump so each robot is stock patrolling back and forth on a single section of girder. If you touch a robot, you've had it. There is only one defense against the robots. There are red girders with small P's inside. This is powerfloor. After walking over powerfloor your man turns red and can destroy the robots by touching them. This power lasts for a different amount of time on each screen. Just before the power goes away the man turns yellow. Then he turns back to white and is once again vulnerable to the robot's touch.

There is just one more type of floor to learn about. The blue floor with T's in it is transporter floor. This type of girder will take you to the next screen. The transporter will only activate if all contaminated girders have been cleared. You don't have to eliminate the crumbling floor or the powerfloor to activate the transporter.

There's one more factor that affects the play of the game. There is a game clock at the bottom right of the screen that starts to tick away as soon as you move your man. If you don't make decontaminate everything and make it to the transporters before time runs out your man is lost. So be sure and take your time before starting each screen to plan a course of action. The first few times through a screen you'll probably run out of time, but soon you'll pick up to the short cuts and be zipping through them with time to spare.

If you're tired of sitting here reading this while your man waits for you, you should be ready to have a try at the game. Don't be surprised if you quickly eliminate your first few men. Even the easy screens are pretty tough. If they're too hard for you, you can always make up some 'grime' screens with the Editor.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

CONTROLS: You may control your team member using either the keyboard or the joystick. With the joystick the man will move in the direction the joystick is pressed and the jetpack will fire via the fire button (remember to release the alpha lock key!). With the arrow keys (e,s,d,x) the man will move in the direction of the arrow on the key pressed and the jetpack will fire by pressing the period key. Unlike most games of this type you may use the jetpack while on a ladder, be careful though because you can't land on a ladder.

HINTS: When you start even the first screen of EASYDEMO will seem tough. If your first screen is called SIMPLETON the trick is to clear everything before you start down the right side of the screen, don't be too slow though because your energy won't last long.

THE MAGIC ARROW EDITOR (M.A.E.)

Introduction:

This editor can be used to create new game screens for Gravity Master by building the screen in the editor mode. Two magic arrows (large and small) are used in the editor to move the background, as well as player and robots on screen to the desired location.

The following is a list of characters available for use with small arrows:

Uncontaminated	blue with no lettering
Lightly Contaminated	yellow
Highly Contaminated	red with no lettering
Breakaway	yellow checkered
Powerfloor	red with small 'p'
Transport floor	blue with small 't'
Ladder	white horizontal bars

After the screen is built the editor can set gravity and other factors to maximize game play. When these values are required you will be prompted for them.

Starting and editing:

After selecting the editor from the main menu you will be faced with a blank area surrounded by a red border, a bank of selectable characters and a small white arrow near the center of the screen. This arrow is the small character arrow (SCA). This arrow can be moved by the arrow keys (E,S,D,X) to any position on the screen. The SCA can pick up and drop any of the small characters from the lower right character bank. You team member and robots cannot be picked up by the SCA. To pick up a character simply move the arrow until it points to the character you wish to pick up and press the space bar. An image of that object will now be carried around the screen by the arrow. To place the character on the playfield move the arrow (and object) to where you wish to drop it, press the space bar and it will be placed on the playfield. This may be done many times for each character. To change the character being carried by the arrow simply move down to the character bank and pick a different character up.

In the event that you make a mistake you may erase any character on the playfield with a blank space. To do this move the SCA down to the character bank and pick up a blank space (note that the SCA may appear to be carrying something other than a space) then move the SCA onto the playfield and put the blank space there.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Placing the player and robots

To place the player character or the robots on the screen you need to use the large character arrow (LCA). The LCA is found at the left side of the character bank. You may exchange the LCA for the SCA (or vice-versa) by attempting to pick it up with the arrow you are using. The LCA cannot pickup or erase characters used by the SCA, but it can pick up and place the player character and the robots. You use the LCA in the same way as the SCA except that the player is moved to a new position instead of being duplicated when he is placed on the screen and up to six robots may be placed on the playfield (attempting to place a seventh robot erases all robots. Try it and see how convenient it is!). Note that holding down the space bar while placing robots (i.e. placing robots on top of one another) can appear to do strange things to your program, giving it the appearance of multiple life robots.

Finishing up

The only absolute requirement for a screen is that you place player on the playfield. If you don't the program will not allow you to save the screen. When you're finished with the screen, press the enter key. After you confirm that you're ready to save the screen you are prompted to set the screen variables. Gravity can be set from 1 to 3 (play the demos to see the results of the various gravities). You can also set the length of time your player will be energized after stepping on powerfloor and the time limit for the screen.

At this point you will give the screen a name (to be using by the Linker). If you need to get out of the editor without saving the screen you may do so by pressing BACK (function-9), this will return you to the main menu. The Editor updates the screen and holds this information in memory. You can test or modify a screen in memory without loading from disk, but if you select the editor again without saving the screen it will be lost.

Sequence for creating a screen:

- 1) Select the Editor from the main menu (screen in memory will be lost)
- 2) Use the SCA to select and place background objects
- 3) Use the LCA to select and place robots and the player
- 4) press enter when finished with the screen and answer prompts

THE LINKER

The Linker is a unique feature of Gravity Master that allows a high level of flexibility in designing games and testing screens. The Linker is used to play both game lists already in memory and to create new game lists. Creating a game list consists of telling the Linker how many screens are to be placed in the list and then typing in the names of the screens in the order you wish them to appear.

Playing a single screen

One of the most common things that you'll be doing with the Linker is testing out the play of a screen you have just created. To do this you should select Create A New Game. Select the number of screens as 1. Type the name of the screen and press enter. You'll answer some questions concerning overall game difficulty and then you'll have the opportunity of either saving or executing your game list. In this case select execute. The Linker will load the game screen from disk and you may play.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Creating a game

When you have a number of screens ready you can make a game list out of them. Select Create A New Game and tell the Linker how many screens the game is to include (up to 20 screens). At this point you are asked about overall game difficulty. When this is done save the game list and give it a name (EASYDEMO and HARDDemo are examples of saved gamelists).

Playing an old game

This is the easy part, just select Play an Old Game and type the name of the game list to be played.

Disk handling

The Linker can access game lists from drives 1,2 or 3, but you have to tell the linker where to find the screens. The simplest solution is to place game lists on the same diskette with the screens that are in the list and use drive one to play (by doing it this way you can play your game lists on your friends' machines even if they only have one drive).

In the event of any disk oriented error you will be given the message I/O ERROR and the program will take you to the disk utility section.

USING THE DISK UTILITIES

The disk utilities section of Gravity Master allows for the cataloging of disks and deleting of files without the use of the Disk Manager module. By following the prompts you may catalog entire diskettes, screen files only or game lists only. You cannot format disks or directly copy files however. It is usually a good idea before booting Gravity Master to have a couple of initialized diskettes handy to store your screens and game lists on.

HELP!

At some point you are going to do something you really didn't mean to (such as select the disk utilities when you wanted the Tester). In cases where there is no blinking cursor you can generally return to the main menu by pressing BACK (function-9). In cases where there is a blinking cursor you can return to the main menu by erasing the line (function-3) and hitting return most the time. Note, we said most, in the event that this does not work and the cursor still sits there blinking away give the computer some input that it can use and try it again on the next cursor.

If when in the editor you press back to move the screen when you intended to press enter you can retrieve your screen by selecting modify screen and answering 'Y' to screen in memory. No screen is released from memory until another is read in.

This program has been on the market for one year as V1.00. This is V1.01 and the only changes made have been in documentation. There has been no evidence of any type of software misbehavior. In the event of an error we suggest the following:

I/O error is the drive on?, is the door closed?, is the correct disk in the designated drive?, is the disk formatted?

Console lockup this program makes use of TMS9900 machine language subroutines in loading the program, saving the screens and the actual gameplay. In the event that the console should lock-up the most likely offender is the big, ugly black cable (or the fright train connections on old style peripherals). Make sure that all connections are secure (console to synthesizer end to end to end ...). You didn't hit the P for pause did you? If you did any try will continue the program.

Centipede

G-2-P [Disk: 063-CENT] By Atari



A very nice rendition of the classic Atari game where you have to shoot down a centipede inexorably moving toward you while avoiding pesky and deadly spiders. The centipede has the bad habit of breaking up into several independently moving bits which tend to complicate your life a bit. Timeless.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: EA option 5: CENT

Download Centipede:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

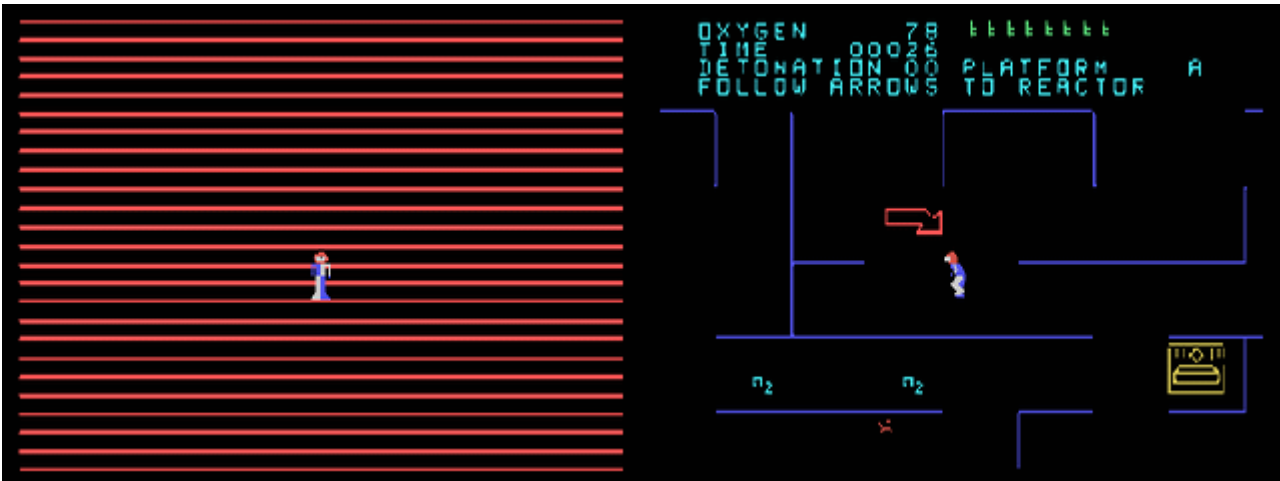
Start from mega menu: G - 2 - P

Features: Title Screen, EA5, One or Two Player, Sound

Controls: Joystick 1

Major Tom

G-2-Q [Disk: 064-MAJO] By Unknown Author



This is a beautifully executed space romp where you have to defuse the reactor of a planetary base before it blows up. Problem is that there are many deadly obstacles to overcome as you roam the twisted labyrinthine corridors of the station as well as making sure you replenish your oxygen supply as you go along. The graphics are superb and the low gravity environment is very well rendered, although I found the difficulty level to be quite steep... Very entertaining!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: EA option 3: File Name=MAJOR-TOM Program Name=LOTS

Download Major Tom:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\] NOTE:](#)

Start from mega menu: G - 2 - Q

Features: Title Screen, EA3, One or Two Player, Sound

Controls: Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.MAJOR-TOM

FILE NAME?

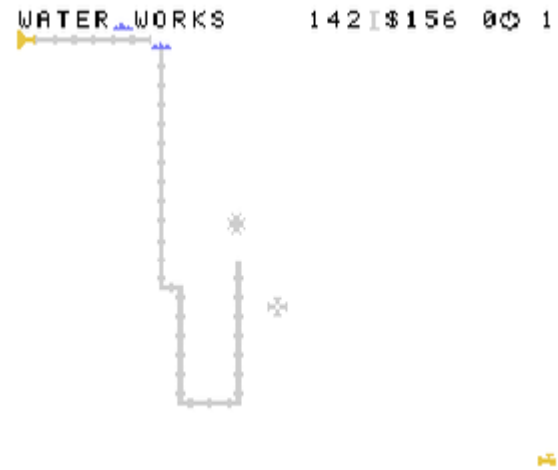
<ENTER>

PROGRAM NAME?

LOTS

Water Works

G-B-5 [Disk: 065-WATW] By David Bishop



In this game, anybody can become a plumber, although the quality of the work will depend heavily on strategic thinking... Your objective is to build a pipe line from the feed pipe to the outlet on all 99 floors and the basement of a building under construction. The higher the starting floor, the more difficult it is to finish. You begin with a budget of \$200 which you can use to purchase equipment and pipes, and it is up to you to use it wisely in order to keep your operating margins healthy. Very original concept. Manual included.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download Water Works:

[\[TIFILES format\] \(NOTE: Name disk "WATERWORKS"\)](#)

[\[V9T9 .DSK Format\]](#)

Does not work from a tipi directory!

Put the files from the tipi directory TIPI.MM.P.GS.065-WATW to a floppy disk, name the disk "WATERWORKS" and put the floppy disk in DSK1. Then select the start code G-B-5 from Mega Menu.

Start from mega menu: G - B - 5

Features: Title Screen, XB, AL, Music, One Player

Controls: Keyboard, Joystick

TI-99/4A – Game Shelf Assembly/c99/Forth Games

THE FOLLOWING KEYS ARE ACTIVE FOR THESE SCREENS:

C	CANCEL- RETURN TO GAME
ENTER	VIEW NEXT SCREEN
FCTN+9	VIEW PREVIOUS SCREEN
FCTN+8	VIEW FIRST SCREEN
FCTN+P	PRINT PRESENT SCREEN
FCTN+D	PRINT PRESENT SCREEN TO LAST SCREEN
SPACE	HOLD DOWN UNTILL THE PRINTER STOPS (AT THE END OF THE SCREEN).
FCTN+Q	STOP PRINTING IMMEDIATELY

50 SCREENS

PLAYING THE GAME

YOUR OBJECTIVE IS TO BUILD A PIPE LINE FROM THE FEED PIPE (.) TO THE OUTLET (.) ON ALL 99 FLOORS AND ONE BASEMENT. ONE TO TEN PLAYERS MAY PLAY. EACH PLAYER MAY SELECT THEIR STARTING FLOOR INDEPENDENTLY OF THE OTHER PLAYERS. THE HIGHER THE STARTING FLOOR, THE HARDER IT IS TO FINISH THE GAME. EITHER THE LEFT OR RIGHT JOYSTICK OR THE KEYBOARD MAY BE USED TO CONTROL THE MOVEMENT OF THE WRENCH, THE SELECTION OF PIPE, OR PIPE PLACEMENT.

AS YOU BEGIN EACH FLOOR YOU ARE GIVEN 200 DOLLARS WITH WHICH TO BUY PIPE OR EQUIPMENT AS NEEDED FROM THE HARDWARE STORE. THE FOLLOWING DESCRIPTION OF GAME PLAY ASSUMES THAT ONE PLAYER IS USING A JOYSTICK.

THE ALPHA LOCK KEY MUST BE IN THE UP POSITION EVEN IF YOU ARE USING THE KEYBOARD.

LOAD THE GAME AND READ THE THREE MAIN SCREENS AS THEY APPEAR.

THE FIRST SCREEN IS THE TITLE SCREEN AND GIVES YOU A GENERAL DESCRIPTION OF THE GAME OBJECTIVE AND PLAY.

THE SECOND SCREEN IS THE PLAYER'S SETUP SCREEN. THIS SCREEN GIVES YOU OBJECT DESCRIPTIONS, INSTRUCTIONS, GENERAL INFORMATION AND THE STARTING STATUS OF EACH PLAYER.

THE THIRD SCREEN IS THE HIGH SCORES SCREEN AND PRESENT PLAYERS SCOREBOARD.

THE FLOOR SHOWN IS THE FLOOR THE PLAYER IS PRESENTLY ON AND IS ONE MORE THAN THE FLOOR THAT THE SCORE WAS ACHIEVED AT.

OBSERVE THE PLAYERS SETUP SCREEN. THE PLAYERS ARE NUMBERED 0 THROUGH 9 AND ARE MADE ACTIVE BY PRESSING THE KEY WITH THEIR NUMBER.

PRESS THE 0 (ZERO) KEY ONCE.

THE SCREEN SHOULD LOOK LIKE THE FOLLOWING SCREEN:

```
.<    MAIN FEED PIPE
s<    LEAD STRAIGHT PIPE
.<    COPPER ELBOW PIPE
y<    LEAD TEE PIPE
.<    COPPER CAP
p<    CONTRACT LINK
.<    OUTLET    YOUR WRENCH >q
```


TI-99/4A – Game Shelf Assembly/c99/Forth Games

HOLD DOWN THE FCTN KEY AND PRESS THE H KEY TO DISPLAY THE HELP SCREENS.

USE THE KEYBOARD OR EITHER JOYSTICK TO CONTROL YOUR WRENCH.

THE SCREEN FLASHES RED THREE SECONDS IF ANY ERROR OCCURS.

ALPHA KEY MUST BE UP!

		JUL
		2991
PLAYER	0123456789	DLRB
FLOOR	0	T 3.14

THIS SELECTS THE BASEMENT AS THE STARTING FLOOR FOR PLAYER 0.

IF THERE IS NO NUMBER BELOW THE PLAYER'S NUMBER, THEN THAT PLAYER IS INACTIVE (NOT PLAYING). TO MAKE PLAYER 0 INACTIVE, PRESS THE 0 KEY TEN MORE TIMES.

SELECT THE BASEMENT (0) AS THE STARTING FLOOR FOR PLAYER 0.

TO START THE GAME HOLD DOWN THE FCTN KEY AND PRESS THE G (GO) KEY.

THIS STARTS ALL PLAYERS AT THEIR STARTING FLOOR. THE PLAYER WITH THE LOWEST NUMBER GOES FIRST.

EXCEPT FOR THE LINK, YOUR FLOOR SHOULD BE AS FOLLOWS:

WATER.WORKS 0b \$200 0. 0
.q

p

OBSERVE THE TOP ROW OF THE SCREEN. THIS ROW CONTAINS THE PRESENT PLAYING STATUS AND IS INTERPRETED THIS WAY:

STARTING ON THE LEFT IS THE GAME TITLE, THE NEXT SPACE IS BLANK NOW BUT WILL SHOW THE SAFETY LINE WHEN YOU HAVE ONE. THE SCORE FOLLOWS AND IS SIX DIGITS LONG (THE LEADING ZEROS ARE REPLACED WITH BLANKS).

THE HARDWARE STORE MARKER FOLLOWING MEANS YOU NEED TO GO TO THE STORE AND BUY EITHER A PIPE PIECE OR A HAMMER. THE NEXT THREE DIGITS INDICATE THE AMOUNT OF MONEY YOU HAVE REMAINING WITH WHICH TO COMPLETE THIS FLOOR. THE NEXT DIGIT IS THE PLAYERS NUMBER. THE CLOCK FOLLOWING THE PLAYERS NUMBER INDICATES THE REMAINING TIME YOU HAVE TO COMPLETE THE ENTIRE BUILDING. YOU HAVE ABOUT 13 MINUTES AVERAGE PER FLOOR. THE CLOCK BEGINS TO COUNT DOWN WHEN THERE IS ABOUT 1 HOUR OF CONTRACT COMPLETION TIME LEFT. THE TWO REMAINING DIGITS SHOW THE PRESENT FLOOR.

THE FIRST THING YOU MUST DO AT THIS POINT IS GO GET A PIPE PIECE FROM THE HARDWARE STORE. THE PIECE YOU WANT WILL DEPEND ON WHERE YOU WANT YOUR PIPE LINE TO GO. THIS IS WHERE YOU MUST DECIDE YOUR STRATEGY. HERE ARE A FEW STRATEGIES:

- 1) LEAST COST: THIS APPROAC CAN PRODUCE VERY HIGH SCORES BUT IS SUBJECT TO THE MOST REPAIR WORK.
- 2) MOST DURABLE: THIS WILL PRODUCE THE STRONGEST PIPE LINE SUBJECT TO THE LEAST AMOUNT OF REPAIR WORK BUT IS VERY COSTLY USING ONLY COPPER PIPE.
- 3) LEAST PIPE COUNT: THIS USES THE LEAST NUMBER OF PIPE PIECES BUT IS MORE COSTLY THAN METHOD 1 AND REQUIRES A LOT OF FORESIGHT TO REDUCE THE LARGE NUMBER OF TREKS TO THE HARDWARE STORE. THE MAIN ADVANTAGE IS THAT LESS REPAIR WORK IS NEEDED.

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4) BRUTE FORCE: THIS METHOD IS THE EASIEST STRATEGY TO PLAY, REQUIRING VERY LITTLE THOUGHT. IT IS LESS EFFICIENT THE HIGHER YOU GO. IT IS SUBJECT TO MUCH REPAIR WORK AND TREKS TO THE HARDWARE STORE ARE FREQUENT. THIS IS THE STRATEGY OF BEGINNERS.

AT THE LOWER FLOORS STRATEGY 1 IS THE BEST. ON THE HIGHER FLOORS STRATEGY 3 IS THE BEST. THESE ARE BY FAR NOT THE ONLY STRATEGIES POSSIBLE AND THE BEST ONE FOR THE HIGHEST FLOORS CAN BE DEVELOPED ONLY THROUGH EXPERIENCE AND OBSERVATION.

BY THIS TIME, YOU MAY HAVE NOTICED A FLASHING RED THING APPEARING FROM THE MAIN FEED PIPE. THIS IS CALLED AN ENCOUNTER. DURING THIS TYPE OF AN ENCOUNTER YOU ARE NOT PERMITTED TO DO ANYTHING BUT WATCH. THESE ENCOUNTERS WILL OCCUR THROUGHOUT THE GAME AT RANDOM INTERVALS. THEIR MAIN PURPOSE IS TO IMPEDE YOUR PROGRESS.

THE BLACK WIDOW SPIDER AND TIME BOMBS CAN BE DEADLY TO YOU.

LET'S GO TO THE HARDWARE STORE. TO DO THIS PRESS THE F (FLIP) KEY ONCE AND YOU WILL IMMEDIATELY BE IN THE HARDWARE STORE.

THE SCREEN SHOULD LOOK LIKE THE FOLLOWING SCREEN:

HARDWARE b STORE

LEAD	PRICE	COPPER	PRICE
r s	1	..	3
tvuw	2	6
}~ .	3	9
x z	4	..	12
y {	4	..	12

BILLED FOR PIPE WHEN USED.

d 10-40 MONKEY WRENCH	P
. 20,40 RUST REMOVER	O
. 30 HAMMER 1000 ...	I
. 40 SPIRITS	C N
. 50 MOP	O T
. 1-122 SCREW DRIVER	S
. 100 AIR FRESHENER	T
. 250 SAFETY LINE	

THE PROGRAM WILL PLACE YOUR WRENCH ON THE PIECE YOU ARE PRESENTLY CARRYING BUT SINCE YOU HAVE NO PRESENT PIPE PIECE, THE HORIZONTAL LEAD PIPE IS THE DEFAULT. THE LEAD PIPE IS SUBJECT TO LEAKING AND EASILY BREAKS. THE COPPER IS VERY HARD AND RUST RESISTANT. MOVE YOUR WRENCH TO THE CENTER OF THE PIPE PIECE THAT YOU NEED ANDPRESS THE **FIRE BUTTON** TO SELECT IT. OBSERVE THE CONNECTOR ARRANGEMENT FOR EACH PIECE OF PIPE TO MAKE SURE IT FITS WHERE YOU WANT IT TO. TO VERIFY YOUR SELECTION, PRESS THE F (FLIP) KEY TO RETURN BACK TO THE PLAYING SCREEN. IF YOU SELECT A PIPE PIECE THAT YOU DO NOT WANT, THEN SIMPLY SELECT THE ONE YOU DO WANT. SOME OF THE PIPE PIECES ARE OFF CENTER AND YOU MAY HAVE TO MANEUVER THE WRENCH SLIGHTLY TO AQUIRE THE PIECE. THE PIECE YOU HAVE SELECTED WILL APPEAR WHERE THE HARDWARE STORE MARKER WAS.

PRESS THE F (FLIP) KEY TO RETURN TO THE PLAYING SCREEN WHEN YOU ARE READY TO CONNECT THE PIPE.

TO CONNECT A PIECE OF PIPE, PLACE THE WRENCH IN THE POSITION YOU WANT THE PIPE PIECE TO CONNECT TO YOUR PIPE LINE. PRESS THE FIRE BUTTON. THE PIPE PIECE MUST BE

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ABLE TO CONNECT TO ALL CONNECTING PIPE PIECES IN ITS VICINITY OR IT WILL NOT BE PLACED ON THE SCREEN.

VALID CONNECTION

WATER.WORKS 0s\$200 0. 0

.q

p

INVALID CONNECTION

WATER.WORKS 0{\$200 0. 0

.q

p

INVALID CONNECTION

WATER.WORKS 0r\$173 0. 0

.sssssssssssssssssssssssv

r

qp

YOU ONLY NEED TO GO TO THE HARDWARE STORE WHEN YOU NEED A PIPE PIECE, A DIFFERENT PIPE PIECE, OR TO BUY EQUIPMENT. ONCE THE PIPE CONNECTS, MOVE THE WRENCH TO THE NEXT POSITION AND MAKE ANOTHER CONNECTION. CONTINUE UNTIL YOUR PIPE LINE CONNECTS TO THE CONTRACT LINK. FROM HERE CONNECT PIPE OVER TO THE OUTLET. WHEN BUILDING YOUR PIPE LINE MAKE SURE YOU DO NOT PRODUCE ANY PIPE LOOPS SUCH AS THE ONE SHOWN HERE:

WATER.WORKS 0s\$160 0. 0

.ssssssssssssssssssssszssv

q r r

usst

IF THIS HAPPENS, THEN READ THE SECTION ON THE USE OF THE HAMMER. VERIFY THAT YOUR PIPE LINE HAS NO LEAKS (WATER.PUDDLES) OR UNCAPPED PIPE OPENINGS. MAKE SURE YOU DID NOT MISS ANY CONTRACT LINKS. IF EVERYTHING APPEARS OK, THEN PRESS THE I (INSPECTOR) KEY ONCE AND THE CITY INSPECTOR, MR. EYEGGLASS, WILL INSPECT YOUR WORK. IF YOU FAIL THE INSPECTION, THEN THE EYE WILL REMAIN FOR A SHORT WHILE AT THE PLACE THAT THE INSPECTION FAILED, THEN YOU WILL BE CHARGED FOR WASTING THE INSPECTOR'S TIME. EACH TIME YOU FAIL AN INSPECTION ON A SINGLE FLOOR, YOU WILL BE CHARGED MORE THAN FOR THE LAST FAILURE. IT GETS VERY EXPENSIVE QUICKLY. IF YOU CAN NOT PAY THE INSPECTOR, THEN YOU LOSE THE GAME. WHEN YOU PASS INSPECTION YOUR REMAINING DOLLARS ARE ADDED TO YOUR SCORE AND YOU ARE ALLOWED TO VIEW THIS FOR A SHORT TIME.

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TO PAUSE THE GAME HOLD DOWN THE **SPACE BAR** DURING THE INSPECTION UNTILL THE MESSAGE "GAME PAUSED" APPEARS. PRESS THE **SPACE BAR** TO CONTINUE THE GAME. THE NEXT ACTIVE PLAYER WILL NOW BE ALLOWED TO PLAY (IF THERE IS SOMEONE ELSE). OTHERWISE YOU WILL PROCEED TO THE NEXT FLOOR, IN THIS CASE FLOOR ONE.

AT ANY TIME YOU MAY PAUSE THE PRESENT GAME BY HOLDING DOWN THE **FCTN KEY AND PRESSING THE B (BREAK) KEY** ONCE. YOU WILL BE RETURNED TO THE MAIN SCREENS.

TO CONTINUE FROM WHERE YOU LEFT OFF HOLD DOWN THE **FCTN KEY AND PRESS THE C (CONTINUE) KEY** ONCE. THE GAME WILL CONTINUE FROM EXACTLY WHERE YOU LEFT OFF.

IF YOU NEED A LITTLE HELP, THEN FROM ANY SCREEN HOLD DOWN THE **FCTN KEY AND PRESS THE H (HELP) KEY** ONCE AND A CONDENSED VERSION OF THIS PLAYER'S MANUAL WILL BE DISPLAYED. THESE SCREENS DO NOT ACCESS THE DISK.

TO LEAVE WATER.WORKS, RETURN TO THE MAIN SCREENS AND HOLD DOWN THE **FCTN KEY AND PRESS THE 0 (ZERO) KEY**.

TO TURN ON OR OFF THE THEME MUSIC, HOLD DOWN THE **FCTN KEY AND PRESS THE T (THEME) KEY** ONCE.

TO TURN ON OR OFF THE SOUND EFFECTS, HOLD DOWN THE **CTRL KEY AND PRESS THE S (SOUND) KEY** ONCE.

OBJECT DESCRIPTIONS

- THE CAN OF AIR FRESHENER IS USED TO EXORCISE SHIMMERING SPIRITS.
- THE JAR OF RUST REMOVER IS USED TO REMOVE RUST AND SMUDGE MONSTERS. THE SMUDGES REQUIRE A DOUBLE DOSE TO BE REMOVED.
- THE MONKEY WRENCH IS USED TO REPAIR LEAKING PIPE. SMUDGES PREVENT THE WRENCH FROM WORKING.
- IF YOU TAKE A SWIG OF THESE SPIRITS, THEN YOU ARE JUST ABLE TO SEE THE OUTLINE OF A SHIMMERING SPIRIT THE FIRST TIME YOU RETURN TO THE PLAYING SCREEN.
- THE SCREWDRIVER ALLOWS YOU TO RESET THE TIME BOMBS PLANTED BY A TERRORIST.
- YOUR TRUSTY HAMMER CAN BE USED TO KNOCK OUT THE WALL PANELS, REPAIR THE WATER-DAMAGED FLOOR PANELS OR BREAK PIPE LOOPS (GOOD PIPE ONLY). USE IT TO MOVE WASHERS, HEATERS OR SINKS.
- THE MOP IS USED TO MOP UP THOSE PESKY WATER MONSTERS WHO ARE VERY DESTRUCTIVE.
- THE SAFETY LINE IS A CHEAP PIECE OF ROPE THAT ALLOWS YOU TO CROSS OVER WATER-DAMAGED FLOOR PANELS SAFELY. HOWEVER SINCE IT IS SO CHEAP, IT DOES NOT LAST VERY LONG SO BE VERY CAREFUL WHEN USING IT.
- THE LITTLE GREEN WOOD WORM IS A REAL BOTHER TO THE BUILDERS IN THAT THEY EAT ANYTHING MADE OF WOOD. HOWEVER FOR YOU THEY ARE A REAL BLESSING IN THAT THEY WILL REMOVE THE WALL PANELS AT NO COST TO YOU. THESE LITTLE CRITTERS ARE ALSO WORTH POINTS TO YOU WHEN YOU PASS INSPECTION, SO DON'T STEP ON THEM.
- APPLES THESE ARE
- CHERRIES ALL WORTH
- STRAWBERRIES VARIOUS
- WATERMELONS AMOUNTS OF POINTS WHEN YOU EAT THEM.

TO EAT ONE OF THESE, JUST PASS YOUR WRENCH OVER THEM, BUT ACT FAST, THEY ROT AND DISAPPEAR RATHER QUICKLY.

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IF YOU SEE ANY LOOSE CHANGE LYING AROUND ON THE FLOOR, GRAB IT FAST! AS YOU KNOW, MONEY COMES AND GOES; HERE TODAY GONE YESTERDAY. TO PICK UP THE MONEY, JUST PASS YOUR WRENCH OVER IT.

THE PIPES YOU INSTALL CAN DEVELOP LEAKS FOR ANY NUMBER OF REASONS. THE BEGINNING OF A LEAKY PIPE IS A WATER PUDDLE.

WATER SPOUTS ARE THE SECOND STAGE A LEAKING PIPE GOES THROUGH BEFORE RUPTURING.

THE CONSTRUCTION WORKERS HAVE A NASTY HABIT OF LEAVING THEIR USED CHEWING GUM LYING AROUND ON THE FLOOR FOR OTHERS TO STEP ON. IF YOU STEP ON THE GUM, THEN YOU WILL BE STUCK (UNABLE TO MOVE) FOR A WHILE. TO UNSTICK YOURSELF YOU MUST KEEP THE WRENCH HEADED IN THE DIRECTION YOU CAME FROM.

- SINKS

- WASHING MACHINES

- WATER HEATERS

THE SCREEN FLASHES BLACK SHORTLY BEFORE A BLACK WIDOW SPIDER APPEARS.

COMING IN CONTACT WITH MOST OF THE ENCOUNTERS HAS EITHER A GOOD OR BAD EFFECT. SOME TAKE AWAY POINTS IMMEDIATELY OR AT INSPECTION TIME. SOME WASTE TIME, OR COST DOLLARS. SOME CAUSE YOU TO LOSE THE FLOOR OR THE PIPE PIECE YOU ARE CARRYING.

THE d..... ALL COST POINTS TO USE AND WHEN SELECTED KEEP WORKING UNTIL IT FIXES ALL IT CAN OR YOU DO NOT HAVE ENOUGH POINTS TO CONTINUE USING IT.

HERE ARE SOME PLAYING HINTS.

FLOORS	0-37	CONCERN YOURSELF WITH DOLLARS.
	38-77	CONCERN YOURSELF WITH POINTS.
	78-99	CONCERN YOURSELF WITH TIME.

TO MAKE THE 99TH FLOOR WILL REQUIRE A LOT OF TIME AND PLAYING EXPERINCE...SO GOOD LUCK.

SAVING & LOADING GAME FILES

YOU MUST BE ON ONE OF THE MAIN SCREENS TO SAVE OR LOAD A GAME FILE. TO SAVE A GAME FILE, INSERT THE DISK YOU WANT TO SAVE THE GAME ON INTO DRIVE 1 AND CLOSE THE DRIVE DOOR.

HOLD DOWN THE **FCTN KEY AND PRESS THE S (SAVE) KEY** ONCE.

SELECT A ONE CHARACTER FILE NAME FROM 0 (48) TO ~ (126).

PRESS THE ENTER KEY TO SAVE

OR...

PRESS THE FCTN 9 (BACK) KEY TO CANCEL THE SAVE ROUTINE.

IF THE SCREEN FLASHES RED, THEN THE PROGRAM WAS UNABLE TO SAVE THE GAME DATA PROPERLY. ONE SOLUTION MAY BE TO TRY ANOTHER DISK.

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WHAT IS SAVED ON THE DISK?

THE DATA FILE ON THE DISK WILL CONTAIN THE PRESENT PLAYER'S SCREEN, THE DATA FOR EACH PLAYER, THE PRESENT GAME STATUS FOR CONTINUATION AND THE PRESENT PRINTER DATA. AFTER SAVING THE DATA THE PROGRAM WILL RETURN TO WHERE IT LEFT OFF.

TO LOAD A GAME FILE, INSERT THE DISK YOU WANT TO LOAD THE GAME FROM INTO DRIVE 1 AND CLOSE THE DRIVE DOOR.

HOLD DOWN THE FCTN KEY AND PRESS THE L (LOAD) KEY. SELECT A ONE CHARACTER FILE NAME FROM 0 (48) TO ~ (126).

PRESS THE ENTER KEY TO LOAD

OR...

PRESS THE FCTN 9 (BACK) KEY TO CANCEL THE LOAD ROUTINE.

IF THE SCREEN FLASHES RED, THEN THE PROGRAM WAS UNABLE TO LOAD THE GAME DATA. MAKE SURE YOU HAVE THE CORRECT DISK.

IF THE DATA IS LOADED SUCCESSFULLY, THEN THE PROGRAM WILL RESTART WATER.WORKS WITH THE DATA FROM THE LOADED GAME.

IF THE DATA DID NOT LOAD SUCCESSFULLY, THEN THE PROGRAM WILL CONTINUE FROM WHERE IT LEFT OFF. A FAILURE TO LOAD A DATA FILE WILL NOT AFFECT THE PROGRAM.

IF YOU SAVE THE GAME AT THE BEGINNING OF EACH NEW FLOOR, THEN YOU WILL NEVER HAVE TO REDO MORE THAN ONE FLOOR IF THINGS GO BAD FOR YOU. ALSO IT IS NOT POSSIBLE TO VERIFY EVERY POSSIBLE EVENT THAT CAN TAKE PLACE IN WATER.WORKS, SO IF THERE IS A BUG IN THE PROGRAM, THEN WHAT IS LIKELY TO OCCUR IS THAT THE COMPUTER WILL HANG (LOCKS UP). YOU WILL NEED TO RESET THE COMPUTER BY TURNING IT OFF.

DO NOT USE THE WATER.WORKS DISK TO SAVE GAME FILES.

PRINTING THE SCREENS

WATER.WORKS COMES WITH A UNIVERSAL PRINTER SETUP ROUTINE THAT ALLOWS YOU TO TELL THE PROGRAM EXACTLY HOW TO COMMUNICATE WITH YOUR PRINTER IN BOTH ALPHANUMERIC AND BIT-IMAGE MODES.

TO ENTER THIS ROUTINE YOU MUST BE ON ONE OF THE MAIN SCREENS. HOLD DOWN THE CTRL KEY AND PRESS THE P (PRINTER SETUP) KEY ONCE.

YOU WILL NOW BE IN THE PRINTER SETUP SCREEN USING THE SCREEN EDITOR UTILITY.

THE SCREEN SHOULD LOOK LIKE THE FOLLOWING SCREEN:

PRINTER SETUP

```
MODES:   A S F I M C L X S C E C
          Y/N   N N N N N Y Y N _
BION     1B 4B E0 00 _ _ _ _ _
BIOF     _ _ _ _ _
LFL      1B 41 09 _ _ _ _ _
RST      _ _ _ _ _
FF       0D 0A _ _ _ _ _
```

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INDENT 10 TOF 00 BE 002 2FD

DEVICE PIO.CR

PRESS DELETE, INSERT, ERASE, CLEAR, PROCEED, REDO, BACK. ALL NUMERIC DATA IS ENTERED IN AS HEXADECIMAL NUMBERS. THE FOLLOWING TABLES WILL AID YOU IN TRANSLATING DECIMAL NUMBERS INTO HEXADECIMAL NUMBERS.

HEX	DEC	HEX	DEC
00.....	0	00.....	0
01	1	10	16
02.....	2	20.....	32
03	3	30	48
04.....	4	40.....	64
05	5	50	80
06.....	6	60.....	96
07	7	70	112
08.....	8	80.....	128
09	9	90	144
0A.....	10	A0.....	160
0B	11	B0	176
0C.....	12	C0.....	192
0D	13	D0	208
0E.....	14	E0.....	224
0F	15	F0	240

TO CONVERT THE HEX NUMBER >A9 (> MEANS A HEX VALUE FOLLOWS) TO DECIMAL DO THIS:

>A0 FROM RIGHT TABLE 160

>09 FROM LEFT TABLE 9

>A9 IS DECIMAL 169

TO CONVERT THE DECIMAL NUMBER 187 TO HEX DO THIS:

LARGEST HEX VALUE LESS THAN OR EQUAL TO 187 IS >B0

187-176 (>B0) LEAVES 11

WHICH IS HEX >0B

187 DECIMAL IS HEX >BB

ONE OF THE APPENDICES IN THE BACK OF YOUR PRINTER MANUAL SHOULD GIVE YOU A HEX TO DECIMAL CHART AND A LISTING OF WHAT THEY MEAN TO YOUR PRINTER.

SOME PRINTER MANUALS CALL THE BIT-IMAGE MODE THE GRAPHICS-MODE.

THE FIRST LINE OF DATA ON THE PRINTER SETUP SCREEN DISPLAYS THE VARIOUS MODES THAT WATER.WORKS IS TO USE WHEN COMMUNICATING WITH YOUR PRINTER. THESE MODES ARE SET USING EITHER:

Y FOR YES (ACTIVE)

N FOR NO (INACTIVE)

READING FROM LEFT TO RIGHT THE VARIOUS MODES ARE;

A WATER.WORKS IS INFORMED THAT YOUR PRINTER DOES NOT HAVE A BIT-IMAGE MODE AND THE SCREEN MUST BE DUMPED AS ALPHA-NUMERIC (TEXT).

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S N A=Y OUTPUTS ASCII CODE 32 TO 95 ONLY. A * FOR ALL OTHER CODES.

 N A=N NORMAL DUMP.

 Y A=Y DATA OUTPUT AS IS.

 Y A=N INTENSITY DUMP.

F A=N PRINTS LINE INVERTED.

I A=N WHITE DOTS ON BLACK.

M A=N MAGNIFIES PRINT (X2)

 S M BYTES/LINE LINES ROWS

 N N 224 >00E0 1 24

 N Y 448 >01C0 2 48

 Y N 896 >0380 4 96

 Y Y 1792 >0700 8 192

C GENERATES A CR AT THE END OF EVERY LINE.

L GENERATES A LF AT THE END OF EVERY LINE.

BION THIS CODE TURNS ON THE PRINTER'S BIT-IMAGE MODE.

BIOF THIS CODE TURNS OFF THE PRINTER'S BIT-IMAGE MODE.

LFL THIS CODE DEFINES THE NUMBER OF DOT ROWS THE PRINTER STEPS FOR A LF.

RST CODE TO RESET PRINTER.

FF THIS CODE DEFINES THE PRINTER'S FORM FEED.

THE INDENT AND TOF COUNTERS ARE USED TO POSITION THE IMAGE ANYWHERE ON THE SHEET OF PAPER.

THE BE POINTERS DESCRIBE THE PRINT RECTANGLE (BEGIN/END). THE NEXT THREE LINES ARE THE DEVICE INTERFACE IDENTITY. TURN OFF THE CR/LF OF THE INTERFACE WITH (.CR).

THE NEXT TWO ROWS TELL YOU WHICH EDITING KEYS ARE ACTIVE.

DELETE - CHARACTER.

INSERT - CHARACTER.

ERASE - LINE.

CLEAR - THE SCREEN.

PROCEED - WITH THE GAME.

REDO -- USE THE DEFAULT DATA.

BACK -- USE THE PRESENT DATA.

EACH LINE HAS ITS OWN RESTRICTIONS ON WHAT CAN BE DONE OR THE TYPE OF DATA THAT IS ALLOWED.

TO PRINT ANY SCREEN HOLD DOWN THE FCTN KEY AND PRESS THE P (PRINT) KEY.

THE EC INDICATES THE LAST I/O ERROR TO OCCUR. BLANK MEANS NO ERROR.

IF YOU HOLD DOWN THE CTRL KEY AND PRESS THE O (OUTPUT) KEY, THEN THE DATA ON THE BION LINE WILL BE SENT TO THE PRINTER. ORDER OF CODE OUTPUT IS:

RST, LFL, TOF.

INDENT, BION, DATA, BIOF
(EACH LINE).

FF.

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**** FCTN KEY OPTIONS: ****

B - (BREAK) PAUSES THE GAME
C = CONTINUES AN OLD GAME
G = (GO) STARTS A NEW GAME

H DISPLAYS HELP SCREENS
I = LOADS DEFAULT PRINTER DATA
L = LOADS AN OLD GAME
N - SKIPS TO NEXT PLAYER
O = SAVES PRESENT PRINTER DATA
P PRINTS THE PRESENT SCREEN
S = SAVES THE GAME TO DISK 1
T = TURNS THEME MUSIC ON/OFF

0 = (QUITS) EXITS WATER.WORKS

CODE MEANING:

ALL SCREENS

= MAIN SCREENS ONLY (3)
- PLAYING SCREENS ONLY (2)

**** CTRL KEY OPTIONS: ****

D = RUNS THE DEMO PROGRAM
D - DROPS THE CARRIED PIECE
H = DISPLAYS PLAYERS MANUAL
L = PRINTS LAST PLAYING SCREEN
O = OUTPUTS THE BION LINE
P = ENTERS THE PRINTER SET UP
R = RESTARTS WATER.WORKS
S TURNS SOUND EFFECTS ON/OFF
0 - PRESENT PLAYER QUILTS GAME

CODE MEANING:

ALL SCREENS

= MAIN SCREENS ONLY (3)
- PLAYING SCREENS ONLY (2)

ADDITIONAL OPTIONS:

0-9 = ADVANCES THE PLAYERS STARTING LEVEL (GO)
W E R - KEYBOARD WRENCH
S D DIRECTIONAL KEY
Z X C CONTROLS

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- F - FLIPS BETWEEN YOUR PLAYING FLOOR AND THE HARDWARE STORE
- P - CONNECTS OR SELECTS A PIPE PIECE, OR SELECTS EQUIPMENT (ALSO FIRE BUTTON).
- C CANCELS THE SELECTION

ENTER COMPLETES DATA INPUT.

ALL SCREENS

- = MAIN SCREENS ONLY (3)
- PLAYING SCREENS ONLY (2)

**** NOTES ****

IN THE PRINTER SETUP THE BE RECTANGLE IS NOT ACTIVE. THE INTENSITY DUMP IS NOT ACTIVE.

X FUNCTION (RASTER SCAN DUMP) IS NOT ACTIVE.

IF YOU SET A=Y AND S=Y, AND PRINT TO A DISK FILE, THEN CONVERT WILL BE ABLE TO TRANSLATE THE FILE INTO A TI-ARTIST COMPATIBLE FILE.

SC SCREEN COUNT. SCREENS PER

PAGE. THIS IS NOT ACTIVE.

CR CARRIAGE RETURN, >0D.

LF LINE FEED, >0A.

TOF TOP OF FORM. OUTPUTS BLANK LINES.

INDENT OUTPUTS SPACES.

TO MOVE THE CURSOR, USE THE FOLLOWING KEYS;

- E UP (PREVIOUS FIELD)
- S D LEFT, RIGHT
- X DOWN (NEXT FIELD)

ENTER NEXT FIELD

IF THE PRINT RECTANGLE WAS ACTIVE, THEN THE BYTES/LINE AND NUMBER OF ROWS PRINTED COULD BE MORE OR LESS.

IN FUTURE VERSIONS 4.00 AND HIGHER, THE PRINT FILES WILL BE CREATED FROM SCRIPTS. THESE SCRIPTS CAN BE CREATED BY YOU WITH A TEXT EDITOR OR WORD PROCESSOR APPLICATION. THEY WILL CONTAIN SEQUENCES OF MACROS THAT WILL DESCRIBETO THE DUMP ROUTINE HOW TO CONTROL YOUR PRINTER. THIS WILL ALLOW RASTER SCAN AND COLOR PRINTERS.

RASTER SCAN PRINTING CREATES AN IMAGE ON A PIECE OF PAPER THE SAME WAY THAT THE IMAGE IS DRAWN ON YOUR T.V. OR MONITOR, ONE PIXEL ROW LEFT TO RIGHT AT A TIME.

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PATTERN SET

```
0123456789ABCDEF
0000000000000000
00.. 0@P`p.....
01..!1AQaq.....
02.. "2BRbr.....
03.. #3CScs.....
04.. $4DTdt.....
05.. %5EUeu.....
06.. &6FVfv.....
07.. '7GWgw.....
08.. (8HXhx.....
09.. )9IYiy.....
0A.. *:JZjz.....
0B.. +;K[k{.....
0C.. <L\l|.....
0D.. -=M]m}.....
0E.. >N^n~.....
0F.. /?O_o.....
```

THIS TABLE WILL HELP YOU TO ENTER SPECIAL CHARACTERS INTO THE HIGH SCORES SCREEN. WHEN GAME PLAY ENDS AND THERE ARE NO ACTIVE PLAYERS REMAINING, THE HIGH SCORE SCREEN WILL BE UPDATED.

EACH PLAYER THAT SUCCEEDS IN ESTABLISHING A NEW HIGH SCORE ENTRY WILL BE ALLOWED TO ENTER HIS NAME.

USE THE FOLLOWING KEYS:

FCTN+7	THIS TOGGLES	01 BETWEEN PATTERNS 0 TO 127 AND 128 TO 255.
FCTN+S	MOVE CURSOR RIGHT	08
FCTN+D	MOVE CURSOR LEFT	09
ENTER	ACCEPT INPUT	0D

ALL OTHER KEY COMBINATIONS ARE ACCEPTABLE. YOU MAY ENTER ANY OF THE GRAPHICS FROM THE PREVIOUS SCREEN.

**** **CREDITS** ****

RAIDERS MARCH

PARAMOUNT PICTURES PRESENTS A LUCASFILM LTD. PRODUCTION

A STEVEN SPIELBERG FILM "RAIDERS OF THE LOST ARK"

MUSIC BY JOHN WILLIAMS

WATER.WORKS THEME IS THE COMPUTER RENDITION OF 35 MEASURES OF A PIANO

RENDITION OF SPIELBERG'S FILM THEME.

1984/1985 MOVIE SONGBOOK

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WATER.WORKS HISTORY

VERSION	DATE		LANGUAGE
1.00	DECEMBER	1983	XB
2.00	MARCH	1984	ASM
3.00	NOVEMBER	1986	ASM
3.01	OCTOBER	1988	ASM
3.13	NOVEMBER	1990	ASM
3.14	JULY	1991	ASM

ONLY THE EXTENDED BASIC VERSION IS PUBLIC DOMAIN

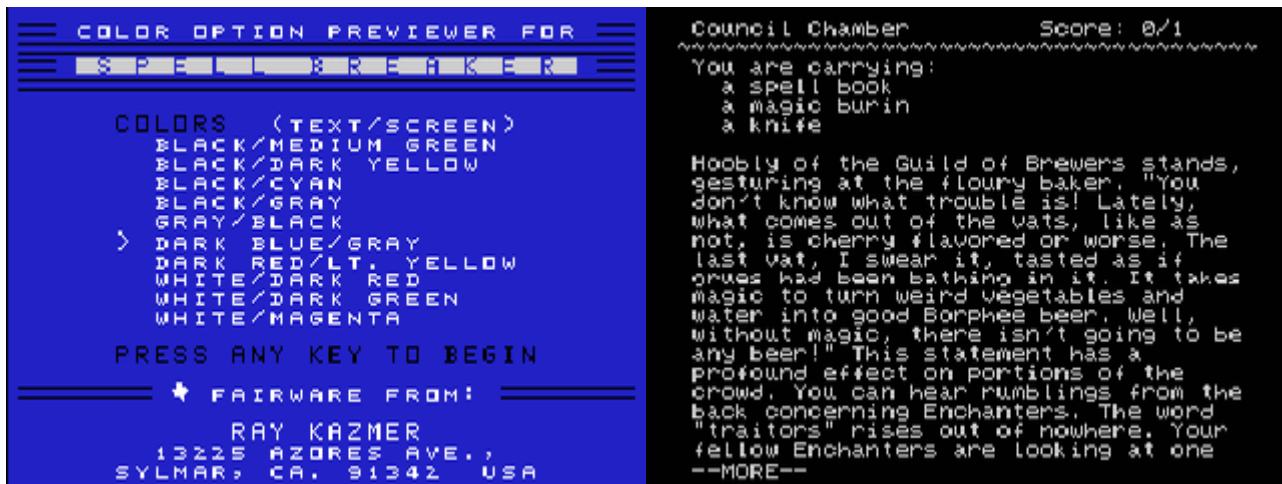
290791 DLRB

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Spell Breaker

G-2-R [Disk: 066-SPEL] By Dave Lebling



This is the third installment in the Infocom Enchanter series. In a world founded on magic, magic itself seems to be failing! Spells fail to work or go strangely awry, leading to the formation of the Guildmasters conclave. As the leader of the Circle of Enchanters, you are chosen to restore magic to its full radiant glory. The very fabric of this enchanted universe lies in your hands... The commands here are those of the standard Infocom interpreter, with the CAST and LEARN commands added for spells. Also, you may write newly found spells into your spellbook by using the GNUSTO command. Good luck!

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download Spell Breaker:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 2 - R

Features: Title Screen, XB, AL, One Player

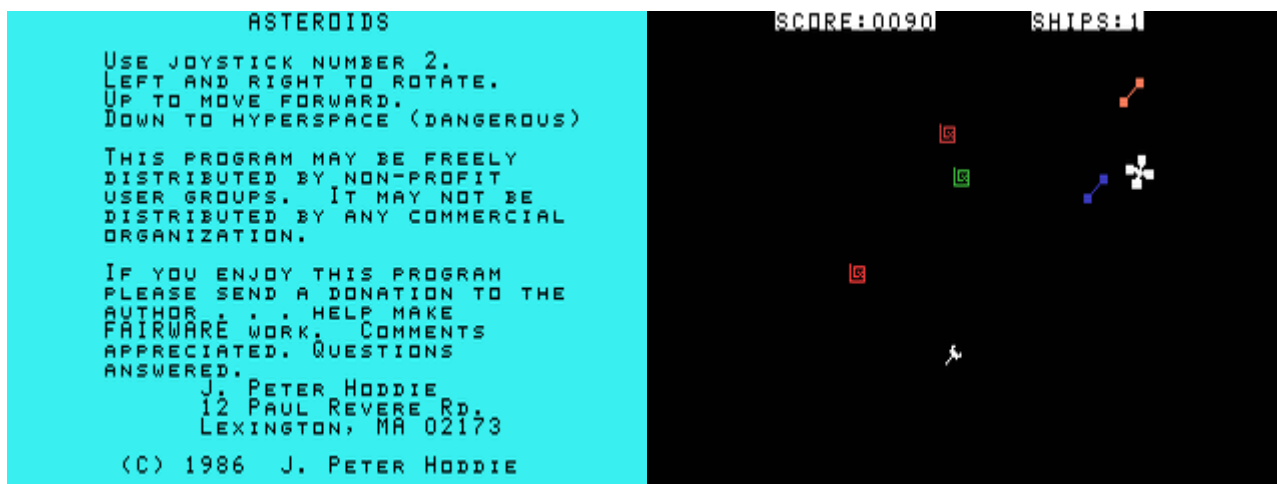
Controls: Keyboard

Spellbreaker Commands

AGAIN	- Repeat previous command - Abbreviation G
BRIEF	- Full discription of area first time through
DIAGNOSE	- State of health
INVENTORY	- Abbreviation I
LOOK	- Abreviation L
OOPS	- Correct mistyped word. Type OOPS <correct word>
QUIT	
RESTART	
RESTORE	
SAVE	
SCORE	
SCRIPT	- Send everything to printer
SPELLS	- Spells that you have memorized
SUPERBRIEF	- Only area name
TIME	- Time of day in game
UNSCRIPT	- Stop printout
VERBOSE	- Full discription of area on each entry
WAIT	- Make time pass - Abbreviation Z for short

Asteroids

G-2-S [Disk: 067-ASTE] By J. Peter Hoddie



Very nicely executed remake of the classic Asteroids game, enhanced by colorful animated obstacles. Classic fun.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Asteroids:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

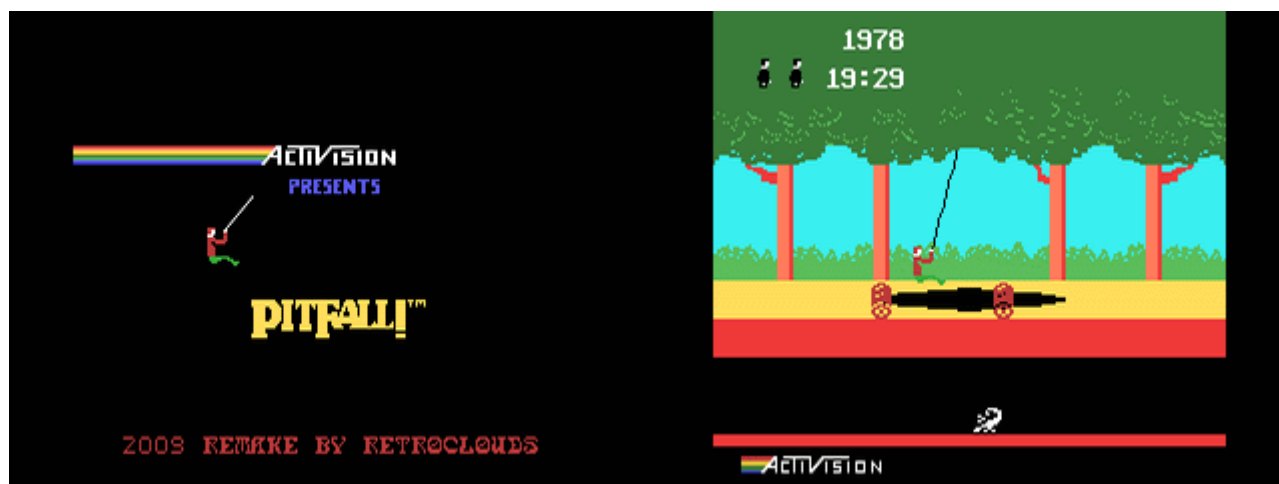
Start from mega menu: G - 2 - S

Features: Title Screen, XB, AL, One Player, Sound

Controls: Joystick 2

Pitfall

G-2-T [Disk: 068-PITF] By David Crane / TI 99/4A Remake By Retroclouds



This is an unbelievably faithful recreation of the classic Pitfall game for the Atari 2600 console that represents a tour de force of masterful assembly programming. It is as much a joy to play as a trip down memory lane, with all 255 screens filled with treasures and frequently deadly obstacles. Very well done indeed!

Requirements: Editor/Assembler or XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD or #PITFALL (EA option 5)

Download Pitfall:

[\[TIFILES format\]](#)

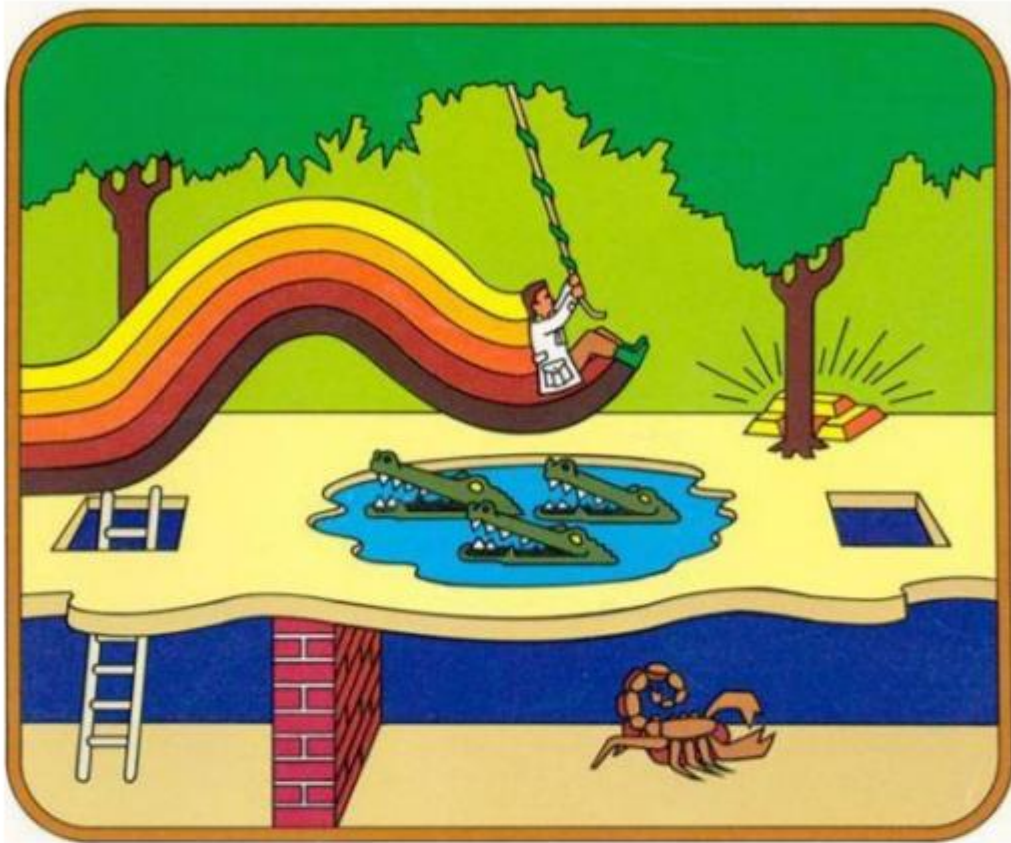
[\[V9T9 .DSK Format\]](#)

[Pitfall Manual \(PDF\)](#)

Start from mega menu: G - 2 - T

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1



**FOR THE TEXAS INSTRUMENTS
TI-99/4A
HOME COMPUTER**

DISK VERSION

A FEW WORDS ABOUT JUNGLE EXPLORERS

Pitfall Harry aside, perhaps the best-known jungle explorer was David Livingstone, a Scottish medical missionary who spent many years in Africa.

In 1968, Livingstone lost contact with the outside world. Henry M. Stanley, a journalist who wrote for newspapers in New York and London, mounted an expedition to locate Livingstone. In 1871, after a difficult and exhausting search which often seemed destined to fail, Stanley located the missing missionary. He approached him and uttered the now-classic line, “Dr. Livingstone, I presume.”

Livingstone and Stanley were only two of the Europeans who explored the vast continent of Africa, and they were latecomers. The earliest written histories tell us that ancient Egyptians were exploring Africa thousands of years ago!

A FEW WORDS ABOUT RETROCLOUDS' REMAKE FOR THE TI-99/4A

Early 2008 a “homebrew” project was started for doing a Pitfall! remake for the Texas Instruments TI-99/4A Home Computer. The goal was to do a high-quality fan version that looks and feels just as the original Colecovision game.

Retroclouds -the person responsible for the TI-99/4A disk version-, had much fun in the process of learning assembly language and studying all aspects of the Colecovision game. By no means was the objective to make “big money” with the remake. Thinking of such: a very unlikely event when dealing with a 28 year old abandoned home computer system, considering that more than a few hundreds of hours were spent in doing the remake.

Therefore Retroclouds is committed in releasing the fully commented assembly language source code for education purposes and for anyone who just wants to take a peek at it.

If this helps to inspire a few more people in making homebrews for the TI-99/4A, it will be worth every minute invested in the project.

It is also planned to do a cartridge version of the remake. Again, there is no intent in making \$\$\$.

If a limited-quantity cartridge version gets developed, selling price will be based on actual costs for cartridge components, packaging and such.

LOAD GAME

Note that the game requires 32K memory expansion in order to run.

Do following steps for loading the game on your TI-99/4A.

- When using the Editor/Assembler module.
Select option #5 to run the program image file "#PITFALL"

```
* RUN PROGRAM FILE *
```

```
FILE NAME?
```

```
DSK1.#PITFALL
```

- When using the Extended Basic module.
The game will automatically start via the LOAD program.

GETTING UNDERWAY

Guide Harry through a treacherous jungle maze. He must leap over obstacles and dodge deadly dangers while grabbing all the treasure he can reach!

- To begin action after the title screen, move Hand Controller (joystick 1) left or right
- **Use of keyboard:**
 - To run left or right, press “S” or “D”.
 - To jump over obstacles, press space bar or “Q”.
 - To climb up ladders, press “E”; to descend, press “X”
 - To grab a swinging vine, press “space bar” while running left or right.
 - To pick up a treasure, run by it.
 - To pause the action, press “P” on the keyboard
 - To restart a new game when game over, press 8 (REDO) or 9 (BACK) to return to the title screen.
- **Use of Hand Controller (joystick 1):**
 - To run left or right, lean Control Stick in that direction.
 - To jump over obstacles, press fire button
 - To climb up ladders, push the Control Stick forward; to descend, pull back.
 - To grab a swinging vine, press fire button while running left or right.
 - To release a vine, pull the Control Stick toward you.
 - To pick up a treasure, run by it.
- **Scoring**

You start each adventure with 2000 points. Should you fall down a hole you will lose 100 points. Rolling logs will also cause point loss depending on how long contact is made with them.

Finding treasure earns you points. There are eight of each type of treasure in the game, 32 in all, worth a total of 112,000 points. Collect them all without losing any points for falling down holes or tripping on logs and you’ll have earned a perfect score – 114,000!



SPECIAL FEATURES OF PITFALL!

There are 255 jungle scenes through which Harry can travel. Each scene covered underground is equivalent to three on the surface. Pitfall! is a circular maze, which means that, if Harry safely goes through all 255 different scenes, he will come back to the starting point. In the course of that journey, Harry will also encounter all 32 treasures.

THE HAZARDS OF PITFALL!

Pitfall Harry's Jungle Adventure is fraught with danger. Some hazards will slow him down and rob you of points, while others will stop him cold in his tracks.

The "lesser" hazards are the open holes in the ground and rolling logs. (See "Scoring.") The catastrophic hazards are the scorpions, fires, cobra rattlers, crocodiles, swamps, quicksand and tar pits. These obstacles will not cost you points, but, they will cost one of Harry's 3 lives.

Some tips from David Crane, designer of Pitfall!

"as you set off on your first adventure with Harry, you'll notice two important features: that the logs always roll from right to left, and that the "replacement" Harrys (after Harry loses a life) drop from the trees on the left side of the screen. So, to minimize the number of rolling logs to be jumped and the catastrophic hazards to be re-tried, simply run to the left."


"Pitfall Harry's trip must be made through a maze of surface and underground passages through the jungle. To capture all 32 treasures in under twenty minutes, Harry will have to use some of the underground passages. I'd suggest that you make a map of the terrain each time you play. Knowing the jungle and planning the best route to all treasures is the only way to insure success time after time."

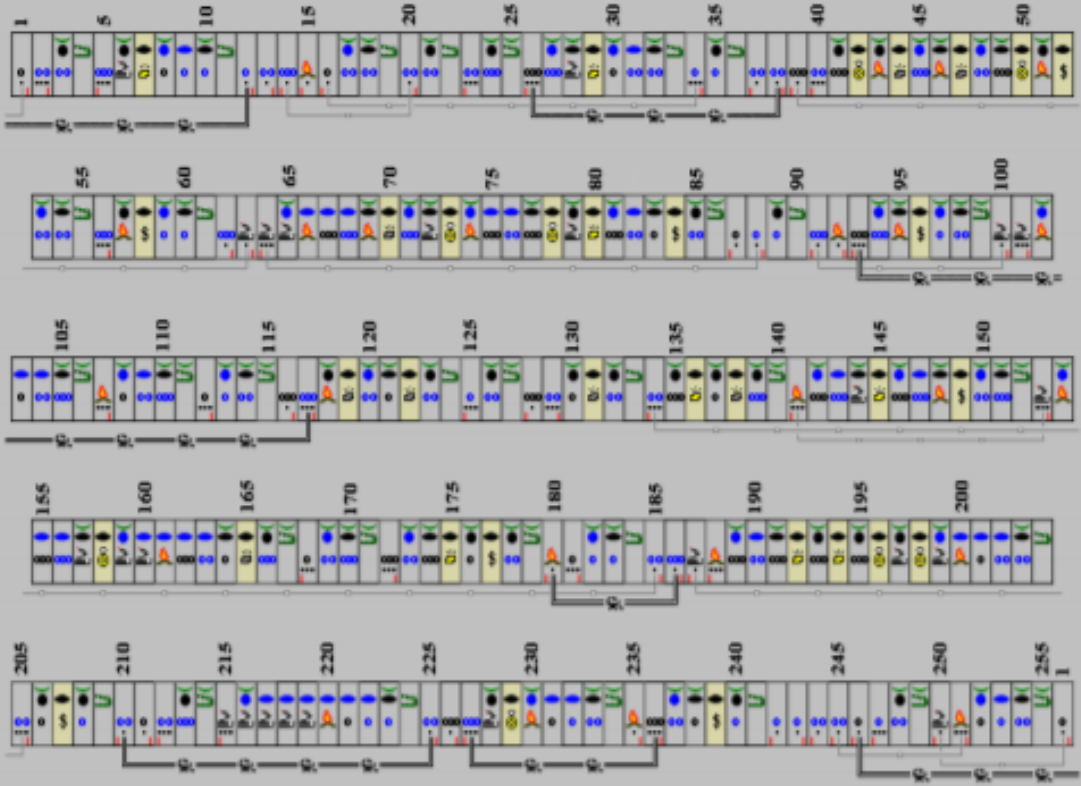
"Until you get really skilled at making Harry jump from croc to croc, you might wait until the crocodiles' jaws are closed, jump to the top of the first croc's head, then wait for the jaws to open and close again before jumping to the next one. Soon, you'll be skipping across crocs like they were stepping stones in a stream."

Pitfall! game map by Ben Valdes

This TI-99/4A disk version of Pitfall! is compatible with the game map created by Ben Valdes. Thank you Ben for giving the permission to include your great map! It was a big help during the development and testing of Pitfall. I'm sure the players will enjoy it as much as I did.

Game Map to





- tar pit
- tar pit, shifting
- quicksand
- quicksand, shifting

- U crocodiles
- vine
- log
- rolling log

- ▲ fire
- 🐍 snake
- 🦂 scorpion
- brick wall

- 1 hole in ground
- 3 holes in ground
- tunnel, optimal
- - - tunnel, other

- \$ money, 2000 pts
- Ⓐ silver, 3000 pts
- 👑 gold, 4000 pts
- 🔖 ring, 5000 pts

HOW TO WIN AT PITFALL!™

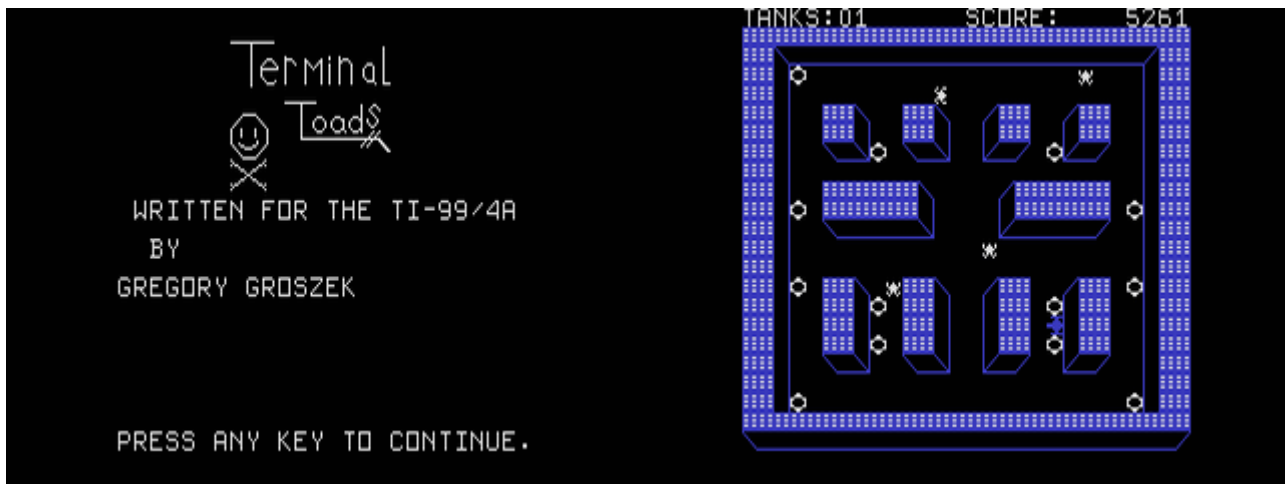
TIPS FROM PITFALL HARRY: Go right to start your jungle adventure. Take the underground passage in scene 12, which goes left. Continue left for the remainder of the game, except to backtrack briefly after emerging from underground to retrieve the treasures in scenes 225, 96 and 29. Be sure to use only the six underground passages highlighted on the map. Now that you know the best path to take, keep practicing until you can retrieve all 32 treasures within the 20 minute time limit. Good luck!

"If you can find any writing materials deep in the jungle, drop me a line. I'd love to hear how you and Harry are getting along."

PITFALL! and the Activision logo are registered trademarks of Activision, Inc. PITFALL! video game designed and programmed by David Crane © 1982.
 PITFALL! game map created by Ben Voldes © 2002.

Terminal Toads

G-2-U [Disk: 069-TERM] By Gregory Groszek



Alert! Four apparently indestructible mutant toads have taken control of a top secret research facility and need to be stopped at all cost. You need to go in with your tank and destroy energy disks that feed the toads. Shooting at the toads only stuns them for a while, and if they catch up with you, you are toast... How's that for a twisted scenario? The good news is that it is actually a very fun and brisk game in the vein of PacMan, although definitely not as cheerful.

Requirements: Editor/XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Terminal Toads:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 2 - U

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf Assembly/c99/Forth Games

this program is completely free

INSTRUCTIONS

The object of the game is to destroy the power pads on each level thus advancing you to the next level.

Keep in mind you cannot kill the toads only stun them for a short while. after which they continue their attack.

KEYS

Use joystick #1 to play.

Fctn 0 -- Quits

Fctn 9 -- Allows you to return to the editor assembler or funnelweb whichever you load from.

Fctn 8 -- Will restart the game.

ENJOY!

Never-Lander

G-3-1 [Disk: 070-NEVE] By Marc Hull



Unveiled at the 2008 Chicago TI Faire, this game takes an original twist on the classic lunar lander theme, where you try to maneuver your lander through unpassable asteroid fields using your thrusters to slow your descent and avoid collisions. Unfortunately, fuel is in scarce supply, although you can try to nab fuel canisters floating in space if you can get to them. Flawlessly executed and highly addictive.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: EA3GAME (E/A option 3)

Download Never-Lander:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 3 - 1

Features: Title Screen, EA3, One or Two Player, Sound

Controls: Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.EA3GAME

PROGRAM NAME?

<autoload>

Astro Fighter

G-3-2 [Disk: 071-ASFI] By Data East Co.



This game appears to be strongly inspired by the classic arcade game Galaxian, with fantastic graphics and frenetic play. Your mission is to destroy wave after wave of tenacious kamikaze alien fighters with the goal of reaching the mothership. Hold on to your joysticks: you are in for quite a ride!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: ASTRFGT (E/A option 3) Enter START when asked for program name

Download Astro Fighter:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Runs with Mega Menu only with RXB!

Start from mega menu: G - 3 - 2

Features: Title Screen, EA3, One Player, Sound, Music

Controls: Keyboard, Joystick 1

Ti-Pei

G-3-3 [Disk: 072-TPEI] By William Reiss



A timeless yet extremely addictive game, beautifully executed. Match tile pairs that have free left or right borders by selecting them with the cursor and pressing the space bar, and they will be removed from the board. There are 4 layers of tiles shown in different colors, and you cannot remove tiles that have another tile on top of them. The goal is to clear the field completely. If you get stuck, press 'H' for a hint, but you did not hear it from me...

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB Autoload

Download Ti-Pei:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 3 - 3

Features: Title Screen, EA5, One Player

Controls: Keyboard

TI-Keno

G-3-4 [Disk: 073-KENO] By Bob Gastoni



The rules of Keno are very simple: pick 4 numbers between 1 and 40 and hope that 2 or more will get selected in a random draw. Not much to it really, but apparently, it's a big hit at the casinos. Nonetheless, it is very nicely executed and provides a little diversion for daily life.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download TI-Keno:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 3 - 4

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard

Space Station I

G-3-5 [Disk: 074-SPAC] By Dominic J. Melfi



"We are under attack by an invisible alien force... Support systems gone... If you read us... Space Station I... We are transmitting all available data...". The Saturn outpost has been obliterated, and the aliens are heading your way. Will you be able to repel them? The aliens will come in waves from all directions, and you have to position your targeting reticle on their position and fire your torpedoes. You can only sustain 5 direct hits to the station before your defenses are overwhelmed. And by the way, watch out for the cloaked command ship.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB Autoload

Download Space Station I:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

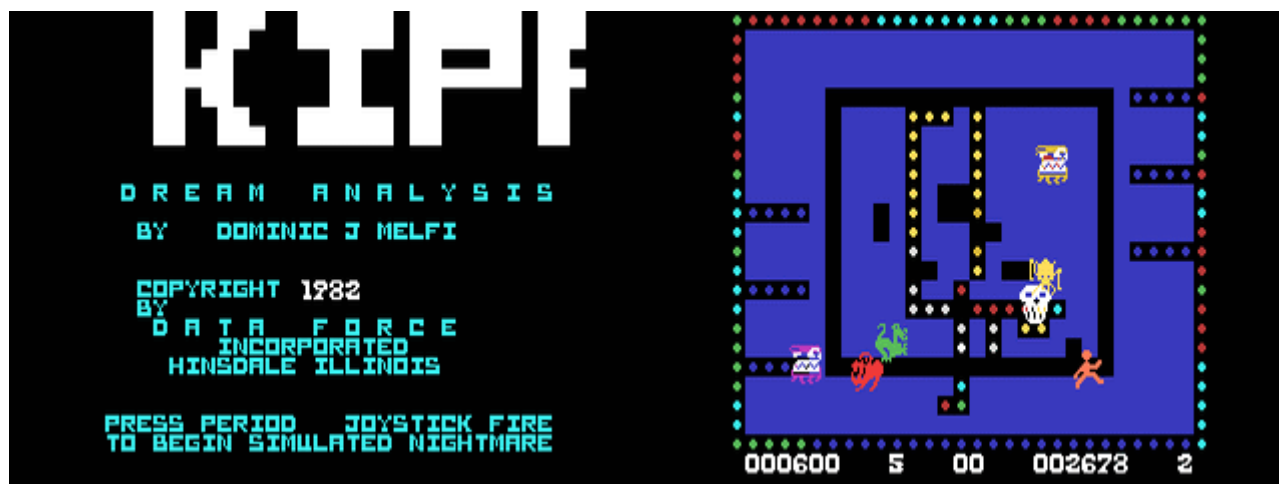
Start from mega menu: G - 3 - 5

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard

Kippy's Nightmare

G-3-6 [Disk: 075-KIPP] By Dominic J. Melfi



In this nightmare, you are surrounded by monsters bent on your destruction, and you are only armed with 6 "poofers" that you can place on the field to whisk away the monsters back into their cages when they bump into them. Your track on the playing grid also acts as a temporary barrier, serving to only postpone the inevitable. But don't worry: it is only a dream after all. Or is it... Very original game premise and wonderful execution. Highly recommended.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB Autoload

Download Kippy's Nightmare:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

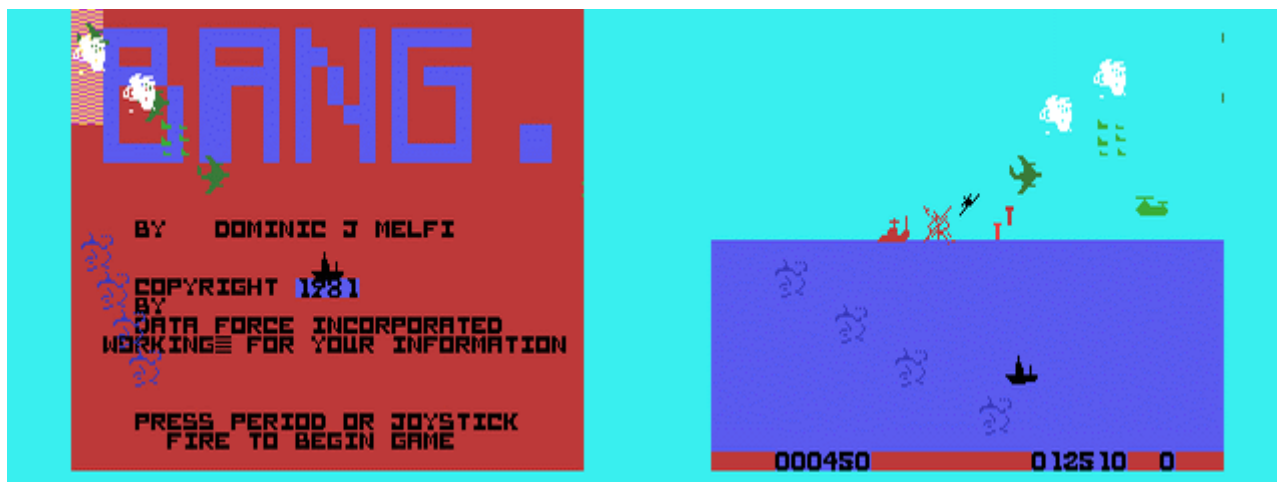
Start from mega menu: G - 3 - 6

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard, Joystick 2

Bang Bang Sub

G-3-7 [Disk: 076-BANG] By Dominic J. Melfi



Frenetic arcade play puts you at the helm of a submarine with the mission to destroy all surface and air ennemy forces within range, while avoiding mines and bombs. Good sound effects and thumb numbing eye blurring action. Quick reflexes a must.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB Autoload

Download Suboceanic:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 3 - 7

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard, Joystick 1, Joystick 2

Lasso

G-3-8 [Disk: 077-LASS] By Texas Instruments



Ever wondered how cowboys herded stray animals? Well, here's your chance to test your lasso'ing skills. Your farm animals have suddenly acquired cabin fever and have started busting out of their corrals, running around like mad, and so you have to capture them one by one using a lasso while trying not to get trampled. Very enjoyable gameplay spiced up by a little speech. Yee Haw!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks. Speech Synthesizer optional

Executable to run: LASSO (E/A option 3)

Download Lasso:

[\[TIFILES format\]](#) **Runs with Mega Menu and RXB**

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 3 - 8

Features: Title Screen, XB, AL, One Player, Sound, Music, Speech

Controls: Keyboard, Joystick 1,

Runs from Mega Menu with autostart the EA Module from tipi/disk EDITOR/ASSEMBLER

PRESS:

3

LOAD AND RUN

FILE NAME?

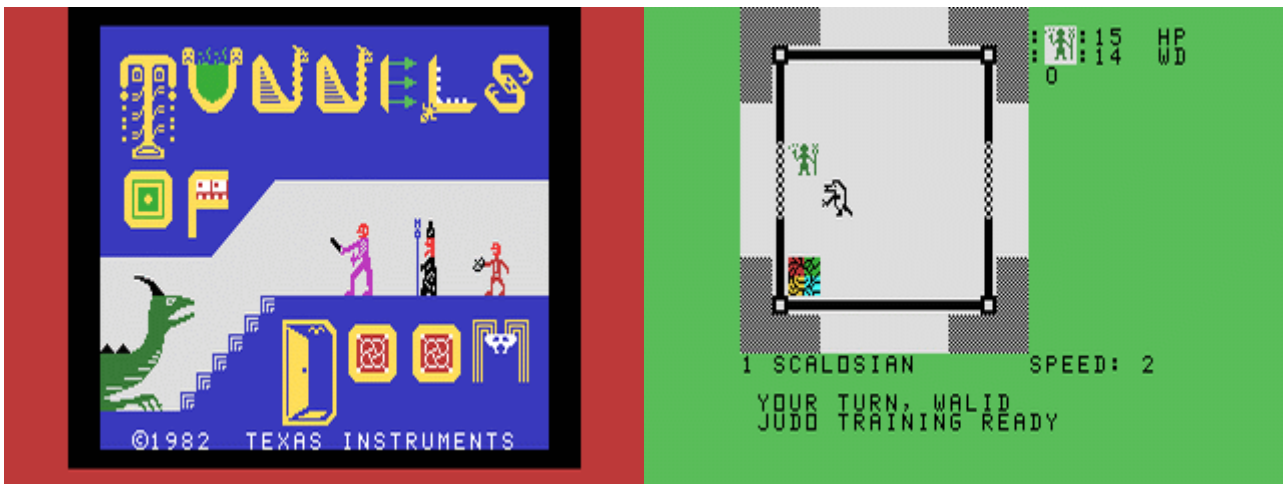
DSK1.LASSO

PROGRAM NAME?

"AUTOSTART"

Tunnels Of Doom

G-3-9 [Disk: 078-TOFD] By Texas Instruments



This is the grand-daddy of the graphic adventure games on the TI, and was quite advanced for its time as it is still supremely playable and enjoyable. In a nutshell, you control a party of up to 4 characters each with different abilities and set about exploring daunting multi-level dungeons while fighting monsters and collecting treasure. Includes several different scenarios, including a Star Trek variation, enough to keep you adventuring for a very long time. A timeless classic!

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Tunnels Of Doom with 10 Adventure Games:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 3 - 9

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard

TI-99/4A – Game Shelf Assembly/c99/Forth Games

First Instructions:

After Start the Tunnels of Doom Module from TIPI disk:

- Select 5 from RXB ore select 3 from TI XB
- The Tunnels of Doom title screen appear

LOAD DATA FROM:

2- DISK1

FILENAME: ASSAULT	loads	Assault The City
DOCTOR	loads	Doctor Who
K-MART	loads	Daring Adventures in Kmart
ORBS	loads	The Dragon Orbs
PENNIES	loads	Pennies & Prizes
QMMD	loads	Quest For The Magic Maker
QUEST	loads	Quest Of The King
SPACE@M	loads	Space Mine
STREK	loads	A Star Trek Adventure
TOMB	loads	Tomb Of Death

GAME SELECTION:

- 1- NEW DUNGEON
- 2- RESTOCK OLD DUNGEON
- 3- CONTINUE CURRENT GAME

NUMBER OF FLOORS (1-10)? 1

NUMBER IN PARTY(1-4)? 1

DIFFICULTY:

- 1- EASIEST
- 2- MEDIUM
- 3- HARDEST

PRESS PROC'D TO CONTINUE

TI-99/4A – Game Shelf Assembly/c99/Forth Games

TUNNELS OF DOOM MODULE DOCUMENTATION.

The following has been copied from the TOD module instruction book and consists of general instructions usable with all TOD games..

SPECIAL KEY FUNCTIONS.

E,S,D,X, (arrow keys) move your party through hallways and rooms or during combat. Also moves cursor before firing a ranged

weapon..

FCTN/X move your party down a flight of stairs..

FCTN/E moves your party up a flight of stairs..

FCTN/7 (AID) displays COMMAND

SUMMARY of these special key functions..

FCTN/8 (REDO) changes information and enters new information. Also refuses monster's price during negotiations..

FCTN/6 (PROC"D) Proceeds to the next display or action, or leaves the store, or accepts monster's price during negotiation..

FCTN/9 (BACK) Returns from looking at a status report, map, or COMMAND SUMMARY..

FCTN/3 (CLEAR) erases selection

if pressed before ENTER..

SHIFT/S moves cursor to the left deleting each character..

FCTN/5 (BEGIN) goes to the game selection display..

FCTN/= (QUIT) returns to TI title screen..

K Save a game..

1 Shows player status report..

2 Shows party status report..

3 Shows monster status report..

F FIRES a ranged weapon..

M Shows MAP..

N NEGOTIATES with monsters

during a battle..

TI-99/4A – Game Shelf Assembly/c99/Forth Games

U	Enables a player to use a magic item..
W	Changes a player's WEAPONS..
C	CHECKS for secret doors..
B	Enables the party to BREAK through a door..
L	Enables the party to LISTEN at a door which is adjacent to and facing the party..
O	Changes party formation..
T	TRADES items between players except during a battle..

When asked for a player's name, type the first letter of the name..

COMBAT NOTATION:.

HP	hit points.
WD	wounds.
++	player has at least 30% better chance than monster of scoring a hit..
+	player has a 10-30% better chance than monster of scoring a hit..
0	even chances..
-	monster has a 10-30% better chance than player of scoring a hit..
--	monster has at least a 30% better chance than player of scoring a hit..

If WD = HP player is disabled but can still drink from fountains, use living statues and trade items.

Healing can be done by consuming rations, use of magical items to reduce WD, or buying healing at the general store.

Mission 'X'

G-3-A [Disk: 079-MISX] By Data East USA



Reminiscent of War Zone, you are a fighter pilot with the mission of destroying invading fleets of warships as well as tanks, while avoiding a steady barrage of enemy fire. You can change your altitude by moving the joystick forward or back, and the fire button launches your bombs. This is a very fast paced well designed game that requires good reflexes and a sharp eye. Very addictive.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: MISSION1

Download Mission 'X':

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

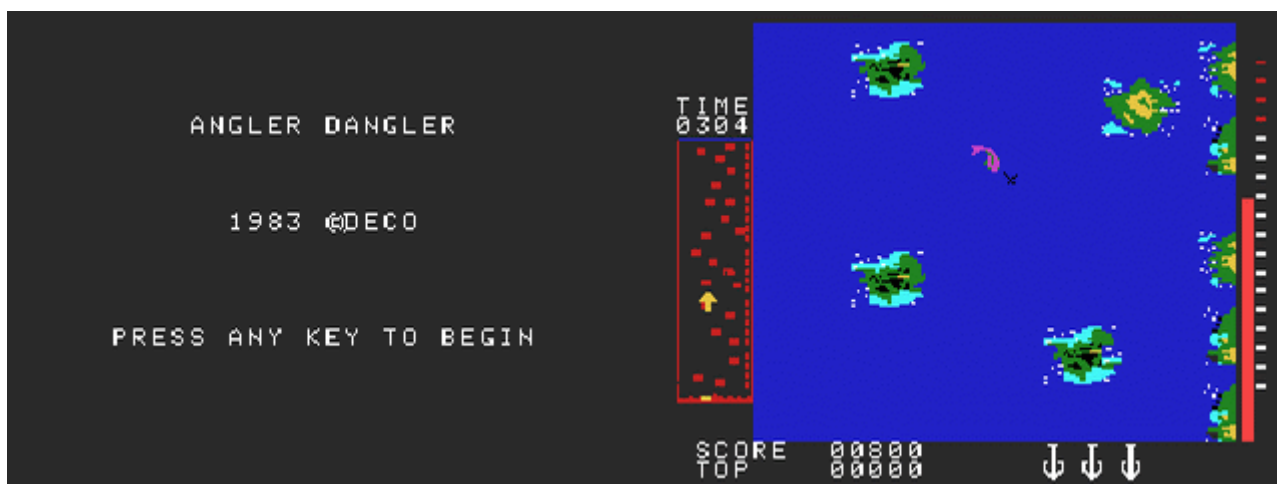
Start from mega menu: G - 3 - A

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1, Joystick 2

Angler Dangler

G-3-B [Disk: 080-ANGL] By Deco



If fishing is your thing, then you should not miss this program. You are an angler trying to catch as many fish as you can before time runs out. You decide how far you want to cast your line, then you reel it in while guiding it away from rocky outposts and towards schools of fish. If you do manage to hook a fish, make sure you monitor your line tension lest it snaps. Excellent graphics and animation make for a very entertaining game, even if you don't fish.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB Autoload

Download Angler Dangler:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G - 3 - B

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1, Joystick 2

Scott Adams Adventures

G-3-C [Disk: 081-ADVA] By Scott Adams & Other Authors



This is the entire collection of text adventures from Scott Adams as well as a few less well known ones from a variety of authors (yes, Adult Adventure is included), for a total of 22 adventures. The text file CONTENTS lists all the titles as well as the executables for each. There is enough here to keep you entertained for many many hours, as your imagination takes you from the sleazy setting to the darkest tomb. Good luck, and don't forget to save frequently!

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Scott Adams Adventures with 22 Adventure Games:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – C

Features: Title Screen, EA5, One Player

Controls: Keyboard

First Instructions:

After Start the Adventure Module from TIPI disk:

- Select 5 from RXB ore select 3 from TI XB
- The Scott Adam's Adventure title screen appear

Press any key to begin

Where is the data base?

DSK1.BUCKY	loads	Buckaroo Banzai In this adventure you will must find and disarm the nuclear bomb that was left behind by the evil Lectroids!
DSK1.COMPUTORAM	loads	Computorama
DSK1.COUNT	loads	The Count
DSK1.DAYS-EDEN	loads	First Days In Eden
DSK1.DOORS-EDEN	loads	The Doors In Eden
DSK1.FUNHOUSE	loads	Mystery Funhouse
DSK1.GHOST	loads	Ghost Town
DSK1.GOLDEN	loads	The Golden Voyage
DSK1.HULK	loads	The Hulk
DSK1.IRONHEART	loads	Knight Ironheart
DSK1.JUNE	loads	Discovery At June Lake
DSK1.LOOSE	loads	On The Loose
DSK1.MISSION	loads	Mission Impossible
DSK1.ODYSSEY	loads	Strange Odyssey
DSK1.PIRATE	loads	Pirate Adventure
DSK1.PYRAMID	loads	Pyramid Of Doom
DSK1.SAVAGE1	loads	Savage Island Part I
DSK1.SAVAGE2	loads	Savage Island Part II
DSK1.SORCERER	loads	Sorcerer Of Claymorgue
DSK1.SPIDEY	loads	Spiderman
DSK1.VOODOO	loads	Voodoo Castle
DSK1.ADULT	loads	Adult Adventure

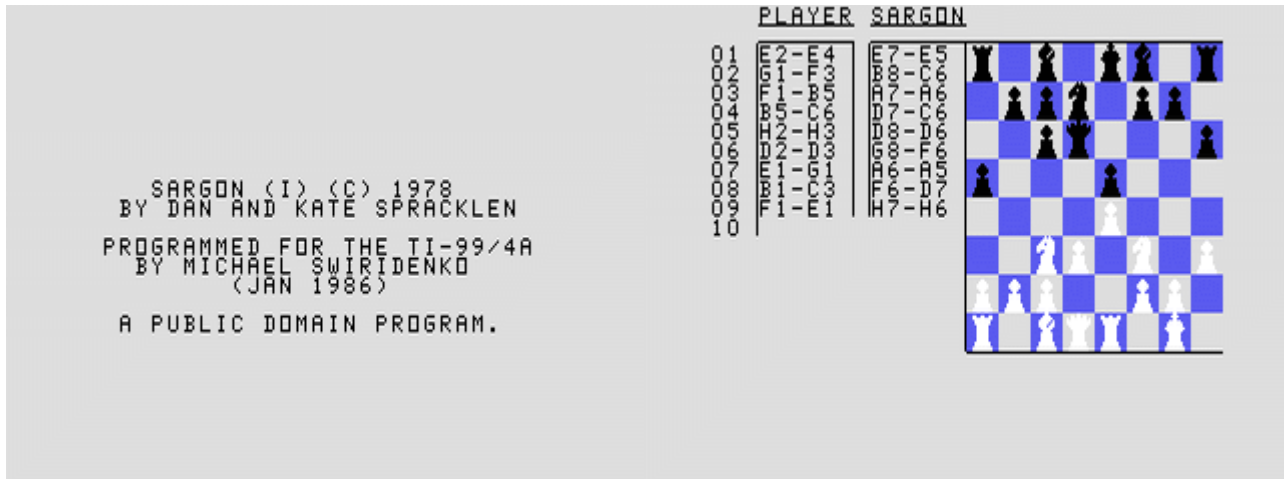
Some commands (4 letters / directions one letter):

QUIT, SAVE GAME, EXAMINE, DROP, TAKE, GO, OPEN, DIG

2 word English commands: GO WEST

Sargon I

G-3-D [Disk: 082-SARG] By Dan and Kate Spracklen
 TI 99/4A Conversion By Michael Swiridenko



This chess program was one of the first successful programs for microcomputers. When pitted against Video Chess, it is clearly stronger tactically, however it still makes significant blunders and like Video Chess is very weak in end-games. The latter also has more features, but will generally lose or draw against Sargon I. Up to 6 half-moves depth of analysis is available, but anything beyond level 2 takes way too long, yet even at that level it is still a decent opponent. Instructions are included.

Requirements: XB or Editor/Assembler, 32K RAM, disk drive.

Executable to run: XB Autoload or CHESS (E/A option 3), Program: START

Download Sargon I:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

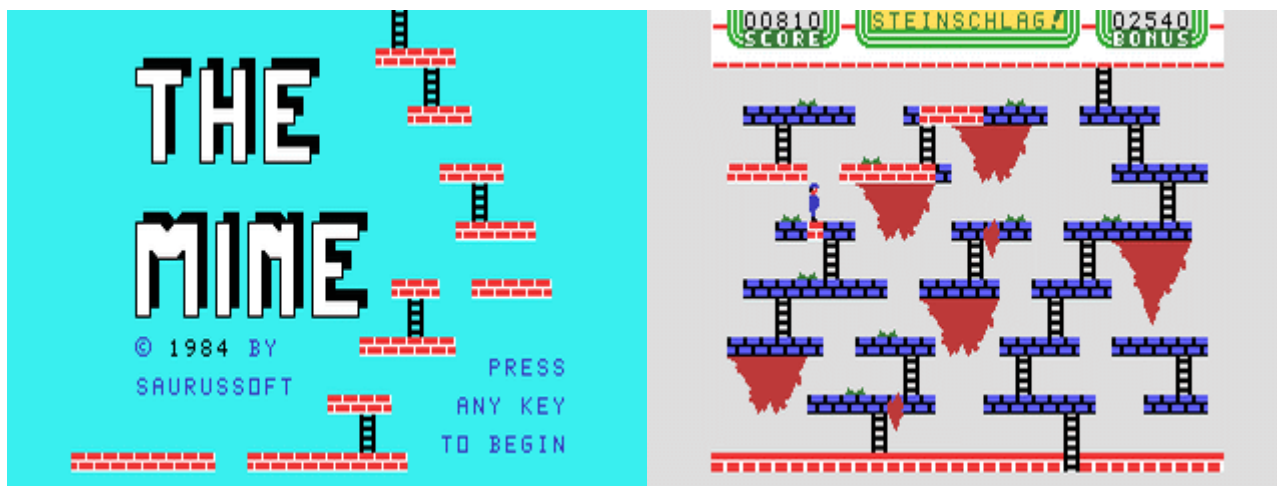
Start from mega menu: G – 3 – D

Features: Title Screen, EA3, One Player

Controls: Keyboard

The Mine

G-3-E [Disk: 083-MINE] By SaurusSoft



In this fantastic game, you are an explorer wandering through multiple caverns filled with monsters and all sorts of obstacles. There are no less than 24 different screens with colorful graphics and imaginative challenges, so it will take the player a very long time to sort through everything. It's the TI at it's best!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: MINE1 (E/A option 5)

Download The Mine:

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[\[V9T9 .DSK Format\]](#)

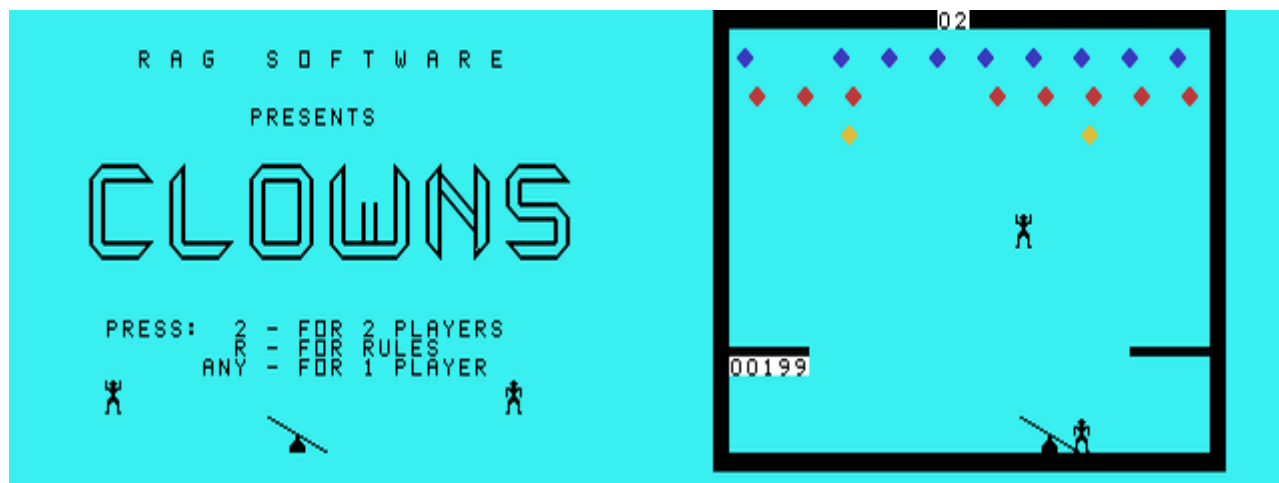
Start from mega menu: G – 3 – E

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1, Joystick 2

Clowns

G-3-F [Disk: 084-CLOW] RAG Software



Clowns is a TI adaptation of the venerable Circus game available on almost every classic computing platform. Your objective is to pop colorful balloons flying over you by having a pair of clowns jump on a seesaw. Gravity is modeled realistically, making things a little more hairy. Simple but highly addictive.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB AUTOLOAD

Download Clowns:

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[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – F

Features: Title Screen, EA5, One or Two Player, Sound, Music

Controls: Keyboard, Joystick 1

Demon Attack

G-3-G [Disk: 085-DEMA] By Texas Instruments



This is a rare version of the classic Demon Attack game which includes speech. You are a moon surface defender repelling wave after wave of alien monsters determined to put you in a state of permanent sleep. The graphics are top notch as are the sound effects while the action will keep you riveted for hours. Highly recommended.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Demon Attack:

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[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – G

Features: Title Screen, EA5, One Player, Sound, Music, Speech

Controls: Keyboard, Joystick 1, Joystick 2

Espial

G-3-H [Disk: 086-ESPI] By Alex Staruszkiewicz



As a fighter inside an enemy mothership, your objective is to cause as much damage to that ship as possible all the while avoiding flying objects and bombs. There are 3 different screens and the level of difficulty increases as you cycle back to the first screen. Good graphics and sound effects coupled with frenetic action make for a very entertaining space shooter game.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: ESPI (E/A option 5)

Download Espial:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

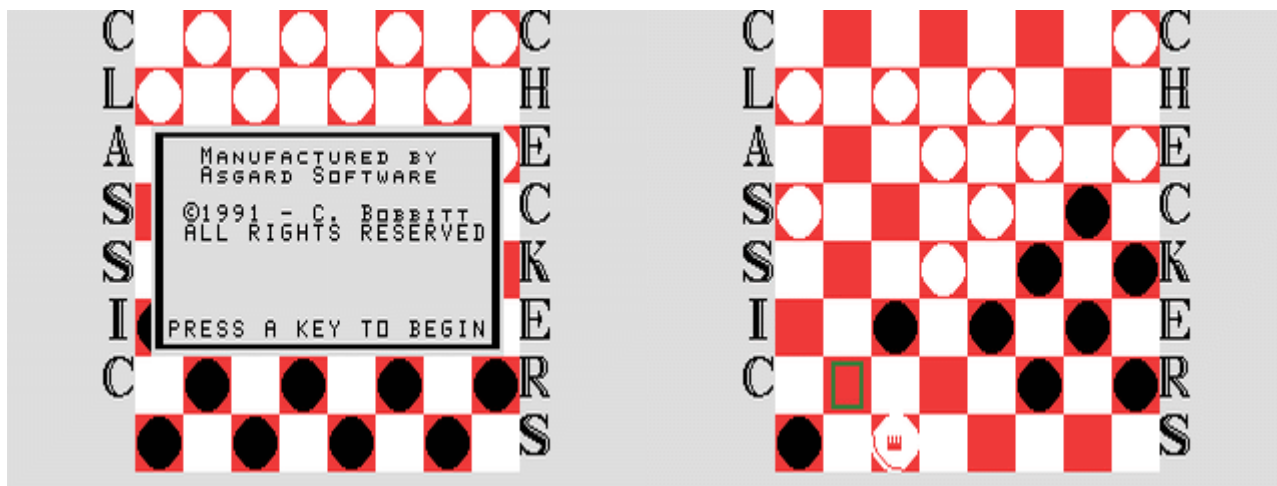
Start from mega menu: G – 3 – H

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 2

Classic Checkers

G-3-I [Disk: 087-CLAC] By Chris Bobbitt



This is an excellent adaptation of checkers for the TI. It is for 1 or 2 players, with the computer proving to be a very decent opponent. Nice fresh presentation of a timeless game.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks or mouse optional.

Executable to run: XB AUTOLOAD

Download Classic Checkers:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

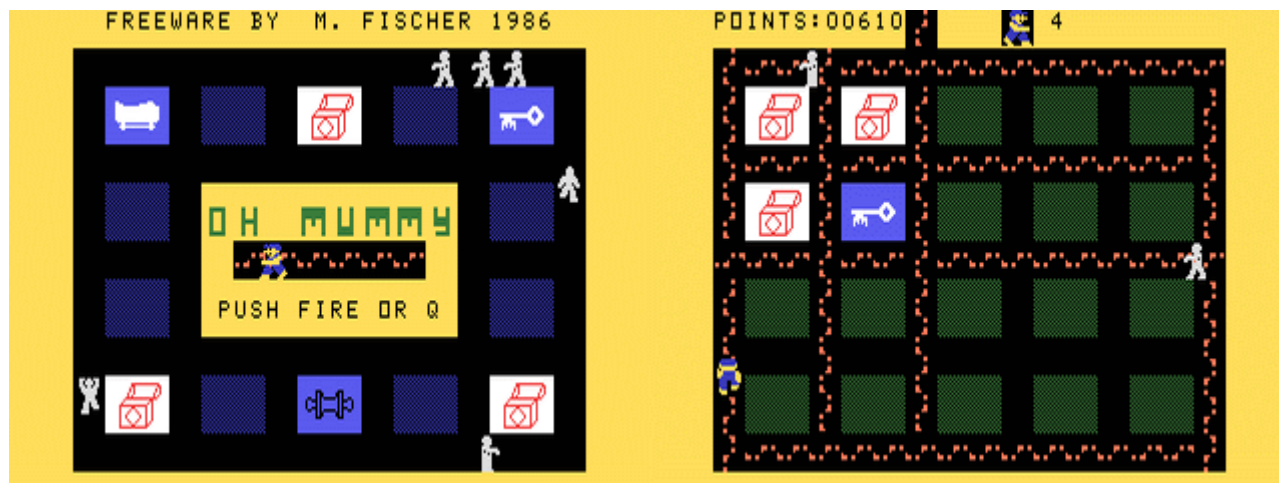
Start from mega menu: G – 3 – I

Features: Title Screen, EA5, One or Two Player, Sound

Controls: Keyboard, Joystick 1, Mouse

Oh Mummy

G-3-J [Disk: 088-OHMU] By M. Fischer



If you are claustrophobic and have slow reflexes, then this game is not for you... As a member of an archeological team excavating a series of pyramids, you have to explore multiple chambers, collect treasure as well as royal mummies. This is made a tad more difficult by the fact that you have nasty guard mummy guards intent on sucking the life out of you. Best of luck and I hope you've left a will... Great all around game!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: OHMUMMY (E/A option 5)

Download Oh Mummy:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – J

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1

TI99 Clickety

G-3-K [Disk: 089-CLIC] By Mark Hull



Inspired from the popular game "Bejeweled", the objective of this colorful game is to eliminate adjacent blocks of the same color, which causes the columns of blocks over them to slide down. The ultimate goal is to clear the screen completely. That's it! Use the joystick to move the pointer and press the fire button to select the blocks. Smooth animation and clean presentation greatly enhance this totally addictive but challenging game. Very well done!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: GAME32k08 or GAME32k16 (E/A option 3)

Download TI99 Clickety:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – K

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

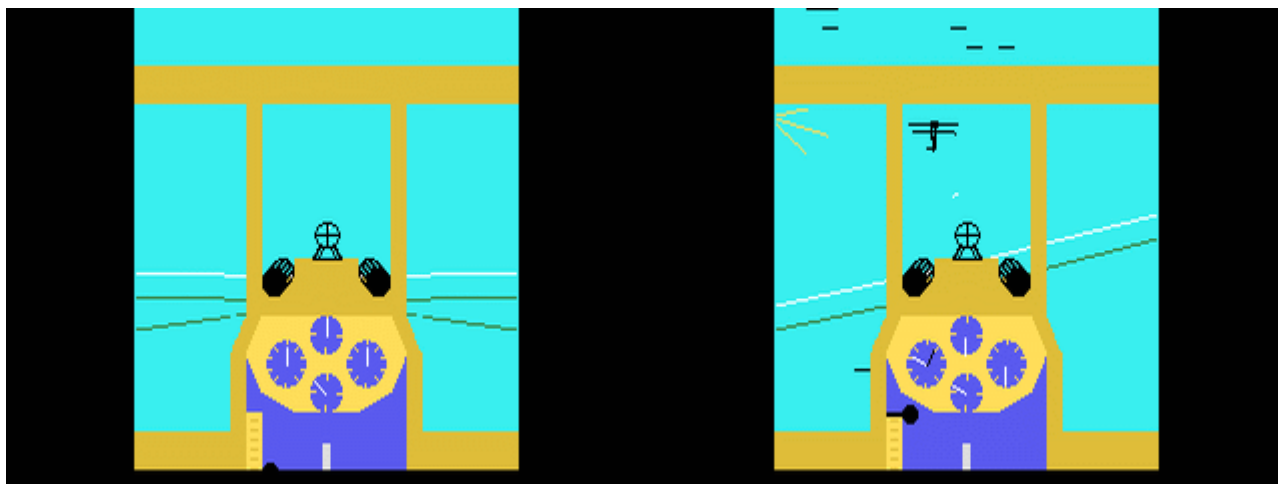
DSK1.GAME32K08

PROGRAM NAME?

“autostart”

SPAD XIII Mark 2

G-3-L [Disk: 090-SPAD] By Not-Polyoptics



This game is the closest thing there is to a true flight simulator on the TI. You are a WWI French fighter plane pilot in 1918 about 20km east of the German front and your mission is to patrol the sky and destroy enemy planes including the dreaded Red Baron, observation balloons and airfield hangars while still managing to return and land safely on your airfield. The flight physics are very realistic and the scenery is 3D wireframe, making for a great and very challenging experience. An absolute must for any flight enthusiast!

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download SPAD XIII:

[\[TIFILES format\]](#)

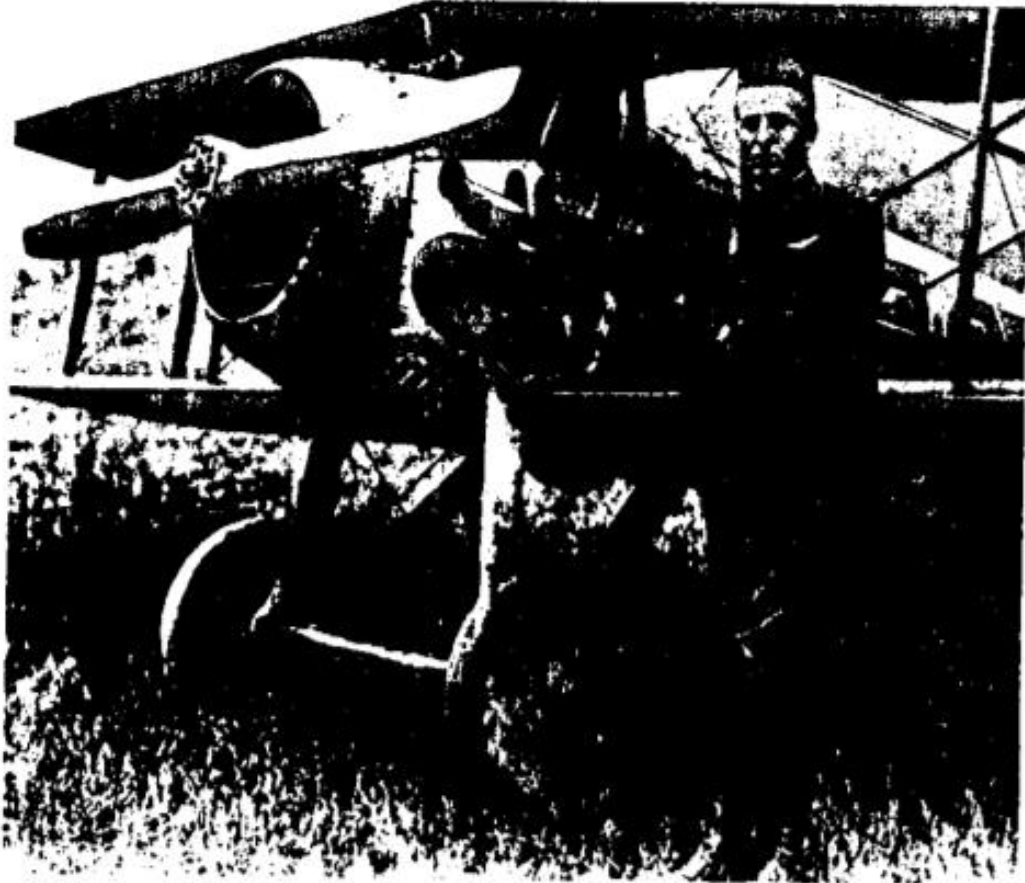
[\[V9T9 .DSK Format\]](#)

[SPAD XIII Manual \(PDF\)](#)

Start from mega menu: G – 3 – L

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard, Joystick 1

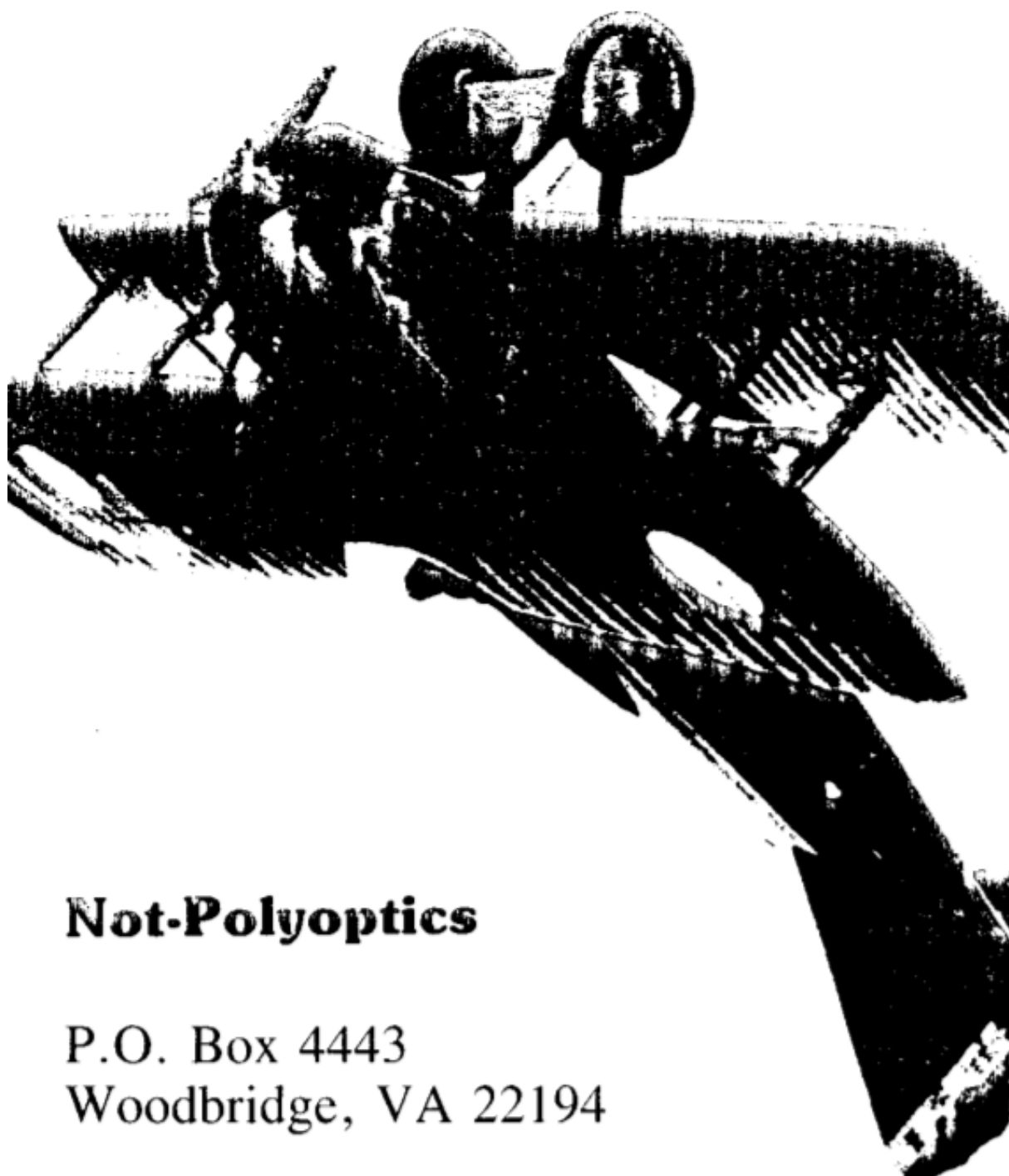


Frank Luke

TI-99/4A – Game Shelf Assembly/c99/Forth Games

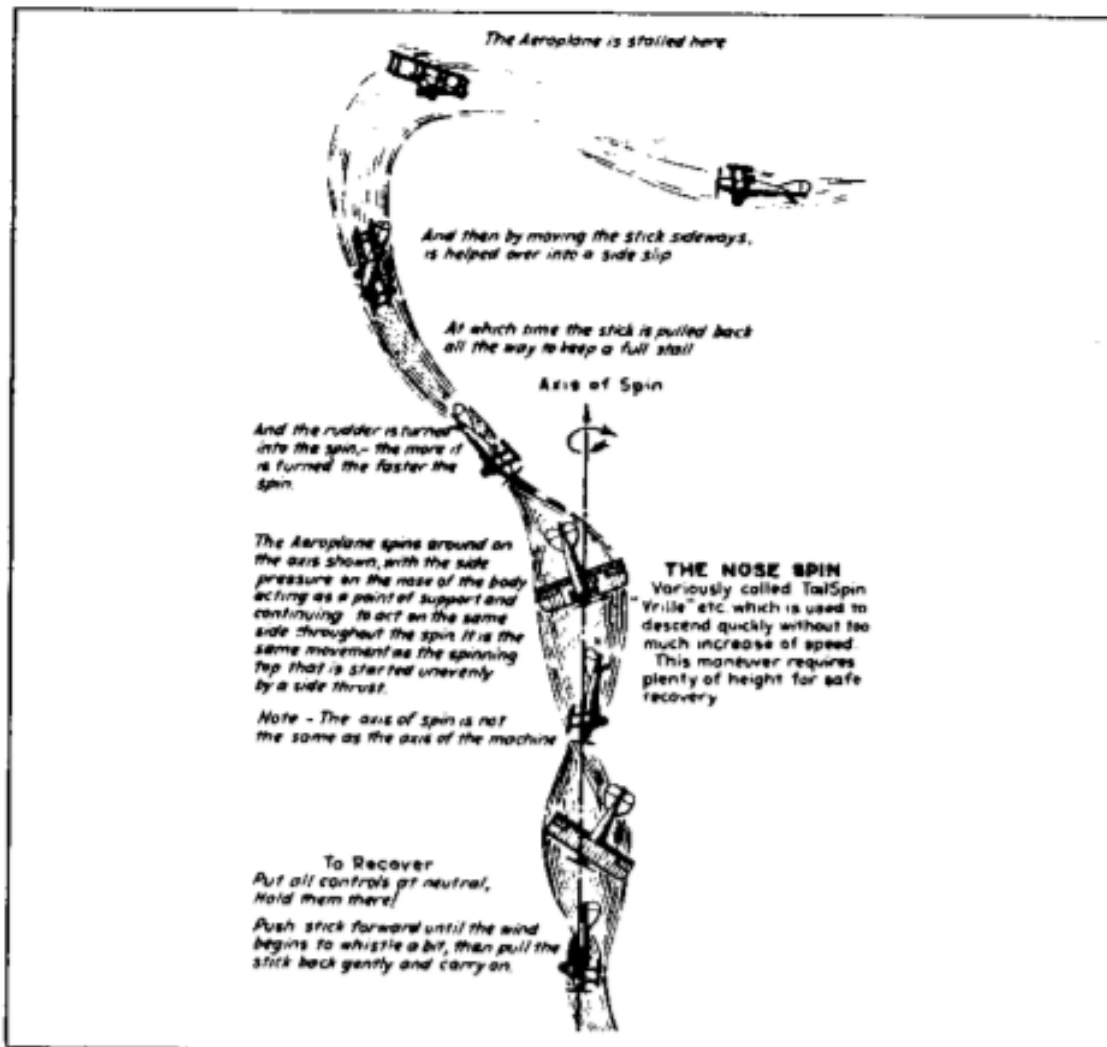
SPAD XIII

Flight Simulator



Not-Polyoptics

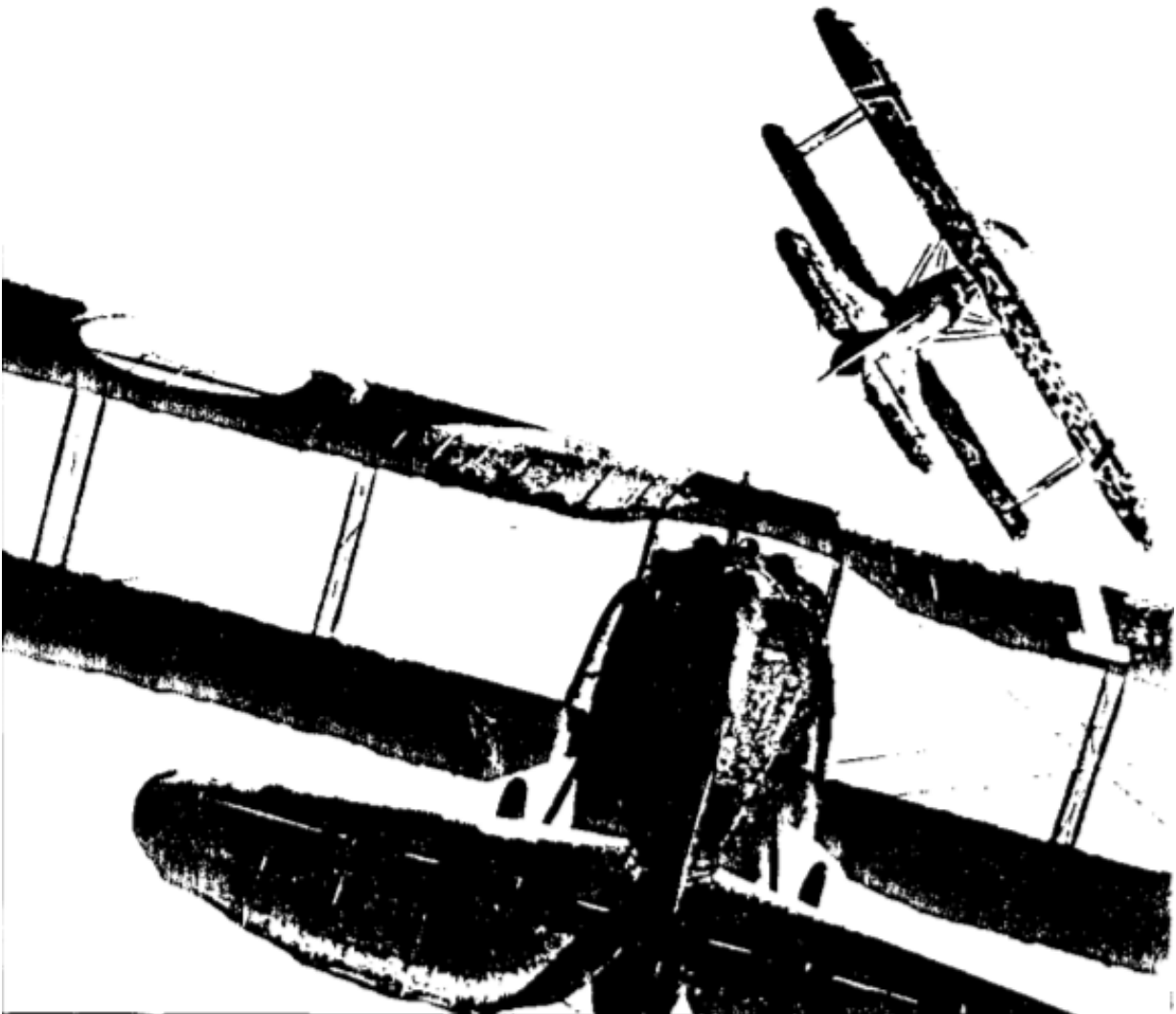
P.O. Box 4443
Woodbridge, VA 22194





XIII

NOT POLYOPTICS



TI-99/4A – Game Shelf Assembly/c99/Forth Games

Bells and Whistles-A high beep is generated by your tires when they are just touching the ground (landing or taking off). Another beep is generated when enemy fire hits your plane; this doesn't necessarily mean you've been damaged - a bullet can pass through the fabric of your plane without really damaging it.

A lower buzz is generated when the Spad stalls, representing the vibration of the wood and fabric plane as it is stressed.



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SPAD XIII

Flight Simulator

Mark 2

Addendum



Spad XII Flight Simulator, Mark 2 is a considerably expanded version of the program, adding many new features and improving graphics and flight algorithms. In all cases, this addendum is an addition to, not a substitute or correction of the original *Spad XIII* Instruction Manual.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Extended Keyboard - (modifies Section B3:page 5)

Five new keys have been added in *Mark 2*. You may wish to write them into the Keyboard Template (Page 10).

Left side:



This key is for hard forward stick, useful for power dives and for flying upside down. To fly upside down climb to a safe altitude, get air speed up to 150 by diving at full throttle, do a half roll with the **A** (full left) or **F** (full right) key, and press the **T** key continuously. You must keep the stick pressed hard forward or it will spoil the maneuver. Note: outside loops were not possible until specialized acrobatic planes were developed after the war.

Right side:



This is a right side fire key, which enables you to use the left side aileron controls and fire simultaneously. The fire button on Joystick 2 will now fire the machine guns, which means it is possible to maneuver with Joystick 1 and shoot with Joystick 2 (or the **Y** key) at the same time.



The 'Eye' key gives a removed view of your Spad and its environs, from 300 feet south and slightly above its present position. With this key you can watch yourself putting the plane through its paces, landing, or get a unique spectator seat for acrobatics. You can maneuver and bomb from this view, but not fire, which makes it a questionable tactic for dogfights.



This key pans continuously through all of the Spad-centered views. This is useful for searching the skies for enemy planes. To get out of the panning mode press any other view key. You can maneuver and bomb in this mode, and fire your guns when the Front Instrument Panel is visible.



The 'Move' key gives you the ability to instantly transport your Spad to various strategic locations of the Operational Area. Choose between the Eiffel Tower, the enemy airfield, your airfield, or the trenches (just west of the balloons). A menu will appear: just press the number of the area you wish to go to. You can thus get quickly to the action (or away from it.) The Move key won't affect the Spad's other parameters and it doesn't function if the Red Baron is in your vicinity. The Move key also can be used as a Pause key while the Menu is onscreen.

Improvement in Flight Algorithms

In *Spad XIII, Mark 2*, the flight characteristics of the Spad have been modified slightly to improve realism. The Spad XIII had a slightly positive roll stability, and *Mark 2* reflects this - the Spad will always have a tendency to roll back to a level position while in a bank. This means that, except for the prevailing 10 mph westerly wind, you can fly in a perfectly straight line and don't have to worry about small roll angles.

Other slight improvements have been made to *Mark 2*, so that it has a slightly different feel than *Mark 1*, but all instructions in the Manual are still completely correct.

Red Baron

Mark 2 introduces the Red Baron, an ace enemy fighter pilot flying a Fokker triplane in your sector. These Fokker triplanes have three wings (instead of two), and its machine guns (like the Spad's) point forward through the propeller. The Fokker pilots are expert shots, and fly a plane that is in some ways better than the Spad. Among their number is the famed Baron Von Richtofen, who you may have the bad luck to encounter. These triplanes generally conform to the strategy of getting on your tail to shoot you down, and are relentless in their pursuit. At the title screen you are asked 'RED BARON(Y/N)'. Press **Y** to include Fokker pursuit planes or **N** to not include them. Novices are discouraged from engaging these proficient flyers.

One Red Baron is generated at the beginning of the program and every time you land to refuel and rearm. Thus, if you find a Red Baron and shoot him down, you don't have to worry about another one until you land again at your field.

Your Spad XIII is slightly faster than a Fokker so you can outrun it by going to full throttle and diving full stick forward; of course, you need plenty of altitude to do this. Doing an Immelmann followed immediately by a Split-S or another Immelman can reverse your positions and give you the upper hand. Whatever you do, keep changing your direction to stay out of his fire. Sometimes you will be trapped on the ground at your airfield. When this happens, wait until the triplane passes overhead and then take off as quickly as possible. He will circle to get back to you and will be vulnerable until he gets back on your tail. Since you will be at a low altitude, there will be little chance to outrun him, so you'll have to fight. Remember, the 'Move' key does not work when the Red Baron is near.

End of Game - (modifies Section B8d:page 16)

In *Mark 2*, it is possible to restart the program after it has ended. After the game has ended, the program prompts you with 'S TO START E TO END'. Press **S** to play again or **E** to return to the TI Main Title Screen.



A. HISTORY

Barely ten years after the Wright Brothers pioneered motorized flight in a fragile structure of canvas, wires, and wood, men had adapted their invention to the needs of war. These new machines were much improved - stronger, faster, and more dependable - but they still bore a great resemblance to their prototype. As soon as it was generally realized that these aerial 'birdcages' made excellent instruments of war, governments around the world were ready to spend more and more money on them, and companies such as Sopwith, Nieuport, and Fokker used that money to progressively improve designs.

World War I was the first war to use many of the machines and methods we associate with modern war. It was also an unspeakable, frightful, bloody mess serving mainly to lay waste to European civilization and decimating its male population. In contrast, however, to the horrors of the trenches, the Air War was clean, somewhat chivalrous, and made good copy. From the newspapers of the time sprang the Air Ace, the ultimate swashbuckler, capable of distracting the civilian public from the pointless stalemate. Although they couldn't quite live up to their press, the flyers were daredevils who often risked their lives and whose exploits, truthfully recounted, were very exciting.

S.P.A.D., the *Société Pour Aviation et ses Dérives*, a French company run by the famous aviator Louis Blériot, shared in the profits spawned by World War I. The Spad XIII, an improved model of the earlier VII, was introduced in April 1917. It was a very stable plane with a more powerful engine and an extra Vickers machine gun. In the hands of the great aces of the time, it reversed the balance of air power once again and gave superiority to the Allies. It was an excellent gun platform, and exceptionally durable, though the engine tended to break down. There were no American pursuit planes used in WWI, and the American aces Rickenbacker and Luke preferred to use Spads when they could get them.

B. FLIGHT SIMULATOR

Spad XIII Flight Simulator is machine language program for the TI 99/4A computer. In order to run it, you must have an Extended BASIC cartridge, the 32K Memory Expansion, and a disk drive. It is auto-loading from Extended BASIC, which means that the program will self load if it is in Disk Drive 1 when Extended BASIC is initiated. The program will not load from Disk Drive 2. If Extended BASIC is already initiated, type in 'RUN DSK1.LOAD' and press **ENTER**. The message 'SPAD XIII - LOADING, PLEASE WAIT...' appears on the screen.

To see the *Spad XIII* title screen type 'RUN DSK1.SPADPIC' and press **ENTER**. **DO NOT REMOVE THE WRITE PROTECT TAB FROM THIS DISK. TURNING THE COMPUTER ON WITH A DISK IN THE DRIVE CAN DAMAGE DATA ON THE DISK.**

1. How to Fly

The following is a limited introduction to flight. Basic concepts will be discussed in order to prepare for *Spad XIII*. However, controlling an airplane is not a simple task, and the reader is encouraged to follow up this introduction with further reading on the subject. We recommend *Stick and Rudder* by W. Langewiesche (McGraw-Hill, 1944) for a comprehensive yet entertaining book for beginners.

An airplane in flight is subject to four principal forces. These are lift, drag, weight, and thrust. Lift is made by the motion of the wings through air and pushes in the direction of the top of the plane, generally up. Weight counters this force, pulling downward toward the earth. Thrust is the force generated by your engine turning a propeller; it acts to push the plane forward. Drag counters this force - it is the air resistance friction that acts in the direction opposite the thrust and slows the plane.

A wing works through channeling the air that passes by it in specific ways that generate lift. Contrary to popular belief, the downwash produced by the wing is more important in generating lift than the pressure imbalance produced as air flows around the wing. Lift can be increased by increasing airspeed or by increasing the angle of attack (the angle at which the wing meets the air). When the angle of attack exceeds 18 degrees or thereabouts, the downwash of the wing is dissipated by increasing turbulence and a stall, the condition in which the wing loses it's power to lift, occurs.

Because the airplane is made up of many complicated surfaces and has an uneven distribution of weight, the behavior of the plane can not be simply described. However, some general characteristics apply to most planes, and the *Spad XIII* in particular. The heaviest part of the plane is

the engine, and thus the plane's center of gravity is in front of the center of lift. This means that counterbalancing of forces on the plane will eventually bring you back into stable, level flight. If you slow down, the nose of the plane will drop, and you will gain speed as you lose altitude. Conversely, if you increase speed, your nose will rise and the increased angle of attack will slow the plane down. Thus, if your wings are parallel to the ground and you have sufficient airspeed, you needn't worry about losing control.

Turning the airplane always involves banking the wings. On each wing there is a control surface which allows you to independently change the nature of the wing. This increases the lift on one wing and decrease the lift on the other, causing one wing to rise and the other to drop. When this happens, a number of things also happen, all of which contribute to the turning of the plane. The principal cause is that the normally vertical component of lift has been shifted horizontally, and thus the plane is lifted sideways, i.e. it turns. As the plane banks, however, and the total lift is not directed upward, the nose will drop and you will lose altitude.

How the control surfaces of the plane affect the flow of air will be discussed in more detail below.

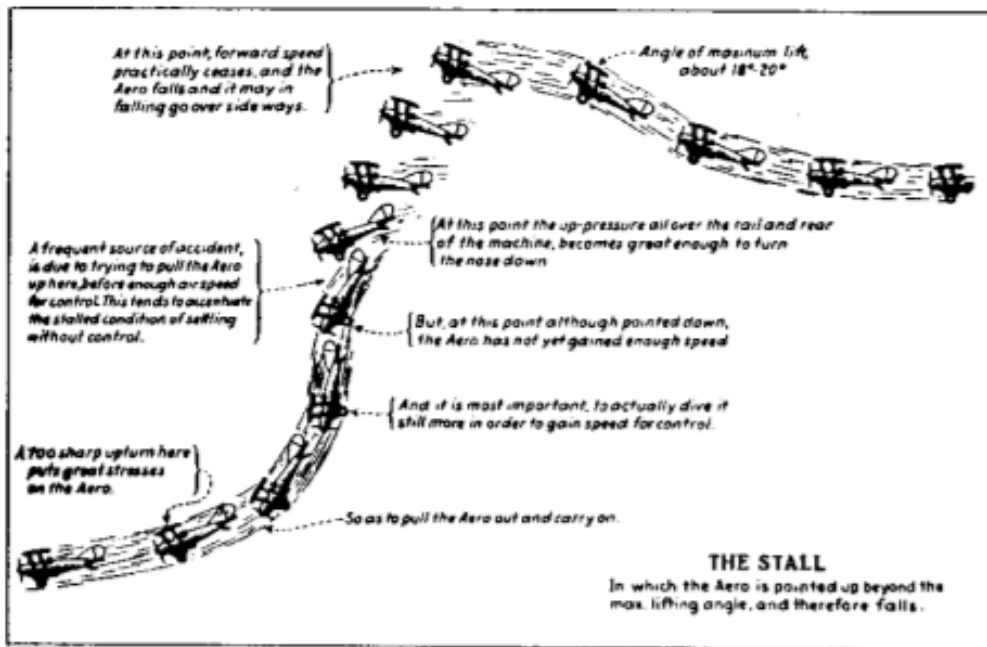
2. Control of the Spad

The flight of a plane occurs, obviously, in three dimensions. In order to better describe the movement of the plane along these three axes, the terms yaw, pitch and roll are used. Yaw is rotation around the vertical axis of the plane, rotating left and right. Pitch is rotation around the axis that passes through the wings, moving the nose up and down. And Roll is rotation around the axis that passes through the fuselage, moving the wings up and down.

a) Lateral Controls - Roll and Yaw

As discussed above, turning the plane involves changing the degree of Roll in order to change the Yaw of the craft. The ailerons, flaps on the trailing edge of the wings which can be raised and lowered, are used to do this. They are controlled by means of the stick. When the stick is moved to the right, the right aileron goes up and the left aileron goes down, resulting in a right turn. When the stick is moved to the left, the opposite happens.

The rudder, though theoretically a direct way to control the Yaw, should only be used in conjunction with the ailerons. Turning the plane with the rudder alone is slow and the increased drag will cause the plane to lose altitude.



b) Pitch Controls

The current airspeed and the position of the nose are interrelated phenomena; thus the controls you have to change the pitch of the airplane, the throttle and the elevator, can control either the airspeed or the nose's position. When the throttle is raised, increasing the RPM of the engine and the speed of the propeller, the nose will go up and the altitude will increase. Contrary to expectations, unless you hold the nose down using the elevator, speed will decrease. Lowering the throttle causes the plane to lose altitude and thus speed up.

The elevator is also controlled with the stick. Pushing forward on the stick causes the airplane to drop its nose, lose altitude, and gain speed. Pulling back on the stick causes the airplane to raise its nose, gain altitude, and lose speed. Altitude gains due to elevator effects are short-lived because of the loss of airspeed, which causes the nose to drop (as long as the stick is not still being pulled back). The best way to stall an airplane is to pull back on the stick until the airplane's speed is less than its stated stalling speed.

3. Keyboard Interface

The *Spad XIII Flight Simulator* is controlled either entirely from the keyboard or from the keyboard with Joystick 1 substituting for the stick movement keys and fire button. Two commands may be input at one time, one from the left side of the keyboard (or the joystick) and one from right side. Press the key until you see the appropriate reaction on the screen.

The stick movement keys are **E-S-D-X-W-R-Z-C** as illustrated in Figure 1. **A** is strong left, **F** strong right, and **V** strong back stick for acrobatic moves (the joystick has no corresponding positions to accomplish these maneuvers). You will be able to see the stick move in response to your actions.

The view keys are **1-2-3-4-5-6**. They are also illustrated in the accompanying figure. You may change the view at any time, and for strategic purposes it is important to look around for enemy planes. The **U** key presents an unobstructed view from the front only. To restore the plane on the screen press any one of the view keys. Firing is possible only when the forward, instrument panel view is on the screen. If a view key is pressed continuously you can peek through the planes' wings and fuselage.

When you look up (view key **5**), forward is down on the screen. When you look down (view key **6**), forward is up. Picture the pilot actually looking up or down from his seat in the cockpit.

The throttle keys are **7-8-9-0** as illustrated below. **7** and **8** raise and lower the throttle in increments. **9** gives full throttle, and **0** stops the engine. (Even at 0, air pressure may keep the propeller moving and cause the engine to run.)

The rudder keys are **,** and **.'**

The fire key is **Q** (or Joystick 1's button). The fire key only works from a forward, instrument panel view. You can not fire the guns and move ailerons at the same time, but the rudder can be used for turning. **B** drops a bomb. For bombing, it doesn't matter which view you are seeing, but to see the bomb drop you must look out of the bottom. Altitude must be less than 1000 feet to see the bomb explode.

The kill program key **K** works only if you are safely on the ground. It will display the Final Score screen and end the game.

At any time, **FCTN** + (Quit) can be pressed to halt the simulator and return to the master title screen.

The alpha lock key must be up to use Joystick 1 for input.

4. Instrument Panel

In the *Spad XIII Flight Simulator*, the screen represents the view of the pilot sitting in the cockpit. In addition to the wings, struts, and guns of the plane, the view includes an instrument panel and the outside scenery. The instrument panel consists of four gauges and two mechanical devices. The gauges with their readout markings are illustrated in Figure 2.

The altitude gauge, on the left, is a barometric device corrected for relative altitude. It has two hands, one black and one white. The black hand indicates thousands of feet and the white hand indicates hundreds. The readings go from 0 to 1,000 feet and 0 to 20,000 feet. Thus if the gauge has the black hand pointing straight down and the white hand pointing at 3 o'clock, the plane is at altitude 10,250 feet.

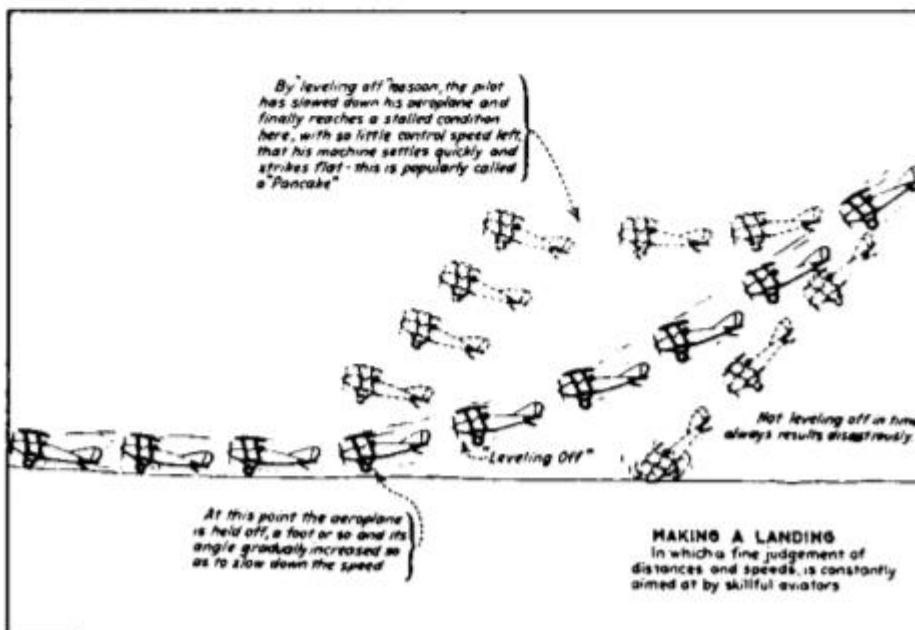
The air speed gauge, on the right, has one hand and registers from 0 to 200 knots. If the airspeed drops below 40 knots a stall is likely.

The compass, on top, is a standard magnetic device corrected for the mass of the engine. North is up and East to the right.

The fuel gauge, on the bottom, reads full at about 10 o'clock and empty when pointing straight up. It moves counterclockwise.

The throttle is the handle below and to the left of the instrument panel. Top is 1200 RPM. It is pegged at 200 RPM although the throttle changes in increments of 100 RPM. Up increases throttle, down decreases.

The stick is located in the bottom center of the display. It moves to 9 different positions to indicate the appropriate action. Shorter means pulling the stick back, longer means pushing forward on the stick.



5. Objects on Ground and in Air

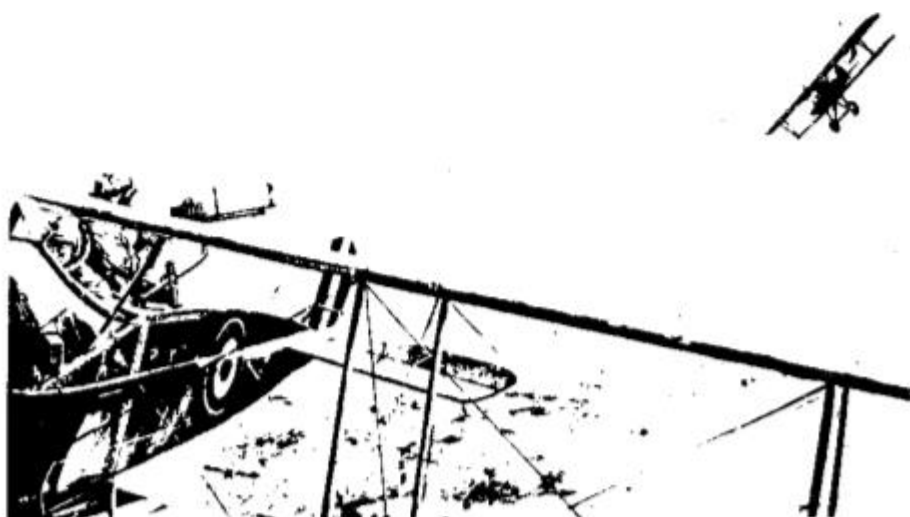
The scenery in the *Spad XIII Flight Simulator* is, of necessity, somewhat stylized, although full 3-D is always observed. The horizon is a dark green line with the white line of clouds always above and parallel to it. In the sky are scattered higher clouds - these are small white flecks until you get close to them, when they appear as parallel, white lines. The sun, in the Southeastern sky, is a yellow burst of lines.

On the ground, there are:

- your plane's shadow - a dark green cross, always opposite the sun from you
- trees - dark green, at regular intervals
- your airfield - dark green parallel lines with one black hangar
- enemy airfields - has two hangars and a parked plane
- trenches - jagged dark yellow lines, run infinitely north-south
- Seine R. - dark blue, runs infinitely north-south
- Eiffel Tower - black multi-lined tower on rectangular park near Seine
- French villages - green multiple boxes with church steeple at center
- destroyed villages - as above but black
- hills - polygonal green shapes; may be faintly seen from a great distance

The skies are infested with Hunnish airships:

- German two-seaters - black; defended by observer machine gun;
 - emit smoke, fall, explode against earth when shot down
 - observation balloons - black, cigar shapes;
 - destroyed like German two-seaters except defended by flak units on ground
 - flak explosions - yellow/red bursts in the vicinity of balloons and enemy airfield
- Your bombs - black; explode against earth, destroy German hangers
explosions - red and yellow; may be seen if within 1000 ft;
damage to airships and hangars is indicated by white line of smoke



6. First Flight

a) Take Off

To take off, press key **1** to get a front view with instruments. Apply full throttle by pressing the **9** key until you hear the motor rev. Watch the airspeed indicator dial move to show your increasing speed. When it reaches 100 knots (straight down), pull back on the stick (**X** or back on the joystick) until the screen stick moves, then let go. As you lift off, the runway will drop away. The altitude gauge will show your rising height. Depress the throttle a notch with **7** key for a controlled ascent. Shift to the rearward view by pressing the **4** key and you can see the airfield falling behind. Don't attempt any turns until you have attained at least 100 feet of altitude.

b) Climbing

Look out your front view and notice that the dark green horizon line is below your gunsight. This means that you are climbing. The proper way to climb is by increasing throttle - the elevator is really only a way of pointing your nose for temporary gain or loss of altitude. If you raise your nose too much with the elevator, you airspeed will drop dramatically and you will stall. The proper use of throttle and elevators to control altitude is a difficult skill and will come only upon sufficient time in the air. Continue your ascent to 3000 feet.

c) Cruising

Once you have reached 3000 feet, you will level off by lowering the throttle (key **7**) three notches to 800 RPM. Although the plane may oscillate a bit, eventually the gunsight (and top of tail) will line up with the horizon. The plane will be in level, straight flight at 120 knots.

d) Turns

To turn, as discussed above, it is necessary to raise one wing and lower the other using the ailerons. Press the **S** key (or move the joystick to the left) until the screen stick moves to the left, and then release. The plane will begin to bank left. Notice the clouds are moving to the right as you change direction. Your nose will drop a bit from its previous position as you lose lift. Continue in this slow turn until you are headed south. Press the **D** key (joystick right) until the stick moves and level off. After a few moments you should see your airfield near the horizon it will appear only as a dark green spot.

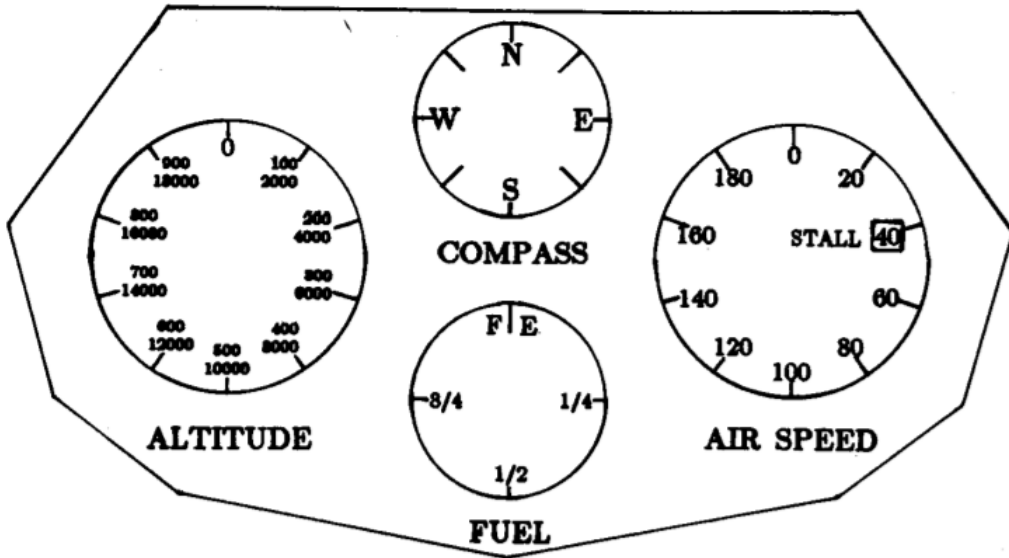
e) Descending and Landing

Use the ailerons to move the airfield to the center of the view, being careful not to let the plane bank too far right or left. The rudder can be used for fine adjustments, but remember using it comes with a penalty of lost airspeed. Lower the throttle four more notches and keep the field in your crosshairs as much as possible. Press the **U** key for an unobstructed view and the **1** key to return instruments. Lower the throttle if the near end of the airfield is below your crosshairs. As the airfield comes up, lower the throttle even more to keep

6

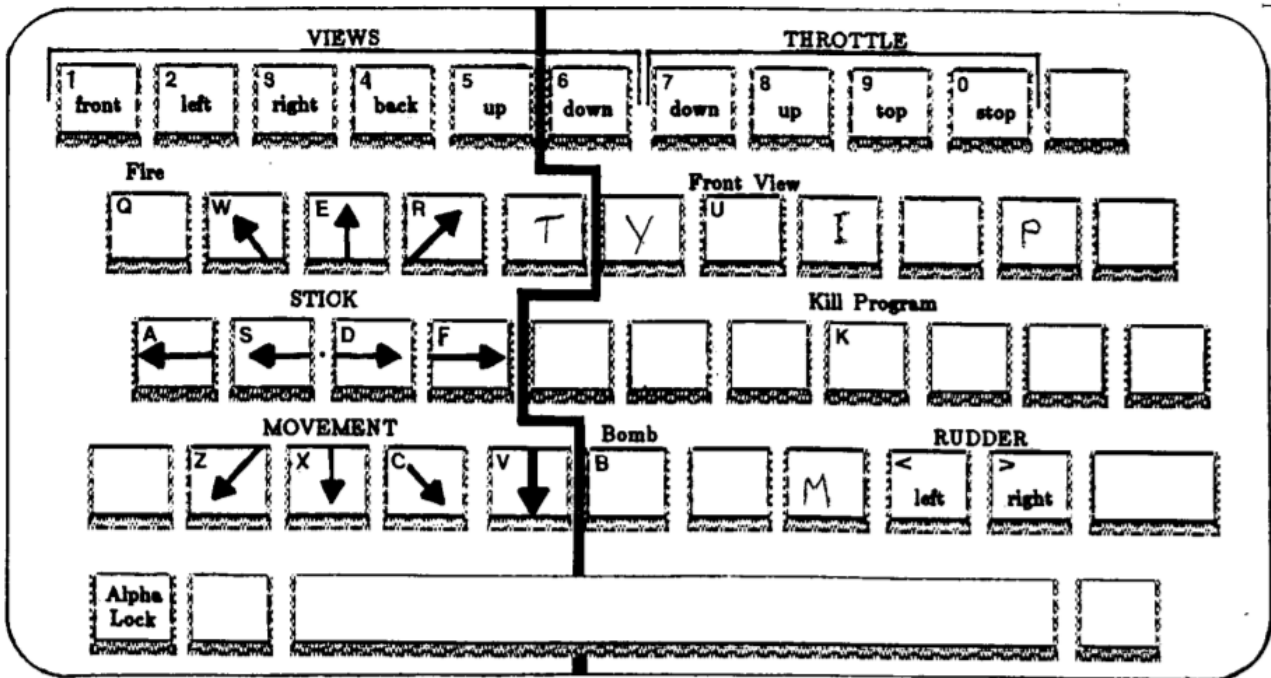
SPAD XIII Instrument Panel

Figure 2



SPAD XIII Keyboard Template

Figure 1



Alpha Lock key must be up to use Joystick 1

the approaching near end in your gunsight. Make sure that your wings are level. Pull back on the stick at fifty feet once to keep your airspeed less than 100 knots and your nose up. It isn't necessary to land precisely parallel to the airstrip since it's all level ground. You've landed when your altitude is zero and your nose rises abruptly. You must taxi to an area near the hangar and let your speed drop to zero. When you have done this the plane will be serviced, fuel, bombs, and ammunition replenished, and the plane will move to the starting point, facing due north.

Congratulations! You have completed your first flight.

7. Acrobatics

a) Turns and Extreme turns

Turning the Spad is not difficult to do if you just keep in mind that you will lose lift at a greater and greater rate the greater your degree of banking. At full throttle, you can turn 40 degrees (right or left stick x 5) without losing altitude, but turns of 45 degrees or more require you to pull back on the stick to stay level.

Extreme turns can be disastrous - you can lose control of the plane and go into a spinning dive. Don't use the **A** and **F** keys (hard left and right) unless you are an experienced pilot attempting a barrel roll or other acrobatic maneuver.

b) Climbing and Stalling

The best way to climb is just to put the throttle up. If you pull back on the stick excessively, your angle of attack will increase and you will lose airspeed. The conditions for a stall are met when your airspeed goes below 40 knots. When you stall your plane will lose its lift catastrophically and will plunge down and sideways. Depending on the conditions, this plunge may or may not evolve into a vrille or wild downward spin. The best way to handle these out-of-control situations is to lower the throttle first and try to turn counter to the spin. If you pull up first, it will only make the situation worse.

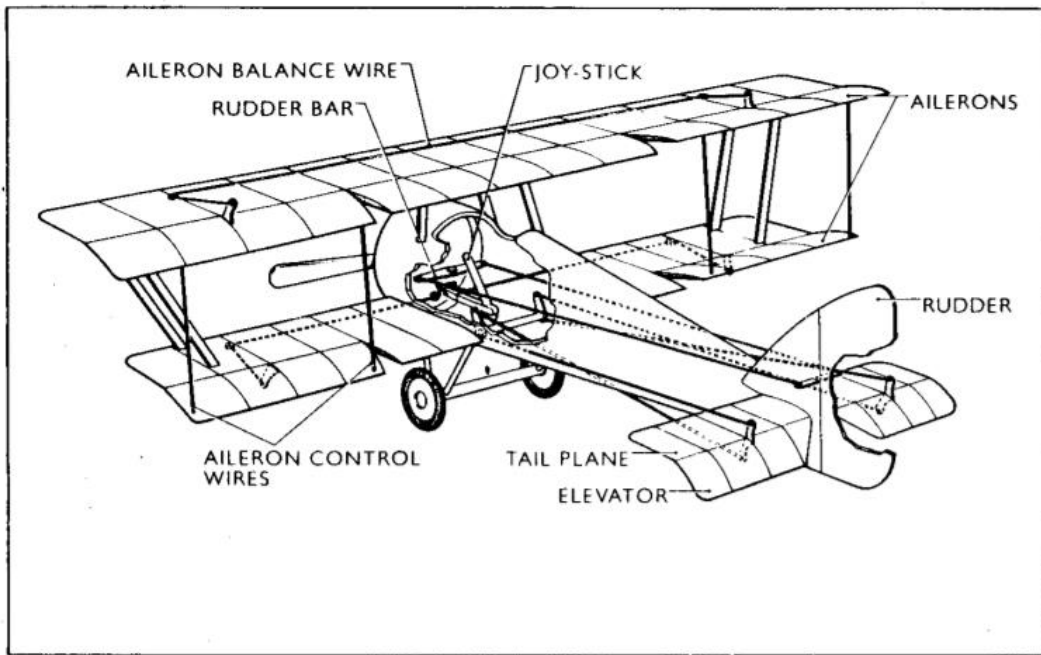
High throttle wastes gas - the best policy is to climb to the altitude you want and lower the engine.

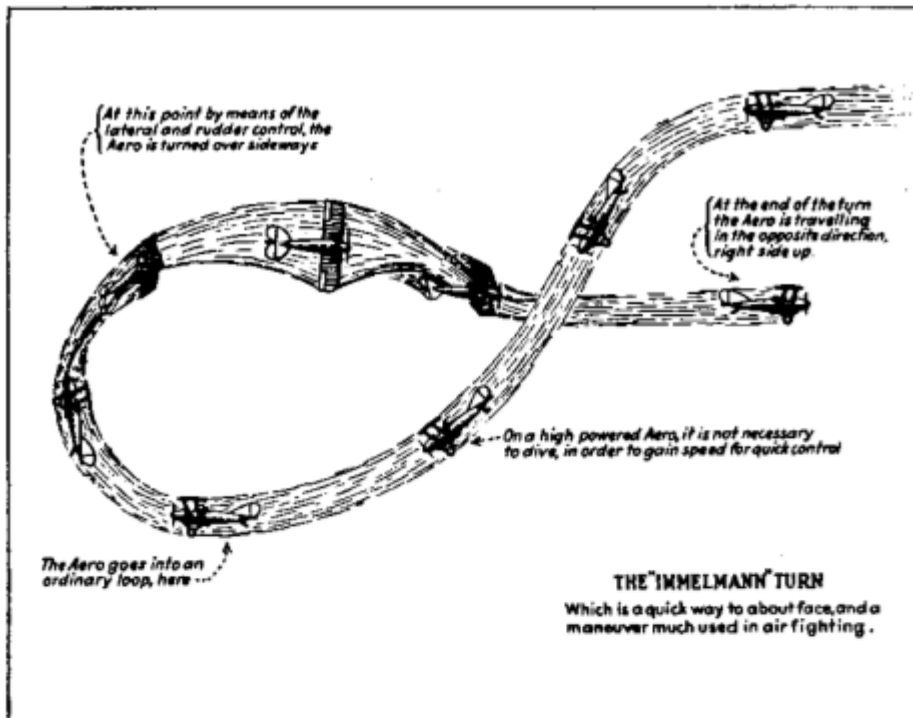
c) Barrel Roll

A barrel roll is when you use your ailerons to roll the aircraft through 360 degrees. This is a relatively simple maneuver if you have your speed up. To do a barrel roll, top your throttle, put your nose down with the crosshairs well below the horizon, until your speed reaches 150 knots. Let your nose come up until the cloud line is below your guns. Push the **A** key for a left barrel roll and **F** for a right barrel and don't let up until you're level again.

d) Loops

The simple loop is also fairly easy. Get to top throttle, push the stick forward until you reach 150 knots, and then press the **V** key until you've gone all the way around. For multiple loops, keep the **V** key down. Outside loops are impossible in a Spad due to the primitive engine.





e) Immelmann turn and Split-S

The Immelmann turn, developed as a tactical maneuver for dogfights, involves making a half loop up followed by a half roll to return to level flight. At top throttle, push nose down until you're at 150 knots, press the **V** until you see the reversed horizon in front of you, hit hard aileron, and roll to upright position. If your nose is pointed down pull back on the stick slightly.

The Split-S is a half-roll followed by a downward half loop. Top the throttle, push the nose down to 150 knots, then let the nose rise until it's just above the horizon. Hit hard aileron (**A** or **F**) to get the half roll - wait a second when you are upside down and then pull back on the stick a few times.



8. Game

You are the pilot of a brand new Spad XIII, assigned to the 94th Squadron of the Air Service of the American Expeditionary Forces. Your airfield, located on the eastern outskirts of Paris, is a small strip of land with one hangar. It is the morning of a day in late Spring, 1918. The weather promises to be fine, but there is a high mist at 1000 feet. Already there are scattered cumulus at 3500 feet. The wind is from the west at 10 knots.

The plane is fully fueled and ready to go, carrying 5 bombs and 1000 rounds of ammunition for your machine guns (enough for 100 bursts). Your plane is pointed north, the correct direction for take-off.

a) Enemies

The front lines of World War I are just 20 kilometers to the east. German two-seater observation planes (mostly Albatross CX's) can be anywhere in the combat zone (See Figure 3). These planes are slightly slower than the Spad, but their machine guns, though not as accurate as yours, can shoot in any direction. In addition, above the enemy lines there are 10 enemy observation balloons defended by flak batteries on the ground. Behind the German lines is a German airfield. It is recognizable by its two hangars and a plane on the ground. It too is protected by flak.

1) The two-seaters will, when attacked, either perform defensive circling maneuvers or try to get away. The circles can be large or small, and the smaller the circle, the harder it will be to get on the plane's tail. It may change the direction of its circle at any time. Since your aim is much more accurate than the Germans, it is best to shoot it at the greatest distance possible. You can't hit it, however, unless the plane is at least as big as your crosshairs. Try to get on the tail, if possible, as this will keep your motion small relative to the other plane, and you can fire at leisure. Rudders can be used for fine-tuning your position. When shooting at the side of the plane, if the plane is relatively large, you must aim at the engine to score a hit.

The chase can be a challenge. Remember, if the plane is above the horizon, that means he is at a greater altitude than you; and if he's below you, the plane will be below the horizon line. Determine the course the other plane is travelling, and aim ahead of him to cut him off. Attacking from below is uncertain, because of the possibility of stalling. The best way to turn sharply while tracking the plane is to do an Immelmann turn or a Split-S.

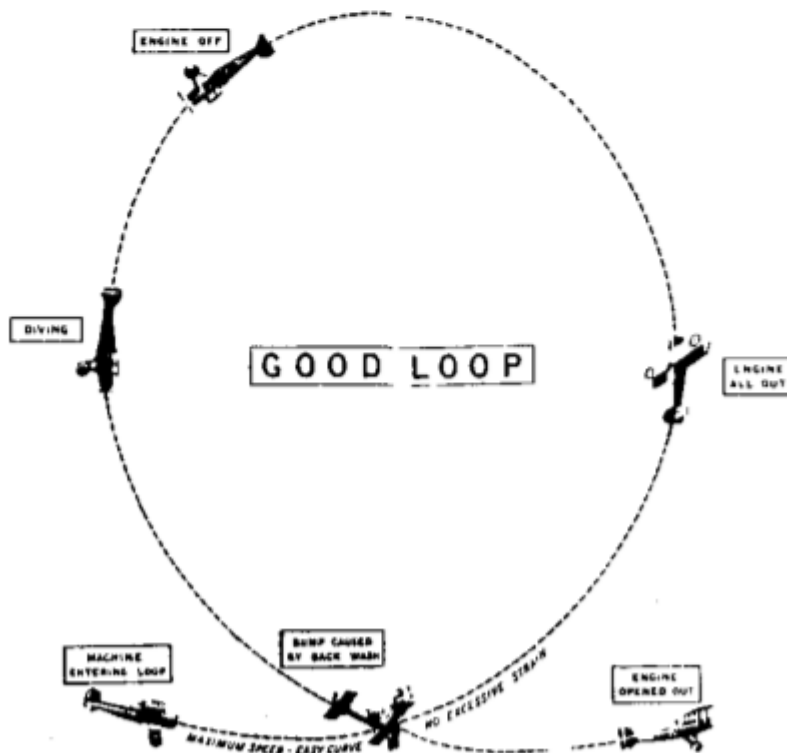
2) The observation balloons do not move. There are ten of them, between 500 and 1500 feet up, forming a straight line just behind the German trenches. If you go due east from your airfield, they will be there. Each one is protected by a flak battery, which hurls explosive projectiles into your path. The flak will appear as orange bursts moving past your plane when you are about a mile away from them. The flak is **dangerous!** Evasive maneuvers do not help when under flak attack, in fact they slow you down and make you more vulnerable.

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The balloons are best attacked by finding the last one in the row and approaching it from the end. If you are adjacent to two balloons you will be flacked by them both, thus reducing your chances of survival. The less time you spend in the vicinity of the balloon, the less danger. Never attack a balloon with your nose up - try to increase your speed by lowering your throttle and attacking in a dive.

3) The enemy airfield, located due east and behind the line of balloons, is also protected by flak. Your principal mission, beyond destroying enemy planes, is to bomb the two hangars there. Dropping a bomb so that it hits a specific target is a fine art, and must be practiced. It's easiest to bomb at less than 500 feet, looking down with the **6** key. The bomb doesn't travel horizontally as much, the target is larger, and, since you can only drop one bomb at a time, you can drop another one sooner. Your altitude must be less than 1000 feet to see the explosion. It is possible to dive bomb, which again exposes you less to flak, but this takes long practice.

Occasionally, the hangars have been struck before you arrive there, by members of your own squadron. If so, they will already be on fire and you will be credited for destroying one of them. You receive no credit for shooting at the Fokker plane parked there.



b) Damage

Either the flak or the machine guns of the observation planes can damage the Spad. The damage can be light and affect the flight little, or be catastrophic. In most cases the only clue to the amount of damage your plane has suffered will be in how it flies. The least severe damage to the Spad will be destruction of the rudder control. This will simply mean that you can't use the rudder; however, the ailerons alone can manage any of the maneuvers you wish to make. The next level of damage is destruction of the elevator. You can still get home, since you can control your height with the throttle, but complicated maneuvers are difficult or impossible. If your engine is hit, it will sputter and lose power. Pressing the **9** key (top throttle) will goose the engine into giving a burst of power for a short time, but this must be done continuously to see any real effect. The Spad was not made to glide, but to escape capture you should try to make it back over the French lines. The worst damage you can suffer is to the ailerons. When the control line is severed, the ailerons will fall into a hard left bank. This is almost uncontrollable, although pressing the extreme right key (**F**) and pulling the stick back and to the right (**C**) can keep you level. The right rudder (**.**) helps also, as does powering down. Only the experienced pilot will be able to land with this handicap.

When more than one of these damages occur, it is very unlikely that the plane can safely land.

c) Repairs

Landing near your hanger refuels and rearms your Spad, repairs damage you may have sustained, and lets the Germans repair their hangers if you have bombed them. This means that you have 0 altitude and 0 airspeed. If you are not close enough to your hangar you can taxi over to it. Your plane will reappear, pointing north, and ready to take off.

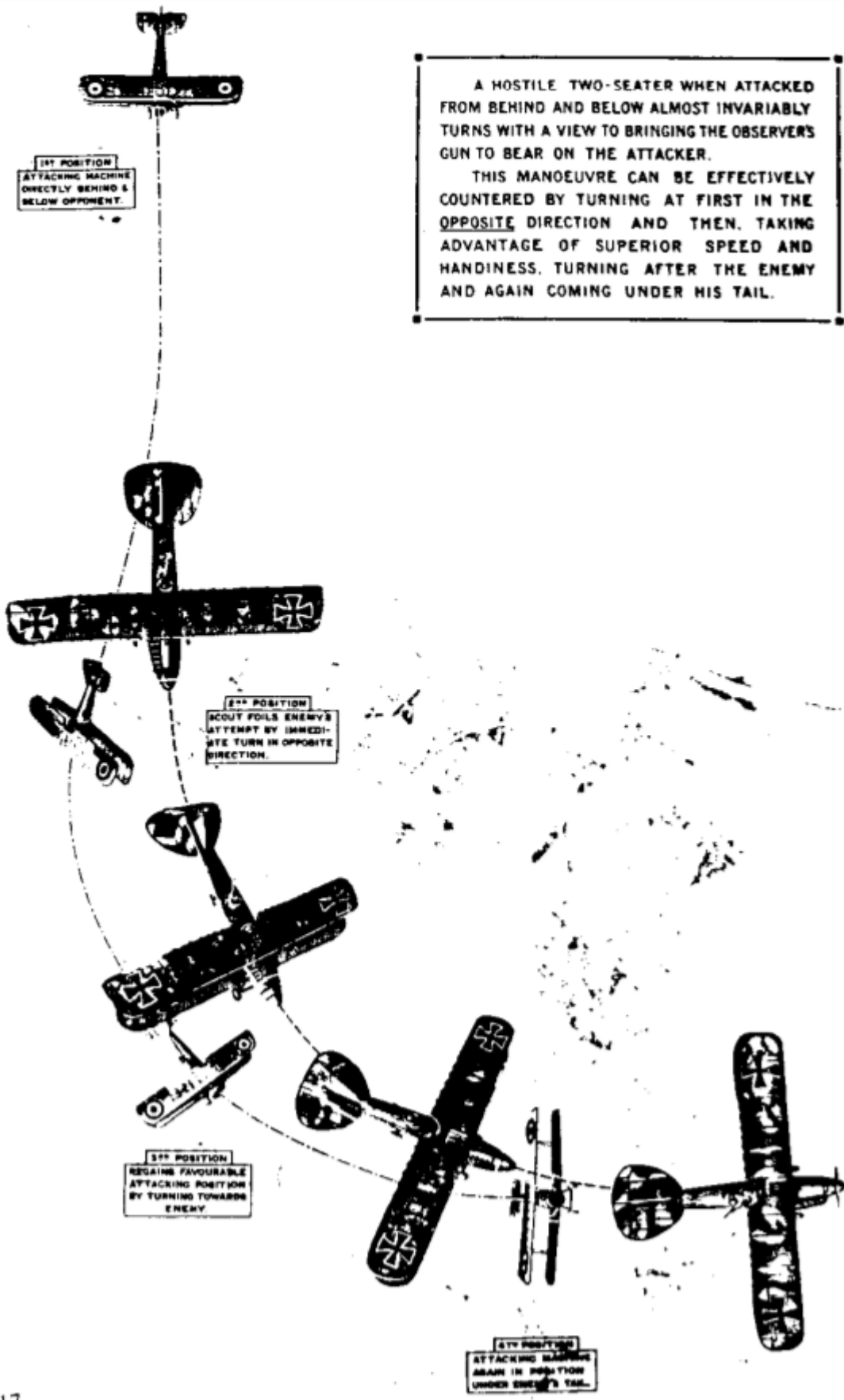
d) End of Game

To end the game successfully you must 1) land undamaged anywhere and press the **K** key, 2) land damaged on French territory, or 3) land damaged on German territory and escape capture.

To end the game unsuccessfully, 1) crash, or, 2) land damaged on German territory and be captured. The screen will go blank except for PRESS ENTER, or possibly CAPTURED.

You only see the Final Score screen if you end the game successfully. At this time the number of enemy planes, observation balloons, and enemy hangars you have destroyed will be tallied. Only planes count when the awarding of Ace status is done, and you must have downed at least five of them to qualify.

To begin the simulator again, press ENTER from the Final Score screen or the blank screen. This will take you to the TI Main Title Screen. Hit the 2 key twice and it will autoloading.



A HOSTILE TWO-SEATER WHEN ATTACKED FROM BEHIND AND BELOW ALMOST INVARIABLY TURNS WITH A VIEW TO BRINGING THE OBSERVER'S GUN TO BEAR ON THE ATTACKER.

THIS MANOEUVRE CAN BE EFFECTIVELY COUNTERED BY TURNING AT FIRST IN THE OPPOSITE DIRECTION AND THEN, TAKING ADVANTAGE OF SUPERIOR SPEED AND HANDINESS, TURNING AFTER THE ENEMY AND AGAIN COMING UNDER HIS TAIL.

9. Scenarios

The following scenarios are in addition to your basic mission of destroying enemy planes, observation balloons, and enemy hangars.

a) Assignment in Paris

You met an attractive Parisian at a party the weekend before. After a wild night, you promised this person that you would fly by the Eiffel Tower today and wave. Take off and fly due west for about twelve minutes, until you see the Seine, and then turn south. The tower should be visible shortly. Make a tight circle around the monument at about 500 feet, looking out the right side window. After two revolutions, head back for your airfield as quickly as possible so that you won't be missed.

b) Observation

Because of damage sustained by the Observation Group, you have been assigned to do a reconnaissance of the trench positions along the front lines. Head north until you see a French village, then east until you are over the trenches. Turn parallel to the trenches. Using pen and paper, sketch the positions of the trenches until you see the destroyed village in no-man's-land. You can avoid or attack the observation balloons as you see fit. Return to your airfield and land.

c) Breaking In a New Spad

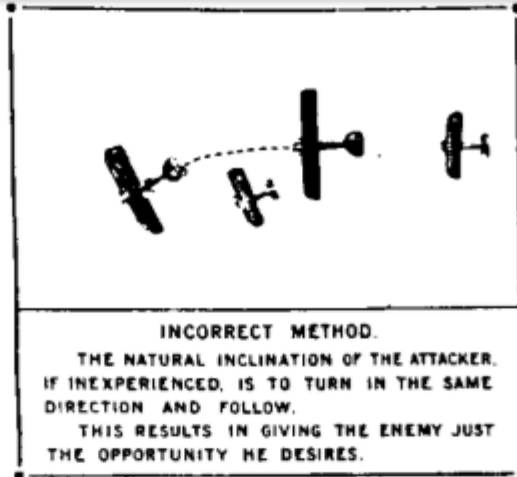
To get a feel for the new Spad, do a series of acrobatic maneuvers. First climb to 3000 feet. Do an Immelmann turn followed immediately by a Split-S. Do ten loops without stopping. Do a Barrel Roll. Stall and recover at least twice.

d) Rescue at Mareuil

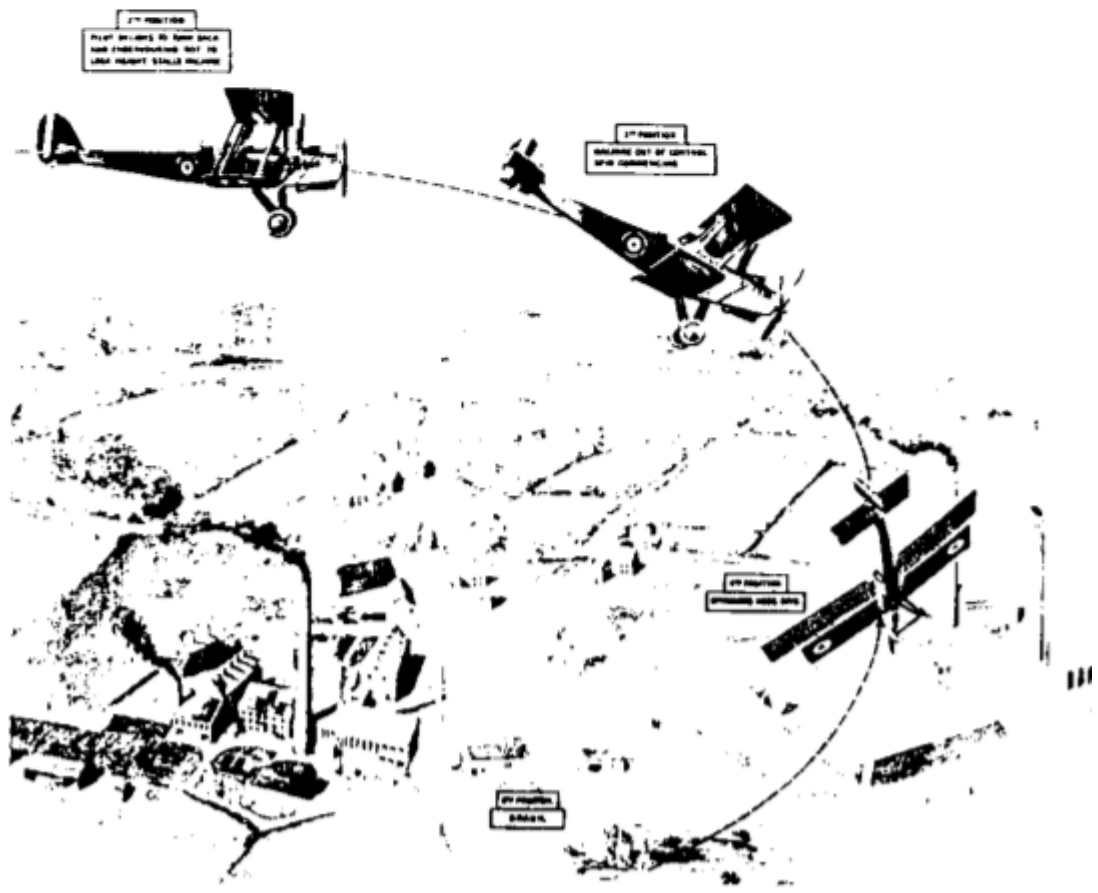
You have received word that there is a spy who has an urgent message for your commander. He is stuck in Mareuil, behind German lines. Take off, and, being careful to conserve fuel, head northeast towards the Destroyed Village. Use the map to find the village as best you can. It may not be easy. Once you have located Mareuil, land on the main street. Take off again and return to your home airfield with the information.

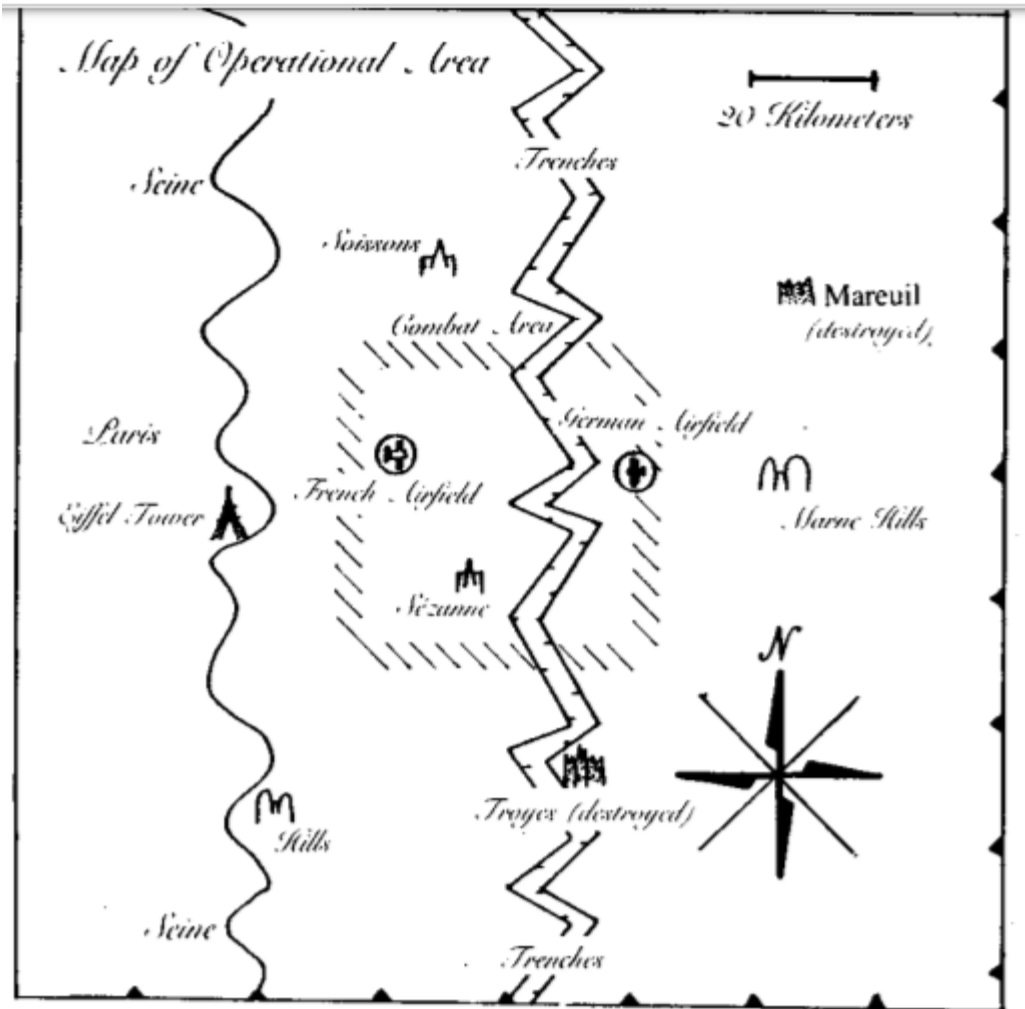
e) Big Adventure

You have been assigned to destroy the gun emplacements in the hills south of the Marne. The hills are due east, beyond the German airfield. As you fly over the front, strafe the eastern trenches with gunfire from an altitude of 300 feet. Continue east, and, when you reach them, bomb the German hangars. When you reach the hills, make several low flights over them, shooting all the while. Drop all your bombs as close to the center of the smallest hill as possible. If you want to take out a few observation balloons on the way home, do so, but be careful that you don't run out of fuel.



IN CASE OF ENGINE FAILURE
DONT TURN BACK – PUT HER NOSE
DOWN AT ONCE AND MAKE SOME
SORT OF A LANDING AHEAD.





Spad XIII Specifications

Nation — France

Manufacturer — S. P. A. D.

Engine — Hispano-Suiza 8BEc 8-cylinder liquid cooled in-line V (235 hp.)

Wingspan — 26' 11" Length — 20' 8"

Weight — 1804 lbs. fully loaded Maximum Speed — 139 m.p.h.

Ceiling — 21,800 ft. Endurance - 2 hrs.

Armament — 2 fixed Vickers machine guns

Astroblitz

G-3-M [Disk: 091-ASTR] By Unknown Author



This fine space shooter has a strong resemblance to the classic Defender game. The objective is to destroy incoming alien ships as well as aliens on the ground all of whom are shooting at you. You have at your disposal a long-range radar screen showing the various targets, which helps plan your route. The action is pretty frenetic and good reflexes are a must. The graphics and animations are excellent, but sound effects seemed a little minimalistic. Definitely worth a try.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks.

Executable to run: ASTROBLITZ (E/A option 5)

Download Astroblitz:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

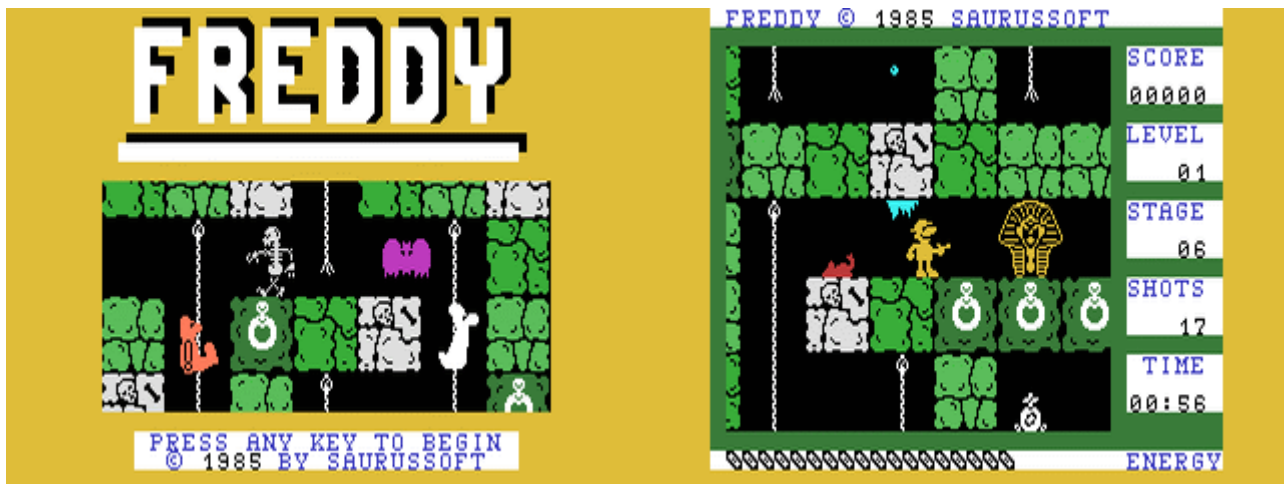
Start from mega menu: G – 3 – M

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

Freddy

G-3-N [Disk: 092-FRED] By Arnd Russmann



As Freddy, you are exploring a vast labyrinth of tunnels filled with scorpions, rats, ghosts, mummies and other nasties in search of treasure and... the exit! You can use your gun to shoot some of the energy leeching monsters, but it is best to try to escape by climbing up and down the ropes. This is a very high quality game that will keep you hooked for hours on end, with detailed smooth scrolling graphics and a very challenging layout. An absolute gem!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: FREDDY (E/A option 5)

Download Freddy:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – N

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1

Ms. Pac-Man

G-3-O [Disk: 093-MSPA] By AtariSoft



This game obviously needs no introduction, and I am including it in this collection because it is not as common to find and it is so cute! Eat the dots and fruits and avoid the ghosts. A venerable classic that is still immensely entertaining.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: MS-P (E/A option 5)

Download Ms. Pac-Man:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – O

Features: Title Screen, EA5, One or Two Player, Sound

Controls: Keyboard, Joystick 1

MS-Adventures

G-3-P [Disk: 094-MSAD] By Mike Stewart



This excellent but less known adventure system includes three separate but sequential quests that need to be played in order, namely The Search For Murgan's Keep, The Enchanted Keep and The New King, all with a fantasy theme. The game mechanics follow very closely Scott Adam's Adventure series, so play is very familiar. There are no graphics, so it is left to your imagination to fill-in the blanks. Difficulty level is pretty challenging, and you are guaranteed many hours of play. Documentation is included. Very enjoyable.

Requirements: Editor/Assembler or XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download MS-Adventures:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – P

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard

After the MS-Adventure program loads, a colorful title screen will be displayed.

Press any key to go past the title screen and choose one of the three adventure games.

ENTER INPUT DEVICE:

DSK1.ADVDATASMK	- Search for Murgan's Keep
DSK1.ADVDATATEK	- The Enchanted Keep
DSK1.ADVDATATNK	- The New King

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LOAD - Extended BASIC program loads adventure or prints documentation. (JT)

PDTTEXT - Patterns for the text in the adventure. (MS)

SOL/SMK - Detailed solution for "Search for Murgan's Keep". (JT)

SOL/TEK - Detailed solution for "The Enchanted Keep". (MS)

SOL/TNK - Detailed solution for "The New King". (MS)

UTIL1 - The adventure program in memory image form. (MS)

WHAT IS FAIRWARE?

Fairware is a marketing technique that appears to be unique to the computer world. It allows you to get software and evaluate it before purchasing it. It also allows, and in fact encourages you, to make copies of the software to share with other potential customers. The risk is born completely by the person marketing the software.

I decided to go the Fairware route because I was tired of paying lots of money for software that I never really ended up using. Some programs were good, but they weren't \$39.95 good. After a short spell in the commercial world, I decided I wanted people to be able to try my software first; and then, and only then, if they found it to be useful and of value, to pay for it. I don't even have a recommended asking price. Only you can, and should, decide what this software is worth to you. I truly enjoy writing programs and sharing what I do. I use this little bit of extra income to help support my children's and my own computing habits.

If you have questions or comments about any of my software, feel free to contact me. And again, thanks for your support of the Fairware marketing concept.

John E. Taylor * 2170 Estaline Drive * Florence, AL 35630 * CIS #74766,241

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MS-ADVENTURE PROGRAM INSTRUCTIONS

The MS-Adventure Series consists of an MS-Adventure program and three MS-Adventure databases. The MS-Adventure databases describe the adventure. The MS-Adventure program reads the databases and controls the adventure which the databases describe.

The following is a list of the MS-Adventure databases which are included in this series.

SEARCH FOR MURGEN'S KEEP: This adventure is Part I of the Quest for the Key. The Princess Dianna has been imprisoned by the magician Murgan, and the key to release her is in his castle. In Part I you must search a magical land for entrance into the magician Murgan's castle.

Difficulty Level: Advanced

THE ENCHANTED KEEP: This adventure is Part II of the Quest for the Key. The search for the key to free the imprisoned Princess Dianna continues through Murgan's enchanted castle.

Difficulty Level: Moderate

THE NEW KING: The Quest for the Key is complete! The princess has been freed! Now you must journey to Dianna's kingdom and vanquish the evil knight who has taken over the kingdom.

Difficulty Level: Advanced

MS-ADVENTURE PROGRAM OPERATING INSTRUCTIONS

In order to play an MS-Adventure, you must have both the MS-Adventure program and an MS-Adventure database. You must also have either the TI-Extended Basic command module or the Editor/Assembler command module. This diskette version, which is written in assembly language, also requires the 32k memory expansion and, of course, a disk drive.

- (1) Put the MS-Adventure program diskette into disk drive one.
- (2) If you wish to use the TI Extended BASIC command module then do the following:
 - (A) Insert the TI Extended BASIC command module and select Extended BASIC.
 - (B) The program will then automatically load in a "LOAD" menu. Select option 1 from the menu to begin loading the MS-Adventure loader and program.

Or if you wish to use the TI Editor/Assembler command module then do the following:

- (A) Insert the TI Editor/Assembler command module and select Editor/Assembler.
- (B) Select option 5 - RUN PROGRAM FILE. When prompted for the PROGRAM FILE NAME just press ENTER and the MS-Adventure program will be loaded.

- (3) After the MS-Adventure program loads, a colorful title screen will be displayed. Press any key to go past the title screen.
- (4) The program will then ask you for the name of the file which contains the MS-Adventure database you wish to play. The names are: DSK1.ADVDATASMK for "Search for Murgan's Keep", DSK1.ADVDATATEK for "The Enchanted Keep", and DSK1.ADVDATATNK for "The New King". The program requires less than a minute to load the database from diskette.

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(5) After the database has loaded, the computer will display the message "WHAT SHALL I DO?", and you may proceed with your adventure.

At this point you should strongly consider saving the current game. If you are "killed", you must either restore a saved game or reload the entire MS-Adventure program and database. Restoring a saved game requires only a few seconds, much less time than reloading the program and database.

CONTROLLING THE ADVENTURE

You control the adventure by entering two word commands. The first word is a verb, and the second word is an object, such as: CLIMB TREE. The program looks at only the first three letters of the object, so you may abbreviate if you like.

For each location, the display indicates visible exits as single letters, E(east), W(west), N(north), S(south), U(up), and D(down). To move to any of these exits, simply enter the letter of the direction in which you want to move. For example: E will move you to the east, if there is a visible east exit.

Most of the commands are defined in the database and may change from one adventure to another. However, there are four commands built into the MS-Adventure program. These are INVENTORY, SAVE, RESTORE, and QUIT. These commands can be entered at any time during the adventure. The INVENTORY command causes a description of the current location, exits, and objects to be printed.

The SAVE command allows you to save the current adventure, which can then be RESTORED should you be "killed", or should you wish to continue the game at a later time.

After you enter the SAVE command, the computer will ask you for the device to which the game is to be saved. Enter "DSKn.filename", where n is a disk drive number containing the disk you wish to save the game on to and filename is any name you wish to give to the saved game. After the game has been saved, the computer will display "GAME SAVED". You can continue the adventure, or QUIT and RESTORE the game later.

The RESTORE command causes a previously saved game to be restored. In order to restore a game, the MS-Adventure database must already be loaded. After you enter the RESTORE command, you will be asked which device the game is to be restored from. Enter the "DSKn.filename" you used when saving the game.

The QUIT command causes the current game to be terminated.

Good luck and happy adventuring.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

THE QUEST FOR THE KEY

Part I: Search for Murgan's Keep

Part II: The Enchanted Keep

By Mike Stewart

In an age lost in the mists of time, the city Avalon was a thriving center of commerce. From booths in the streets of the city, necromancers, craftsmen, magicians, and merchants of all kind sell their wares and conduct their trade.

Rengal the Rouge is a denizen of the backstreets of the city. His quick wit and affable personality offset his reputation as a cut purse and rouge.

One day, during a pause in haggling with a merchant, Rengal notices a large crowd growing before a new booth. After working to the front of the crowd, Rengal sees that the booth is that of the magician Fanest, and that the attraction is a beautiful, sleeping young lady, imprisoned in a large glass case. Fanest, an elderly magician, stands before the crowd, calls for their attention, and begins the tale of the imprisoned Princess Dianna.

Long ago, the magician Murgan ruled the eastern marches from his great castle, Murgan's Keep. Murgan became enamoured with the Princess Dianna, daughter of the King of a nearby city. Murgan kidnapped the Princess and took her to Murgan's Keep. He planned to force a marriage.

However, one day a demon somehow gained entrance to Murgan's Keep and engaged Murgan in fierce battle. Murgan sealed the Princess in the indestructible glass case, both for her safety and to prevent her escape. Murgan won the battle, but received mortal wounds and died shortly thereafter.

In response to questions, Fanest claims to have bought the glass case from Murgan's young apprentice who fled with the case during the battle. However, the apprentice had been unable to find the key to the case.

As Fanest begins selling magical items to the crowd, Rengal decides to undertake a quest for the key. He will search out Murgan's lost castle, somehow gain entrance, find the key, and return to Avalon to release and marry the beautiful princess Dianna.

Rengal sets out immediately. After a long and arduous journey, he is finally approaching the region in which Murgan's Keep is rumoured to have been located.

Thus your "Quest for the Key" adventure begins. In Part I: "Search for Murgan's Keep", you must find Murgan's Keep, and gain entrance to the castle. In Part II: "The Enchanted Keep", you must pass through the castle, find the key, and return to Avalon to release the imprisoned princess.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

The New King
by Mike Stewart

The Quest for the Key is complete! The beautiful Princess Dianna has been released from the glass case, and has married her rescuer, Rengal the Rouge! Rengal expects to live happily ever after as a wealthy prince in Dianna's kingdom.

The two newlyweds move through the streets of Avalon, buying supplies for their journey to Dianna's kingdom. Suddenly an old peasant bows before Dianna and cries "Princess! I have searched for you for years!"

"Rise and tell me thy story," bids Dianna.

"Shortly after you were kidnapped by the evil magician Murgan," he tells Dianna, "your father the King became sullen and recluse. Soon an evil knight entered the realm and overthrew your father. The evil knight now rules, demanding exorbitant taxes from the starving peasants!"

Dianna turns to Rengal. "Oh despair! We can not return to my kingdom while the evil knight rules!"

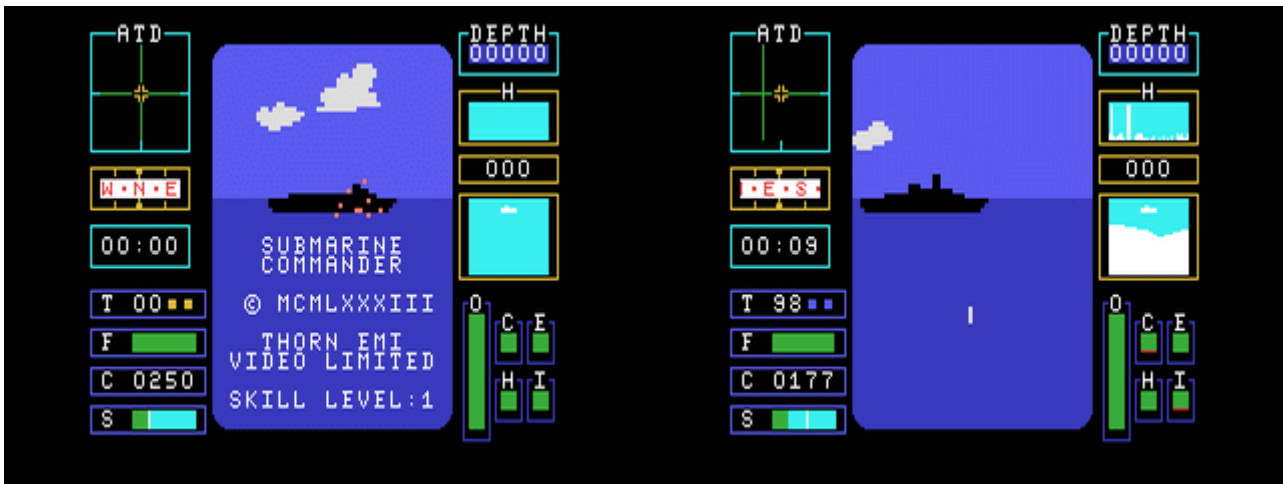
"Fear not, my princess!" say Rengal. "I shall journey to your kingdom and vanquish this evil knight!"

Leaving Dianna in Avalon, Rengal sets out for Dianna's kingdom. After a long and arduous journey, he is finally approaching his destination.

Thus begins your adventure. In this, the third adventure of Rengal the Rouge, you must find a way to free Dianna's kingdom from the rule of the evil knight.

Submarine Commander

G-3-Q [Disk: 095-SUBC] By Thorn Emi



This game places you in a WWII setting as a submarine commander hunting enemy convoys. Your submarine has a complete array of gauges and instruments including sonar and hydrophone allowing you to successfully track and sneak up on passing convoys while avoiding the deadly escort destroyers. This simulation is incredibly well designed and can easily compare to the venerable Silent Service sub simulation. While the numerous controls are easy enough to master, developing successful strategies is where your mettle is really tested. You have got to try it!!! (Docs included).

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: SUBCOMMAND

Download Submarine Commander:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Submarine Commander Manual by Kevan](#)

Start from mega menu: G – 3 – Q

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1



SUBMARINE COMMANDER

For the TI-99/4A and Emulators

TI-99/4A – Game Shelf Assembly/c99/Forth Games

This program can be loaded using option 5 of the EDITOR/ASSEMBLER cartridge.
To load, type: DSKn.SUBCOMMAND

Once loaded, you'll see the title screen and SKILL LEVEL, as displayed on the cover of this manual.
To toggle through the game levels, simply press the SPACEBAR.

To start the simulation, press START (Number 2)

The Controls

Joystick: optional

To Surface: Pull the joystick towards you (down)...this pushes the submarines nose up.
To Dive: Push the joystick away from you (up); the nose goes down.
Rudder Control: Pull the joystick to the left or right. Use in conjunction with the compass setting (see instrument panel).

Keyboard

Active keys are:

E.....To Surface
X.....To Dive
S.....To Move Left (Rudder Control)
D.....To Move Right (Rudder Control)
1.....Abort Mission
2.....Start Mission
3.....Status Report
4.....To Crash Dive
5.....To Blow ballast
6.....Move Forward (Direction & Speed)
7.....Move in Reverse (Direction & Speed)
8.....Fire Torpedo
9.....Map
0.....Sonar Screen
=.....Periscope
SPACE BAR.....Pause

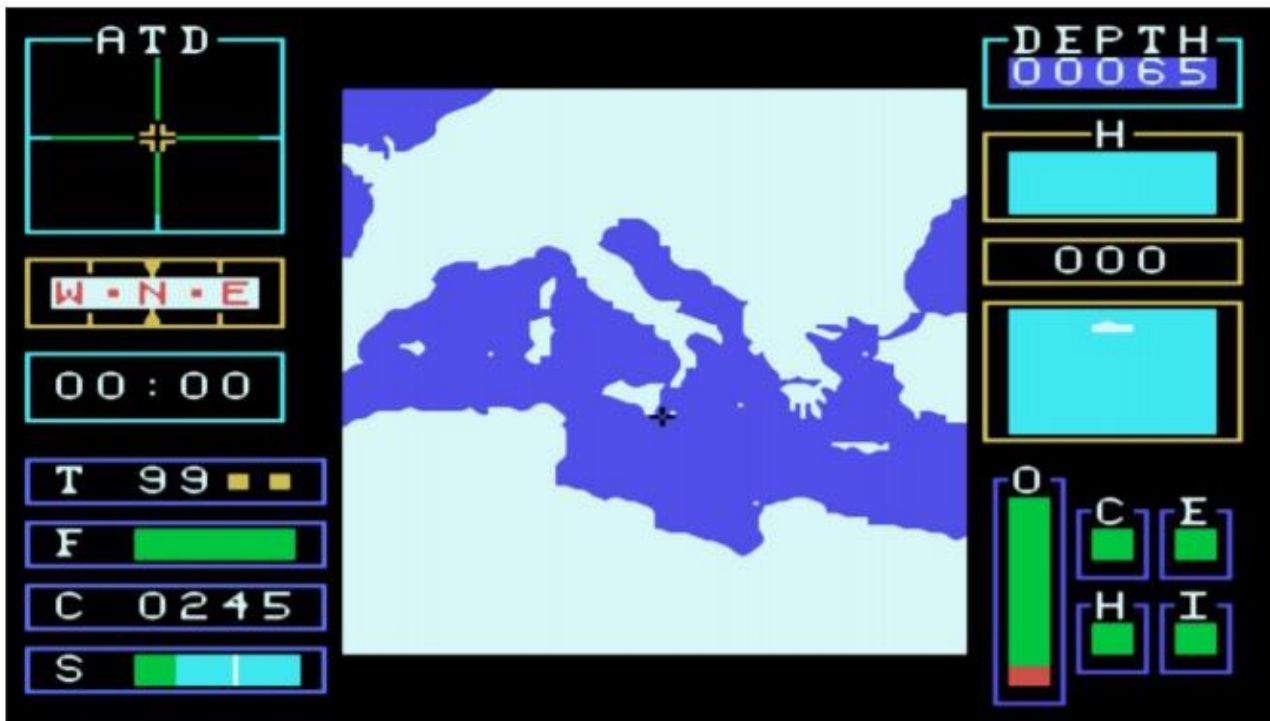
Pressing either (E) or (X) will neutralize a Crash dive (4) or Blow Ballast (5) in progress.

How to play

1. At the title screen, you may choose a skill level (1-3), by pressing the SPACE BAR to toggle through the options. When you are ready to begin the simulation, press START (Number 2)
2. The map in the center of the screen shows your position (black cross) and those of the enemy convoys (white dots). The object is to track down the convoys and sink all the ships. The enemy is composed of the following: Destroyer, Tanker and Freighter. You score tonnage points for sinking ships, with more points for tankers and freighters than for destroyers. The enemy ships are armed with shells and depth charges and can cause you heavy damage. If they detect you they may attack or take evasive action to try to lose you. To attack the target, you have the following equipment:

- MAP: Press MAP (9) to establish your position relative to land and convoys at any time.
- SONAR: Press SONAR (0) for a picture of the sea around you; ships within range show up as blips on the screen.
- PERISCOPE: Press PERISCOPE (=) when you are at a depth of 40 feet, and you will get a view of any ship within range that is in your line of sight. Use this mode to prepare for an attack.
- TORPEDOES: When you are at a depth of less than 30 feet, press the fire button on the joystick, or FIRE (8) to release a torpedo. Aim it ahead of the target ship.

The following is the instrument panel with the MAP shown:



TI-99/4A – Game Shelf Assembly/c99/Forth Games

The graphic on the previous page shows the position of the gauges on the panel, and the description below tells what each are used for. At the beginning of each mission, you are allocated quantities of torpedoes, fuel, air, and battery charge (See skill-level for details). You must be careful not to run out of any of these. Your speed is initially set at NIL, and you have to press either FORWARD (6) or REVERSE (7) to start moving.

In detail, the controls are as follows:

- A..... Attitude: Move joystick left/right or arrow keys to change course.
- B..... Compass: The compass reading determines the course you steer.
- C..... Clock: This times how long missions last.
- D..... Torpedoes: The two digits on the left are the number of torpedoes remaining. Next to these are torpedo status indicators. These can be any of the following colors:
 - (a) Light Blue = Priming.
 - (b) Dark Blue = Loading
 - (c) Red = Ready to Fire
 - (d) Yellow = Tube out of action
- E..... Fuel supply
- F..... Battery charge reading: To re-charge, you must surface.
- G..... Speed: When the sub is in the blue (cyan) area, the sub is moving forward. When it is in the green area, the attitude dial causes the compass and depth dials to move in the opposite direction.
- H..... Sonar screen: Shows the enemy ships as white blips. Your position is the black cross in the center which remains static. When an enemy ship is correctly lined up, the blip will appear directly above the cross, or at some point between it, and the edge of the screen.
- I..... Depth measured in feet.
- J..... Hydrophone chart: This is the longest range dial on the screen. The nearer a ship is to your submarine, the closer the relevant peak is to the left of the dial.
- K..... Tonnage sunk. The amount recorded is in thousands of tons (K-tons).
- L..... Depth below keel: Be careful when diving. This shows the water below you.
- M..... Damage indicators: These show damage as a square ranging from empty (no damage) to full (severe damage), to (C=controls), (I=instruments), (H=hull) or (E=engines). You may carry on without waiting for repairs, but beware of unexpected malfunctions. (Your sub is repaired automatically. However, repairs are carried out more rapidly on the surface). If your hull damage becomes severe, it may crack...with a watery grave awaiting you.
- N..... Air supply: Can be renewed by surfacing.

SKILL LEVELS

The higher the skill level, the more challenging the game becomes. At the higher levels, you'll have to attack and destroy more enemy convoys with less fuel, charge and torpedoes.

TACTICS

You constantly need to assess the pros and cons of moving on the surface or underwater. Running on the surface is quicker, but if you get too close to an enemy convoy on the surface, you will be seen and attacked by the escorting warships. To warn you, a bell sounds as you approach the enemy's range of vision on the surface.

Your greatest advantage over the enemy is your ability to travel underwater, however this does use up air and batteries, and you can still be detected if you fire a torpedo.

One game tactic is to approach an enemy convoy on the surface, using the map (9) mode. As you draw near, dive and locate the ships with your sonar (0) and hydrophone chart, then come to a depth of about 25 feet and press periscope (=) for a view of the surface. Aim your submarine at the target, press the trigger on the joystick or fire (8) to release a torpedo, aiming it ahead of the ship. Hits are recorded on the 'tonnage' sunk chart on the right. If you are under heavy attack from the surface ships and wish to lose them, dive deep and wait till the attack is over.

END OF GAME

The game ends when any of the following occurs:

- (a) All enemy convoys are sunk.
- (b) All oxygen is used.
- (c) All fuel and charge is used.
- (d) There is severe damage to the hull.

The game can be terminated by pressing Abort (1). You'll still receive a rating of your abilities as a Submarine Commander.

RATING

At the end of each game, you receive a rating (score) with points awarded for tonnage sunk and the ultimate achievement of a Submarine Commander...elimination of all convoys. Points are deducted for fuel and torpedoes used, and damage sustained.

Summary of factors affecting your rating:

Points given for:

- (a) Tonnage sunk
- (b) Sinking all convoys proportional to skill level

Points deducted for:

- (a) Fuel used
- (b) Torpedoes used
- (c) Damage incurred
- (d) Being destroyed

River Rescue

G-3-R [Disk: 096-RIVR] By Thorn Emi



The object of this game is to navigate a river infested with crocodiles and electric eels and strewn with obstacles, while trying to rescue refugees from one bank and transporting them to the other. Your task is further complicated by enemy helicopters and tanks that seem to have a distinct dislike for you. Great smooth scrolling graphics and sound effects, with excellent controls response. Very highly recommended! (Docs included).

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: RIVER

Download River Rescue:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

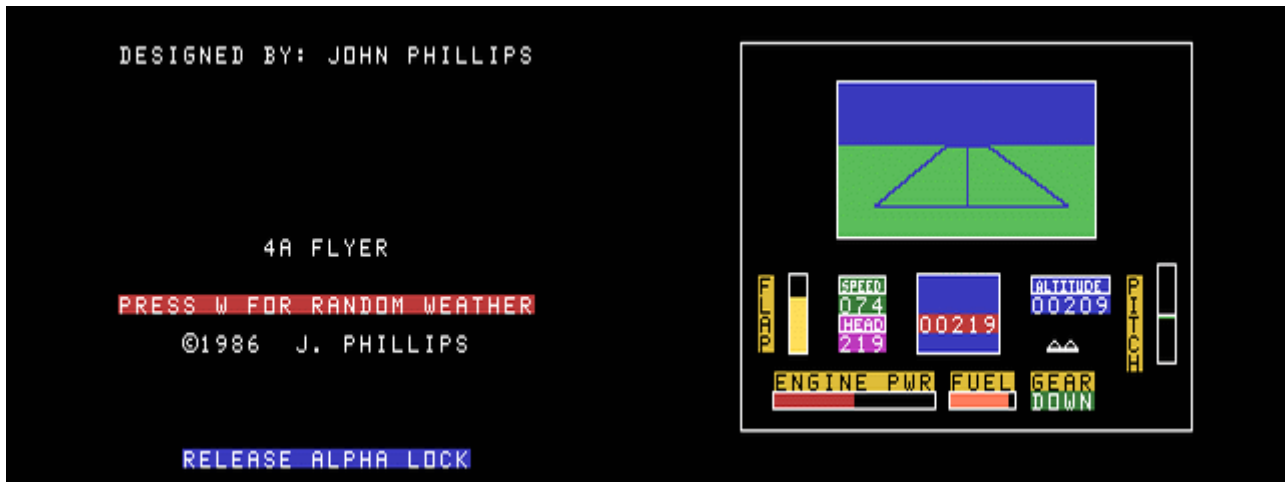
Start from mega menu: G – 3 – R

Features: Title Screen, EA5, One or Two Player, Sound

Controls: Keyboard, Joystick 1

4A Flyer

G-3-S [Disk: 097-4AFL] By John Phillips



While not a flight simulator for the purist, this game is still entertaining enough with you being at the controls of a plane charged with carrying top secret cargo to four different airports. You need to take off, navigate and land safely to complete the missions under different weather conditions. In addition, you can search and destroy enemy planes if you are so inclined. The flight physics are very simplified, so the learning curve is minimal. Good graphics and excellent controls responsiveness. (Docs included).

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: 4AFLYER

Download 4A Flyer:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – S

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1, Joystick 2

Runs from Mega Menu with autostart the EA Module from tipi/disk

EDITOR/ASSEMBLER

PRESS:

5 RUN PROGRAM FILE

FILE NAME? DSK1.4AFLYER

TI-99/4A – Game Shelf Assembly/c99/Forth Games

4A Flyer by John M. Phillips or...DA PLANE, DA PLANE!

Fasten your seat belt and prepare for takeoff with 4A Flyer! You are the pilot of the 4a Flyer combat plane! Your mission is to carry top secret cargo to four separate airports. But watch out! Enemy planes will do all in their power to stop you from reaching your destinations. Start your engine, fly into the sky, navigate through hazardous weather conditions, search for and destroy enemy planes, and land safely - without running out of fuel! Feel the excitement and motion of flight as you pilot your own plane with 4A Flyer!

In 4A Flyer you:

- o Pilot the plane through take-off, flight, combat and landing sequences.
- o View the sky and horizon through the cockpit window.
- o Control the motion of the plane as you rush to intercept enemy planes.
- o Battle enemy planes.
- o Face dangerous weather conditions.
- o Monitor your fuel and power.
- o Hear exciting sound effects.
- o Use keyboard or joystick controllers.

Selecting the Weather option.

At the title screen, press W for random weather. Pressing any other key will default to clear skies. There are three types of weather. Pressing W at the title screen randomly assigns weather hazards. After landing at any of the four airports, the weather changes. Weather conditions are as follows:

- o Clear - blue sky, green land ... perfect flying, no danger. Only displayed if W is NOT pressed.
- o Snow - blue sky, white land ... hazardous at high altitudes. Watch out for ice forming on wings.
- o Rain - grey sky, green land ... dangerous when landing.
Be careful not to reduce speed too drastically during rainstorm.
- o Heat - blue sky, red land ... effects engine during flight.

Monitor engine power carefully to avoid overheating.

You see the instrument panel through the cockpit window. The instruments show the status of the flap and landing gear, amount of fuel and power, speed, heading, altitude, pitch of plane. An artificial horizon indicator shows the actual tilt of plane. The flight computer displays exact info about the altitude and heading of enemy planes and location of nearest airport. Become familiar with each flight instrument and its purpose before attempting flight.

- o COCKPIT WINDOW ... shows runway, sky, horizon, enemy planes and current weather conditions.
- o FLIGHT COMPUTER ... The center rectangle below the cockpit window is the flight computer. When in combat mode, it displays altitude (in feet) and heading (in degrees) of enemy planes, and the number of time you have been hit by the enemy. Remember, this is the number of time YOU have been hit...not the enemy plane. During landing sequences, this area displays the heading you must take to find the nearest airport.
- o ALTITUDE INDICATOR ... Displays your altitude in feet, based on ground level.
- o PITCH INDICATOR ... A line divides the pitch indicator in half.
When blue appears above the center line, the nose of the plane is heading towards the sky.
When green appears below the center line, the nose is heading towards the ground.
- o GEAR INDICATOR ... Displays the status of the landing gear, either up or down.
The gear must be up shortly after take-off to allow for a smooth flight, and down during landing.
- o ARTIFICIAL HOR. DISPLAY ... looks like two side-by-side triangles. The triangles tilt left or right when the plane is banking.
- o FUEL GAUGE ... Shows amount of fuel in fuel tank. The fuel gauge is filled with red when the tank is full. When engine power is at maximum, the fuel is consumed more quickly.
When you land at an airport, plane is automatically fueled.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

- o ENGINE POWER GUAGE ... Displays level of engine power. It is filled with red when engine power is at its max. The amount of engine power needed varies depending upon speed desired.
- o FLAP INDICATOR ... Flap is a movable part of each wing. When fully raised and the plane is in the air, it causes the plane to slow down by ten knots.
- o SPEED INDICATOR ... Measure plane speed in knots
- o HEADING INDICATOR ... Displays heading in degrees. Heading can range from 0 to 359 degrees.
- o BRAKE INDICATOR ... The word "brake" appears in the lower right corner of the instrument panel when the brake is engaged.

How to control the plane. Put alpha lock UP when using joystick.

JOYSTICK	ACTION	KEYBOARD
Forward (UP)	Pushes nose of plane down	E
Backward (DOWN)	Pulls nose of plane up	X
Left	Banks plane left	S
Right	Banks plane right	D
Fire Button	Fires at enemy planes	Q, ".", V, Y

Other active keys:

- 1 increase engine power
- 2 decrease engine power
- I raise flaps
- M lower flaps
- G or ; raise/lower landing gear
- B or / apply/release brake
- C or , enter/exit combat mode
- L or F begin landing sequence
- W select weather option (title screen)

Getting off the ground.

Long takeoff procedure:

- o Press B or / to apply brake
- o Press and hold 1 to increase power
- o Press B or / to release brake
- o Press X or pull back on joystick until airborne.

Short takeoff procedure:

- o Press and hold 1 to increase engine power.
- o Press X or pull back on joystick until airborne.

Combat mode:

Your purpose in combat mode is to face and destroy enemy planes. Flight computer displays enemy altitude and heading of each enemy plane, and number of hits you have sustained during battle. you must pilot the 4A Flyer plane to the enemy's position, get the plane within the sight of your crosshair lens and destroy it, before it destroys you. An unlimited number of enemy planes await to fight you one-on-one. You can continue to engage enemy planes, keeping a close watch on your fuel, or leave the combat mode.

- o Press C or , to enter combat mode. Flight computer directly beneath the cockpit window shows heading and altitude of closest enemy plane.
- o Pilot the plane until you reach the altitude and heading displayed on the flight computer.
- o Once you reach the enemies location, level the pitch until no blue/green shows in the pitch indicator. The enemy plane will appear.
- o Maneuver your plane until enemy appears in the center of the crosshair lens displayed in the cockpit window...and fire away.

If the enemy hits you, a hit is recorded in the third row of the computer.

If you try to fly out of the enemy's range.....you could still be hit!!

TI-99/4A – Game Shelf Assembly/c99/Forth Games

- o Once the enemy plane is destroyed, the next location of another enemy plane appears in the computer window.
- o If you get hit three times, the game resets to the title screen. When the enemy plane is not visible, you can leave the combat mode by pressing C or ,. You can enter/exit the combat mode as often as you like.

Landing DA plane.

- o press L to alert flight computer you are ready to begin the landing procedure. The flight computer will show the heading of the nearest airport. Once the landing procedure has begun...there is no turning back!
- o heading must match EXACTLY that of the flight computer.
- o once on the correct heading, steady the plane so that the artificial horizon is not tilted, and the pitch is level (no red/green showing). The runway will appear on the ground below.
- o lower pitch to begin descent. Once you commence descent, the plane will not bank, and pitch cannot rise above the center-line.
- o Press G or / to lower landing gear.
- o A successful touchdown is indicated by the appearance of runway markers, which are two pairs of dots on either side of the runway line.
- o raise flaps, decrease engine power, apply brake.

You are now ready for take-off again....I hope.

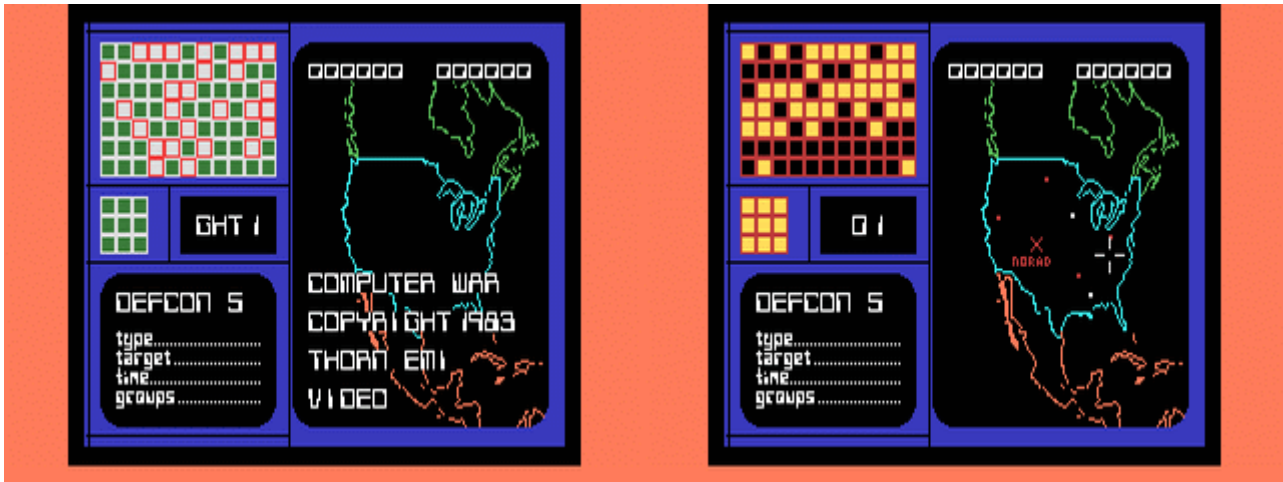
Some messages may be displayed from time-to-time. Here are the messages and their solutions:

- o SPEED TOO HIGH ON GROUND: Press X or pull back on joystick once speed reaches 60 knots.
- o GEAR DOWN OVER 125 KNOTS: Press G or ; to raise landing gear before speed reaches 125 knots.
- o PLANE RAN OFF RUNWAY: You must reach 60 knots for takeoff, and for landing you must have stopped before the end of runway.
- o SPPED TOO HIGH ON SLICK RUNWAY: Only appears during rain and snow conditions. Similar to message above.
- o GEAR UP DURING LANDING: Press G o ; to lower landing gear, once you have slowed to under 125 Knots.
- o SPEED TO LOW DURING APPROACH: Speed must be at least 50 knots for touchdown on runway.
- o WINGS BROKE DUE TO ICE: In snowy weather, keep altitude below 7500 ft.
- o ENGINE EXPLODED DUE TO HEAT: In hot weather avoid high engine power.
- o CRASHED INTO GROUND: Do not attempt to land plane until runway appears.

Also, do not lower pitch dramatically during touchdown. Plane must be close to a level pitch.

Computer War

G-3-T [Disk: 098-WARG] By Thorn Emi



Inspired by the cult classic movie War Games, Computer War places the fate of the USA in your hands as nuclear ballistic missiles are converging toward its cities. You have to intercept the incoming missiles and destroy them, then match a visual code for extra points. The game ends when all the cities and NORAD are destroyed. This game is extremely challenging as it requires very fast reflexes as well as quick pattern matching. A perennial favorite. (Docs included).

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: WARGAMES

Download Computer War:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 3 – T

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf Assembly/c99/Forth Games

COMPUTER WAR

THE DISPLAY:

1. The score of the current game is displayed in the top left of the right window. The high score of the current session is displayed in the top right of the screen.
2. The map of the United States shows the location of all the cities targeted by enemy missiles and the NORAD headquarters. Your task is to defend these cities.
3. The left of the screen shows a matrix and below this is the current DEFCON (defense condition).
5 is the start of the game.
1 is game over with all cities and NORAD destroyed.

How to play:

1. Press the fire button on the joystick to start the game. Do not touch the fire button again until it is absolutely necessary.
2. From the edges of the screen, enemy missiles will appear, advancing towards selected targets. Move the cross on the screen (with joystick) until it is immediately over the advancing missile. At this point press fire button.
3. The display will change from one of two:
If the missile was in the center of the cross, then the display will become that of a fighter pilot through the cockpit window. Beneath the screen are three boxes, depicting current DEFCON status (on the left), the time until impact of enemy missile (on right) and in the center is a box depicting where the enemy missile is in relationship to the view from the cockpit. To chase the missile, move the joystick towards the missiles location. To move left or right, push the joystick in the appropriate direction. To move up, pull the joystick back, and to dive, push the joystick forward. When the missile is in view, press the fire button. Ammunition is unlimited, so keep firing until the missile is destroyed. When time until impact indicator reaches 10, an alarm will sound.
4. If you do not destroy the enemy missile in the allowed time, you will lose a city.
5. If the cross was not positioned correctly over a missile the message NO ENEMY MISSILES IN INTERCEPT RANGE will appear. The game will return to the map screen, but you will not be given a second chance to knock-out that particular missile.
6. After all missiles in a wave have either been destroyed or have hit their targets, the bonus screen is presented. At the middle left of the screen in a 3x3 matrix, is the code you have to match. This is achieved by moving the white 3x3 square around the screen above until a similar mix is achieved. If an identical mix does not exist, then patterns can be built by spinning the squares by pressing the fire button. When an identical match is found, press the fire button again and the computer will move onto the next square to be matched. If all matches are made, then a bonus of 1000 points is added to your score.
7. The game then re-starts with further attacks of missiles, in increasing number and speed.

The game is over when all cities and NORAD are destroyed. Even if all cities are intact, should NORAD be destroyed, then the game is over. As each city is destroyed, the DEFCON factor is reduced. Game is over if DEFCON reaches 1.

Scoring:

- 150 points per enemy missile shot down.
- 1000 points for a full code screen cracked.
- 1000 subsequent points each additional time the code screen is cracked.

Star Fort

G-3-U [Disk: 099-STAF] By Daniel S. Muenchau



Star Fort is a fast paced and frantic space shooter where you are manning a laser cannon turret and have to shoot down incoming waves of hostile saucers. The saucers throw at you slow-moving seeker bombs which are fairly easy to destroy, and fast-moving deadly missiles which cannot be shot down. The latter can only be defeated if you manage to destroy the saucer that fired it before the missile reaches you, at which point a shield will materialize and temporarily protect you. If that was not enough, the saucers also initiate the formation of rapidly expanding crystal-like structures that will kill you if they reach your position. Very tough game beautifully executed...

Requirements: Extended Basic cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: LOADSPAC

Download Star Fort:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

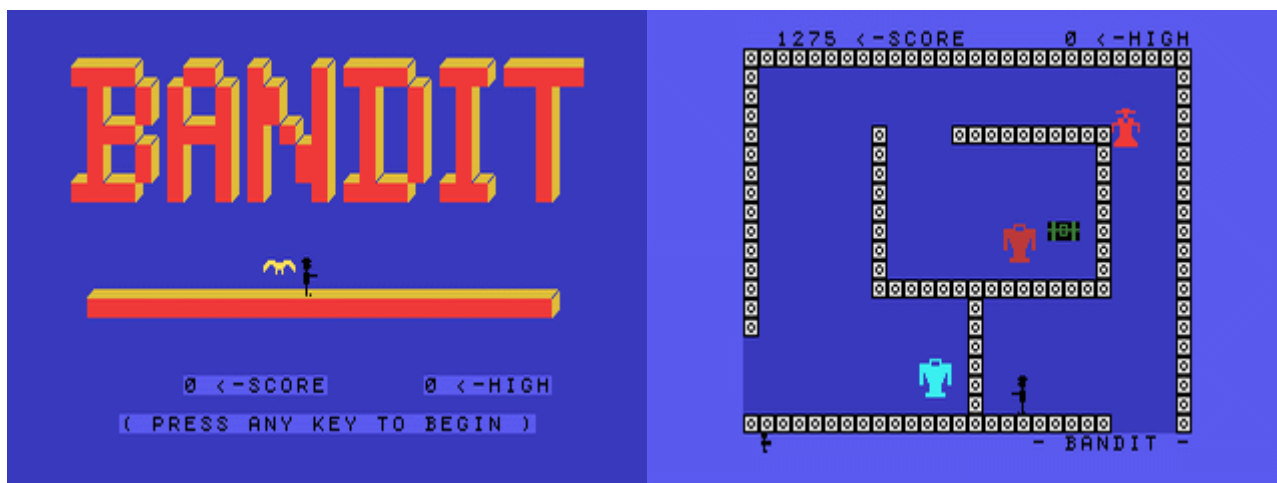
Start from mega menu: G – 3 – U

Features: Title Screen, EA5, One or Two Player, Sound

Controls: Joystick 1

Bandit

G-4-1 [Disk: 100-BAND] By Unknown Author



In this game, a take on the famous arcade game "Frenzy", you are a sneaky bandit trying to collect as much treasure chests as you can find inside a vast labyrinth infested with deadly shooting robots and flying creatures, armed with an effective laser gun. The labyrinth is divided into rooms with multiple exits, each of which leads to other rooms with different layouts and dangers, thus maintaining a high level anticipation as well as dread throughout the game. The animations are silky smooth and your character is very responsive. Good sound effects. Highly enjoyable.

Requirements: Extended Basic cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: LOADBAND

Download Bandit:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 1

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1

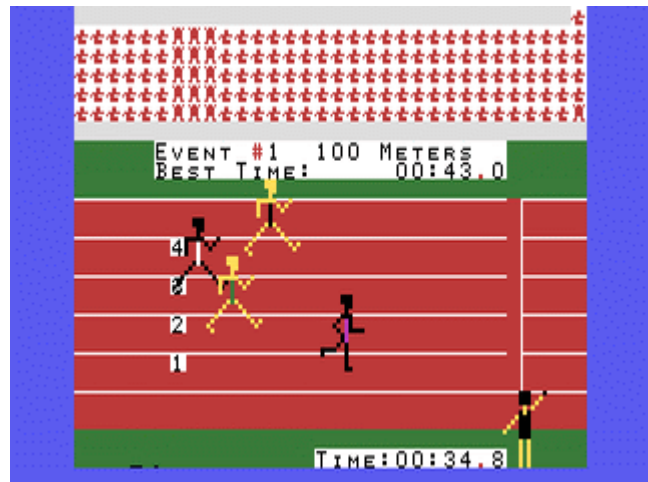
c99 Games

[Disk: 101-C99G] By Jacques GrosLouis

G
99
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S

A SPORT SIMULATION OF
 TRACK AND POOL EVENTS
 BY JACQUES GROSLOUIS

ANY KEY TO CONTINUE



This is an impressive looking sports simulation of track and swimming competition where up to four players can compete simultaneously against each other or against the computer if less than four human players are involved. There are four different track events and three swimming events which can be selected either individually or sequentially, with the computer keeping track of standings. The human player is run by repeatedly pressing a keyboard key or a joystick fire button, so the faster your rate of pressing, the faster your player goes. For short events, the computer is pretty easy to beat, but it gets tougher on longer ones. Of course, the most fun is obtained by playing against live people. Good sound effects and excellent animations round up this great game.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: GAMES_1 (E/A option 5)

Download c99 Games:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 2

Features: Title Screen, EA5, One Player

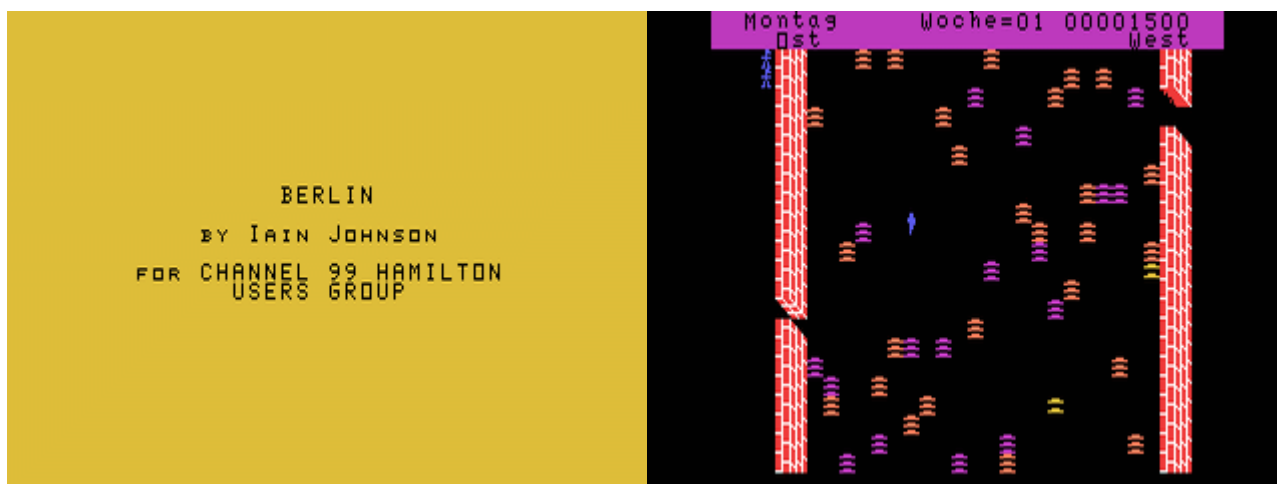
Controls: Keyboard, Joystick 1

Sports events:

1. 100 meters run
2. 400 meters run
3. 2000 meters run
4. 5000 meters run
5. Back Stroke
6. Butterfly
7. Breast Stroke

Berlin Wall

G-4-3 [Disk: 102-BERL] By Iain Johnson



While the theme of this game was more relevant in the 80's, it is still fun to play nonetheless. You start with five men attempting to cross from East to West Berlin, through 2 thick walls and a nasty minefield. Each successful escape scores you maximum points, but you also get partial points for blowing up (and yourself) a mine or a hole in the wall. This is sometimes unavoidable. You need to accumulate at least 5000 points before moving to the next level, and you get an extra man at that time. Each man that successfully passes through comes back around until you reach your 5000 point goal or all your men die. How far will you get?

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks. Speech synthesizer optional.

Executable to run: BERLINWALL (E/A option 5)

Download Berlin Wall:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 3

Features: Title Screen, EA5, One Player, Sound, Music, Speech

Controls: Joystick 1, Joystick 2

Barrage

G-4-4 [Disk: 103-BARR] By Softmachine



This is a great recreation of Atari's Missile Command where you are the sole defender of earth against nuclear enemy bombardment. You have at your disposal two batteries of missiles with limited ammunition which you need to launch against each attacking wave. Game ends when all your cities are destroyed. Gameplay and sound effects are superb, making this game a showcase of the TI capabilities. An absolute must-have!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: BARE (E/A option 5)

Download Barrage:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

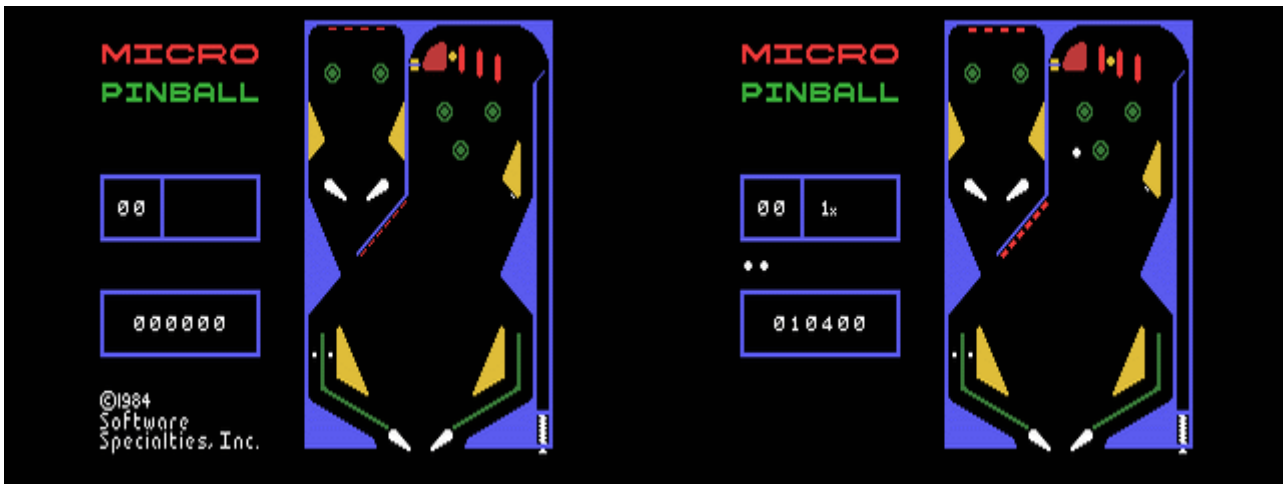
Start from mega menu: G – 4 – 4

Features: Title Screen, EA5, One or Two Player, Sound

Controls: Joystick 1, Joystick 2

Micro Pinball

G-4-5 [Disk: 104-MPIN] By Software Specialties



Beautifully rendered pinball game with great sound effects and silky smooth animations. The ball physics seem to be very accurate and thus enhance gameplay tremendously. Control of the paddles is via two joysticks, one for each, by simply pressing the fire button. Press 9 to start the game and pull back on the right joystick to load the spring ball launcher. Great entertainment value.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: PINBALOAD

Download Micro Pinball:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 5

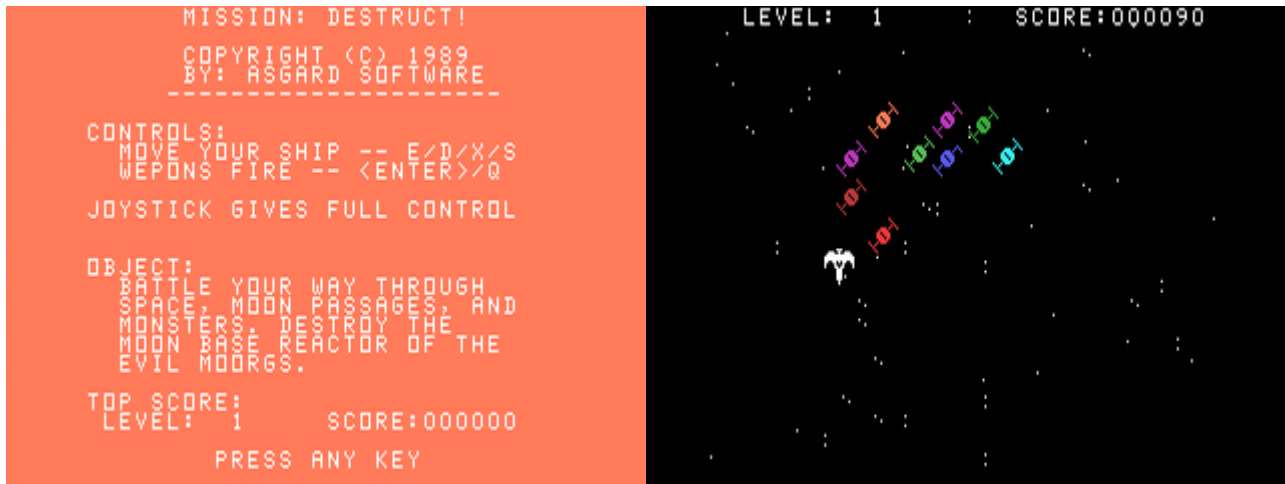
Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1, Joystick 2

Start game	9		
Shout the ball	0		
left paddle	1	/	Joystick 1 fire button
Right paddle	=	/	Joystick 2 fire button

Mission Destruct

G-4-6 [Disk: 105-MIDE] By Glenn Schworak



This is a great fast-paced space shooter where you are fighting your way through multiple alien waves with the objective of destroying their nuclear power plant. In the process, you will go through a lunar shaft rigged with mines, a subterranean passageway swarming with enemies, and finally a power shield that you need to drain while avoiding fireballs. Levels increase in difficulty after completion of each set of stages. High quality programming and very entertaining, definitely recommended.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: DESTRUCT (E/A option 5)

Download Mission Destruct:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 6

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

5 RUN PROGRAM FILE

FILE NAME? DSK1.DESTRUCT

3D Maze

G-4-7 [Disk: 106-3DMA] By Glenn Schworak



For the masochists among you, this is the perfect torture game. You are thrown into a 3D maze and have to find your way out. But before you do, you need to obtain a key to unlock the door. If you are lucky, you can find a map of the maze that will guide you. As a small token of magnanimity, the author lets you glimpse at the maze layout before the game starts. Very crisp graphics maintain a good 3D representation of your surroundings and game controls simply consist of the arrow keys. I suggest you play it with the lights out to really make you claustrophobic...

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: 3D-MAZE (E/A option 5)

Download 3D Maze:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 7

Features: Title Screen, EA5, One Player

Controls: Keyboard

Runs from Mega Menu with autostart the EA Module from tipi/disk

EDITOR/ASSEMBLER

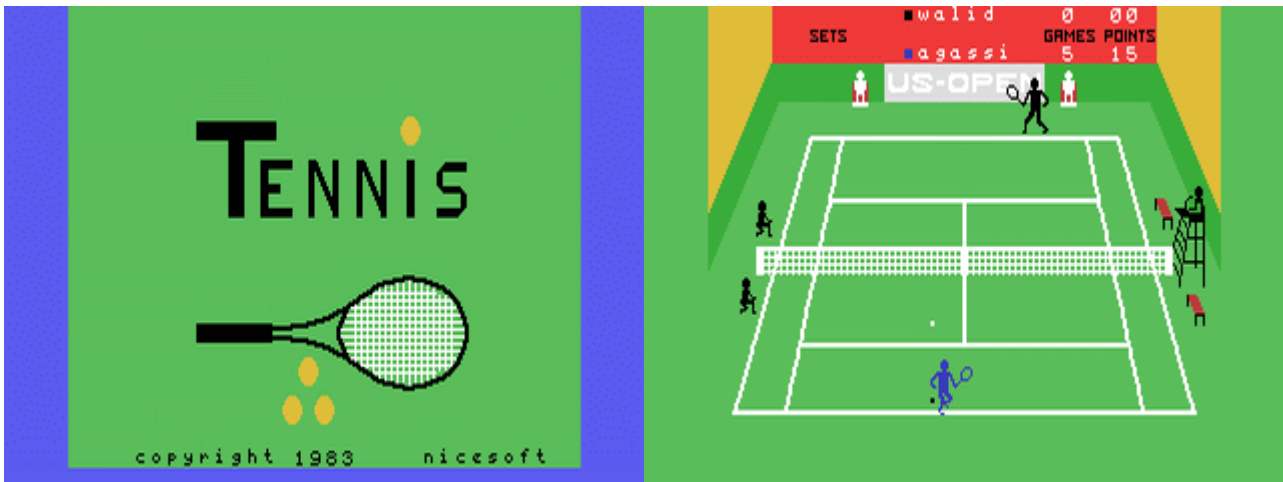
PRESS:

5 RUN PROGRAM FILE

FILE NAME? DSK1.3D-MAZE

Pro Tennis

G-4-8 [Disk: 107-TENN] By NiceSoft



As a fan of tennis, this game was a godsend for me. And the pleasant part is that it is very well done and challenging. You get to pick the level of play and whether your opponent is a human or a computer player. The rules of tennis are preserved including switching sides after each odd game, and the speech synthesizer does a nice job of announcing the score and any errors. Animations are clear with added touches such as ball boys running to get a ball near the net. You can control the way you hit the ball (forehand/backhand), the speed (smash/lob) and the direction via the joysticks. Two thumbs up!!! But I have to go now because Agassi is literally humiliating me on the court...

Requirements: XB cartridge, 32K RAM, disk drive, joysticks. Speech synthesizer optional.

Executable to run: XB autoloader

Download Pro Tennis:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 8

Features: Title Screen, EA5, One or Two Player, Demo, Sound, Music, Speech

Controls: Keyboard, Joystick 1, Joystick 2

TI-99/4A – Game Shelf Assembly/c99/Forth Games

INSTRUCTIONS FOR PRO TENNIS

Pro Tennis is a high resolution arcade-type game for the TI-99/4A which enables the player(s) to simulate, on the screen, the live action of a real tennis match.

Features include serves, forehand and backhand shots, lobs and volleys, net balls, tie breakers and spoken scores using the speech synthesizer.

The game can be played between two players or one player against the computer. Three skill levels from beginner to pro can be selected.

LOADING THE PROGRAM:

The program will automatically load when Extended Basic is selected, providing it is in Drive 1. When the game comes on, a demonstration game follows the title screen.

To begin a game, press FCTN 9 (BACK) and any key, which will give you your Option Selection Screen. The options of number of players and difficulty can be made using the joystick or the arrow keys.

Press ENTER or FIRE once your selection is made. You are then able to enter the name of the players or give a name to the computer player, which will be provided automatically if you do not.

PLAYING A TENNIS MATCH:

To play a tennis match

1. Move the players with the Joystick.
2. Use the fire button to swing the racket to hit the ball.

The racket starts moving when the fire button is pressed and a direction of the shot is determined by the relationship of the ball to the racket at the time of impact. The players can be positioned to receive the ball either in forehand or backhand. Moving the player to the right results in a forehand shot and moving the player to the left results in a backhand shot; however, the fire button can be used to move from backhand to forehand and vice versa.

SERVING:

The joystick is used to control the direction of the ball and the power of the serve (up or down for fast serve, center position for normal serve).

RETURNING THE BALL:

Moving the player toward the net upon return will accelerate the ball. Moving the player backward will result in a lob. If the player does not move vertically the ball will be hit at normal speed.

SCORING

Regular tennis rules are used with the players changing side after every odd game. The referee announces the score which is also posted on the scoreboard. A match consists of five sets with a tie breaker if necessary.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

SKILL LEVELS:

The skill levels apply when a player challenges the computer. The novice level results in the ball being returned in the players direction at a low level of aggression. At pro level, the computer champion becomes merciless and will alternate with fast and normal shots, as well as lobs and volleys. The amateur level will be in between the pro and novice, but be careful! At the end of the match, the level and number of players is displayed.

SPECIAL OPTIONS:

Pause--Obtained by pressing the space bar. Pressing any other key continues the game. Speed--Using the plus and minus keys permits the pace of the game to be increased or decreased accordingly. Color—The color of the court can be changed to simulate grass, clay or artificial turf by using FCTN 1, 2 or 3.

Redo--FCTN 8 (REDO) will restart a match from the beginning.

Back--FCTN 9 (BACK) returns the program to the Option Selection Screen.

LIMITED WARRANTY: TEX-COMP shall have no liability with respect to any loss or damage caused by this product. The product will be exchanged if defective in manufacture. Except for such replacement, the sale of this product is without warranty or liability. Magnetic media is warranted to load for one year from date of purchase. If defective, return original media and proof of purchase for replacement. Beyond one year, include \$5.00 handling charge.

High Gravity

G-4-9 [Disk: 108-HIGR] By Tom Wible



This is a greatly original game that will keep you entertained for hours. You are the captain of a spaceship and are trying to supply a stranded space station by sending it cargo capsules through space. Sounds simple enough except that the surrounding planets exert a varying gravitational pull on your capsules, thus altering their trajectory. You have to find the best route through these planets that will lead to the space station, and if necessary you can adjust the initial velocity of the capsules and the density of the planets among other factors. You can also customize the playing field and change play parameters. Nice colorful visuals. Totally addictive!

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB autoloader

Download High Gravity:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – 9

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1, Joystick 2

Karate Challenge

G-4-A [Disk: 109-KARA] By Glenn Schworak



As a karate contender, you are set on destroying the competition through a combination of punches and kicks in this nice martial arts simulation. It is one on one competition, and every hit incurred will decrease your "life bar", but you can slowly recover if you manage to avoid your opponent for a while. Difficulty is progressive with each level. Graphics are sharp and animations are very quick and realistic. Sound effects are basic however. Overall quite entertaining.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB autoloader

Download Karate Challenge:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – A

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard

Cannonball Blitz

G-4-B [Disk: 110-CANB] By Jlando



In this very original take on Donkey Kong, your objective is to jump over cannonballs being hurled at you from the top of the ramps while trying to highest ramp. There are trap doors all over with see-saws underneath, and when a cannonball falls through a trap it swings the see-saw. If you happen to be at the opposite end of that see-saw, then you are propelled to next ramp above. At least in theory because the game requires very precise positioning which can be sometimes frustrating. There is a countdown timer for each screen and your score is a combination of the how fast you are and the number of cannonballs jumped. Very well done game!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: BLITZA (E/A Option 5)

[Download Cannonball Blitz \[TIFILES format\]](#)

Start from mega menu: G – 4 – B

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1, Joystick 2

Cave Creature

G-4-C [Disk: 111-CACR] By Funware



This game is kind of reminiscent of Space Invaders in claustrophobic way. You are apparently trapped inside a rectangular enclosure and are surrounded by alien beings that spiral their way around you. Every so often, a kamikaze run by one them homes in on you, along with random appearances of saucers. As you shoot down each alien, it turns into a rock that also needs to be cleared lest you get walled-in. Starts rather lazily then becomes progressively more frantic, enhanced by good smooth graphics and decent sound effects. Definitely entertaining.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: CAVE (E/A Option 5)

Download Cave Creature:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – C

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1, Joystick 2

TI Puck (Compiled Version)

G-4-D [Disk: 112-TIPU] By Walid Maalouli



This is the exact same game as the one in the BASIC section, except that it has been compiled using [Harry Wilhelm's Basic Compiler](#). I have included it here as a demonstration of the power of Harry's compiler to substantially speed up Basic and XB programs. TI Puck actually had to be *slowed down* in order to make it playable after it was compiled (gasp!) and that was the only required modification. If you are a Basic/XB programmer, then this compiler is going to free you from the agony of Basic's sluggishness and you will be able to produce near-assembly speed programs (with some restrictions such as no floating point math). If you don't believe me, then compare the original and the compiled TI Puck versions and make up your own mind... By the way, TI Puck is obviously inspired from Pac Man and this version is actually quite challenging and enjoyable.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: TIPUCK_C

Download TI Puck (Compiled version):

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

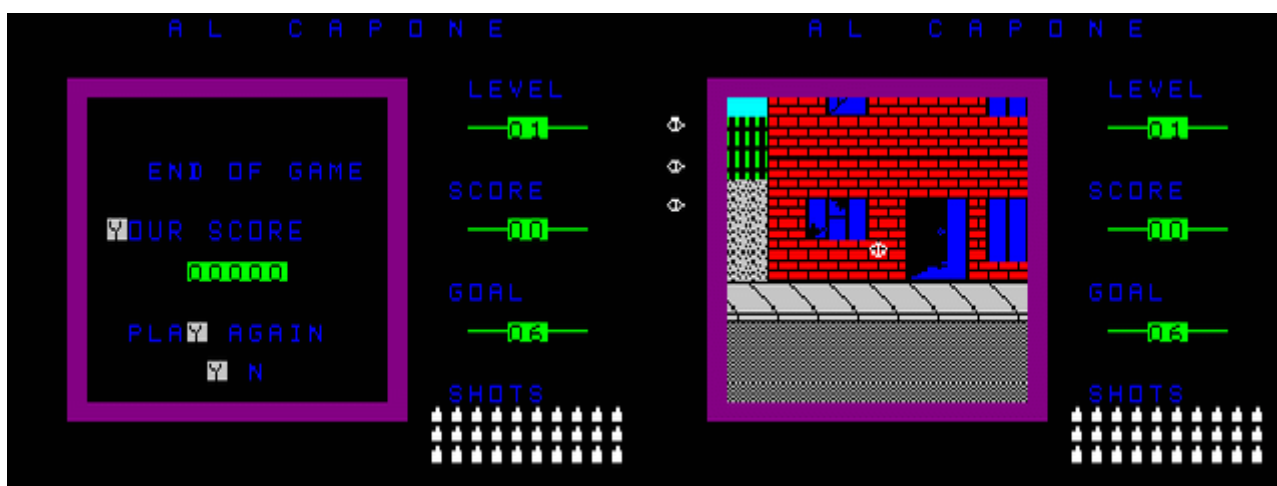
Start from mega menu: G – 4 – D

Features: Title Screen, XB compiled, One Player, Sound

Controls: Joystick 1

Al Capone

G-4-E [Disk: 113-ALCA] By Eric Boisvert & Jean-Luc Brousseau/Con. by Jacques GrosLouis



If you happen to have an itchy trigger finger, this game is perfect for you. As the strong arm of the law, you are charged to hunt down and eliminate the famed Al Capone from the streets of Chicago. You have a limited amount of bullets, so you must make every shot count. Capone will be hiding inside buildings and you must quickly locate him and shoot him before he hoses you with a spray of bullets. Advanced scrolling techniques are used for the visuals, but control can be difficult to master secondary to lightning joystick response. Very enjoyable.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: CAPONE1 (E/A Option 5)

Download Al Capone:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

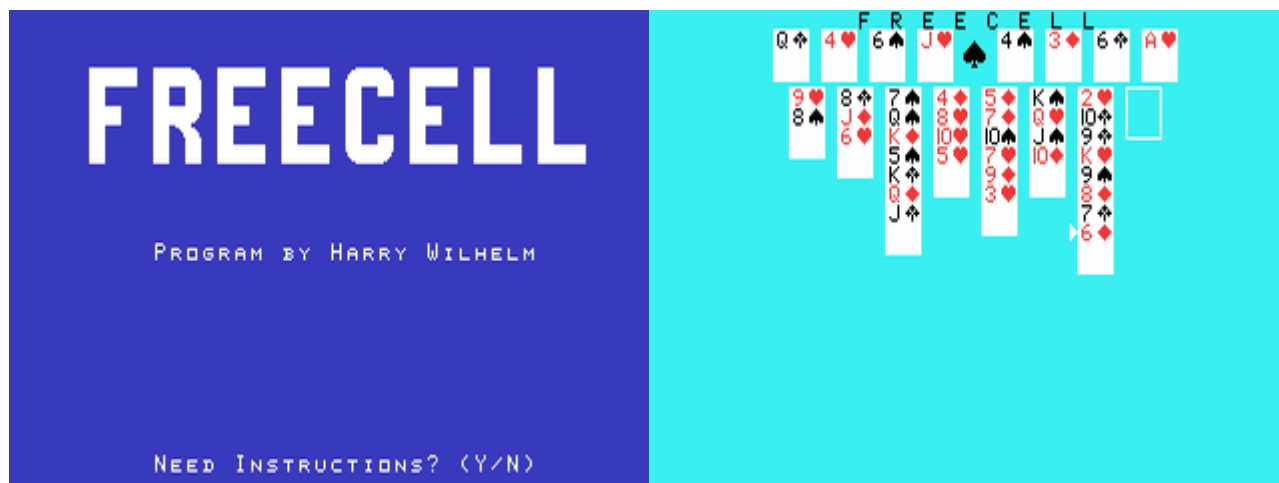
Start from mega menu: G – 4 – E

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

Freecell

G-4-F [Disk: 114-FREE] By Harry Wilhelm



A beautifully executed TI version of the classic solitaire game Freecell. The graphics are crisp and clear, and the card manipulation cannot be any better without using a mouse. A tough game to beat though despite Harry's claim that every game can be theoretically won... This game was originally written in XB then compiled, speeding it up considerably and thus is a good showcase of the potential of XB compilers.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: FREECELL/P (E/A Option 5)

[Download Freecell \[TIFILES format\]](#)

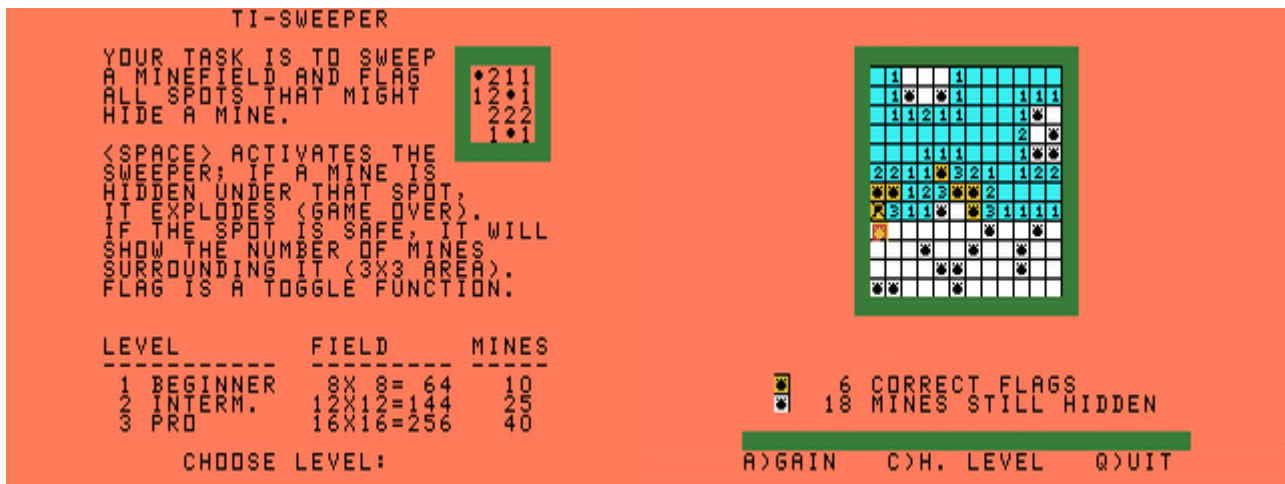
Start from mega menu: G – 4 – F

Features: Title Screen, XB compiled, One Player, Sound

Controls: Keyboard

TI-Sweeper V.2c

G-4-G [Disk: 115-SWEP] By Lucie Dorais - Conversion by Jacques GrosLouis



This is another version of the classic Mine Sweeper game with great use of color and excellent layout. You have a choice of three different grid areas, and your objective is to locate and flag all the hidden mines. Requires deducive reasoning and on occasion blind luck. Play mechanics are easy and the presentation is well above par. The best version I have seen of this game.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: SWEEPA (E/A Option 5)

[Download TI-Sweeper \[TIFILES format\]](#)

Start from mega menu: G – 4 – G

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard

Runs from Mega Menu with autostart the EA Module from tipi/disk

EDITOR/ASSEMBLER

PRESS:

5 RUN PROGRAM FILE

FILE NAME? DSK1.SWEEPA

The Labyrinth Inferno

G-4-H [Disk: 116-LINF] By Michel Montmigny - Conversion by Jacques GrosLouis



Your memory and orientation sense will be heavily taxed in this program where you are briefly shown the layout of a complex full screen labyrinth, and you subsequently have to find your way in and out in as few moves as possible. Play this game every day and I bet you'll improve your memory. On the other hand, you could just as easily toss the TI in frustration... Enjoy!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: LABC (E/A Option 5)

Download The Labyrinth Inferno:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

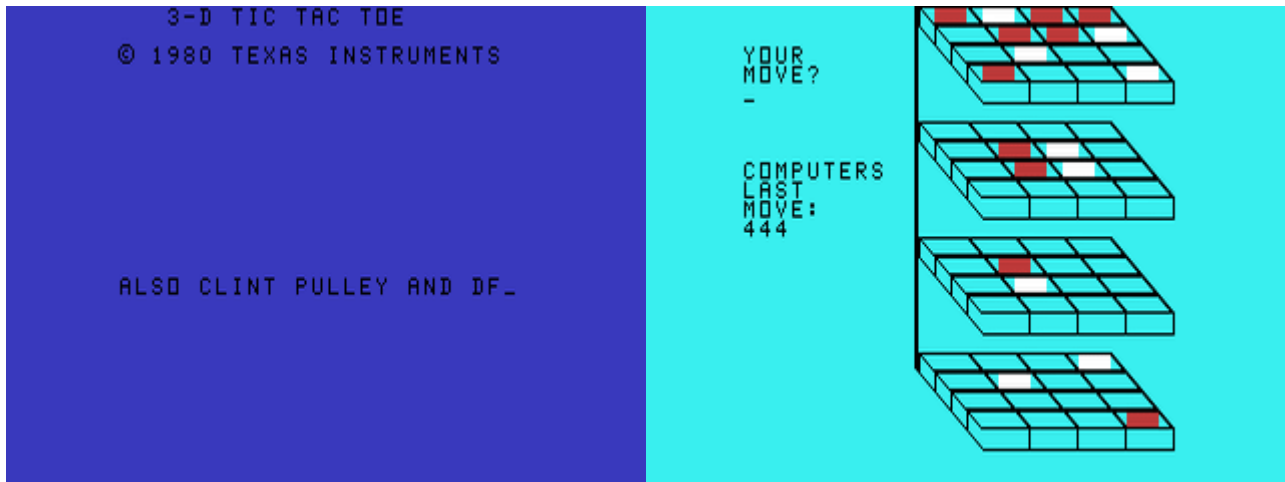
Start from mega menu: G – 4 – H

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard, Joystick 1

3D Tic-Tac-Toe

G-4-I [Disk: 117-3TIC] By Clint Pulley



Not your average tic-tac-toe game. This one is in three dimensions with four 4x4 superimposed playing boards. You play against the computer, trying to line up 4 tokens in a row in 3D. I have yet to win a game as it is devilishly difficult to grasp the token lineup and I keep missing key combinations. The AI is quite strong and will not miss an opportunity to humiliate you. Have fun!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: 3DTIC (E/A Option 5)

[Download 3D Tic-Tac-Toe \[TIFILES format\]](#)

Start from mega menu: G – 4 – I

Features: Title Screen, EA5, One Player, Sound

Controls: Keyboard

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

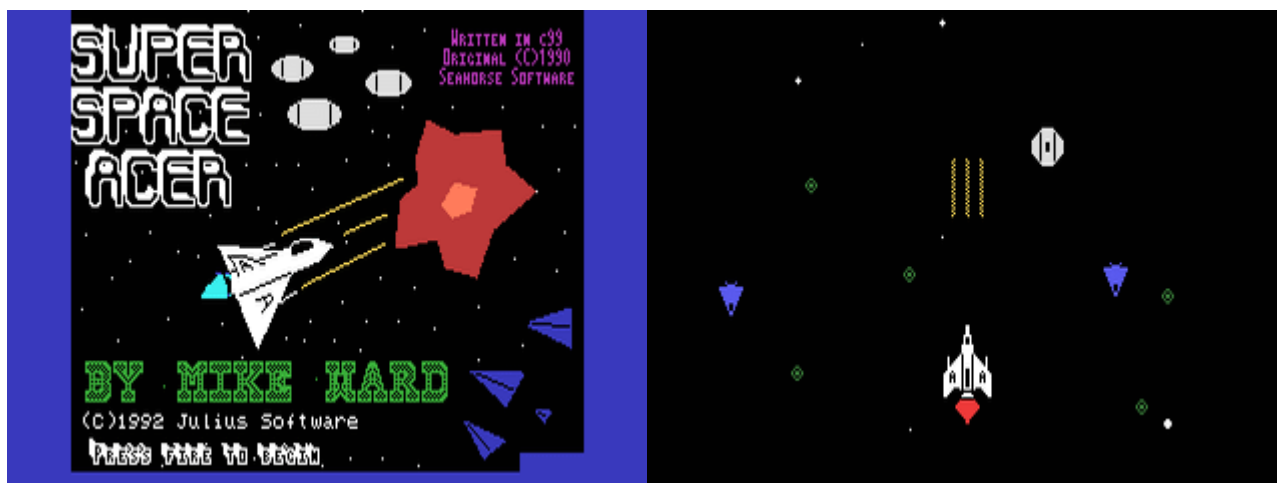
PRESS:

5 RUN PROGRAM FILE

FILE NAME? DSK1.3DTIC

Super Space Acer

G-4-J [Disk: 118-SSPA] By Mike Ward



This is a frenetic space shooter reminiscent of Galaxians where your mission consists of destroying waves of alien spaceships. There is a "Boss" mothership to annihilate at the end of each stage, and you can pick up power-up modules along the way to obtain shields and increased fire power. Very well drawn graphics, smooth action and in-game music make this game very hard to put down, at least until your hands cramp up...

[Find more of Mike's software here](#)

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: BOOTSSA (E/A Option 5)

Download Super Space Acer:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 4 – J

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1

Super Sled Acer

G-4-K [Disk: 119-SSLA] By Mike Ward



In this game, you are the driver of a speed sled trying to make it to the bottom of the hill in one piece, avoiding along the way trees, rocks, skiers, snowmobiles and even shooting tanks (!), among other things. This really makes for a very crowded and weird snow slope, taxing your reflexes to the maximum. Smooth graphics and a very responsive joystick make it a very fun game to play. Who knows what comes after the tanks???

[Find more of Mike's software here](#)

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: SLEDACER (E/A Option 5)

Download Super Sled Acer:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Select from mega menu: G – 4 – K (to configure the right directory as DSK1.)

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

Works only with an original E/A Cartridge from 1981 or FinalGrom with E/A (1981)!

Does not start from MEGA MENU!

EDITOR/ASSEMBLER

PRESS:

5

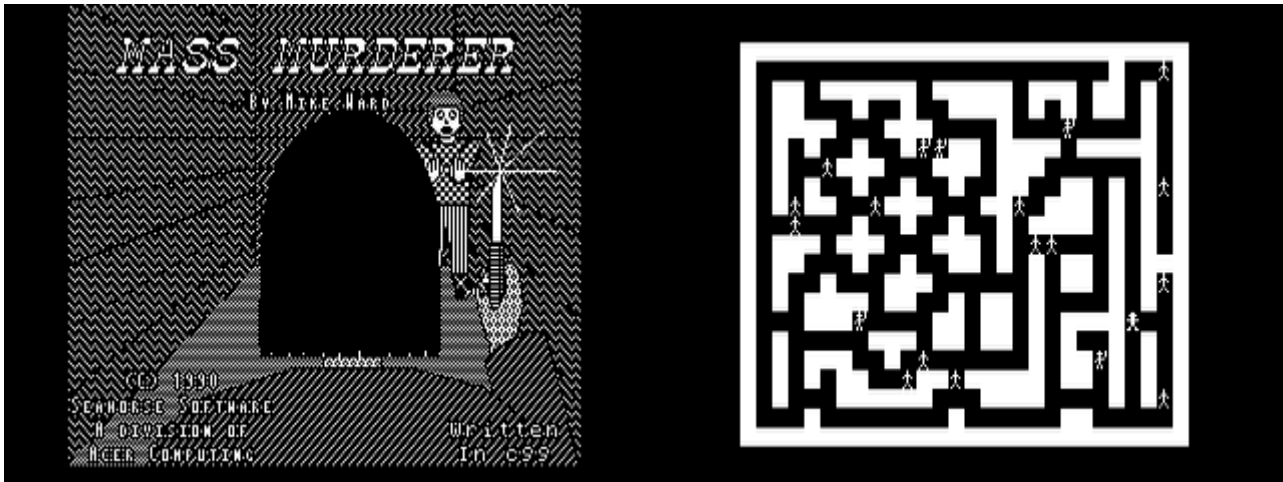
RUN PROGRAM FILE

FILE NAME?

DSK1.SLEDACER

Mass Murderer

G-4-L [Disk: 120-MAMU] By Mike Ward



In a somewhat creepy themed game, the premise here is to kill as many innocent pixelated victims as you can before the police catches up with you. While at first glance it may seem like a Pac Man relation, the twist here is that the police does not know you are a murderer until they come across the remains of one of your victims. In other words, you can actually cross over police officers unnoticed, at least for a while. After that, you'd better have good reflexes and quick thinking.

[Find more of Mike's software here](#)

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: MASSMURD (E/A Option 5)

[Download Mass Murderer \[TIFILES format\]](#)

Select from mega menu: G – 4 – L (to configure the right directory as DSK1.)

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

Works only with an original E/A Cartridge from 1981 or FinalGrom with E/A (1981)!

Does not start from MEGA MENU!

EDITOR/ASSEMBLER

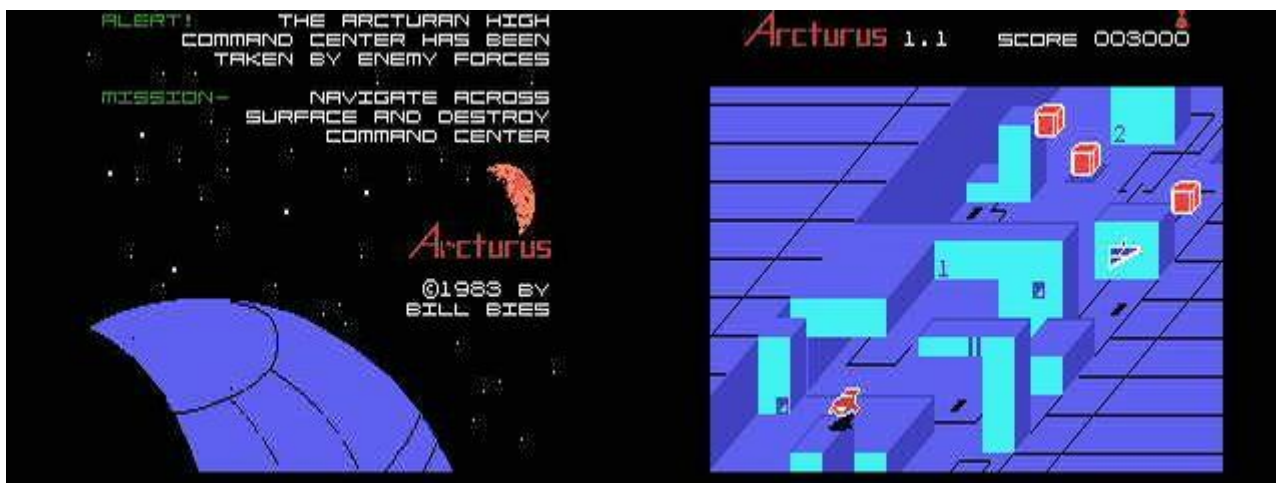
PRESS:

5 RUN PROGRAM FILE

FILE NAME? DSK1.MASSMURD

Arcturus

G-4-M [Disk: 121-ARCT] By Bill Bies



A beautifully rendered shoot-em-up program that pushes the TI to the limit. Based on the popular 80's game Zaxxon, your objective is to destroy the Arcturian Command Center which has been taken over by enemy forces. You start with three ships and have to maneuver your way through mine fields and convoluted surface structures all rendered in three-quarter isometric view, while battling enemy fighters, tanks and missiles. There are three levels of difficulty, and you get rewarded with extra ships as you progress. Play can be devilishly difficult initially while adjusting to the isometric display, but it is still great entertainment. Joystick response can occasionally be sluggish, and the scenery gets repetitive, but who has time to notice in the heat of battle. Great introductory music. Highly recommended!

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB Autoload

Download Arcturus:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Select from mega menu: G – 4 – M

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Keyboard, Joystick 1

The game has a very long loading time, be patient!

TI Lander

G-4-N [Disk: 122-LAND] By Walid Maalouli



Written in c99, the object of the game is to successfully land a spacecraft on a landing pad through a series of increasingly difficult terrain and gravities, keeping an eye on fuel and vertical as well as horizontal velocities. Starts off easy but becomes extremely challenging at higher levels. Decent sound and visual effects spiced up by speech optionally. I have been known to spend a couple of hours at a time trying to get to the highest level, but so far no success, although I got close...

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks and speech synthesizer optional.

Executable to run: TILANDER (E/A option 5)

Download TI Lander:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[TI Lander Manual by Kevan](#)

Select from mega menu: G – 4 – N

Features: Title Screen, EA5, One Player, Sound, Speech

Controls: Keyboard, Joystick 1

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

5

RUN PROGRAM FILE

FILE NAME?

DSK1.TILANDER

TI Lander.

By Walid Maalouli

August 2002

Overview:

TI Lander is an arcade game somewhat similar to the classic Lunar Lander game. You are in command of an unmanned 700kg lander that will be used to explore different planetary bodies with increasing gravitational pull. It was programmed using C99 V5.0

Gameplay:

There are five different "planets" in the game each of which has five different landing areas with increasing levels of difficulty. In addition, the gravity of each planet increases progressively, starting with the equivalent of Earth's moon's gravity up to Jupiter's gravity. Your lander is equipped with one main thruster as well as two lateral smaller thrusters. The main thruster will affect the vertical velocity of the lander and counter the planet's gravitational pull, while the smaller thrusters will affect the horizontal velocity.

The game screen will show the current area's terrain, with a different color for each planet. The landing area will be green. The top left of the screen will display the current level (1-5), current area (1-5), and the current gravitational level. The top right of the screen will show the remaining fuel, which initially starts at 500 units, as well as the horizontal (Vx) and vertical (Vy) velocities in m/s. A negative velocity indicates either a left (Vx) or upward (Vy) motion. Next to each velocity display is a number in between square brackets [n], which indicates the maximum &landing Vy for the current gravity. Vx should always be between -1 and 1 inclusive.

You should attempt to land within the velocity specifications on the green landing strip, and if successful then you will move to the next area or planet depending on where you are in the game. Should you crash, i.e. come in contact with the terrain, then you will be given the option to retry the landing again.

You will not have to restart the whole game. If during the course of the landing you get too close to the top edge of the screen, then your lander will be "lost in space" and you will have to try again.

No scores are maintained. Your goal is to reach and successfully land in level 5 area 5 (Jupiter gravity), which I believe is close to impossible (I did say "close" however...).

Controls:

You can either use the joysticks or the keyboard to control the thrusters. Left or right joystick fire the corresponding contralateral small thruster, while either up or down joystick will fire the main thruster. It is possible to fire the main and one of the lateral thrusters simultaneously (Note: this is not possible with keyboard control).

With the keyboard, the left and right arrows control the corresponding contralateral thrusters, and the ";" key fires the main thruster.

Each firing of the main thruster consumes 10 units of fuel, and the lateral thrusters use 5 units. When your remaining fuel reaches 50 or less, a repeating warning beep will be heard to alert you of impending thruster shutdown. Of course, when you run out of fuel, then you will be at the mercy of the planet's gravity and will likely slam onto the surface at unhealthy velocities....

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Hardware & Requirement:

E/A cartridge, 32K RAM. Optional: Joysticks, Speech synthesizer.

Running the Program:

The files TILANDER and TILANDES should be on the same disk/directory. Go to E/A option 5 and type DSKx.TILANDER.

Final & Notes:

TI Lander is freeware, and you are welcome to modify it and distribute it as you see fit. The source code is included, along with all the necessary C99 libraries. There is also a batch file (TILANDER/P) that can be used with Tom Bentley's C-Loader to create an E/A 5 executable. Comments and suggestions can be E-Mailed to me at wmaalouli@@attbi.com. Enjoy!

Walid Maalouli

8.4.02

Attack of the Creepers

G-4-O [Disk: 123-AOTC] By Ian J. Howle & Alexander F. Perry



This is a very addictive platform game with very well designed levels and superb animation. Alien hordes have invaded your mine and you need to fight your way up to the planet surface where a spacecraft awaits you. You are armed with a ray gun and have to face green slimy creatures, falling rocks and gaping voids. You can walk, run, jump, do jumping barrel rolls, and...smoke. You even have to use a jetpack at some point. Requires precise coordination and fast reflexes. Very hard to put down. One of the better action games on the TI.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB Autoload

Download Attack of the Creepers:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Select from mega menu: G – 4 – O

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf Assembly/c99/Forth Games

ATTACK of THE CREEPERS (V1.5)

THIS GAME IS FREWARE AND MAY BE FREELY DISTRIBUTED.

PLOT: CREEPY ALIEN MONSTERS HAVE INVADDED YOUR LATINUM MINE ON TALIS
1. YOU MUST ESCAPE THE PLANET BEFORE THE INFESTATION GETS WORSE AND YOU BECOME TRAPPED.

THE MINER IS ARMED WITH A PARTICLE GUN AS HIS ONLY FORM OF DEFENSE. HE MUST CLIMB LADDERS, JUMP OVER AND ONTO LEDGES AND SHOOT ANYTHING THAT SLITHERS. *NOTE: THIS GAME WAS NOT INTENDED AS A DONKEY KONG CLONE* DUE TO EXTREME STRESS ON THE UNDERGROUND CAVERNS, SEVERAL AREAS HAVE BEGUN TO COLLAPSE AND CANNOT BE CROSSED ON FOOT. THERE IS STILL MINING EQUIPMENT LEFT IN THE MINE THAT CAN BE USEFUL IN THIS SITUATION.

CONTROL: USE JOYSTICK #1 AND MAKE SURE THE ALPHA LOCK KEY IS UP.

MOVING THE JOYSTICK LEFT AND RIGHT MAKES THE MINER WALK LEFT & RIGHT.

MOVING THE JOYSTICK DIAGONAL UP CAUSES THE MAN TO JUMP FORWARD.

PRESSING THE FIREBUTTON WHILE NOT MOVING MAKES THE MINER FIRE HIS WEAPON.

PRESSING THE FIREBUTTON WHILE WALKING CAUSES THE MINER TO RUN. AFTER HE HAS STOPPED RUNNING, THE MINER WILL SLIDE A SHORT DISTANCE.

MOVING THE JOYSTICK DIAGONAL UP WHILE HE IS RUNNING CAUSES HIM TO JUMP FAR DISTANCES.

MOVING UP WHILE UNDER A LADDER MAKES THE MINER CLIMB UP.

MOVING DOWN WHILE STANDING ABOVE A LADDER CAUSES THE MINER TO CLIMB DOWN.

THERE ARE TWO DIFFICULTY LEVELS. "NOVICE", WHICH IS PRETTY EASY AND "HARD", WHICH IS VERY HARD. (EVEN THOUGH SOME LEVELS MAY NOT SEEM PASSIBLE, IT IS BARELY POSSIBLE TO PASS THEM).

CREDITS: GAME DESIGN, CONCEPT, AND PROGRAMMING BY IAN J. HOWLE (ME) SPRITE ANIMATION BY A.F.P.

I WOULD LIKE TO THANK PIERRE GAROCHE FOR PROGRAM INFO. THAT WAS VERY USEFUL.

I WOULD LIKE TO THANK BRUCE HARRISON WHO ALSO SENT VALUABLE INFO. AND WROTE AN OPTION-5 & XBASIC LOADER FOR ATC. HE ALSO PROVIDED AN INTERESTING DELAY ROUTINE WHICH ALLOWS ATC TO RUN ON FASTER MACHINES. UNFORTUNATELY, DUE TO THE FACT THAT IT DECREMENTED EVERY 60TH OF A SECOND, IT CAUSED SLOW-DOWN WHEN IT CAME TO MOVING AND ANIMATING SPRITES. I DID HOWEVER IMPLEMENT THIS ROUTINE WHEREVER I COULD.

** THANKS GUYS!!! **

NOTE: IF YOU HAVE A RAM DISK, IT MIGHT BE A GOOD IDEA TO TURN IT OFF BEFORE RUNNING ATC. I HAVE RECEIVED REPORTS THAT ATC FREAKS OUT WHEN THERE IS A RAM DISK IN OPERATION, BUT RUNS OK WHEN IT IS TURNED OFF.

IF ANYONE DISCOVERS ANY BUGS, THEN PLEASE LET ME KNOW AND I WILL TRY TO FIX THEM.
YOU CAN WRITE TO ME:

IAN J. HOWLE

3707 S.W. SOUTHERN ST.

SEATTLE, WA. 98126

OR CALL ME AT: (206) 938-4065

ONE LAST THING: I HOPE THAT FRED MOORE SUCCEEDS IN CREATING A CD ROM WITH THE ENTIRE TI PUBLIC DOMAIN. TO SIT DOWN AT YOUR TERMINAL AND BE ABLE TO ACCESS ALMOST ANYTHING RIGHT THERE AND THEN FROM A SINGLE DISK WOULD BE PRETTY NEAT.

Virus Attack

G-4-P [Disk: 124-VIAT] By Vern L. Jensen



Inspired from the classic Tetris game, your objective is to disinfect your TI from viruses that have invaded it, using high voltage multicolored pills. Each level has a certain number of viruses scattered on several rows, and you need to line up four colors on a single row to destroy that row by manipulating the falling pills. There is suspenseful but switchable in-game music, and game play is just as addictive (and frustrating) as Tetris. Very nicely done!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: VIRUS1 (E/A option 5)

[Download Virus Attack \[TIFILES format\]](#)

Select from mega menu: G – 4 – P

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 1, Joystick 2

Runs from Mega Menu with autostart the EA Module from tipi/disk

EDITOR/ASSEMBLER

PRESS:

5

RUN PROGRAM FILE

FILE NAME?

DSK1.VIRUS1

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Virus Attack by Vern L. Jensen

FOR THE FIRST TIME IN HISTORY, THE TI HAS BEEN INFECTED WITH VIRUSES! IT IS UP TO YOU TO SAVE YOUR COMPUTER!
YOU ARE ARMED WITH SPECIAL CAPSULES THAT HAVE BEEN CHARGED WITH VERY HIGH VOLTAGES, SO WHEN YOU GET FOUR OR MORE COLORS OF THE SAME TYPE IN A ROW, THE ROW WILL EXPLODE, TAKING ANY VIRUSES IN THE ROW WITH IT! BUT ACT QUICKLY, FOR IF THE CAPSULES STACK UP TO THE TOP OF THE SCREEN, THE GAME WILL BE OVER, AND THE TI WILL BE INFECTED FOREVER! YOU ARE OUR ONLY HOPE...
ROWS MAY BE CONNECTED HORIZONTALLY OR VERTICALLY. IF YOU HAVE MORE THAN FOUR COLORS OF THE SAME TYPE IN A ROW, THEY WILL ALL DISAPPEAR, ALTHOUGH YOU WON'T GET ANY EXTRA POINTS FOR THEM.

CONTROLS:

YOU MAY USE EITHER THE JOYSTICKS OR THE KEYBOARD TO MOVE THE CAPSULES.

KEYS:

S - LEFT
F - RIGHT
X - DROP
D - ROTATE CLOCKWISE
E - ROTATE COUNTERCLOCKWISE

JOYSTICK:

LEFT AND RIGHT MOVE THE CAPSULE, AND PUSHING DOWN DROPS IT. THE BUTTON ROTATES CLOCKWISE, AND PUSHING UP ROTATES COUNTERCLOCKWISE.

OTHER CONTROLS:

TO SELECT THE LEVEL AND SPEED IN THE BEGINNING OF THE GAME, USE EITHER THE ARROW KEYS OR THE JOYSTICK.

ANY TIME DURING THE GAME YOU MAY PUSH:

9 - RETURN TO TITLE SCREEN
P - PAUSE GAME
M - TOGGLE MUSIC ON/OFF

SCORING:

FOR EVERY TWO ROWS YOU DROP A CAPSULE BY PUSHING DOWN, YOU GAIN ONE POINT. EACH VIRUS DESTROYED IS WORTH 15 POINTS. IF YOU DESTROY MORE THAN ONE VIRUS IN A SINGLE TURN, YOU GET

THEIR VALUE MULTIPLIED BY THE NUMBER KILLED IN THAT TURN:

1 VIRUS	= 15 POINTS
2 VIRUSES	= 60 POINTS
3 VIRUSES	= 135 POINTS
4 VIRUSES	= 240 POINTS

IN ADDITION, THERE IS A 100 POINT BONUS AT THE END OF EACH LEVEL.

WINNING:

THERE ARE THREE WAYS TO WIN.

- 1) BEAT LEVEL 10 ON THE FAST SPEED. (HARD!)
- 2) BEAT LEVEL 20 ON ANY SPEED.
- 3) EARN 10,000 POINTS

TIPS:

REMEMBER THAT THE OBJECT OF THE GAME IS TO KILL THE VIRUSES. AS SOON AS A LEVEL IS CLEARED OF VIRUSES, YOU WILL GO ON TO THE NEXT. SO, DON'T WORRY ABOUT GETTING RID OF OLD CAPSULES THAT ARE

TI-99/4A – Game Shelf Assembly/c99/Forth Games

LAYING AROUND. GO FOR THE VIRUSES! - THE GAME SPEEDS UP OVER TIME, SO DON'T MESS AROUND!

- TO "FLIP" A CAPSULE, SO THE COLORS SWITCH SIDES, SIMPLY ROTATE IT TWICE.

- IF UP ON THE JOYSTICK DOES NOT WORK, RELEASE ALPHA LOCK

I HOPE YOU ENJOY VIRUS ATTACK. I SPENT NEARLY TWO YEARS MAKING IT, FINISHING IN NOVEMBER, 1995.

PLEASE WRITE AND TELL ME WHAT YOU THINK OF THE GAME. AND DON'T FORGET TO SEND THE \$15! AS A REGISTERED USER, YOU WILL BE INFORMED WHEN I RELEASE ANY NEW GAMES. YOU SURE WON'T WANT TO MISS THE NEXT ONE! IT WILL BLOW AWAY ANY OTHER GAME YOU'VE SEEN!

ALSO, IF YOU HAVEN'T SEEN MY OTHER TWO GAMES, MAZE MANIA AND THE CASTLE, YOU MIGHT WANT TO TAKE A LOOK AT THEM. THEY ARE WRITTEN IN EXTENDED BASIC, BUT ARE PROBABLY THE BEST XB GAMES YOU'LL EVER SEE! SO PLEASE WRITE, AND HELP SUPPORT THE TI!

YOU CAN REACH ME AT: VERN L. JENSEN 910 LINDA VISTA AVE PASADENA, CA 91103

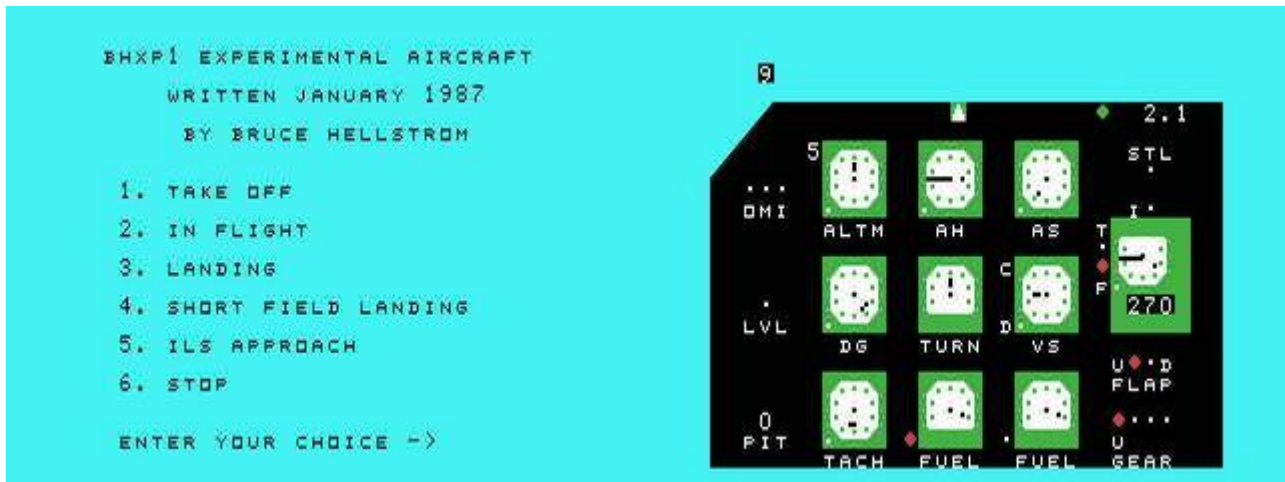
I LOOK FORWARD TO HEARING"
FROM YOU!

VIRUS ATTACK WAS WRITTEN IN C99; THE EASIEST WAY TO MAKE ASSEMBLY-SPEED GAMES ON THE TI. IF YOU ARE INTERESTED IN THE FULL C99 SOURCE CODE, LET ME KNOW. IT IS A GREAT EXAMPLE OF GOOD PROGRAMMING PRACTICE.

MANY THANKS TO BRUCE HARRISON, WHO WROTE SEVERAL SPECIAL ASSEMBLY ROUTINES FOR THIS GAME AT MY REQUEST.
THANKS, BRUCE!

BHXP1 Experimental Aircraft

G-4-Q [Disk: 125-EXPA] By Bruce Hellstrom - Original concept by John Dow



This is a pretty accurate instruments only flight simulator with a full complement of avionics. There is no visible scenery and you have to rely solely on your instruments for navigation and landing, using the joystick and keyboard to control the airplane. Input response is brisk, and the gauges graphics clear. A basic level of aeronautical knowledge is assumed, making it a very challenging but ultimately gratifying simulation for the flight enthusiast. That first landing is a hoot!

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive, joysticks.

Executable to run: BHXP1 (E/A option 5)

[Download BHXP1 Experimental Aircraft \[TIFILES format\]](#)

Select from mega menu: G – 4 – Q

Features: Title Screen, EA5, One Player, Sound, Music

Controls: Joystick 1, Joystick 2

**Runs from Mega Menu with autostart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

5 RUN PROGRAM FILE

FILE NAME? DSK1.BHXP1

TI-99/4A – Game Shelf Assembly/c99/Forth Games

DOCUMENTATION FOR BHXP1 EXPERIMENTAL AIRCRAFT VERSION 1.0

Written January 1987 by Bruce Hellstrom for the TI99/4A and GENEVE home computers.

Released to the public domain January 1989 after final adjustments and bug fixing.

OVERVIEW

The BHXP1 is an experimental aircraft in the final testing stages before FAA approval. The airplane itself is a modified version of an airplane purchased in 1984. The plane has been restructured to handle higher speeds and has been fitted with a much more powerful engine. The instruments have been replaced with larger, easier to read models and DME (distance measuring equipment) has been added.

STARTING OUT

The program is designed for use with the Editor/Assembler module.

TO LOAD ON THE TI99/4A:

1. Select the RUN PROGRAM FILE option from the Editor/Assembler menu.
2. Type in DSK*. BHXP1 where * represents the disk drive the program disk is in.
3. Program will load and begin running and, in a few seconds, will show the main menu screen.
4. Continue to the ONCE LOADED section.

TO LOAD ON THE GENEVE 9640:

1. Load the GPL interpreter.
2. Set the GPL speed to 1.
3. Load the Editor/Assembler cartridge.
4. Select the RUN PROGRAM FILE option from the Editor/Assembler menu.
5. Type in DSK*.BHXP1 where * represents the disk drive the program disk is in.
6. Program will load and begin running and, in a few seconds, will show the main menu screen.

ONCE LOADED

Select item "1" from the menu. This is the "Take Off" option. Enter a value of 0 for both wind and chop. The instrument panel will appear. The airplane is sitting on the runway ready for take-off.

Read the INSTRUMENTS AND CONTROLS section while the instrument screen is in front of you. Push the "M" key to return to the menu. Read SOME FLYING BASICS to learn some of the basic information necessary for flight.

STANDARD OPERATIONS PROCEDURES

PREFLIGHT CHECKLIST

- 1) Program loaded
 - 2) Alpha lock off (TI99/4A Only)
 - 3) Joystick #1 operating normally and plugged in.
- *Note - Some early versions of MDOS for the 9640 may require joystick.
#2 instead of #1

TI-99/4A – Game Shelf Assembly/c99/Forth Games

TAKE OFF - NORMAL

- 1) Pitch set to 4
- 2) Full throttle
- 3) Pull back at 75 mph for lift off
- 4) After climbing to a safe altitude (500 ft), push stick forward and trim to 150 mph
- 5) Climb out at 150 mph

TAKE OFF - SHORT FIELD

- 1) Pitch set to 5
- 2) Full throttle
- 3) Flaps down at 70 mph
- 4) Climb at 70 mph until clear of obstacle
- 5) Push stick forward to obtain 100 mph before raising flaps, then immediately pull back to continue climb with flaps up
- 6) Push stick forward and trim to 150 mph
- 7) Climb out at 150 mph

CRUISE

Below 9000 ft, 75% power
Above 9000 ft, full power

LANDING - NORMAL

- 1) Fuel selector to fuller tank
- 2) Trim to 100 mph
- 3) Lower landing gear and flaps
- 4) Trim to 80 mph

LANDING - SHORT FIELD

- 1) Fuel selector to fuller tank
- 2) Lower landing gear and flaps
- 3) Trim to 70 mph with flaps down

TESTED PERFORMANCE FIGURES

Speeds

Never exceed	260 mph
Top speed (sea level)	230
Cruise (75%, 9000 ft)	222
Maneuvering speed	175
Maximum flap extension	130

Climb

Best rate	150 mph	950 fpm
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Ceilings

Service	17,500 ft
Absolute	19,750

Stalls

Flaps up	67 mph
Warning horn and light	76
Flaps down	58
Warning horn and light	65

TI-99/4A – Game Shelf Assembly/c99/Forth Games

CONTROL SUMMARY

Joystick	- pitch and bank
1-9	- joystick pitch effectiveness (stick force)
A	- abort approach or landing and go to full power
B	- back to airport for ILS approach
C	- climb, increase power
D	- descend, decrease power
E	- extend or raise landing gear
F	- flaps, raise or lower
G	- gas, select other tank
H	- hold pitch (trim setting)
I	- invert nav bearing, 90 or 270 degrees
J	- jam, pilot in jam, stop everything
K	- keep on going (see J)
L	- leveler, wing leveler on or off
M	- menu, return to main menu

CAUSES FOR CRASHES

MISSED RUNWAY

Descending to ground level off the runway surface or at too great an angle to runway alignment (090 or 270 +/- 18 degrees)

TOTAL WIPEOUT

Impact with ground at high rate of descent

LOST CONTROL

Going over 130 mph on the ground (takeoff or landing) or wing tip hits ground due to excessive angle of bank

CAUSES FOR CRASHES (CONTINUED).

TOO HARD

Touched down on runway but too hard. Max safe rate of descent is 300 fpm. Beware of inherent lag in VS indicator

LOST FLAPS

Flaps lowered at speed over 130 mph. Severe structural damage results

LOST WINGS

Pulling more than 3.8 g's may cause wing failure (see maneuvering speed)

LOST TAIL

Exceeding 260 mph may cause severe vibration of tail surfaces, causing structural failure

TOO LOW

Hit TV transmitter tower, mountain, building, or other obstruction or terrain during ILS approach. Happens when off course, when too low before intercepting glide slope, when going too far below glide slope, or going below decision height or crossing runway threshold while still in clouds

TI-99/4A – Game Shelf Assembly/c99/Forth Games

INSTRUMENTS AND CONTROLS

When reading this section you should have the control panel in front of you as you read about each instrument.

Lights that are on are represented by a red or green circle. Lights that are off are shown by smaller white dots. On all dials, a pointer is represented by a dot in the center and a dot or line at the end. If there are two dots at the end, the pointer is at their midpoint. The pilot controls the plane with the joystick, the digits 1-9, and the letters A-L.

LIGHTS

Marker beacons - On the left side of the panel are 3 lights marked "OMI".

These are the marker beacon lights. Used only for an ILS approach.

Right light (inner marker) is not used. Middle light (middle marker) lights 1.5 miles from touch down point. Left light (outer marker) lights 4.2 miles from touch down point, at point where glide slope should be intercepted

LVL - located below the marker beacons, this light indicates when the automatic wing leveler is activated (key "L")

STL - located on the right side of the panel. This light comes on at the same time a horn does. Both warn you that the airspeed is getting dangerously low. If the stall actually occurs, the horn becomes more shrill and the nose of the plane falls rapidly. If you do not recover promptly, the plane will go into a steep dive

FLAP - located on the right lower portion of the panel. These 2 lights indicate the position of the flaps, up or down

GEAR - just below the flap lights are the gear indicator lights. A single red light above the "U" indicates the landing gear is up. 3 green lights indicate that all wheels are down and locked in place.

INSTRUMENTS AND CONTROLS (CONTINUED)

INSTRUMENTS

In the center portion of the panel are 9 gauges labeled as follows:

ALTM - Altimeter. The 2 digits in the upper corner represent the ten thousand and thousand digits, the dial represents thousand foot intervals. For instance, 12,500 ft above sea level (not necessarily ground level!) would be represented as "12" and the dial pointer straight down. Each tick mark on the dial represents 100 ft and the pointer moves in 25 ft increments

AH - Artificial horizon. 3 dots in a line represent the airplane as seen from behind. If the plane banks to the left, the left dot goes down and the right dot goes up. tick marks on the right side mark 30 and 60 degrees of bank. The horizontal line extending from the left side represents the horizon, relative to the nose of the plane. If the line is below the center airplane dot, the nose is above the horizon. The horizon line moves in 5 degree increments, the wing dots move in 9 degree increments.

AS - Airspeed indicator. Reads from 0 to 300 mph. Each tick is 30 mph. Straight up is 0 or 300 mph, straight down is 150 mph

TI-99/4A – Game Shelf Assembly/c99/Forth Games

DG - Directional gyro. The needle points to the airplane's heading. If there is a wind, the ground track may differ. Up is North (360 deg), right is East (090 deg), etc. Each tick is 36 degrees. The needle moves in 9 deg increments

TURN - Turn indicator. This instrument displays the rate of turn. If the needle is straight up, the plane is not turning. If it points to the first tick from the center, the plane is turning at the rate of 3 deg/sec. This "standard rate turn" requires 2 minutes to make a 360 deg turn. The next tick mark is a 1 minute turn, 6 deg/sec

VS - Vertical speed indicator. This rate instrument shows how fast the plane is climbing or descending. Due to the way this instrument is constructed, there is a delay before its reading is accurate. Therefore it should be used to determine the rate only after it has stabilized. When the needle is pointing to the left, the rate of climb is 0 feet per minute (fpm). When pointing up, the rate of climb is 500 fpm. When pointing down, the plane is descending at 500 fpm. Each tick mark represents 200 fpm

TACH - Tachometer. This does not really show revolutions per minute but shows percent power. Up is 0 or 100%, right is 25%, down is 50%. Each tick mark is 10%

FUEL - Fuel gauges. The left gauge is for the left tank (in the left wing). The right gauge is for the right tank. If a fuel tank runs dry, the engine will cut out. You must select the other tank and bring back the desired power setting. If one tank has more fuel than the other, the plane will tend to turn toward the heavier side. Each tank holds fuel for 70 min at full power.

OTHER INSTRUMENTS

DME - Distance Measuring Equipment. This instrument is located at the upper right of the panel. A green light shows that the instrument is on and working. The DME measures the distance from the VOR station at the airport in miles.

NAV - Navigation radio. This instrument is located on the right center of the panel above the flap indicator lights. This instrument is used either for an ILS approach or to receive the enroute navigation signal from the VOR. The light on top labeled "I", is on for an ILS approach. Note: when making an ILS approach and the airplane breaks through the cloud cover into clear air below, the instrument automatically changes from ILS mode to VOR mode and the light goes off. The 2 lights on the left side are labeled "T" and "F" ("to" and "from"). When passing over the ground station, the indication changes from one to the other. At the bottom of the display there is a number 090 or 270. This is the bearing to or from the ground station (when in VOR mode only). The face of the instrument has three tick marks. If the needle is aligned with the center mark, the plane is exactly on course. If the needle is at a tick mark, the plane is 20 deg off course in VOR mode, 4 deg off course in ILS mode. On the left side of the instrument is a horizontal needle which indicates whether the plane is above or below the glide slope when making an ILS approach (it does not move in VOR mode). Each increment is 1/10 deg above or below.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

JOYSTICK - Controls aircraft attitude.

- Push forward - nose down
- Pull back - nose up
- To right - bank to right
- To left - bank to left

Nose up and down (pitch) is also affected by the pitch effectiveness setting. the degree of banking is dependent on how long the stick is held to either side. The maximum angle of bank is 63 degrees

KEYS - Depressing several keys select options and control various functions of the plane.

- A** Aborts landing or approach. If ILS approach, NAV switches from ILS to VOR mode and the clouds disappear. In all cases, full power is applied immediately.
- B** Back to airport for ILS approach. This can only be selected if east of the outer marker. A cloud cover suddenly forms, obscuring the ground.
- C** Climb - power is increased, more the longer the key is held.
- D** Descend - power is reduced, more the longer the key is held.
- E** Extend or raise landing gear.
- F** Flaps are raised or lowered. Do not lower flaps when speed is above 130 mph. Beware of sudden loss of lift when raising flaps.
- G** Gas tank is selected. Caution, if a tank is run dry, the engine will stop. If one tank has more fuel than the other, the plane will tend to turn to the heavier side.

KEYS (CONTINUED).

- H** Hold trim setting at current pitch position. Push this key while pushing or pulling the stick to set trim to that position indefinitely. Subsequent stick movements are in addition to the held position. Trim settings can be accumulated by holding the key and stick for several seconds. Beware of high pitch effectiveness settings when cranking in trim.
- I** Invert the NAV bearing from 270 to 90 or vice versa. Although the number changes, for ILS mode the needle display is not affected.
- J** The pilot is in a jam and needs to stop the passage of time momentarily. This can be used to study the docs and instruments, or just take a break from flying.
- K** Keep on going. Restarts time after J key is used.
- L** Wing leveler. When on, the plane rolls to wings level position and maintains it. If the stick is used to bank, the plane will return to level as soon as the stick is released. The wing leveler will keep the plane level even if the fuel tanks are uneven, and will return it to level in severe turbulence.
- M** Menu. Returns to main menu. First shows information on the screen regarding plane's condition at the time key was pressed.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

MENU OPTIONS

1) TAKE OFF

With this option, the airplane is sitting at the end of runway 27. (heading 270 degrees or due west). The airport is at sea level.

2) IN FLIGHT

With this option, you are asked first what altitude in feet above sea level you wish to start, second, what the ground level is (also above sea level), and third, the starting velocity. The power and trim are automatically set to maintain level flight at that speed and altitude. If the altitude is too high, there may not be enough power to maintain level flight at the specified speed. If the altitude is the same as ground level, you can try taking off from an airport higher than sea level. The runway direction is selected randomly. Your starting position is within 5 miles of the primary airport where the VOR and ILS are located. When doing this, you are taking off from a secondary airport from which you can not land.

3) LANDING

You are about to join the down wind leg for a landing on runway 27. You are heading 45 degrees at an altitude of 1000 ft above sea level at 130 MPH. The airport is at sea level and your location is about 1 mile south west of the threshold of the runway. For the landing to be safe, you must touch down on the runway surface and be able to stop within the overrun. This means that the touch down must be within a mile of the threshold. When several miles from the field, a digit will appear on the screen above the panel. The value of this digit and it's height above the panel represent the distance to the touch down point (The east end of runway 27). This figure is in the east-west dimension only and is not affected by being north or south of the runway. That is why the distance shown by this digit will sometimes be different than the reading of the DME.

LANDING (CONTINUED).

If the digit is exactly above the pointer in the center of the panel, you are intersecting the line of the runway, no matter which direction you are headed. The position of the digit to the left or right indicates which direction the runway would be if you were heading exactly due east or due west, whichever is closest to your present position.

The digit indicates the distance in tenths of miles from the touch down point and the height above the panel indicates the number of miles, for example, if the digit is a 3 and it is located right above the pointer in the middle of the panel, then your distance is 3 miles from the touch down point. If the same digit is up 1 row on the screen, then the distance is 1.3 miles. If the 3 appears 2 rows above the initial example, then the distance is 2.3 miles.

4) SHORT FIELD LANDING.

You are positioned for a landing as in option 3. The only difference is that there is a ridge of mountains 400 feet high just 1/2 mile east of the runway. So, if upon approach, you stray below 400 feet when farther east of the runway, you're history. If that's not enough, the runway is also shorter, so you must be on the ground within 1/2 mile of the threshold.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

5) ILS APPROACH

ILS stands for Instrument Landing System. An ILS allows for a safe method of landing even if visibility is poor or the ceiling (cloud bottoms) is low. The ILS locates the airplane precisely in space relative to the runway threshold. At this particular airport, if you break through the clouds at the decision height (DH), which is only 300 feet above the ground, you will be just 1 mile from the runway and in a position to try and make the landing. This approach can also be selected with the B key if you are east of the outer marker. If you choose option 5, you will automatically be positioned 8 or so miles east of the airport and within 1 or 2 miles north or south of the center line. You will be at an altitude of 2000 feet, heading west at 140 MPH. The ceiling is not known, but it is probably above the 300 ft DH, but it may be below it. Your first task is to turn as necessary to center the needle. You should also slow down to a more acceptable approach speed and lower the flaps and landing gear so that you won't have to mess with them later. Do NOT go below 1200 ft before you cross the outer marker! As you approach the outer marker, located 4.2 miles east of the runway, the outer marker light will go on. Once past the transmitter, the light will go out. At this time you should be well established on the glide slope, that is, the glide slope needle on the left side of the NAV display should be centered. Now concentrate on keeping both needles as close to the center as you can. If things get out of control, call "missed approach" on the radio and execute the missed approach procedures: abort the approach and apply full power (A key) climb straight ahead to 1500 ft, then a climbing right turn to 2000 ft, heading 090.

The middle marker is located 1.5 miles out. The light for this marker will not stay on as long because you are closer to the transmitter on the ground. Your altitude passing over it should be 450 ft. You could break into the clear at any moment. You must not go below 300 ft. in the clouds. If in the clouds still at 300 feet you must call missed approach. The signal to you that you are below the clouds is the sky turning blue again and the ILS light on the NAV display going out. You will then see the digit appearing above the panel to tell you of your location and distance from the touchdown point

If you pass the threshold of the runway while in the clouds and without calling missed approach, you will crash with the message, "TOO LOW".

WIND AND CHOP

After you select your choice from the main menu, you specify the wind and turbulence (chop) strength. Each can be in a range from 0 to 3 meaning none to severe.

SOME ADDITIONAL NOTES.

The pitch effectiveness setting is selected using the 1-9 keys. This setting tells the program how far you would be pulling back or pushing forward the stick in a real airplane. A pitch setting of 1 is similar to barely pulling or pushing on the stick and may seem like nothing is happening. A pitch setting of 9 is like pulling or pushing the stick to it's limits and can be dangerous. In all practical flying, you should rarely have to use a stick force more than 5 with a normal setting of 3.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

Using the H key (hold trim setting) will accumulate trim very quickly and can also be dangerous at high pitch settings. An example is upon take off when trimming to your climb speed of 150 mph. The pitch should be set to 4 on take off and when you start to trim the nose. As you get closer to your climb speed, you should reduce the pitch to 2 and continue trimming the nose while holding the stick forward. This can prevent you from suddenly putting the plane into a dive.

SOME FLYING BASICS.

For the following examples, you can use the in flight option from the menu, put the aircraft at 5000 feet at the speed suggested in the example.

DESCENDING.

Set the plane up as above with a speed of 100 mph.

- 1) Hold down the D key for about 2 seconds and listen for a drop in power.
- 2) Notice the tach change.
- 3) Because the power has been reduced, the plane initially slows down a little. As the plane slows down, the wings produce a little less lift. This causes the nose to drop. When the nose drops, the plane begins "coasting downhill" which in turns brings the speed back to the original value but the plane is now descending.
- 4) The VS dial now shows the rate of descent. (It stabilizes slowly).
- 5) The altimeter begins to show the altitude dropping.

CLIMBING

This is exactly the opposite of descending. Start in level flight again, but increase power. The engine noise will increase, the tach will show the increase, the speed will initially increase followed by a climb, and the altimeter will show the gain.

SLOWING DOWN

Set up again at a speed of 100 mph. Now reduce the power as if to descend. However, when the instruments show the descent has begun, pull back on the stick. Pulling back on the stick will create more lift because it tilts the wings back. This will slow the descent, bring the nose back to level, or cause a little climb depending on the pitch. If you reduced power enough, even though the stick is held back, the nose will again fall. Hold down the H key to "crank in some trim". This will pull the nose up again. As you make these adjustments, notice that the speed is falling and, if you do it just right, your altitude stays just about the same. Once you have slowed down to your desired speed, you may increase power again to maintain altitude.

SPEEDING UP

This is just the opposite of slowing down. Increase power and when the climb starts, push the nose down. Use trim as needed. When the desired speed has been reached, decrease power as necessary to maintain altitude.

TI-99/4A – Game Shelf Assembly/c99/Forth Games

SOME FLYING BASICS (CONTINUED)

LEVELING OFF FROM A CLIMB OR DESCENT

This is very easy if you wish to keep the same airspeed, just adjust the power until the plane is not climbing or descending anymore. There are many times however when you want to increase speed when leveling off, such as when making the transition to cruise speed after taking off and climbing to your target altitude. This is accomplished by pushing the nose of the plane down until the plane is not climbing anymore. This increases airspeed. To level off from a descent, you would pull back and increase power.

HOLDING ALTITUDE WHILE TURNING

When the airplane is banked in a turn, the plane will start to drop due to reduced lift on the wings. If the turn is steep enough, it is necessary to hold back on the stick to bring the nose up during the turn and keep the VS constant. Set up the plane at the maneuvering speed of 175 mph and experiment with turning. You may need to adjust the pitch effectiveness to maintain altitude during steep turns.

SUPPLEMENTARY ILLUSTRATIONS

On the program disk are some supplemental illustrations for this documentation which can be printed on an EPSON FX-80 compatible graphics printer..

To do this, you must use EXTENDED BASIC and place the program disk in drive 1. Use the command OLD DSK1.SUPPRINT to load the file. The program will then print the supplementary illustrations..

THIS PROGRAM IS BASED ON A 1982 TI BASIC PROGRAM FROM JOHN DOW.

ALL ASSEMBLY CODE AND MODIFICATIONS ARE BY

BRUCE HELLSTROM
7055 SEPULVEDA BLVD. #5
VAN NUYS, CALIFORNIA 91405

THIS PROGRAM IS BEING DONATED TO PUBLIC DOMAIN AND THE AUTHOR REQUESTS NO FEES OR CONTRIBUTIONS. IF PROGRAM IS COPIED, PLEASE LEAVE ALL FILES IN THEIR ORIGINAL FORM.

1989 - BRUCE HELLSTROM

Backsteine 1.2

G-4-R [Disk: 126-BACK] By Quinton Tormanen & Steve Mehr



In the spirit of Breakout, Backsteine delights the player with colourful and well designed screens, smooth animation, and very challenging levels. The object of the game is to clear the screen of bricks using a bouncing ball and a paddle. Some bricks will have special effects on your paddle or on the ball speed. There are 50 screens to go through requiring lightning fast reflexes and zen-like concentration. You may also load the version 1.0 screens which are much easier by pressing CTRL-E at the player selection screen, then pressing CTRL-L and typing OLDLEVELS then pressing CTRL-P to play. It will be a while before you get bored with this one...

Requirements: XB cartridge, 32K RAM, disk drive, Joysticks.

Executable to run: XB Autoload

Download Backsteine 1.2:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Select from mega menu: G – 4 – R

Features: Title Screen, EA5, One or Two Player, Sound

Controls: Joystick 1, Joystick 2

War Zone

G-4-S [Disk: 127-WARZ] By Quinton Tormanen



This is a vertically scrolling shoot-em-up game where you control an F-15 fighter and attempt to destroy five different kinds of enemies from jets to tanks using missiles and bombs. Levels increase in difficulty as you progress. The action is fast and furious with great graphics and sound effects, and you will find that your trigger finger will get quite sore after a while. Not for the faint of heart.

Requirements: XB cartridge, 32K RAM, disk drive, Joysticks.

Executable to run: XB Autoload

Download Warzone:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

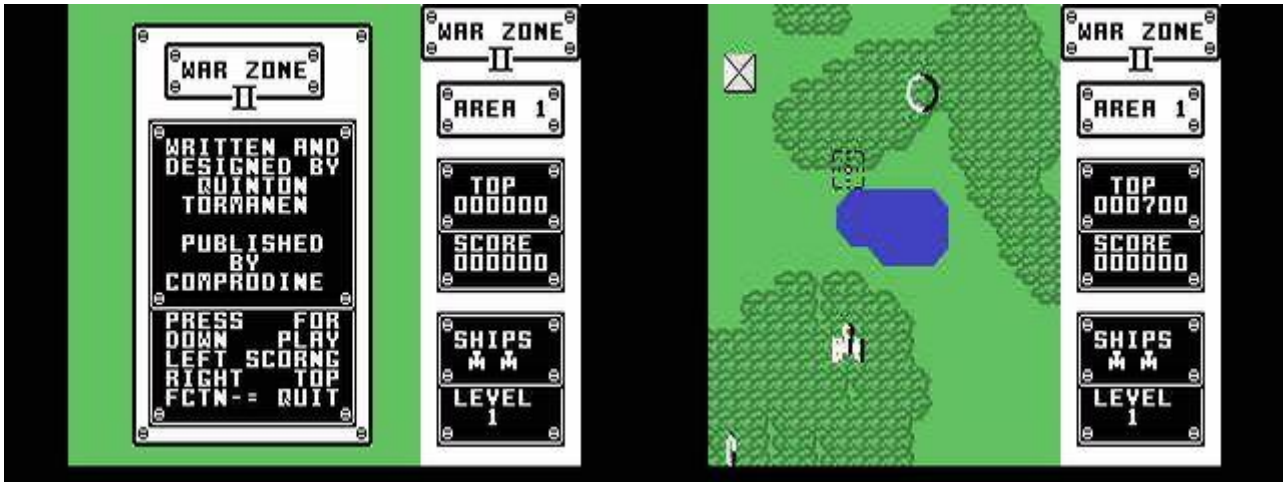
Select from mega menu: G – 4 – S

Features: Title Screen, EA5, One Player, Demo, Sound

Controls: Joystick 1, Joystick 2

War Zone II

G-4-T [Disk: 128-WAR2] By Quinton Tormanen



This sequel to War Zone features essentially the same game premise, but with a more futuristic setting where you need to conquer five different alien planets. However, the graphics are some of the best I have seen on the TI, with silky smooth scrolling and eye blurring shoot-em-up action. This is a must have game for any TI'er. Tormanen has done it again!

Requirements: XB cartridge, 32K RAM, disk drive, Joysticks.

Executable to run: XB Autoload

Download Warzone II:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

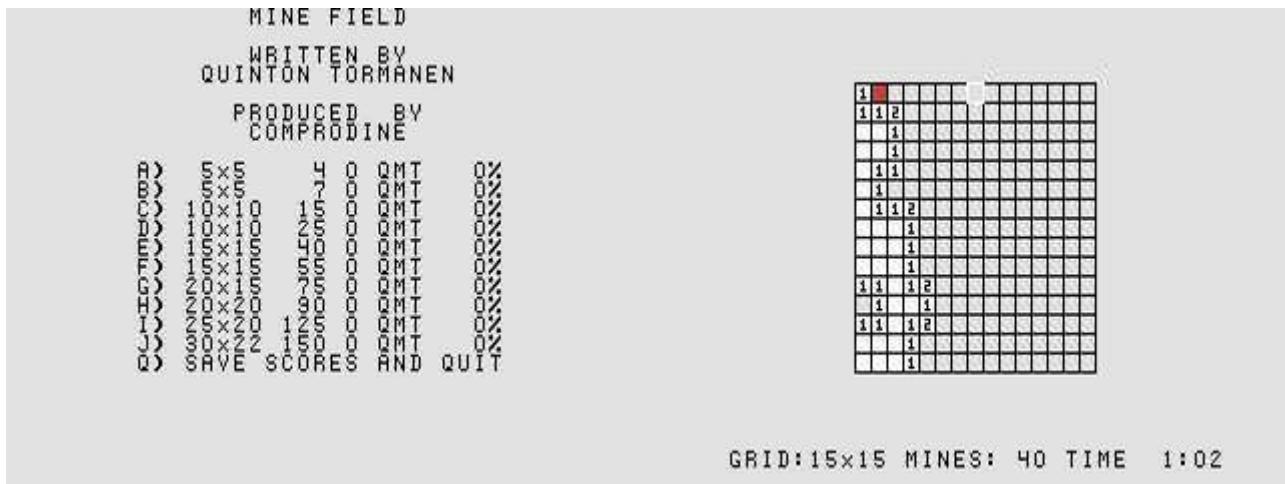
Select from mega menu: G – 4 – T

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

Mine Field

G-4-U [Disk: 129-MIFI] By Quinton Tormanen



This is a classic conversion of the Minefield game where you have to deduce the location of mines on a grid using numerical clues. Use the cursor keys to move a cursor around, and press the space bar to uncover a square. Any number that appears indicates the number of mines adjacent to that square. Use the ENTER key to mark suspected mine locations. Several grid sizes are available. A very enjoyable game of deduction and logic.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Mine Field:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

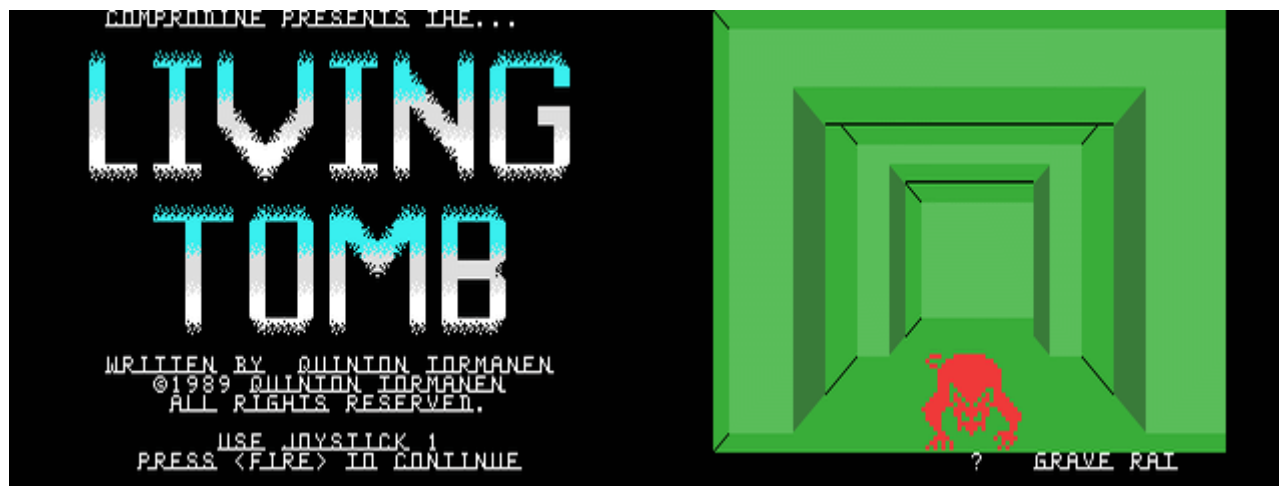
Select from mega menu: G – 4 – U

Features: Title Screen, XB, AL, One Player

Controls: Keyboard

Living Tomb

G-5-1 [Disk: 130-LITO] By Quinton Tormanen



High adventure inside a monster infested dungeon. Pick up treasure, weapons and items while fighting your way through the maze and facing nasty looking creatures. Excellent 3D representation of the surroundings and a variety of challenges will keep you on your toes. Press the fire button and push back on the stick to access the extensive and self-explanatory in-game menu. Fight with the fire button and pushing the stick toward the arm you want to use. Find the compass early so you can map your surroundings as there is no automap utility. The only complaint I have is the lack of a save game feature. The author has however kindly provided a suicide option should you become desperately lost... Definitely recommended game for the adventurers among you.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB Autoload

Download Living Tomb:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Select from mega menu: G – 5 – 1

Features: Title Screen, EA5, One Player, Sound

Controls: Joystick 1

Part II - Extended Basic Games

TI-99/4A Game Shelf

Extended Basic Games

Mille Bornes

G-9-C [Disk: 317-MILL] By Hloberg

```

Mille Borne 99
A Card Game of Auto Racing

Reading and Shuffling Cards

MILLE BORNES
your cards      cards left= 42
(1) roll!
(2) repairs
(3) roll!
(4) 75
(5) 100

last card:spare tire D
player:you
status:roll!      STOPPED
hazards:          speed lim
safetys:          out of ga
                  extra tank

miles: 650      375
    
```

The classic card game Mille Bornes from the 1950's is reborn on the TI with this challenging simulation where you face off against a tough AI. The main objective is to be the first to reach a certain number of road distance markers (bornes in French) driving a car, while your opponent attempts to throw at you all manner of limitations such as accidents, empty fuel tanks, tire punctures etc... in order to slow you down. You draw cards from a common deck and use them to either move, block an attack or attack yourself. The rules are pretty simple but the game can be at times very frustrating particularly when you are stuck while your opponent is accumulating marker points! The game presentation is text only but quite effective, although I would have liked a little color and sound effects to enhance the gameplay. Overall an enjoyable simulation that brings back a lot of childhood memories.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Mille Bornes:

[Disk Image](#)

[Official game rules](#)

Select from mega menu: G – 9 – C

Features: Title Screen, XB, 2,3,4 or 6 Player, Sound, Speech

Controls: Keyboard



**For 2, 3, 4 or 6 Players
Ages 8 to Adult**

Rules © 1962, 1981, 1982 Parker Brothers, Beverly, Mass. 01915 Printed in France

Along the roads in Europe—especially in France—one sees small cement markers at regular intervals. The French call these markers *bornes kilométriques*. We know them as kilometer-stones or milestones. Milestones show the number of the route as well as the distance to the next town. Their red or yellow color also shows whether the route is a national highway or a local road. These markers give this game its name: MILLE BORNES (pronounced “MEEL BORN”) means “a thousand milestones.” MILLE BORNES is a card game for 2, 3, 4 or 6 players, usually played as a partnership game by 4 players—2 on each team.

PROOF OF PURCHASE
Mille Bornes

Object

As a driver, you must follow the rules of the road. Namely: You can *go* only when the light is green. You must *stop* when the light is red. You must obey speed limit signs. If you get a flat tire, you must use a spare. If you run out of gas, you must refill your tank. If you have an accident, you must repair your car.

In this card game, you must follow these very same rules. And while sticking to them, you and your partner must try to travel 1,000 miles along an imaginary road. But be careful! Your opponents are trying to do the same and will try to slow you down by placing hazards in your path. Your challenge: to accumulate mileage by overcoming these hazards, while also trying to slow your opponents' progress with hazards of your own.

The final object of the game is to be the first team to accumulate a total of 5,000 points in several hands of play. In doing so, you must try to complete a trip of *exactly 1,000 miles* in each hand played.

Equipment

112 cards • a score sheet

The Cards

As you read about the different cards, spread them out in front of you and look them over carefully.

Distance Cards. These are the cards with the mile-stones on them. Each one represents a distance of 25, 50, 75, 100 or 200 miles. When played to the table, they are added together to determine the distance travelled.

Hazard Cards. There are 18 Hazard Cards: 3 Out of Gas, 3 Flat Tire, 3 Accident, 4 Speed Limit, and 5 Stop.

Remedy Cards. There are 38 Remedy Cards: 6 Gasoline, 6 Spare Tire, 6 Repair, 6 End of Limit, and 14 Roll.

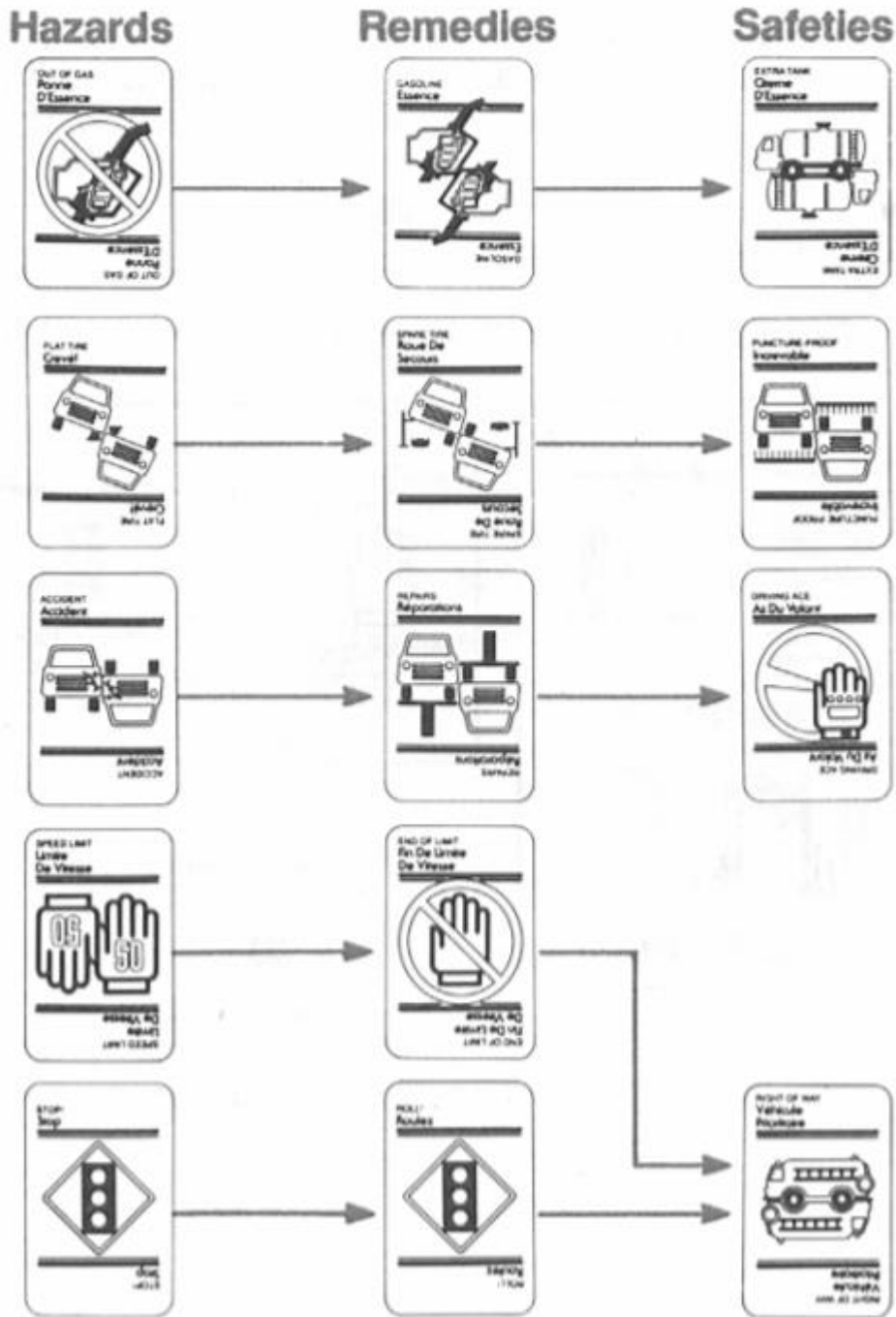
Safety Cards. There are 4 Safety Cards: 1 Extra Tank, 1 Puncture-Proof, 1 Driving Ace, and 1 Right of Way.

Cards Not Used in Play. There are 6 cards not used in the play of the game: 3 Score Cards—2 in English, 1 in French; 3 Card Guides—2 in English, 1 in French.

How the Cards Relate

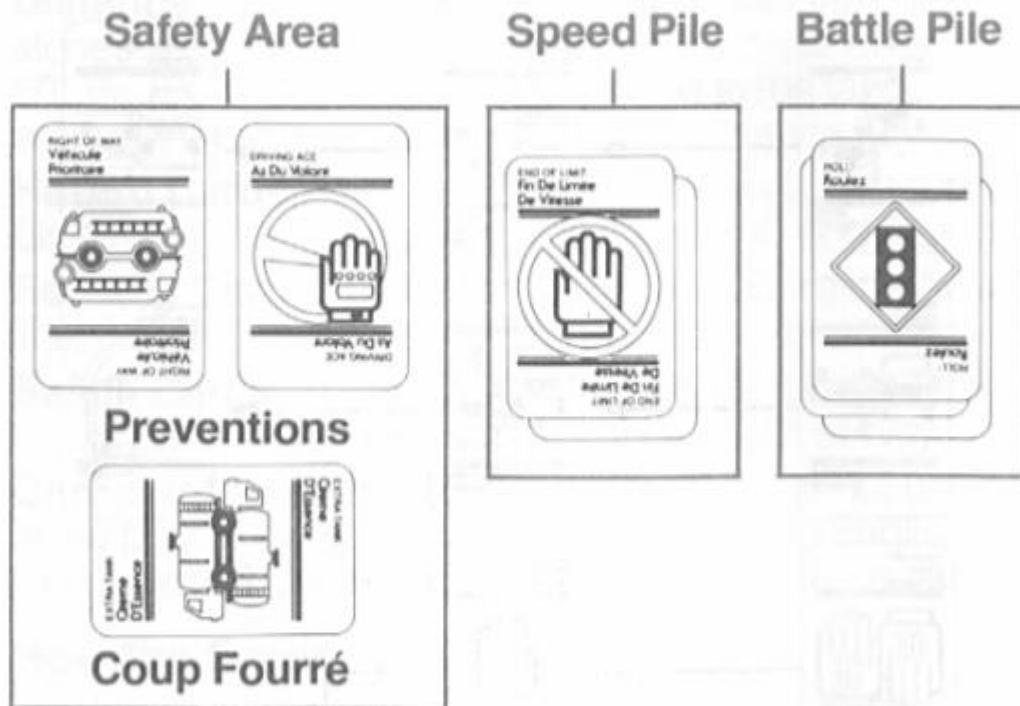
The figure on the right shows how the cards relate to each other. For each Hazard Card there is a corresponding Remedy Card that overcomes the hazard. There is also a corresponding Safety Card that not only overcomes the hazard but also prevents it from occurring again.

TI-99/4A – Game Shelf Extended Basic Games

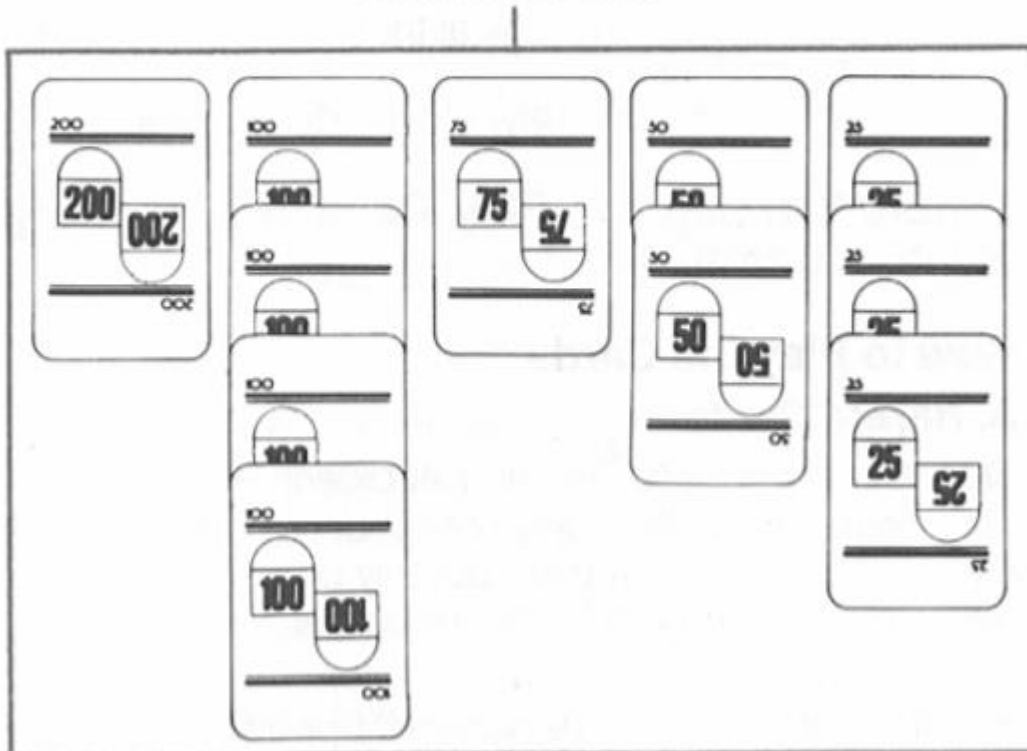


Where to Play the Cards

This unusual deck of cards also has an unusual method of placement. Look at the figure below to see how the cards are played to the table. Note that there are 4 playing areas: a Speed Pile, a Battle Pile, Distance Piles, and a Safety Area.



Distance Piles



Set Up

1. Sit opposite your partner.
2. Select a dealer.
3. After removing the cards not used in play, the dealer shuffles the deck and deals 6 cards, face down and one at a time, to each player. The dealer then places the remaining cards, face down, onto the center of the table. These cards form the *draw pile*.
4. Pick up the cards and look at them. Be sure no one else can see them.
5. The first to play is the player to the dealer's left.

Before You Begin to Play, Read the Following Section Carefully.

How to Play the Cards

A. Hazard Cards

Stop, Out of Gas, Flat Tire, and Accident

Play these cards offensively onto your opponents' Battle Pile. By playing one, you temporarily prevent your opponents from gaining any further distance.

Speed Limit

Play this card onto your opponents' Speed Pile. While it is showing, your opponents can play 25-mile and 50-mile Distance Cards only.

B. Remedy Cards

Gasoline, Spare Tire, and Repair

Play these cards defensively onto your own team's Battle Pile. Play one onto the corresponding hazard an opponent has played against you. By doing so, you overcome the hazard and may again be able to play a Distance Card.

Roll

Play this card onto a Stop Card an opponent has played against you. Also, after playing a Gasoline, Spare Tire or Repair Card, you must first play a Roll Card on a Subsequent turn in order to play further Distance Cards. As you'll learn further on, the exception to this rule is when the Right of Way Card is in your Safety Area.

End of Limit

Play this card onto your own team's Speed Pile, on top of a Speed Limit Card. Your team then can resume normal speed and play *any* Distance Card.

C. Distance Cards

You may play Distance Cards when a Roll Card is on top of your Battle Pile or—as you'll learn—when the Right of Way Card is in your Safety Area.

You may play almost any combination of Distance Cards to make 1,000 miles. You *may not*, however, play more than two 200-mile cards. And under no circum-

stances may you play Distance Cards that will bring your total over the 1,000 mile mark. If you should place a Distance Card that causes your mileage to exceed 1,000, remove that card and place it on the discard pile.

D. Safety Cards

Right of Way, Extra Tank, Puncture-Proof, and Driving Ace

Play these cards in your team's Safety Area. By playing one, you gain several advantages. First, you overcome the corresponding Hazard Card an opponent has played against you. Second, you prevent your opponents from playing the corresponding Hazard Card for the rest of the hand. And finally, by playing a Safety Card **you may immediately draw another card and take another complete turn.**

The use of the Right of Way Card requires further explanation. It prevents your opponents from playing a Stop Card onto your Battle Pile or a Speed Limit Card onto your Speed Pile. Because it cancels a hazard already in play, it allows you to play 75-mile, 100-mile and 200-mile Distance Cards even if a Speed Limit Card is already showing on top of your Speed Pile. The Right of Way Card also permits you to play Distance Cards even if you don't have a Roll Card exposed.

Remember that playing the Right of Way Card won't stop your opponents from playing Hazard Cards other than Stop and Speed Limit Cards. An opponent still

can stop you by playing Out of Gas, Flat Tire, or Accident Cards onto your Battle Pile. In these cases, however, you still don't need to play a Roll Card in order to be able to play Distance Cards. You only need to play the proper Remedy Card.

E. Coup Fourré (pronounced Coo-Foo-Ray)

Coup Fourré is a French fencing term for “counter-thrust.” It describes the action by which one fencer parries the opponent's thrust and counterattacks in the same maneuver. In this game, the action is similar and operates in the following manner.

If an opponent plays a Hazard Card and you hold the corresponding Safety Card, immediately Call “Coup Fourré” and play the Safety Card to your Safety Area crosswise, as shown on page 4.

You may call “Coup Fourré” whether or not it is your turn. If you call “Coup Fourré” when it happens to be your turn, you must do so *before you draw a card*. Similarly, if it's your partner's turn, you may call “Coup Fourré” only *before your partner draws a card*.

A Safety Card played as a Coup Fourré entitles you to the following advantages:

1. Immediately remove the Hazard Card from your Battle Pile or Speed Pile (in the case of the Right of Way Card) and place it onto the discard pile.
2. Take an extra turn.

3. You are protected from the corresponding Hazard Card for the rest of the hand.
4. Whereas you'll score only 100 points for playing a Safety Card in the regular manner, you'll score 300 additional points for playing that same card as a Coup Fourré.

When you finish your turn, play continues around the table in the usual manner. Any players between you and the player who played the Hazard Card that started the Coup Fourré, lose their turns.

Playing

Your turn consists of two parts: drawing one card and adding it to your hand; then either playing one card to the table or discarding one card to the discard pile. Thus, you always hold 6 cards in your hand at the end of each turn.

If you're the first player, start by drawing a card from the draw pile and adding it to your hand. You then must make one of the following plays:

- A. If you have a Roll Card, you may play it face up to the table to start your Battle Pile. Your turn ends, and play passes to the opponent on your left.
- B. If you have a Safety Card, you may play it face up, as shown on page 4. Whenever you play a Safety Card, you may immediately take another complete turn. Start by drawing another card from the draw pile. If you have another Safety Card, you may play it and still have another turn, and so on.

- C. If you have a Speed Limit Card, you may play it in front of an opponent, even though your opponent has not yet had a chance to play and thus has no Roll Card exposed. This play starts your opponents' Speed Pile.
- D. If you can't make any one of these plays, you *must* discard one card, face up, thus starting the discard pile. Discarded cards are out of play for the rest of the hand.

When the first player has finished his or her turn, the second player starts by drawing a card. As the second player, you may then make any one of the plays already described, with two additional possibilities. If the first player played a Roll Card, you may play a Hazard Card on top of it. If the first player played a Speed Limit Card, you may play an End of Limit Card on top of it.

As the third player, you play as a partner of the first player and don't start any piles of your own. You have the same possible plays as the first and second players. If, however, your partner played a Roll Card or a Right of Way Card, you may play a Distance Card in front of your partner, thus starting the Distance Piles for your team.

As the fourth player, you play as a partner of the second player and don't start any piles of your own. You have the same possible plays as the first, second, and third players. Play then continues, in turn, until the end of the hand.

Special Notes

- A. It's best to keep the Score Cards and Guide Cards on the table so that all the players can refer to them.
- B. When beginning a hand, usually it's better to play a Roll Card to get your distance started rather than playing a Hazard Card against your opponents.
- C. Ordinarily, you must show a Roll Card on your Battle Pile in order to play Distance Cards. The exception is when the Right of Way Card is displayed in your Safety Area. This card allows you to play Distance Cards even if you don't have a Roll Card exposed.
- D. If you can't use a card, don't hold it in your hand. Instead, discard it. *For example:* a 200-mile card has no value once you've played two of them; and an Out of Gas Card has no value if your opponent has played the Extra Tank Card in his or her Safety Area.
- E. Try to remember which cards have been played. *For example:* a Spare Tire Card has no value when all the corresponding Flat Tire Cards have been played.
- F. You can play a Speed Limit Card on your opponents' Speed Pile even when there is a Hazard Card displayed on their Battle Pile, and vice versa.
- G. You are allowed to place a Hazard Card directly on top of another Hazard Card that's not yet remedied. But don't expect both hazards to count. *Regard only the Hazard Card that's displayed on top of the pile.*

- H. Don't forget to take an extra turn each time you play a Safety Card.
- I. Each Coup Fourré earns you 300 points *in addition* to the 100 points you automatically collect for that same card played as a Safety Card. Therefore, whenever possible, play a Safety Card as a Coup Fourré. However, don't hold out for a Coup Fourré too long. You'll get no credit for a Safety Card that's still in your hand at the end of the game.

Ending a Hand

There are two ways to end a hand: 1) when one team completes a trip of *exactly 1,000 miles*; or 2) when there are no more cards in the draw pile. In this second case, players must try to play out the remaining cards in their hands.

If you complete the trip of 1,000 miles *after* all the cards in the draw pile are gone, the play is referred to as *Delayed Action*. By completing a trip in this way, you'll score 300 bonus points.

Winning

A game usually will consist of several hands. So total all points for each team at the end of every hand. The team that first scores 5,000 points, wins. If both teams exceed 5,000 points on the same hand, the team with the higher total points wins the game.

Scoring

Total the score at the end of each hand:

Each team scores as many points as the total number of miles it has traveled	x
Bonus for each Safety Card played	100
All four Safety Cards played by the same team (Add this bonus to the 100 points scored for each Safety Card)	300
Each Coup Fourré (Add this bonus to the 100 points scored for playing a Safety Card)	300
Bonus points for completing a trip of 1,000 miles . .	400
Delayed Action (Bonus points for completing a trip after all cards have been played from the draw pile)	300
Safe Trip (Bonus points for completing a trip without playing any 200-mile cards)	300
Shut Out (Bonus points for completing a trip before opponents have played any Distance Cards)	500

The enclosed score sheets provide spaces for all possible types of scoring. After the first few games, these sheets will not be necessary, and scores may be kept on any piece of paper.

Rules for 2 or 3 Players

In a game of 2 or 3 players, you're on your own. Display your own game piles in front of you. With the following exceptions, playing and scoring are the same as in the four-handed partnership game:

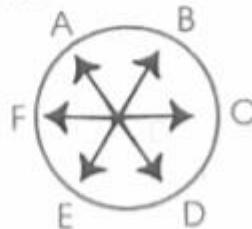
- A. Before the hand is dealt, remove the following cards: 1 Stop, 1 Accident, 1 Out of Gas, 1 Flat Tire, and 1 Speed Limit.
- B. Shorten the distance of a trip from 1,000 miles to 700 miles.
- C. Use the *Extension Play*: If you are the first to reach exactly 700 miles, you may—if you wish—demand to continue the hand to 1,000 miles. To do this, you must call "Extension" *exactly* at the time you reach 700. The hand then goes on until someone reaches 1,000 miles or until no one has any cards left.
 - a) The first player to reach 1,000 miles scores the usual 400 bonus points for completing the trip. If the hand ends after all the cards have been played *without any player reaching 1,000 miles*, no one receives the 400 bonus points.
 - b) If you are the player who calls "Extension" and are also the first to reach 1,000 miles, add 200 bonus points to the 400 points for completing a trip. If you call "Extension" and someone else reaches 1,000 miles, 200 bonus points is given to each opponent.

Rules for 6 Players

With the following exceptions, the play of the 6-player game is the same as in the four-handed partnership game:

A. There are three sets of partners, and they sit as shown in the figure below.

- A & D are partners.
- B & E are partners.
- C & F are partners.



- B. Shorten the distance to 700 miles.
- C. Use the *Extension Play*. (Refer to Rules for 2 or 3 players.)
- D. Scoring is the same as in the game for 2 or 3 players.

We will be happy to answer your questions or comments about MILLE BORNES. Write to the Consumer Response Department in the location nearest you:
 In the U.S.A.: Parker Brothers, P.O. Box 1012, Beverly, MA 01915.

In the United Kingdom: Parker Games, Owen Street, Coalville, Leicester LE6 2DE.

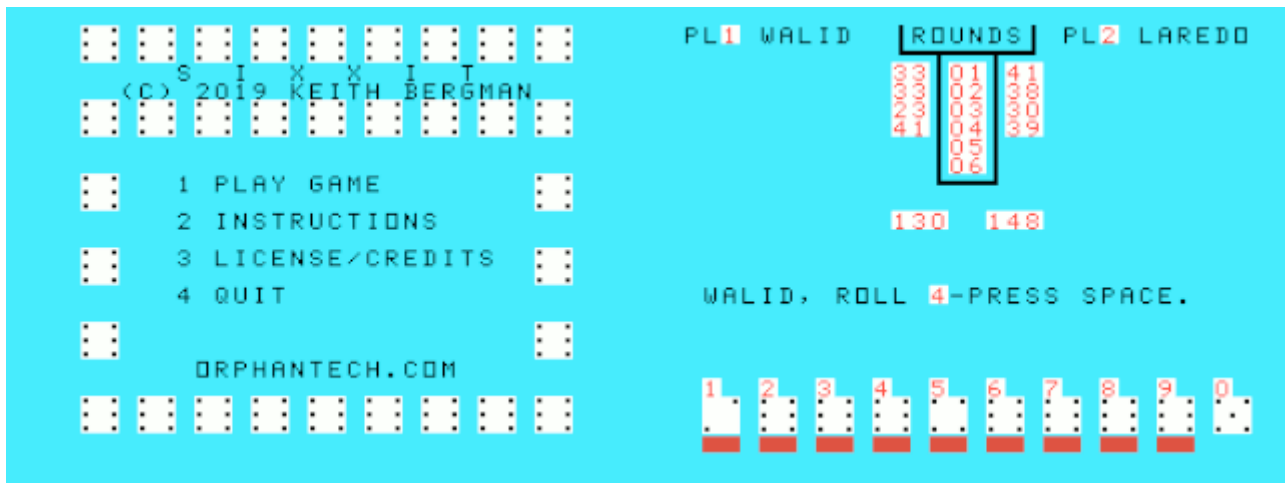
In Australia and New Zealand: Parker Games, 104 Bourke Road, Alexandria, N.S.W. 2015.

You may order additional score sheets directly from Parker Brothers at the same address.

Price: 3 for \$.50.

Sixxit

G-1-U [Disk: 315-SIXX] By Keith Bergman



Requiring both luck and strategy, this interesting dice game has you rolling 10 dice six times trying to score as many combinations of 6 as possible in order to maximize your score. Your opponent can be either the computer or another human. The graphics are crisp and clear with a well thought out very intuitive interface, and the AI is actually quite challenging as I was having one heck of a time winning at this game and I kept coming back for more punishment. Well done!

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: SIXXIT

Download Sixxit:

[Disk Image](#)

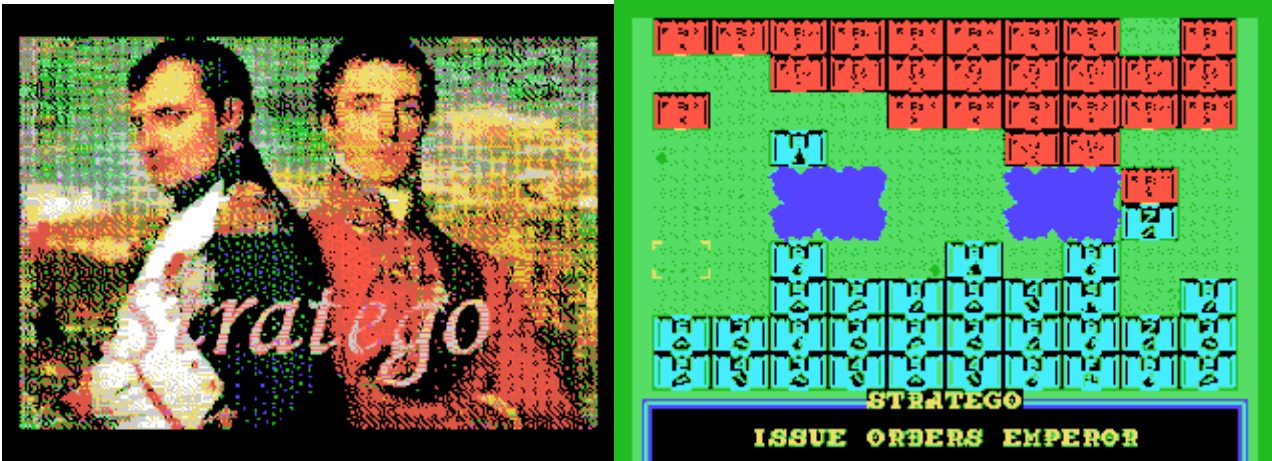
Select from mega menu: G – 1 – U

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Stratego

G-5-2 [Disk: 131-STRA] TI 99/4A Conversion by Walid Maalouli



In this computerized remake of the venerable board game Stratego, you take control of Napoleon's forces and face off against the Duke of Wellington's coalition controlled by the computer in the battle of Waterloo. The classic rules of the game are fully implemented, and you start off not knowing anything about your opponent's unit layout, which you will painfully discover subsequently. The object is to either capture Wellington's flag or destroy all of its movable pieces, and you have to carefully leverage your units' layout and particular abilities to win the day. The AI will put out a respectable show and the final outcome will heavily depend on the starting layouts as well as some luck. Programmed in Extended Basic then compiled using Harry Wilhem's XB Compiler for speed of execution.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: STRATEGO

Download Stratego:

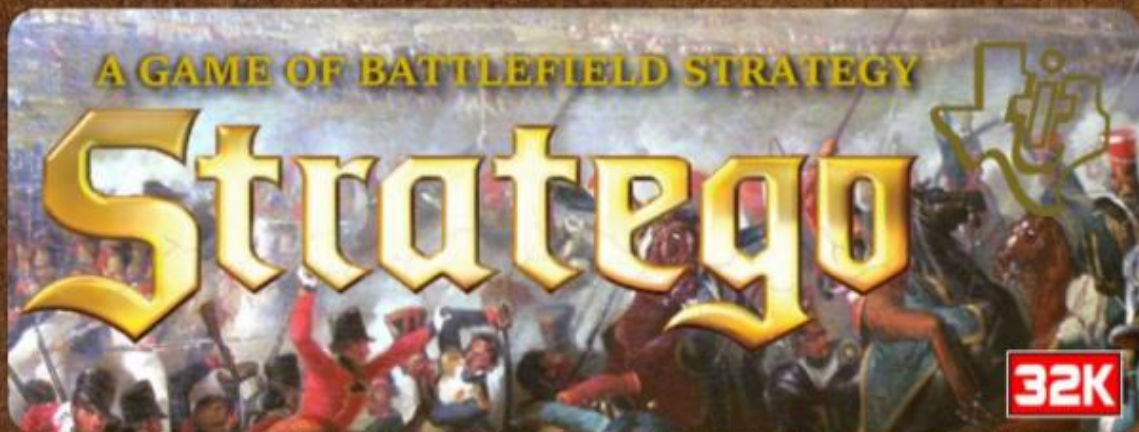
[Disk Image](#)

[Stratego Manual](#)

Start from mega menu: G – 5 – 2

Features: Title Screen, Compiled XB, One Player

Controls: Keyboard



June 18, 1815 – Waterloo

Napoleon Bonaparte, the newly minted Emperor of France, has escaped from exile on the island of Alba, rallied his loyal troops, and is marching towards the British and Prussian coalition army led by the Duke of Wellington. They finally meet near the town of Waterloo in Belgium.

The very fate of Europe depends on the outcome of this battle...

1. System requirements

- TI 99/4A computer
- 32K RAM expansion
- Single disk drive
- TI Extended Basic or compatible

2. Running the game

Insert the Extended Basic cartridge into the console and power up the computer. Select Extended Basic from the start menu.

At the READY prompt, insert the Stratego disk into the DSK1 drive and type RUN "DSK1.STRATEGO" including the quotation marks.

The game will now run and display a splash screen. Press **<ENTER>** to move on to the main game. While the game is loading, you will see some random characters appear on the screen. This is perfectly normal and will disappear once the game starts.

3. Objective

The object of the game is to capture your opponent's flag.

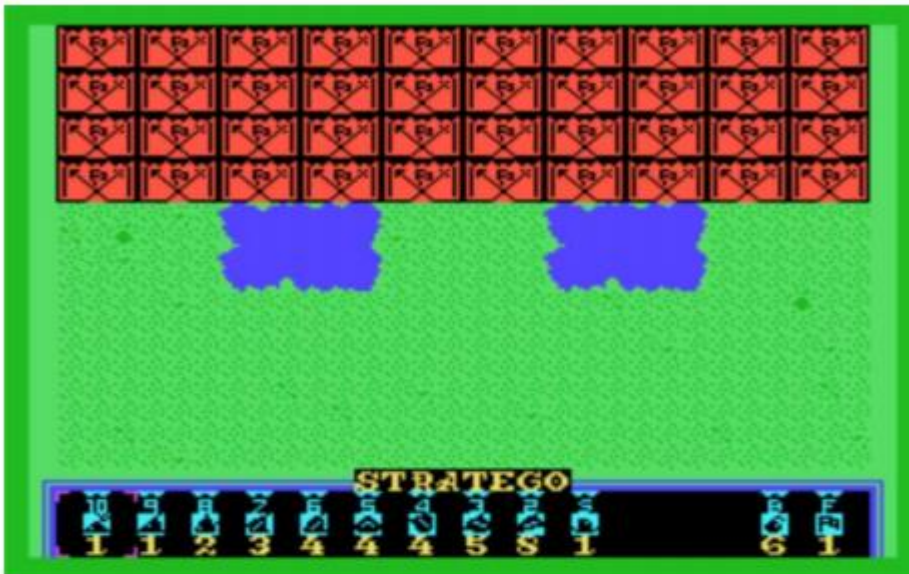
4. Setting up the battle field

You, the player, take on the role of Emperor Napoleon with your army represented by the blue units, and the computer will assume command of Wellington's army, represented by the red units.

First the battle field will be drawn, which consists of 2 central lakes which cannot be crossed, surrounded by a green plain with some vegetation. Immediately below the battle field is an informational window. The army units are restricted only to the green plain and cannot cross its borders. Each side will start with 40 units.

Once the battle field is drawn, you will be informed that Wellington is setting up his forces, and his red units will appear across the top 4 rows of the field, and their composition is initially hidden.

Now it's your turn to set up your army, which at the start of the game will occupy the bottom 4 rows of the field. The different types of units making up your army will be displayed in the window consisting of a point value, an icon, and the number of units of each type in yellow.



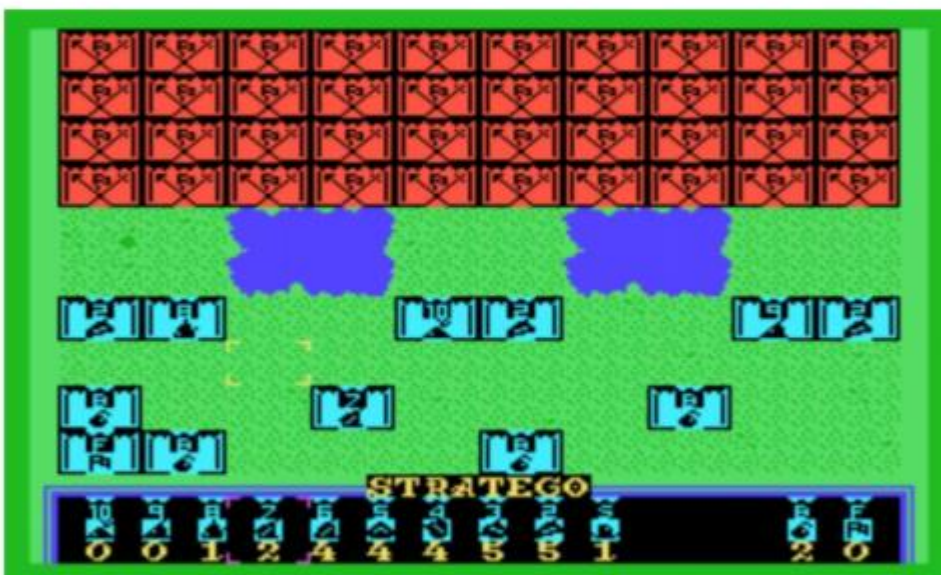
Each type of unit has a point value assigned to it as well as a rank, and the higher the point value, the higher the rank and thus attack and defense potential.

- Marshal - 10 points. [1 unit]
- General - 9 points. [1 unit]
- Colonel - 8 points. [2 units]
- Major - 7 points. [3 units]
- Captain - 6 points. [4 units]
- Lieutenant - 5 points. [4 units]
- Sergeant - 4 points. [4 units]
- Miner - 3 points. [5 units]
- Scout - 2 points. [8 units]
- Spy - 1 point. [1 unit]
- Bomb - n/a [6 units]
- Flag - n/a [1 unit]

A magenta cursor will be positioned initially around the Marshal in the window. You can move the cursor using the <S> and <D> keys left and right respectively, and the cursor will wrap around to the other

side past the edge of the window. The number below each unit indicates the number of units left of this type.

To select a unit to place on the field, position the magenta cursor over it and press **<ENTER>**. A yellow cursor will appear on the field which can be moved around the player's setup area using the **<S>**, **<D>**, **<E>** and **<X>** keys for left, right, up and down respectively. Press **<ENTER>** again and the unit will appear on the field at the location of the cursor. The number of units of that type will decrement by one. If it gets to zero, then you can no longer place that type of unit. Once a unit is positioned, the yellow cursor will disappear. Keep going through the same procedure until all your units have been placed.



If you wish to remove a unit from the field, position the magenta cursor in the information window over *any* unit and press **<ENTER>**, and a yellow cursor will again appear on the field. Position the cursor over the unit you wish to remove and press **<ENTER>** again and the unit will disappear, and its unit count number will be incremented by one in the information window. You can select it again later.

Once you have placed all of your units on the field and are satisfied with their location, press **<FCTN><6>** to initiate the battle. The

information window will display "Preparing for battle" then the computer will initiate the battle.

5. Rules of engagement

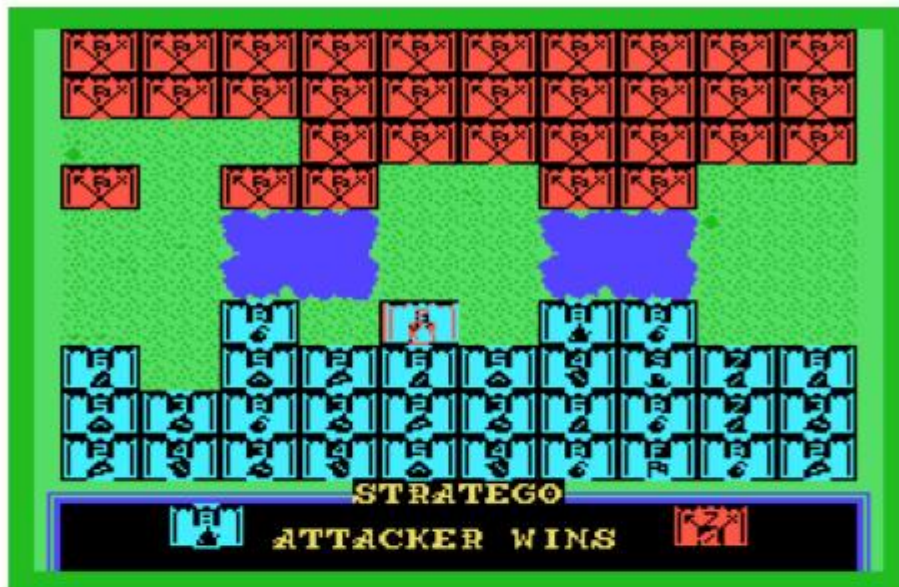
▪ Movement

- Turns alternate, *first Red then Blue*.
- A unit moves from square to square, one square at a time, with the only exception being the Scouts. A unit may be moved forward, backward, or sideways but *not diagonally*. It also may not move outside of the battle field outer edges or cross the lakes. To move a unit, position the yellow cursor which appears on the field when it is your turn over the desired unit and press **<ENTER>** and it will be overlaid with a magenta cursor. Next position that cursor over either an adjacent empty location or an enemy unit and press **<ENTER>**, at which point your selected unit will move over to the empty location or overlay the targeted enemy unit whichever is applicable. Should you decide to pick another unit to move after selecting it, just press **<FCTN><9>** and it will be deselected. *Please note that this can only be done if you have not already selected a target square.*
- Scouts may move any number of *open* positions in a straight line and land either on an empty location or over an enemy unit. They may not jump over lakes or other units.
- Two units may not occupy the same location at the same time unless they are engaged in battle.
- Only one unit may be moved each turn on either side.
- The Flag and Bomb units *cannot* be moved.



▪ **Attack**

- Attack is always optional.
- When one of your units moves over an enemy unit, a battle charge is initiated, and combat ensues. The rank of the attacking and defending units is compared, and the unit with the lower rank is lost for the remainder of the game and replaced by the higher-ranking unit.
- When equal ranks engage in battle, both units are lost.
- The Spy has the special privilege of being the only unit capable of killing the *Marshal* provided he strikes *first!* If the Marshal attacks the Spy first, then the latter is lost.
- When any unit except a Miner strikes a Bomb, that unit is lost but the Bomb remains in place.
- When a Miner attacks a Bomb, the bomb is defused and removed from play and the miner moves into its location.
- A Bomb or Flag cannot attack.
- Any unit can strike down the enemy Flag.



6. Victory conditions

- When a side strikes down the opposing Flag, then the battle is won by that side and the game ends.
- If all the *moveable units* on one side are lost, then that side loses the battle even if the Flag is still standing.
- The computer will resign if it does not have any good moves left if even its flag is still standing.
- At the player's discretion, the game can be considered a draw if neither side can force one of the victory conditions outlined above.
- When a victory condition is detected by the computer, then an announcement is made in the information window and the game is paused. Press any key to end the game and return to Extended Basic.



7. Play notes

The computer response time varies depending on the stage of the battle. It averages 10-12 seconds early on and will gradually get faster as the number of units on the board dwindles.

8. Credits

Coding and graphics: Walid Maalouli (aka Vorticon)

Sound effects: OLD CS1

Manual cover and disk label: Omega

Font: Sometimes99er

Programming and graphics tools:

- TidBiT TI Basic Translator (Matthew180)
- XB Compiler (Senior Falcon)
- Classic 99 TI 99/4A emulator (Tursi)
- Convert9918 image digitization program (Tursi)
- Magellan graphics program (The Codex, Retroclouds, Sometimes99er, Asmur)

Game completed on April 4th, 2019. It may be freely distributed but not modified or sold without the express consent of the author. The game is available for download on the TI Gameshelf site:

<http://tigameshelf.net/xb.htm>

Please address questions or comments to wmaalouli@comcast.net

Tiles

G-5-3 [Disk: 132-TILE] TI 99/4A Conversion by Alan W. Rateliff II



Tiles is a one- or two-player memory game which appeared in COMPUTE! Magazine, Volume 10, Number 2, Issue 93, February 1988, Pages 30-46. The program was originally written by Rick Harrison, with versions for the Commodore 64, Apple II, Atari 8-bit, IBM PCjr, Amiga, and Atari ST. The Texas Instruments conversion is based upon the game description in the article. You are presented with a grid into which an increasing number of tiles are hidden, and you have to uncover them. You start with 500 points and at the beginning of each round you are shown the tile positions. The longer you keep them displayed the more points are deducted from your score. Once hidden, you have an unlimited amount of time to find them again. Every time you successfully locate a tile, you are awarded 100 points, but you also lose 100 points if you uncover an empty square. The game ends when you run out of points or you give up. Simple and colorful, yet very challenging. Photographic memory definitely an advantage here! Great presentation and execution. (A TI BASIC version is also included on the disk).

Requirements: Extended Basic cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: TILESXB

Download TILES:

[Disk Image](#)

[Cassette tape may be purchased here](#)

Start from mega menu: G – 5 – 3

Features: Title Screen, XB, One or Two Player, Sound

Controls: Keyboard

Quest

G-5-4 [Disk: 133-QUES] By Adam Haase



With your greed knowing no bounds, you embark on a dangerous search for the Rainbow Gem hidden deep inside the Quest castle, a meandering 8-level deep abomination guarded by blood-chilling and deadly gruds whose faintest of touches can kill you instantly. Along the way you will find treasure filled chests as well as various magical items to help you along as well as numerous obstacles. You need to find the key to the door leading to the next level in order to move on. Given the number of gruds on each screen, gameplay still moves on briskly, quite a feat for an Extended Basic game, and you will find it increasingly difficult to maneuver around the monsters. Luckily you are provided with plenty of extra lives which helps stave off frustration and desperation. Each level is meticulously designed, and you will find yourself inexorably drawn to keep going and find out what's behind the next chamber. Really well done game!

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Executable to run: QUEST

Download Quest:

[Disk Image](#)

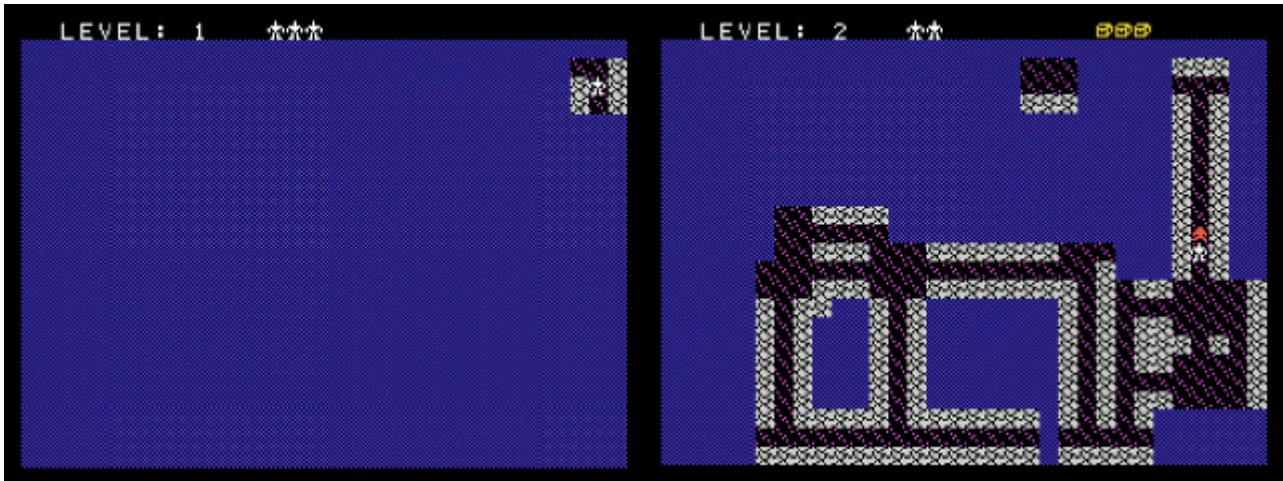
Start from mega menu: G – 5 – 4

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Dark Maze

G-5-5 [Disk: 134-DMAZ] By Adam Haase



You are a fearless adventurer, braving the awful depths of a dark and sinister dungeon for precious treasure. But beware! You are not alone in this foul place. You can hear something else moving down here... and it's getting closer... and louder! The maze will reveal itself as you move about, and you will be able to collect treasure chests, potions, and swords to fight the monster on your tail. Luck and quick thinking will get you through. Maybe...

Requirements: Extended Basic cartridge, 32K RAM, disk drive, joysticks.

Executable to run: DARKMAZE

Download Dark Maze:

[Disk Image](#)

[Dark Maze instructions](#)

Start from mega menu: G – 5 – 5

Features: XB, One Player, Sound

Controls: Joystick

TI-99/4A – Game Shelf Extended Basic Games

```
=====
Dark Maze v1.1 for TI Extended BASIC
(copyright 2010 Adam Haase/Quixotic Software)
=====
```

```
-----
LOADING
-----
```

Place the DARKMAZE file in the DSK1 folder of your Classic99 emulator

Launch Classic 99

Select "Extended Basic" from the Cartridge->Apps menu

Press any key

Press the 2 key to select Extended Basic

Type the following command and press ENTER:

```
OLD "DSK1.DARKMAZE"
RUN
```

Recommended: Play on CPU Overdrive

```
-----
GAMEPLAY
-----
```

You are a fearless adventurer, braving the awful depths of a dark and sinister dungeon for precious treasure.

But beware! You are not alone in this foul place. You can hear something else moving down here... and it's getting closer... and louder!

Unfortunately, it's very difficult to see down in this place. You can scour around you and see everything close, but far away places are a mystery. As you traverse the dungeon, you uncover its secrets and learn its twisting passages.

There are a few things to help you. A bubbling potion is here, drinking it causes the monster chasing you to stop for a brief time, letting you catch your breath and get out of his immediate reach.

Better still is the mystical sword, a powerful blade that will frighten and drive the monster away from you, for with it you can vanquish him and explore at your leisure... but the sword will disappear after a short time, so move quickly to catch him!

To advance to the next level, you must collect all the treasure chests on the dungeon level. The first level had three, and one additional chest is needed for each level, to a maximum of eight.

TI-99/4A – Game Shelf Extended Basic Games

You have three lives at the start of the game. Completing a level awards you one additional life, to a maximum of five. Each time the monster catches you, you reappear in a different portion of the maze, although areas you have already traversed will remain visible.

The game ends when your greed leads to your frightful doom...

SCORING

When you finally perish, your final score will be displayed. Two values separated by a slash indicate that the point award goes up per level, to the given maximum.

Picking up a Chest	50 points
Picking up the Sword	10 points
Picking up the Potion	10 points
Completing a level	100/1000 points
Killing the monster	100/1000 points

CONTROLS

Joystick - Move any of eight directions

Enjoy!

Werewolves and Wanderers

G-5-6 [Disk: 135-WEWA] By Owen Brand



As a mini-dungeon crawler, this little gem stands out with easy controls, crisp presentation and an engaging background story. You are a wanderer who finds himself inside the mysterious and dreaded Manor Castle rumored to be hiding a werewolf and other monstrosities, along with fabulous treasure. If you survive, you will have fame and riches, otherwise your soul will be lost to eternity. A meticulously crafted game that is highly enjoyable.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Werewolves and Wanderers:

[Disk Image](#)

[Werewolves and Wanderers instructions](#)

Start from mega menu: G – 5 – 6

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard



Werewolves & Wanderers



"You find yourself in a dark bedroom..."

Thus begins your great adventure into the ominous and mysterious world of the Manor Castle. Many Wanderers have met their end here, falling prey to despair, madness, or much worse. You have one night to find a way out of this place, or your fate will be the same as theirs...

The windows are unbreakable, the walls have ears and eyes, and you have only a few gold pieces in your pocket to begin your journey. You are not without resources, however. A magical incantation will take you to the Quartermaster's Store; a dark, dream-like commissary in another dimension. The Quartermaster is a sinister apparition, twisted and evil in his own right. Crossing him would not be advised.

As you travel through the mysterious Manor Castle, you may see things you wish you could "un-see." I assure you... you cannot.

You may find bits of treasure lying about or perhaps even chests of gold, lock-boxes containing valuables, or closets holding hidden secrets. Do not pass through any room without surveying it thoroughly, as you may regret it later. Take whatever items you can, as you never know what may prove useful to you during your trials.

If you possess a pure heart, sound mind, and keen wit, you may just see another sunrise.

Fare thee well, wanderer.



Wanderer's Key

- N: Travel Northward
- S: Travel Southward
- W: Travel Westward
- E: Travel Eastward
- U: Ascend Upwards
- D: Descend Downwards
- I: Inventory
- Q: Quartermaster's Store
- M: Use Magical Amulet*
- O: Open something
- T: Take something
- C: Consume rations



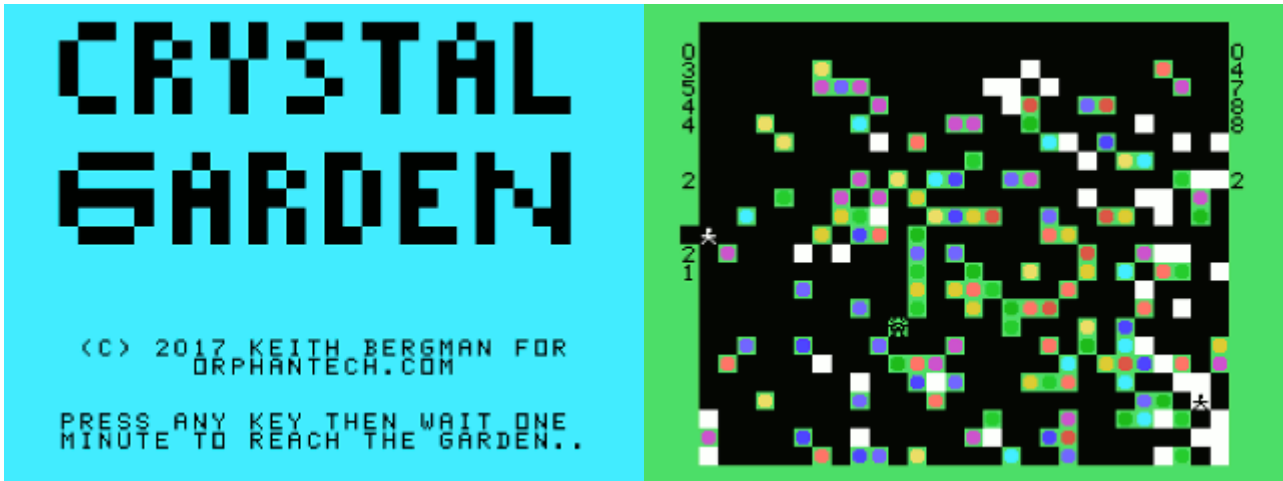
Other commands may be necessary as well (such as in battle) but you will be prompted as needed during the course of your journey.

*The Magical Amulet is a mythical treasure, sought by many historians and treasure-hunters. While it is rumored to be somewhere within the Manor Castle walls, no wanderer has ever claimed it. It is purported to give the possessor the power to transport into other areas of the Manor Castle. It may only be used once, however, and then it loses its power until the next Full Moon revives its magic.



Crystal Garden

G-5-7 [Disk: 136-CRYG] By Keith Bergman



If you like puzzle and maze games, then this one is definitely for you. It's really a clever combination of the two genres, where you, as the keeper of the magical crystal garden, are racing against a foe to open up 3 portals and save it as it is being destroyed by the forces of evil. Unfortunately, the garden keeps shifting, making path finding anything but straightforward. Gameplay is a bit slow and the controls can be very touchy, but overall it's a great way to exercise you noggin along with a good cup of tea on a quiet afternoon. I found it quite challenging, but definitely intriguing and original. I rather enjoyed it.

Requirements: Extended Basic cartridge, 32K RAM, disk drive.

Executable to run: CRYSTXB

Download Crystal Garden:

[Disk Image](#)

[Crystal Garden instructions](#)

Start from mega menu: G – 5 – 7

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

Crystal Garden
How to play:

Crystal Garden takes place on a screen full of multicolored gems, interspersed with some white and black spaces. You are at the top left corner of the Garden when the game begins, and one of your foes (we'll call him the Visible Foe) is on the bottom right corner. You are represented by a black stick figure on a white background, while the Visible Foe is your mirror image.

Your goal is to reach the top right corner of the Garden (the first portal), then the bottom right corner (the second portal). Once you've done this, you must find the third portal, which could be anywhere in the Garden - even under a black square. Once you've opened the first two, an indicator number will appear below your score - the number of columns away you are from the third portal. While this number will not give you an exact fix on its location, you'll also be shown the color of the space you're looking for. This will help you narrow down your search.

Keep in mind that the portal square will probably change color during the match, due to shifts in the Garden or attacks by the Rogue Foe. Sometimes noting the changed color of the portal square will help you identify its exact location (as your indicator square will also change color).

In each turn, you move one square in any of the four cardinal directions, or stay put. You can not move onto a black square. You score points for each move you make, depending on the color of the square you land on -- the lighter the color, the more points that gem rewards you. Squares you have traveled on become white squares, which you may revisit, and which will also provide points when you walk on them.

After you move (or elect to stay still), you may use your powers as the keeper of the Garden to shift one horizontal row of gems one space to the right. This will allow you to clear black squares from your path, block your Foe, or just give you a path of lighter gems and more points while on your journey. You cannot shift the row the Visible Foe occupies, but you can shift your own row -- a way to move further to the right (or wrap around the screen to reappear on the left side of the Garden). If you are both in the row, you cannot shift it.

The portals are fixed points - shifting rows and columns do NOT change their location, only the color of the gem or space above them.

You move with the classic ESDX keys, or press SPACE to stay put. When the indicator arrow appears on your left, use E and X to scroll to the row you wish to shift, then press ENTER.

After you move, the Visible Foe takes a turn as well. The Visible Foe leaves a path of black squares in his path, and absorbs energy from gems in reverse proportion to you. The Foe is unable to walk on white squares.

After you and the Visible Foe have each taken a turn, the Garden itself takes a turn, shifting several rows (or columns -- the Garden, unlike you, can also shift vertically). Due to the poison of conflict within its boundaries, when the Garden shifts a row or column, the gem at the end of the shifted section disappears, and a black square forms at the beginning. Thus, more black squares are introduced as the match progresses, further threatening the survival of the Garden.

(The Garden will only shift rows to the right and columns down.)

TI-99/4A – Game Shelf Extended Basic Games

Similar to your objective, the Visible Foe must reach the left top and left bottom corner of the Garden before he can pursue the hidden third portal.

Every time the Visible Foe scores another 250 points, the Rogue Foe is unleashed. This monster can only enter the Garden from the edges, and can only traverse black squares. It will rampage across as much of the Garden as it can, until it reaches gems it cannot touch, and then it explodes, turning adjacent squares black as it dies.

NOTE: if the Rogue Foe finds you during its rampage, it vanquishes you instantly and the game is over. It is important to avoid large sections of black spaces, especially ones connected to an edge of the playfield.

After the Rogue Foe's rampage, the Garden is in a state of turmoil, and a random number of gems across the Garden will spontaneously "explode" into black squares. After a few moments of this, the turmoil will pass, and the next turn will begin.

For either you or the Visible Foe to open the third portal, you must have the higher score. Thus, if you've unlocked your first two portals, and land on the square of the third portal, but your score is lower than the Visible Foe's, the portal will not open and the game will still be active. You must increase your score, then return to the third portal, before you can win the game.

If the Visible Foe unlocks the third portal and has a higher score than you, the Foe wins, the Garden is lost, and your game is over. If you achieve this feat with a higher score than the Visible Foe, your score stands and you are the winner of the match.

The Rogue Foe cannot open any of the portals during his brief attacks.

STRATEGY NOTES:

Remember, you must always be conscious of your point total. The longer the match goes on, the more of the Garden will be black squares, and the faster the Visible Foe's score will go up. You must play a mixture of offense -- moving toward your portals -- and defense -- using your limited row-shifting abilities to change the terrain to lower the Visible Foe's score, thwart his movements, and cut off paths the Rogue Foe could use to catch you.

Neither of your Foes are particularly intelligent. They react on primal instincts. The Visible Foe can be tricked.

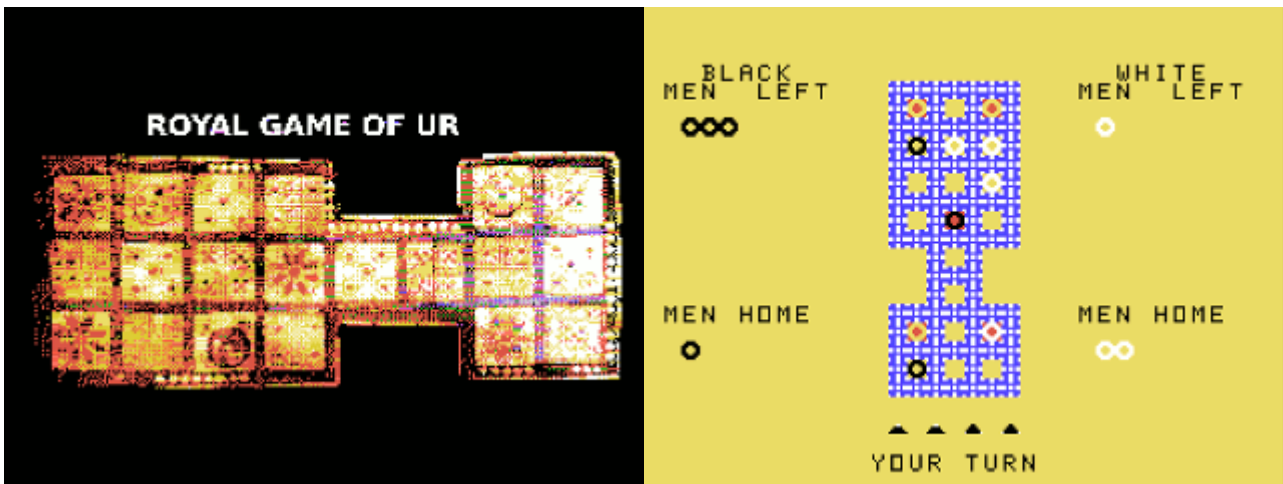
By the time you reach the second portal, the Garden will look very different than when you started. The path to the third portal may seem impossible, but remember, the Garden shifts with every turn. Try to create pathways toward open spaces -- move toward the bright colors and avoid, as much as you can, dark edges where the Rogue Foe can surprise you.

Remember that you can "wrap" from one side of the Garden to the other when you shift rows. If the third portal is far to the left side, this might be easier than trying to pick your way across the Garden one row at a time.

Using your row-shifting ability is an essential part of the game, whether hemming in the Visible Foe or clearing your own path through a darkening Garden. But shift rows when the time is right. Too soon, and the Garden's own shifting changes may undo your work. Too late, and you may not have enough turns to make the changes you need.

Royal Game Of UR

G-5-8 [Disk: 137-ROGA] By Walid Maalouli



The royal game of UR is an ancient Mesopotamian board game which was the precursor to backgammon. This [video](#) has all the details about the game and its rules according to the British Museum, and this computerized single player version is a faithful reproduction of the gameplay against a pretty good AI. While there is a lot of luck involved, there is also definitely an element of strategy. I found it to be very entertaining, although I have yet to beat the computer... The controls are very simple: Use the E and D keys to place the cursor over the token you want to move and press ENTER. To introduce a new token, press N. That's it! The graphics for the game were designed by Ramidavis.

Requirements: Extended Basic cartridge, 32K RAM, disk drive. Speech synthesizer optional.

Executable to run: UR

Download Royal Game Of UR:

[Disk Image](#)

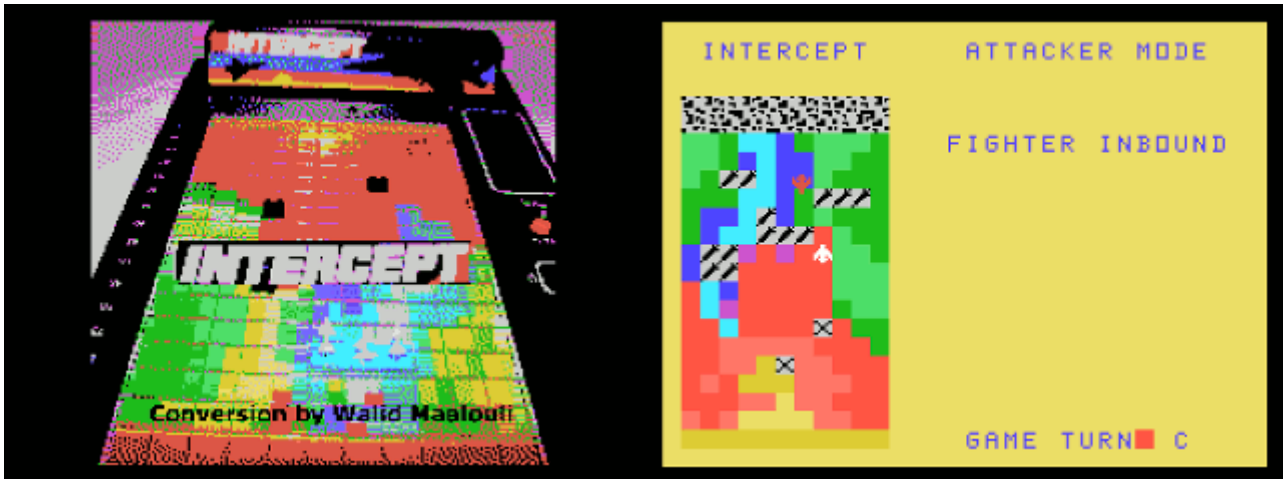
Start from mega menu: G – 5 – 8

Features: Title Screen, XB, One Player, Sound, Speech

Controls: Keyboard

Intercept

G-5-9 [Disk: 138-INTE] By Walid Maalouli



This is a computerized recreation of the classic 70's game of the same name but this time your opponent is a wily AI. You can play as the attacker where you try to sneak around the defenses of a base and bomb it, attempting to evade fighters on the lookout for you. You can also pick up the role of the defender instead trying to defend the base, which is the harder role. Simple yet effective gameplay that will bring back memories of childhood.

Requirements: Extended Basic cartridge, 32K RAM

Executable to run: INTERCEPT

Download Intercept:

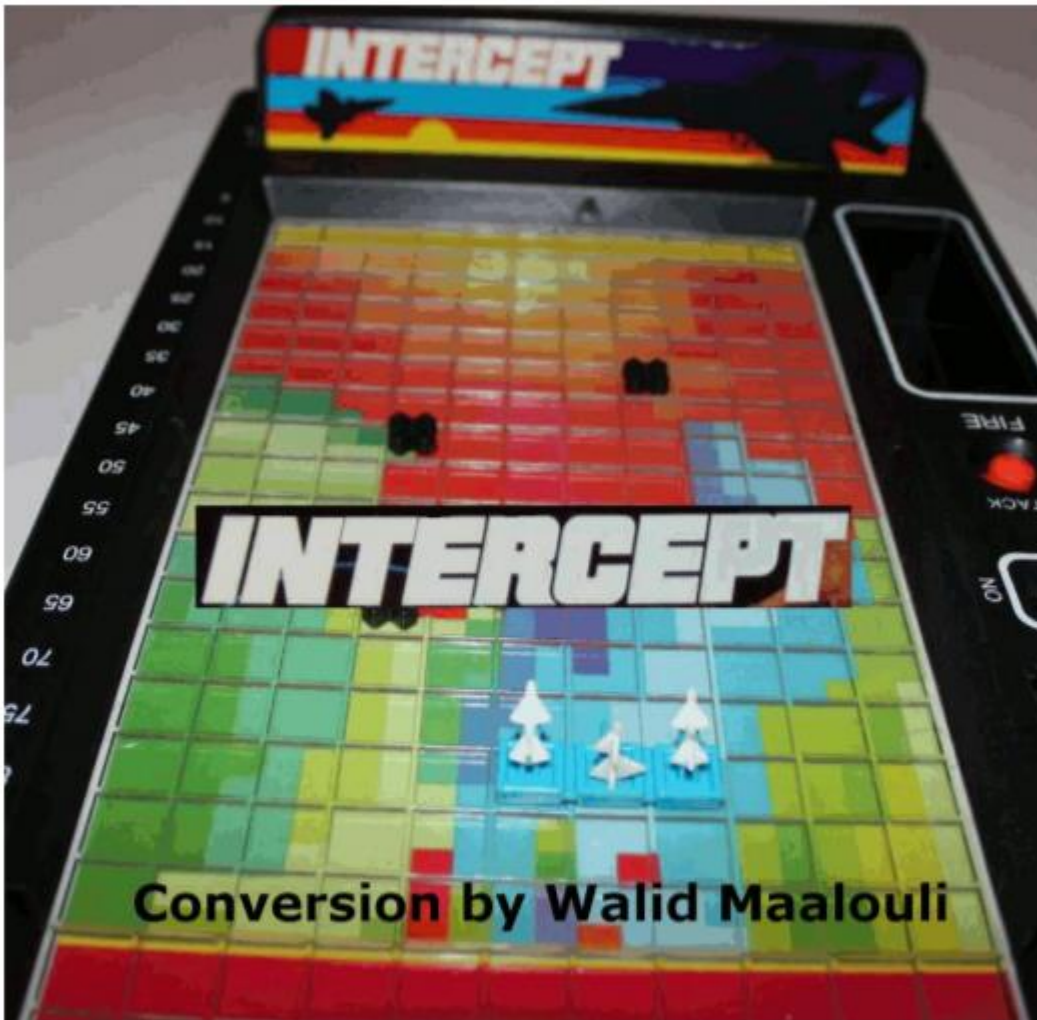
[Disk Image](#)

[Intercept manual \(PDF\)](#)

Start from mega menu: G – 5 – 9

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard



FOR THE TI 99/4A COMPUTER

TI-99/4A – Game Shelf Extended Basic Games

INTERCEPT is a computer conversion of the classic 70's electromechanical game with the same name.

As the *defender*, you have to protect your city from an incoming stealth enemy plane on a bombing run through the judicious placement of anti-aircraft missile batteries and combat air patrols by your own air force.

As the *attacker*, you have to use your stealth bomber to sneak through enemy defenses and avoid being detected by the enemy planes and shot down with your mission being to bomb the city.

Regardless of the role you choose, you will be faced with a competent computer opponent who would like nothing more than to blow you up to smithereens...

Game Requirements

In order to play **INTERCEPT**, you will need a TI 99/4A computer with the Extended Basic cartridge, 32K of RAM expansion and a disk drive.

Credits

Programming: Walid Maalouli – October 2017

Splash screen creation tool: Convert9918 by Mike Brent

TI-99/4A – Game Shelf Extended Basic Games

Gameplay

To start the game, type RUN "DSK1.INTERCEPT" and press "ENTER". The game consists of 2 files called INTERCEPT and INTERMAIN and both should be on the same disk. If you wish to run the game from a different drive, just change line 240 in the INTERCEPT file with the disk path desired and save the file again.

To get past the splash screen, press "ENTER" and the game will take a few moments to load then you will be presented with the playing field and a choice between playing the attacker or the defender.

The top 2 rows of the field represent the city. The bottom row is the attacker's starting area.

Attacker Play

The computer will automatically place its defensive missile batteries on the field, then you will be asked to pick a starting square on the starting row by using the right and left arrow keys then pressing ENTER when done.

At that point, you can start moving your bomber. Remember that at no time during the game does the computer have knowledge of your exact position, including your starting square.

You can move horizontally and vertically but not diagonally for a total of 4 squares per turn using the arrow keys. You cannot cross or land on missile batteries locations. Your move count will be displayed on the right going from A to D. If you want to take back a move, press the FCTN-9 key. When satisfied with your position, press ENTER.

Your objective is any square within the 2 city rows on top of the playfield.

Then it will be the computer's turn to move and it will send out 2 waves of fighter aircraft to hunt you down. Each wave will travel to a location on the playfield and fire missiles. If that location happens to be your current position, then your bomber is destroyed and you lose the game. Otherwise, it's your turn again to move. If the computer fails to find your bomber, then a black marker indicating your last position will be placed on the field, which the computer will use in its target computations during the following game turn.

Your move and the subsequent computer move represent one game turn, and you have 10 game turns, from A to J, to complete your mission. The game turn letter will be displayed on the bottom right of the screen.

In order to win the game, you have to safely reach one of the city squares within that 10 turns limit. It is important to remember however that even when you do reach the target, the computer still gets to launch one final set of fighter waves before you get to declare victory!

TI-99/4A – Game Shelf Extended Basic Games

Defender Play

Here the roles are reversed and now it's your turn to defend the city. At the start of the game, you will have to choose the location of the defensive missile batteries. You have at your disposal 4 batteries in different configurations and these will be displayed on the right-hand side of the screen.

To place a battery on the playfield, first press its corresponding letter, and a small yellow marker will appear next to it. You can only pick any particular battery once. At that point, a cursor will be displayed on the playfield which you can move with the arrow keys. The cursor represents the leftmost or left uppermost square of the battery, and you will not be able to place a battery unless all of its squares are within the playfield. Once satisfied with the location, press ENTER and the battery will be placed on the playfield. Follow the same process with the remaining batteries, and when you place the last one, it will be the computer's turn.

The computer will then start its bombing run following the same rules outlined in the attacker section, and you will be prompted to move your fighter waves after each run. A cursor will appear on the playfield which you will be able to move with the arrow keys. Select a target square by pressing ENTER then sit back and watch the fighter plane make its attack. You have 2 attack waves per turn. If you manage to hit the enemy bomber then you win the game, otherwise it's on to the next game turn and a black marker will appear on the playfield indicating the last position of the enemy bomber.

Here again, the computer will have 10 game turns to reach a city square. If it fails to do so, then you win. Otherwise, you lose the game.

Oregon Trail

G-5-A [Disk: 139-OREG] By Majestyx



What could be more classic than the Oregon Trail game originally appearing on the Apple 2 computer? This excellent remake for the TI 99/4A captures the troubles and tribulations of a caravan travelling from Independence, Missouri to Oregon City, Oregon in 1847, a trip of 2040 miles over several months. On the way, you will encounter a variety of obstacles that will slow you down or even downright doom your expedition, and you will have to manage your resources carefully in order to make it safely to your destination. Well executed.

Requirements: Extended Basic cartridge

Executable to run: OREGONTEB

Download Oregon Trail:

[Disk Image](#)

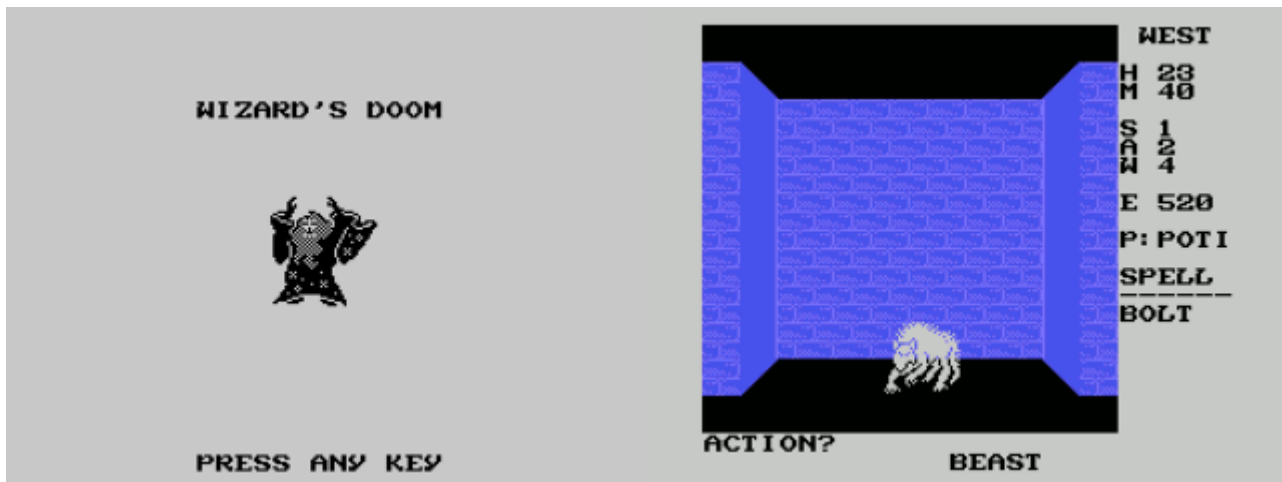
Start from mega menu: G – 5 – A

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Wizard's Doom

G-5-B [Disk: 140-WIDO] By Adam Haase



This superb sequel to Rainbow Software's Wizard RPG series, namely Wizard's Lair and Wizard's Revenge both of which can be found further down on this page, is really a fitting continuation and cap to the series, with the Evil Wizard's third reincarnation this time in Maldred's Castle. You are tasked to clean the castle's dungeons of its sinister monsters and seek out and defeat the Wizard himself. As you wonder around, you will find a bewildering array of items, spells and weapons which will enhance your strength, knowledge and experience in preparation for the final encounter, along with many different kinds of interesting monsters, thus making for a very rich playing experience. To help you out, a map of your meanderings is automatically generated and updated, a feature you will find invaluable. Compared to the original series, the graphics have been enhanced, particularly the monster depictions, and the screen redraws are very fast thanks to assembly language support. The difficulty level is well balanced, challenging enough to keep you on your toes but without an undue amount of frustration. Finally, the manual is extremely professional and well laid out, emphasizing the overall high attention to detail Adam is renowned for. It is however a rather solitary experience for your alter ego, being limited to only one of the different castes rather than having a party based game where one can leverage the strength of different castes during the game. Regardless, this is a gem that should not be missed.

Requirements: Extended Basic cartridge, 32K RAM, disk drive

Executable to run: XB Autoload

Download Wizard's doom:

[Disk Image](#)

[Wizard's Doom manual \(PDF\)](#)

Start from mega menu: G – 5 – B

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

WIZARD'S DOOM



FOR THE TI-99/4A
EXTENDED BASIC
32K MEMORY

BACKGROUND

Many decades of peace have passed since the realm was tormented by the Evil Wizard... First he was slain in the dungeon of Weymoor Castle, and then in the dungeon of Bleylock Castle, both times by brave and mighty heroes. All the good folk of the realm prayed and hoped that he was gone forever... Alas, it was not to be. The Evil Wizard has returned by means sinister and unknown. People now whisper that he cannot be truly killed, for he has achieved some terrible mastery over life and death in his travels in the forbidden zone. He has claimed the dungeon of ruined Maldred Castle to fulfill his malevolent designs and wreck vengeance upon all that opposed him. Strange fell creatures have been seen abroad at night, emerging from the dungeon depths to plague the innocent and bring valuable treasures back to the Wizard. The King has offered a great reward to the would-be slayer of the Evil Wizard, but such wealth is nothing compared to what the Wizard possesses... Since his return, many great warriors and skilled magic-users have entered the dungeon, seeking to kill the Evil Wizard once and for all and lay claim to the vast store of riches he possesses. None have ever returned to the light of day. And now it is your turn.

You approach the dungeon's dark malodorous entrance, with only a few simple weapons and spells at hand to fight the forces of evil. As you enter the darkness the doors slowly swing shut behind you and an evil cackle arises from the depths... You grimly move forward to find your destiny...

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GETTING STARTED

Make sure the ALPHA-LOCK key is in the down position. Insert the disk into your DSK1 drive and insert the Extended BASIC cartridge. Press 2 twice from the Master Title Screen and the game will auto-load. You can also type RUN "DSK1.LOAD" at the command-prompt in Extended BASIC. Please leave the disk in the drive while playing; the game will load data from the disk during gameplay. After loading, you will see a title screen. The next screen will ask if you wish to restore a prior game or start a new game. Press 1. The next screen will allow you to select a class. After making your selection the computer will take a few minutes to generate dungeon level one. When the "PRESS ANY KEY" prompt appears, press any key to begin.

CLASSES

There are three classes to choose from:

WARRIOR: Very strong with average agility and low wisdom. A warrior can use the best arms and armor, but are unable to cast spells. If you are playing for the first time, a warrior is the easiest to play.

MAGIC-USER: Very wise but physically weak with average agility. A magic-user has great magical power and rely on spells for combat and defense. They only use simple weapons and wear light armor. They begin with the BOLT and WARD spells in their spellbook. A magic-user is the most challenging class to play.

ADVENTURER: Average strength and wisdom, but very agile. An adventurer is a jack-of-all-trades, master of none. They can use most weapons, wear most armor, and also cast spells. They begin with the BOLT spell in their spellbook.

Every class begins with a STICK for a weapon, which will be discarded whenever a better weapon is found.

INTERPRETING THE SCREEN

The large window shows a three-dimensional view of the dungeon chamber you are currently in. You can also see up to two chambers ahead. To the right of this window are status indicators. The top line displays the direction in which you are now facing: north, south, east or west. Below this, the following statistics are listed:

H: HEALTH. This is your life force value.

M: MAGIC. This is your magical power value.

S: STRENGTH. Determines how much damage you can inflict with a successful attack.

A: AGILITY. Determines your ability to dodge and strike effectively during battle, as well as disarm traps.

W: WISDOM. Determines how powerful your spells are, as well as your ability to discover traps, inscribe scrolls and examine items.

E: EXPERIENCE. Your overall level of power. You get experience points for picking up treasure, defeating monsters and disabling traps.

Below these statistics, the current selected item in your backpack is displayed. It is abbreviated to the first four letters, preceded with its type letter and a colon. If you are playing a spellcasting class, you will also see the current active spell, abbreviated by the first six letters. Near the bottom, if you have any active effects on you, they are displayed as a list of letters. (See STATES).

All commands are entered from the keyboard and will be displayed following the word "ACTION?:" under the window.

SAVING/LOADING

You can save your game any time you are not in combat by pressing FCTN-9. This will prompt you to enter a path and filename; the default is DSK1.GAME. You can restore your game in progress by pressing 2 after the title screen and entering the filename.

TI-99/4A – Game Shelf Extended Basic Games

THE COMMANDS

The following is a list of all commands used in the game. All commands are activated by pressing the key indicated. A "beep" will sound with each command.

F	Move forward.
R	Turn right.
L	Turn left.
B	Turn 180 degrees.
E	Display the items in your backpack.
S	Display the spells in your spellbook.
P	Pick up items.
M	Display map.
T	Look for traps on items in the chamber.
C	Cast the current active spell.
I	Inscribe the currently selected scroll into your spellbook.
X	Examine active item.
N	Go down to the next level. (From exit chambers only)
D	Drop the currently selected item.
A	Attack.
U	Use the currently selected item.
1,2	Select/cycle through the items in your backpack.
9,0	Select/cycle through the spells in your spellbook.
/	Quick retreat. (slash)
FCTN-9	Save game

MOVEMENT

If you are facing an open passage, you can press F to move into the next chamber. If you wish to go down a passage to your left or right, you must first turn to face that direction and then move forward. You cannot move forward through a chamber if a monster is present. You can retreat from a monster, which moves you back to the chamber you were previously in. The Evil Wizard, while immortal, will arrogantly allow you to pass by him.

PICKING UP ITEMS

Each chamber can hold one item. Chests contain the Evil Wizard's treasures. Crates contain weapons, armor, or shields. Magic items appear as a bottle, scroll, ring or gemstone. Press P to pick up an item. If it is treasure, your experience total will increase. If you pick up any other item they will be added to your equipment pack. Fifteen items can be held in your pack.

USE and DROP ITEMS

To use an item in your backpack, hold the 1 or 2 keys to cycle through the items in your backpack until you find it. Press U to use it. To drop an item, press D.

EQUIPMENT

To display all the items in your backpack, as well as your equipped weapon, armor, shield and ring, press E. This command can also be used to pause the game. You cannot view your equipment list while in combat. You can also sort your backpack's contents by pressing S. You may hold one weapon, wear one suit of armor, wield one shield and wear one ring at any time. To change weapons, armor, shields and rings, select and USE them. The new item will replace the old one, which will be stored in your backpack.

EXAMINE

Any item in your backpack can be examined to determine its nature or how powerful it is. The higher your wisdom and experience the more likely you'll be successful. If you fail, you must either wait until you're more experienced or wise, or use it to reveal what it is.

INSCRIBE

You can copy spells into your spellbook by pressing I when a scroll is the active item. Your wisdom and experience determines if you are successful. If you fail, the scroll is destroyed.

SPELLS

If you are playing a MAGIC-USER or ADVENTURER class, you have a spellbook that contains all your known spells. You can select your active spell by pressing 9 and 0 to cycle through the list. You can view your spellbook by pressing S. You can also re-arrange spells in your spellbook to keep your most used spells closer together. When you CAST a spell magic points are consumed; the exact amount used is determined by your wisdom and experience. Magic points are regained through either magical items or by descending to the next level of the dungeon. To get new spells into your spellbook, you must find scrolls in the dungeon and inscribe them (See INSCRIBE).

There are fifteen different spells in the game. Some examples are:

BOLT : Fires a magical bolt of energy at a monster, inflicting damage.

WARD : Generates a magical shield around you, warding off attacks.

DISARM : Disarms an active trap on an item in the chamber with you.

HEAL : Restores HEALTH.

LOCATE : Uncovers the entire dungeon map.

STATES

Through spells, potions, and monster attacks, you can suffer or benefit from several different effects. When affected, the status is listed below your active spell, using the indicated letter. Some states conflict with one another and won't occur at the same time. All effects wear off as you move around, or as you descend to the next dungeon level.

POWERED (P): You inflict double damage with physical attacks.

SHIELDED (S): You have magical evasion that improves your chance to dodge attacks.

ARMORED (A): You have magical protection that reduces the amount of damage you take upon a successful attack.

NUMBED (N): You have a reduced chance to hit and evade in combat.

WEAKENED (W): You inflict only half damage with physical attacks.

CURSED (C): You are extremely unlucky; everything you do will be plagued with bad luck.

ATTACKING

If you enter a chamber containing a monster, you cannot proceed past it unless the monster is dealt with. You can retreat from the chamber and fight the monster later (See MOVEMENT). A monster may not attack right away, so you may have time to retreat before they decide to. If you decide to attack, press and hold A. Once a monster is attacked they will begin attacking you. Keep the A key held down to guarantee you get your attacks in-between theirs. If you successfully hit a monster, the monster will flash. If a monster hits you, the screen will flash red. If the monster uses a special ability, the screen will flash magenta and you'll be told the effect it had. Your agility and experience determine how accurate your attacks are, and your strength and weapon how much damage you can inflict. You may have to hit a monster quite a few times before killing them. Always keep an eye on your HEALTH during battle, and be ready to retreat if it gets close to zero. If you are CURSED, there is a chance that the monster will knock your weapon or shield from your hands, and you will lose it. If you defeat a monster, you will gain the appropriate experience points, and the monster may drop an item on the floor. If you retreat from the chamber after combat has started, the monster will rejuvenate and will be at full strength when you return. Also, monsters in chambers adjacent to yours may decide to move in to investigate. If there is a monster in the chamber ahead of you, it appears as a vague shadow. Don't stand idle for too long!

MONSTERS

There are over twenty different monsters in the dungeon of Maldred Castle. As you progress to the deeper levels, the stronger the monsters become. More powerful monsters have special abilities which they occasionally use in combat. Some are also immune to certain spells while others are more vulnerable. And in the deeper levels, monsters are immune to non-magical weapons, or can bypass non-magical armor and shields with their attacks. Always be ready for the unexpected!

MAGICAL ITEMS

There are over thirty different scrolls, potions, and magical items that can be found throughout the dungeon. Initially, they are identified only by their type. To determine what they are, you must examine them (See EXAMINE). There are four different classifications of magical item:

POTION (P): A magical potion that is (usually) beneficial.

SCROLL (S): A piece of parchment with a spell written on it. These can either be used (casting the spell from the scroll) or inscribed into your spellbook.

RING (R): A magical ring that grants an effect as long as it's worn. You can only wear one ring at a time.

GEM (G): A gemstone imbued with a powerful enchantment.

Items that increase Strength, Agility or Wisdom will not increase them past 8. Rings are an exception to this; they grant a bonus on top of your natural attributes.

ARMS AND ARMOR

There are forty different weapons, armor and shields which can be found in the dungeon. Examining them will reveal how powerful they are (See EXAMINE).

WEAPONS (W): The stronger the weapon the greater amount of damage you can inflict upon a hit. Weapons that are described as **MAGIC** are necessary to hurt more powerful monsters.

SHIELDS (B): Shields and cloaks provide a bonus to your ability to dodge an attack. Shields described as **MAGIC** are needed to evade powerful monster attacks.

ARMOR (A): Armor reduces potential damage from a monster strike. Armor that is described as **MAGIC** will be needed against the more powerful monsters.

TRAPS

Any item found in a chamber may have been booby trapped by the Evil Wizard. You can search for traps before picking it up by pressing T. The higher your wisdom and experience, the more likely you will be able to find a trap. If a trap is found, you are asked if you wish to disarm it. The higher your agility and experience, the better chance you have of disarming it safely. If you fail, the trap is set off.

THE MAP

Press M to display the map and your current level. The map is oriented so that north is always the top edge. Unexplored chambers are shown as checkerboard boxes. The exit chamber down to the next level is shown as a dot. Your position is marked with a red square. To return to the game, press any key. You cannot view your map while in combat.

LEVELS

The dungeon of Maldred Castle contains six levels. The deeper you go, the larger the dungeon level and the harder it becomes to survive. Exit chambers contain a passage leading down. If you are in an exit chamber, you can proceed to the next level by pressing N. You will be asked for verification to do this. The computer will take a few minutes to set up the next level. Between levels, the rest you receive will boost your HEALTH and MAGIC values and end any active effects.

RATINGS

Whenever a game ends, your rating will appear at the top of the screen. This rating is based upon treasures collected, monsters slain, chambers explored and if you were victorious against the Evil Wizard.

TI-99/4A – Game Shelf Extended Basic Games

WINNING THE GAME

To win the game, you must reach level 6 and kill the Evil Wizard. This is not an easy task, for the Wizard has incredible strength and magical power. He cannot be permanently killed until you have discovered the secret of his immortality. Unlike other monsters, the Wizard will allow you to pass by him, at least until you have made him vulnerable. After that, you fight until one or the other is dead...

After either your victory or defeat, you will be prompted if you wish to play again. Press Y to start a new game. Pressing N will return you to the BASIC prompt.

Good luck!

WARRANTY

Rainbow Software warrants that the media on which this program is furnished will be free from defects in material or construction for a period of thirty (30) days from the date of delivery to the consumer. This program is provided on an "as is" basis and Rainbow Software will not be liable for any damages, including incidental or consequential damages resulting from the use or operation of this product. This warranty will be void if the product has been damaged by misuse, accident, neglect or any other cause not directly related to defects in material or construction.

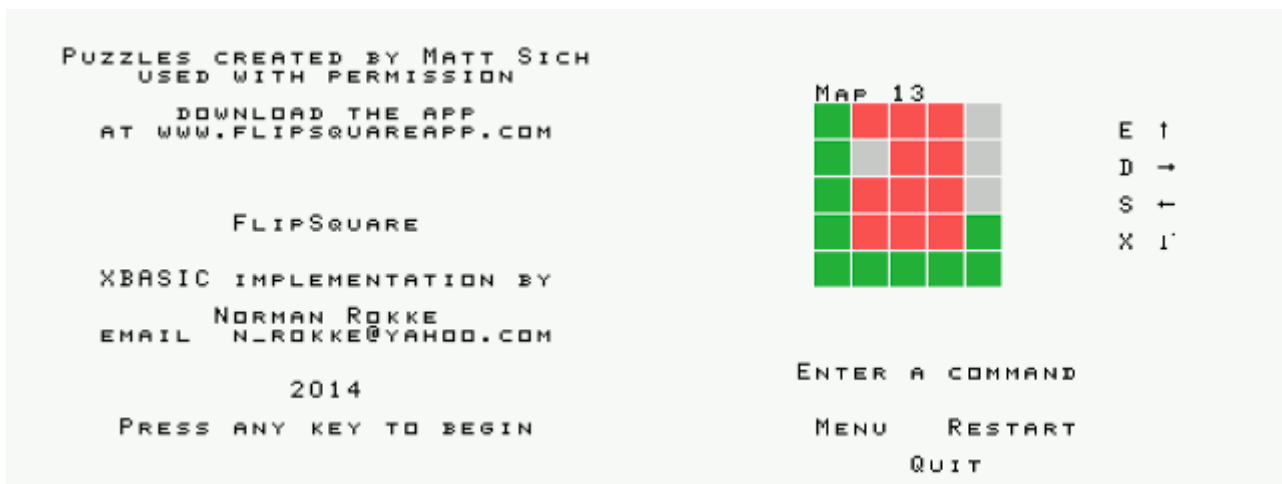


**Rainbow
Software**

15 ROSE STREET BROOKLYN N.Y. 11236

FlipSquare

G-5-C [Disk: 141-FLIP] By Matt Sich / TI Version by Norman Rokke



This is a puzzle game where you have a grid of red squares and your job is to turn them all into green ones. Easier said than done given that there are the inevitable complications such as blocking squares, jumping squares, squares requiring multiple passes, and of course the fact that once you start flipping in one direction you automatically continue till the end of the row or column. There are 9 different grids in the game in increasing level of difficulty, enough to keep you occupied for a while. An interesting and challenging game that is well executed graphically, easy to learn but difficult to master, limited only by the fact that replayability is non-existent once all 9 puzzles have been solved.

Requirements: Extended Basic cartridge, 32K RAM

Executable to run: FLIP

Download FlipSquare:

[Disk Image](#)

[FlipSquare instructions \(rtf\)](#)

Start from mega menu: G – 5 – C

Features: Title Screen, XB, One Player

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

FlipSquare

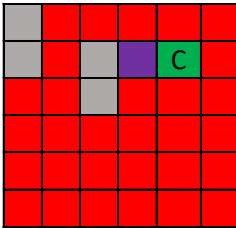
FlipSquare is a puzzle game in which each puzzle is called a Map. The simplest Maps consist of a square array of squares which are either red or gray. The object is to flip all of the red squares to turn them green. Gray squares can not be flipped. They simply get in your way and make solving the puzzle harder. You begin by picking one of the red squares as your starting point. Then you move to adjacent red squares either horizontally or vertically. Red squares in the chosen direction are flipped until you encounter a gray square, a green square or the edge of the Map. Then you move in a different direction. You will either flip all of the red squares (success) or arrive at point where there are remaining red squares but with none adjacent to your current position (fail).

Orange squares

Orange squares must be passed through twice. The first pass changes the square to a red square and the second pass changes it to green.

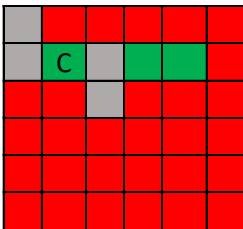
Purple squares

When you encounter a purple square it changes to green but also jumps you over the next square in the direction you are moving providing that you land on a square that can be flipped (red). Consider the following:

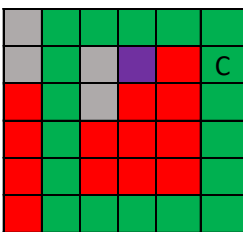


Where C is your current position

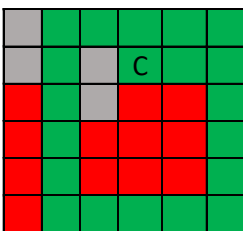
If you choose to move left the result will be



However, if the situation were as follows:



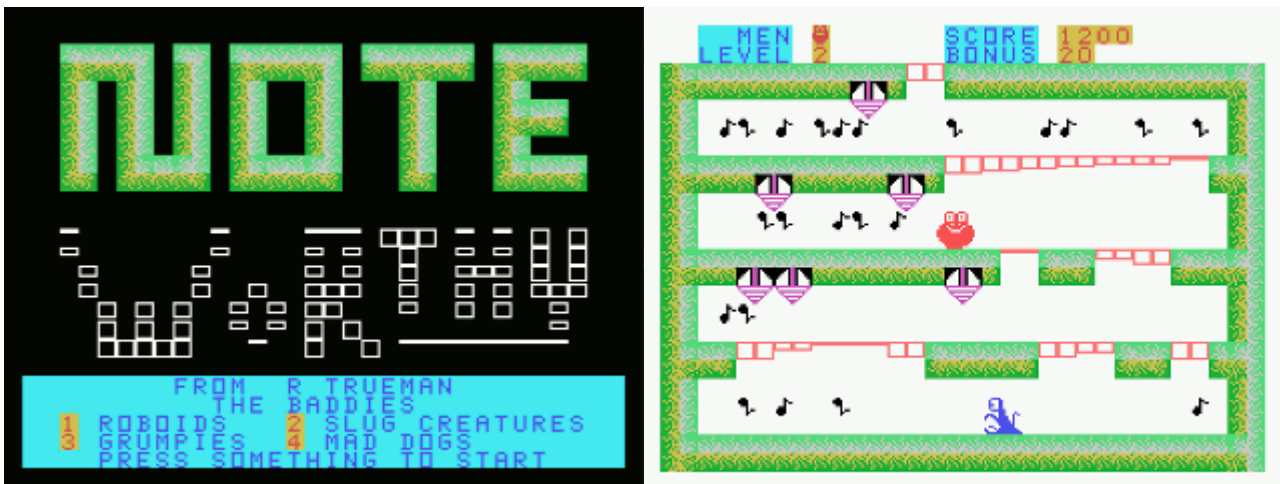
If you choose to move left the result will be



You can not jump over the gray square because there is not a red square on the other side.

Noteworthy

G-5-D [Disk: 142-NOTE] By Roland Trueman



This really cute and original platformer has you collect musical notes on each level while avoiding monsters and mechanical spikes from the ceiling. Straightforward gameplay with a colorful presentation and well balanced difficulty level. I bet you children will have a blast with this one, and so did I! Highly recommended.

Requirements: Extended Basic cartridge, 32K RAM

Executable to run: NOTEWORTHY

Download Noteworthy:

[Disk Image](#)

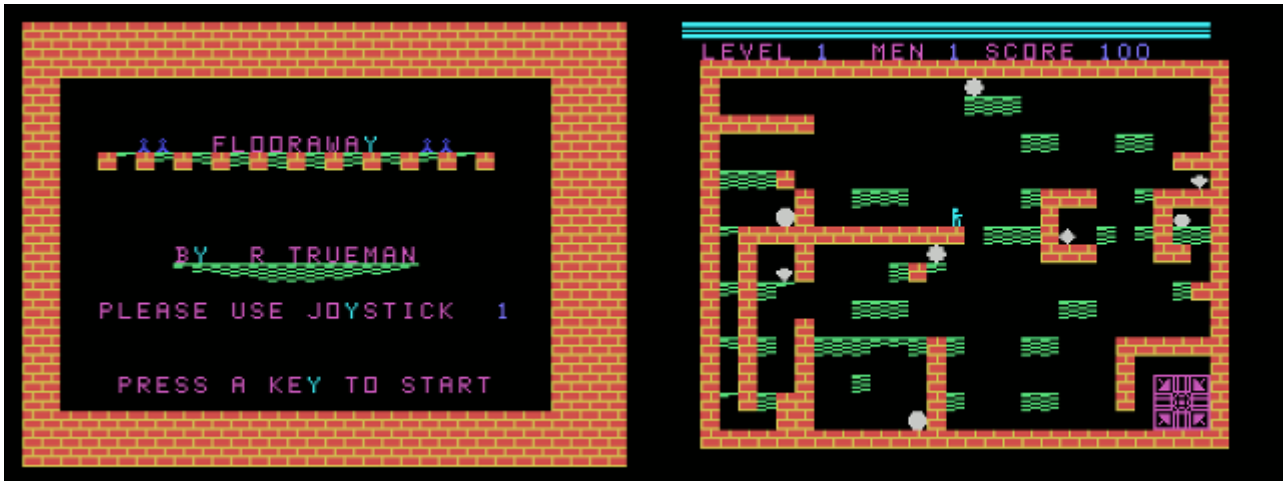
Start from mega menu: G – 5 – D

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Flooraway

G-5-E [Disk: 309-FLOO] By Roland Trueman



In this platformer, you are a miner trying to collect 8 treasures on each of the 5 mine levels. The problem is that the wooden platforms of the mine are rotting away, and so standing on them for too long makes them collapse with dire consequences for you. Furthermore, you have to jump from one platform to another in order to complete your task, complicating matters further. Oh and did I mention that you have a limited amount of air on each level? Fair warning: this is a hard game and excellent reflexes are a must in order to survive long enough to enjoy the game. That said, it is very well done for those with the stomach for it...

Requirements: Extended Basic cartridge, 32K RAM, joysticks

Executable to run: FLOORAWAYJ

Download Flooraway:

[Disk Image](#)

Start from mega menu: G – 5 – E

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joysticks

Billy Ball To the Rescue

G-5-F [Disk: 143-BIBA] By Roland Trueman



This is a cute and colorful platformer where you guide a vaguely Pac Man like character through multiple screens filled with baddies, jumping your way over them and moving on. It's not quite clear what the endgame is however as I have not been able to quite finish it, but it must be some kind of rescue given the game title. There is mini-map at the top of the screen to give you an idea of where you are, which is nice. Regardless, it is quite well done with smooth gameplay and good sound effects. Pretty enjoyable.

Requirements: Extended Basic cartridge, 32K RAM

Executable to run: B/RESCUE

Download Billy Ball To The Rescue:

[Disk Image](#)

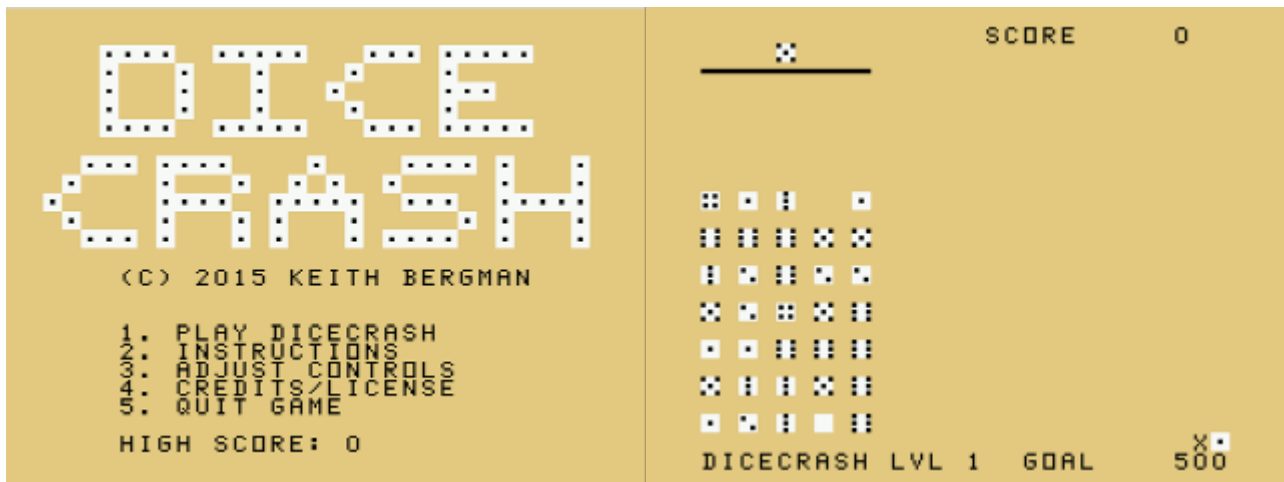
Start from mega menu: G – 5 – F

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick

Dice Crash

G-5-G [Disk: 144-DICE] By Keith Bergman



In this original game with the feel of both Tetris and Draw Poker, your goal is to arrange randomly popping dice in rows to create different combinations each worth a certain number of points to reach a set goal. There are also a variety of power ups, some helpful and some not to much, to spice things up a bit. You have a very limited amount of time to make a decision as into which column to drop the dice, which adds an element of termulouness to the game. The keys however do not always register immediately, which can sometimes cause the dice to drop into the wrong column. Nonetheless, the game is very well implemented and quite entertaining. Nicely done.

Requirements: Extended Basic cartridge, 32K RAM

Executable to run: DICECRASH

Download Dice Crash:

[Disk Image](#)

Start from mega menu: G – 5 – G

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

In The Dark

G-5-H [Disk: 145-INDA] By Rich Gilbertson



You are a prisoner in a vast maze, being chased by a deadly repair robot. It is totally dark, so you must feel your way around on your hands and knees trying to avoid or disarm booby-traps, find food, and if you are lucky the exit before the robot catches up with you. The latter starts making recurrent beeps as it closes in on you, thus throwing you into a state of frantic nervousness as you scramble to get away as quickly as possible. Simple and effective gameplay in principle, if not for the fact that this game fills up 333K of RAM in 43 files using the SAMS memory expansion card, a first for an extended basic game! In other words, the game world is enormous, and getting through it will be quite the achievement. Needless to say that I still have a very long way to go, but thankfully there is a save game option which allows you to save your progress. Are you feeling claustrophobic yet? **NOTE: This game is too big to fit on a diskette as it was designed to work on the Classic99 emulator. The download file consists of a zipped folder for DSK5 which you will need to unzip and drop into the Classic99 folder.**

Requirements: Rich Extended Basic cartridge (version 2012 or newer), SAMS memory expansion card, Classic99 emulator

Executable to run: INTHEMADARK

Download In The Dark:

[File folder for Classic99 emulator](#)

[In The Dark YouTube demo](#)

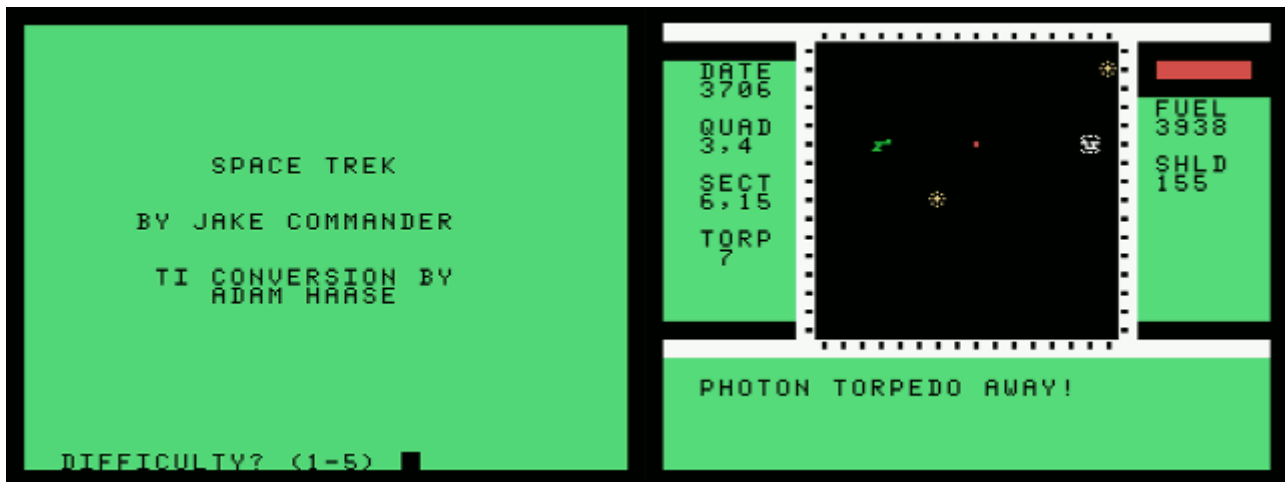
Start from mega menu: G – 5 – H

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Space Trek

G-5-I [Disk: 146-TREK] By Adam Haase



This is to date the best variant of the venerable Star Trek game on the TI platform. As the commander of a mighty starship, your orders are to clean up the sector of all the Klingons within a limited amount of time. You are armed with phasers and photon torpedoes as well as the latest in reconnaissance and defensive technology, which in the right hands will wreak havoc among the Klingon warships. There are multiple commands and sub-commands available, making for a very captivating game as you race against time to complete your mission. The outstanding special effects and the clear display truly enhance the entire experience. Very well done indeed.

Requirements: XB cartridge, 32K RAM

Executable to run: STREK

Download Space Trek:

[Disk Image](#)

[Space Trek instructions](#)

Start from mega menu: G – 5 – I

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

Space Trek

(Adapted from the original game written by Jake Commander for the TRS-80 Color Computer, originally published in Color Computer Magazine May 1983.)

You are captain of the U.S.S. Enterprise. The Klingons have invaded the galaxy, intent on destroying the Federation. Only you can stop them! To win the game, destroy all the Klingons in the galaxy before time expires.

GAMEPLAY:

You can select a difficulty from 1 to 5. This affects the amount of time you have, the number of Klingons and their shield strength.

INTERFACE:

Your main play screen is a large tactical display at the center. This shows you a tactical view of your present quadrant. Objects in the quadrant include your ship, Klingon ships, stars, and star bases. On the left side of the display is the current star date, your quadrant and sector positions, and number of torpedoes. On the right side of the display is your condition bar, current power and shield strength.

When you are in relatively safe conditions, the condition bar will be green. When Klingons are present, the condition bar will be red. During a magnetic storm, the condition bar will be yellow.

Time passes whether you are doing commands or not, so don't leave the game idle!

YOUR SHIP:

Your ship, the U.S.S. Enterprise, is a powerful vessel armed with phasers and photon torpedoes and the latest in sensors and navigation systems.

Your top notch crew will perform maintenance on your ship over time, making sure to repair damaged systems. Occasionally they'll even have a breakthrough and upgrade a ship system! Or have a catastrophic failure and cause a system to temporarily go offline. You'll receive notifications when either happens. A Star Base will repair any damaged system while you're docked.

The U.S.S. Enterprise has a maximum of 5000 units of power. Movement, phasers, and shields all consume energy. To recharge your ship's energy store, stop at a Star Base.

NAVIGATION:

The galaxy is huge, divided into quadrants in an 8x8 grid. Each quadrant contains a number of Klingons, Star bases, and stars. Each quadrant itself is divided into sectors on a 16x16 grid.

You have two methods of propulsion; impulse drive and warp drive. Impulse drive is used to move within a quadrant, sector by sector. You can also cross the quadrant boundary and enter a different quadrant via impulse. Warp drive allows you to move entire quadrants of space at high speeds.

TI-99/4A – Game Shelf Extended Basic Games

Navigation courses are provided with a number from 1-9, with the directions as follows:

8 1 2
7 + 3
6 5 4

So 1 is straight up, 2 is to the upper right, and so forth. Using decimals will use a course between the number course. Any value above 9 defaults to 1.

FEATURES:

Stars:

These are obstacles that block torpedoes and ships.

Klingons:

The enemy. They will move towards you, firing their disruptors once they get into range. Occasionally they will also cloak, which allows them to move closer and evade your tactical scanners. Fortunately they can't attack while cloaked.

Klingons also have photon torpedoes, which they will fire occasionally. If your shields are down when this happens, your ship will be destroyed!

Star Bases:

These provide repairs, refueling, and torpedoes to your ship. To do so, move the ship next to the base and you will automatically dock. While docked, your shields are dropped and the star base extends their shields to protect you.

Klingons will try and destroy star bases, don't let that happen! Your communications officer will notify you if there is a star base under attack.

Magnetic Storm:

Once in awhile, a magnetic storm will strike, lasting potentially several star dates.

When this happens, all your scanners and sensors will go out, rendering you mostly blind. Guided courses will be unavailable. You will be unable to raise shields as well, due to the magnetic interference. Phasers CAN be used but must be manually targeted.

Your tactical display will remain but it will be largely useless, only offering hazy unclear spots for objects in the quadrant. Sometimes a sensor ghost or two will appear on the display, fooling you into thinking it's an enemy ship moving closer...

On the plus side, your enemies are also affected and unable to find you as much as you can find them!

Be careful using warp drive during a magnetic storm as well, there is a greatly increased likelihood of a warp flux.

Also, you're not able to dock at a star base during a magnetic storm.

TI-99/4A – Game Shelf Extended Basic Games

COMMANDS:

Commands are enacted by pressing the corresponding number key.

1. Set Course

Use impulse drive to move around the quadrant, or cross the quadrant boundary. Enter a course direction and a number of sectors to move.

If your impulse drive is damaged, it may still work but limit you on how far you can move.

2. Warp Drive

Use warp drive to jump whole quadrants. Your chief engineer has advised you to keep it to warp 4 and under if you can; there's always a small chance of a warp flux which will throw you off course and damage the engines.

3. Long-Range Scan

Scan the adjacent quadrants for their contents. Also updates your charts. Cannot be used during a magnetic storm.

4. Fire Phasers

Destroy Klingons with energy attacks! The U.S.S. Enterprise has three phaser banks, all or some of which may be operational at a given time.

Phaser power is impacted by shield strength; the more power you have into defensive shields, the less phaser power is available.

Enter units of power to expend. If the main computer is operational, a calculated range of power needed is given to destroy all enemies. The effectiveness of phasers is greatly reduced by distance, so avoid using them if the enemy is too far away!

Phasers always target the closest Klingon under normal conditions. If Klingons are cloaked, or if a magnetic storm is present, you are instead asked to provide a specific targeted sector to aim at. Be certain that you're actually aiming at a Klingon!

5. Launch Torpedo

Enter a course and watch it fly! Be careful not to hit Star Bases... Torpedoes will always destroy Klingons in one hit. The U.S.S. Enterprise can only carry a maximum of 10 torpedoes at a time, and they must be periodically restocked at a Star Base.

6. Raise/Lower Shields

These defensive screens protect the U.S.S. Enterprise from being damaged by enemy attacks. Enter units of power, to a maximum of 500. To lower shields, set them to 0. Shields don't function during magnetic storms.

Power expenditures increase for movement when shields are up, both at impulse and warp speeds. Phasers are also less effective; the more power you have on shields the less efficient your phasers are.

TI-99/4A – Game Shelf Extended Basic Games

If your shields are brought down by enemy fire, your shield coils will be damaged and you won't be able to re-raise them until they are repaired.

7. Damage Report

Gives a read-out on all ship systems and their current status.

8. Main Computer

The main computer offers a number of features to increase the chance of mission success.

Magnetic storms prevent the guidance systems from functioning, so options 3-5 won't work during a storm.

Computer commands are also enacted by pressing the corresponding number key. Pressing 0 will return you to the main command menu.

1. Status Report

Gives a report of how many Klingons remain, the target Stardate to complete your missions, and star bases destroyed.

2. Mission Record

Displays your galaxy charts, showing each quadrant's contents.

3. Guided Course

Moves the ship to the targeted sector in the quadrant. If you enter 0 for the targeted row and column, it will cancel out.

4. Warp Course

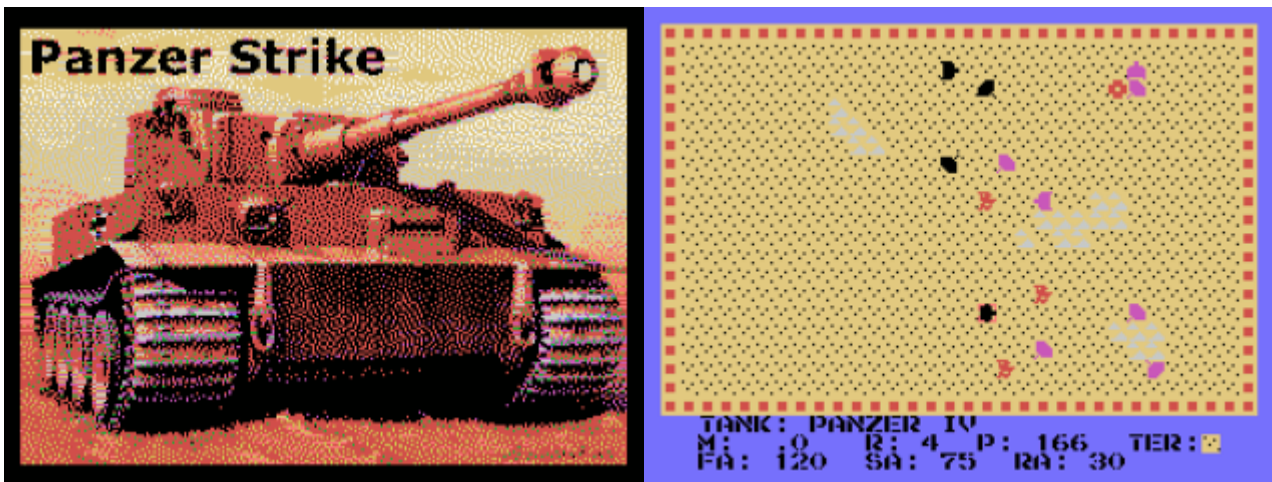
Warps you to the targeted quadrant. If you enter 0 for the targeted row and column, it will cancel out.

5. Guided Torpedo

Calculates trajectories for up to three Klingon ships in quadrant and launches a torpedo at each one.

Panzer Strike

G-5-J [Disk: 147-PANZ] By Walid Maalouli



On the heels of the naval combat simulation in the age of sail, Clear For Action, which can be found further down this section, comes a World War II tactical tank warfare simulation. As a tank platoon commander, you have up to 10 tanks under your command and your orders are to fight your way to and occupy a strategic target. You will be facing stiff opposition from a computer controlled defender and it will take cunning and tactical acumen to reach your objective. There are 4 primary scenarios in the game, as well as an outstanding add-on multi-scenario set with a background story created by Iwantgames:). And if that's not enough, a scenario builder is included so you can create your own scenarios. All the tanks in the game are based on real hardware with an accurate representation of their main characteristics, including American, British, German and Russian tanks. Is there a hidden Rommel inside you?

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: PSTRIKE

Download Panzer Strike:

[Disk Image](#)

[Panzer Strike Manual](#)

[Alien Strike scenario set documentation by Iwantgames:\)](#)

Start from mega menu: G – 5 – J

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard



PANZER STRIKE

A GAME OF ARMORED WARFARE

FOR THE TI-99/4A HOME COMPUTER

BY: WALID MAALOULI

TI-99/4A – Game Shelf Extended Basic Games

System Requirements

TI Extended Basic

32K RAM expansion

Disk drive

Credits

Programming: Walid Maalouli

TidBit TI Basic Translator: Matthew Haggerty

Image conversion tool: Mike Brent

Font: Sometimes99er

Manual cover and disk label: Kevan/Ω

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February 2015.

TI-99/4A – Game Shelf Extended Basic Games

Introduction

This is a platoon level game of tactical tank warfare spanning the World War II era written in TI Extended Basic. Your opponent is an artificial intelligence controlled by the computer. The objective is to maneuver your tanks, occupy a target area and defend it from tenacious enemy tanks.

Four different scenarios are included (see Appendix A) of variable difficulty, but you also have the ability to create your own scenarios using the included Scenario Builder.

Walk in the boots of Erwin Rommel at El Alamein or Manstein at Kursk and see if you can reverse the course of history. Wear Patton's helmet and find out if superior tank numbers can overwhelm a smaller but fearsomely powerful enemy tank force.

It's all up to your skill and cunning to win the day. And remember, your opponent will show you no mercy...

Running Panzer Strike

Panzer Strike loads and runs from DSK1 by default. Please refer to Appendix C for instructions on how to patch the program for your favorite disk path.

With the Extended Basic cartridge inserted in the cartridge slot and the Panzer Strike disk in disk drive #1, turn on the peripheral expansion box then the computer, press any key at the startup screen, then select Extended Basic from the menu (option 2).

At the READY prompt, type RUN "DSK1.PSTRIKE" and press the Enter key. The program's splash screen will appear. Press the Enter key to clear it, and after a brief pause the main loading screen will be displayed with 2 options:

1. Create/Edit Scenario
2. Run Panzer Strike

Select the appropriate option desired. These options are discussed in detail in the following two sections of this manual.

IMPORTANT: Please make sure that the Caps Lock key is depressed throughout the entire game.

TI-99/4A – Game Shelf Extended Basic Games

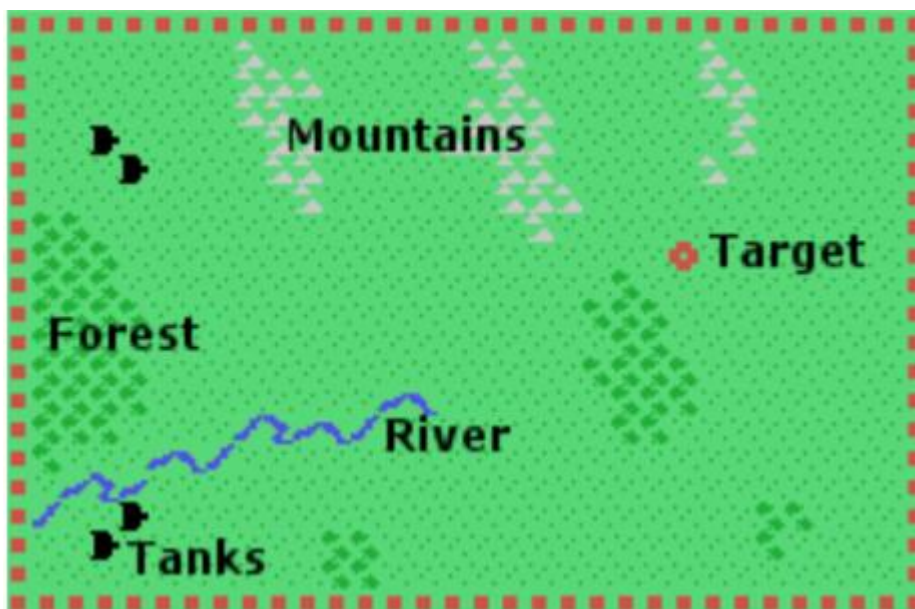
PART 1 – PANZER STRIKE GAME

When first run, Panzer Strike will ask you for a scenario name, which should match one located on DSK1. Please refer to Appendix A for a detailed description of each scenario. Type in the name then press the Enter key.

At that point, a brief synopsis of the scenario will be displayed. Press any key to clear it, and the main battle map will be gradually drawn on the screen.

Map features

The map consists of several scenery elements which vary depending on the scenario as indicated below:



At this stage of the game, the enemy tanks will not be visible yet because they are too far away from you.

The battle map consists of 30x19 squares, each square representing 230m per side. The total surface area is 6.9x4.37 kilometers.

TI-99/4A – Game Shelf Extended Basic Games

Game phases

The game is played in turns, each turn being the equivalent of 1 minute of real battle time. There are 3 phases to each turn:

1. Reconnaissance phase
2. Movement phase
3. Combat phase

Each side goes through each phase and the game turn ends after the combat phase. The human player always does reconnaissance and movement first, but the combat phase initiative is random.

Line of sight

The game features full line of sight, meaning that any enemy tank located further away than 10 squares (2.3 km) will not be visible. Furthermore, any obstruction (forest, mountains, wreckage or other tanks) between your tanks and enemy tanks will render the latter invisible to you. Rivers and the target square never obstruct line of sight.

However, because the tanks on each side maintain radio communication at all times amongst each other, if an enemy tank is visible to one of your tanks, then its position will be reported to all your other tanks. Furthermore, if in the process of moving the player attempts to enter the location occupied by a hidden enemy tank, then the latter will become immediately visible for the duration of the turn.

The computer side is fully subject to the line of sight rules just as the human player even though the player's tanks always remain visible on screen. A computer controlled tank could be sitting right next to a player tank in a forest and not "see" it despite the fact that the latter remains visible on screen. This could be a little disconcerting at times.

Line of sight is checked at the end of the movement phase for each side.

Note: Given the relatively low resolution of the Extended Basic screen, line of sight is not always 100% accurate, and therefore introduces a small additional level of uncertainty to the game. We will assume that visibility is hampered at times by small variations in terrain elevation as well as variability in the tank commanders' abilities on the ground.

Victory conditions

The main objective of the human player is to occupy the target square with one of his tanks for a full 3 turns. It does not have to be the same tank as long as at the end of each turn one of his tanks occupies the square. Failing that, the count is reset and another set of 3 consecutive occupation turns will be required to win.

The human player can also win by destroying all the enemy tanks.

TI-99/4A – Game Shelf Extended Basic Games

The computer opponent's main task is to defend the target and if possible destroy all the human controlled tanks. If that happens, then the human player loses the game.

Victory conditions are checked at the end of each turn.

Reconnaissance phase

Each side has at its disposition a single reconnaissance airplane, but it can only be flown once during the entire game. The option to send the plane out is available at the beginning of each turn until the reconnaissance mission is authorized, and then the option will no longer be available subsequently. When prompted to launch a recon mission, press **Y** to launch or **N** to decline the option for the current turn.

There is a 25% chance that the airplane will be shot down by the enemy when the reconnaissance mission is launched before it has had a chance to collect intelligence.

If the mission is successful, then all enemy tanks will become visible regardless of line of sight for the current turn only. The one exception is if an enemy tank is located in a forest at the time of the reconnaissance, then it will remain invisible given the protective tree cover.

Movement phase

At the beginning of the movement phase, one of your tanks will be automatically selected by having a red cursor around it, and its vital statistics will be displayed at the bottom of the screen below the battle map.



The tanks vital statistics are derived from real world historical data and consist of:

- Type (See Appendix B)
- M: Movement factor in battle map squares
- R: Gun range in battle map squares
- P: Maximum armor penetration of the gun in millimeters
- TER: The type of terrain under the current tank location
- FA: Frontal armor thickness in millimeters
- SA: Side armor thickness in millimeters
- RA: Rear armor thickness in millimeters

Use the **S** and **D** keys to move the selection cursor to the previous or next live tank. When ready to move a selected tank, press the Enter key, and the cursor color will change to blue.

S – Move cursor to previous tank

D – Move cursor to next tank

ENTER – Select/Deselect a tank

At this point, you can rotate the tank orientation counterclockwise and clockwise by pressing the S and D keys respectively. The E key moves the tank along the current orientation direction.

TI-99/4A – Game Shelf Extended Basic Games

Movement costs are:

- 0.5 points per rotation
- 1 point on open ground or to enter the target square
- 2 points in forests
- 3 points in mountains

Rivers, other tanks (friendly or enemy) and tank wreckage cannot be crossed. Movement is confined to the battle map edges. There is no wrap around allowed.

The movement potential is updated as you move the tank. If the movement potential is zero or you do not have enough movement factor left to enter a specific terrain, then you can no longer move the tank. Press **Enter** when done moving a specific tank, and the cursor will turn red again.

Should you move a tank in error, press **FCTN-8** to take back one movement step. You can repeat this as needed. However, once you deselect a tank after movement, you will not be able to return to that tank and take back the previous movement steps.

If you deselect a tank with a non-zero remaining movement potential, you can always come back to it later during the movement phase and continue moving.

Movement commands:

- S** – Rotate counterclockwise
- D** – Rotate clockwise
- E** – Move forward
- FCTN-8** – Take back one movement step

Once you have completed movement for all your tanks, press the **FCTN-6** key to end your movement phase. Please note that movement is always optional.

At that point, the computer opponent will move his tanks, but their movement will remain invisible unless they are within your line of sight and close enough.

Combat phase

Combat can only occur if there is at least one visible enemy tank to either side. Unlike movement, combat initiative is random, which can have significant tactical implications. On your combat phase turn, one of your tanks will be automatically highlighted by a red cursor similar to the movement phase, and you can use the **S/D/ENTER** keys to move the selection

TI-99/4A – Game Shelf Extended Basic Games

cursor around and select a specific tank. Once a tank is selected, the cursor around your tank will turn blue, and a new red targeting cursor will appear around one of the visible enemy tanks. The targeted enemy tank vital statistics will be displayed below the battle map.

If you would like to select another enemy tank, press the **SPACE** key and the targeting cursor will move to the next available enemy tank. You may select any visible enemy tank even if they are not facing your current tank orientation because tanks are turreted and thus can move in one direction and fire in another.

Once you are satisfied with the selection, press the **F** key to fire your gun. If the enemy tank is out of range or if you do not have direct line of sight to it from your firing tank, then you will get a message informing you of such, and you will have the opportunity to select another enemy tank. To deselect a tank, press the **ENTER** key. If it has not fired yet, you can always come back to it and select it again.

- SPACE** – Next available enemy tank
- F** – Fire gun
- ENTER** – End combat for a selected tank

There are 3 possible outcomes to fire:

- **Missed** – The chance of missing the target increases with distance.
- **Armor penetration failed** – The program will calculate the incidence angle of your shell relative to the targeted enemy tank, and if your gun does not have sufficient penetration energy to penetrate the facing enemy armor (front, side or rear), then your shell will simply bounce and no damage to the enemy tank will occur. The penetration power of the shell depends on its kinetic energy which is reflective of the tank's specific gun. Furthermore, penetration becomes less effective with distance from the target.
- **Enemy armor destroyed** – Your shell managed to penetrate the enemy tank armor and that tank is destroyed. It will be replaced by a wreck icon which will remain in place for the duration of the game and will affect line of sight. The only exception is if a tank is destroyed while on the target square, at which point the wreckage icon will be removed after a short delay.

Once a tank has fired, it can no longer fire again that turn and it will automatically be deselected (the cursor will turn red).

When you are done firing your tanks, press the **FCTN-6** key to end your combat phase.

At that point, the computer opponent will go through each of its tanks and make firing decisions. The currently selected computer tank and its intended target will be selected, and if firing occurs then you will be informed of the outcome as noted above.

Once all combat is completed, victory conditions are checked, and if they are not met, then you are taken back to the reconnaissance phase of the next game turn. Otherwise, the game will end and you will have the option to play another game.

PART 2 – PANZER STRIKE SCENARIO BUILDER

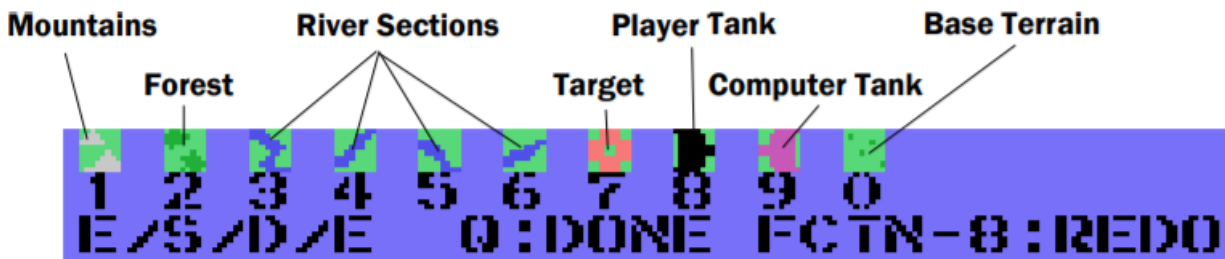
The scenario editor gives you the ability to either modify an existing scenario or create a new one from scratch. This will allow for an unlimited capacity for experimentation with different tanks and battle maps.

When the scenario editor is launched, you need to select the option to either edit a scenario or create a new scenario.

If the **EDIT** option is chosen, then you will be prompted for a scenario name which should match one on **DSK1**, following which the battle map will be loaded and displayed.

If the **NEW** option is selected, then you will be asked to choose the type of base terrain, namely plain or desert. Plain terrain has a light green background while desert has a dark yellow one. Then, a blank battle map will be displayed.

Once the battle map is on screen, there will be a list of scenery options below it which vary depending on whether the base terrain is plain or desert (there are no rivers or forests for the desert terrain).



A red cursor will appear in the left upper corner of the battle map. You can move it around using the **A/S/D/E** keys. To place a scenery feature on the map, move the cursor to the desired location and press the number corresponding to the scenery feature to be placed. If the new feature overlaps an existing one, it will overwrite it. To erase a scenery item, simply overwrite it with the base terrain.

The following placement limitations apply:

- Player tanks need to be within 5 squares of the *left* map edge
- Computer tanks need to be within 5 squares of the *right* map edge
- The target needs to be within 10 squares of the *right* map edge
- There needs to be at least one tank for each side
- Only one target is allowed

TI-99/4A – Game Shelf Extended Basic Games

If you wish to discard all your changes to the map, press **FCTN-8**. Otherwise, press **Q** when done editing. The map will be stored in memory, then the tank selection menu will appear:



First the player tanks are assigned then the computer tanks.

A red cursor will appear around one of your tanks. If that tank does not have an assigned type as of yet, then the Assigned Type field will display NONE, otherwise it will show the tank type in that field.

To assign a tank type to a specific tank, select it with the cursor:

- Pressing the **SPACE** bar will move the cursor to the next available tank.
- The **S** and **D** keys will page backward and forward respectively through the different types of tanks available in Panzer Strike (See Appendix B). All the displayed characteristics are based on real life historical data. When the desired tank type is displayed, press the ENTER key to assign it to the currently selected tank.

You may modify tank assignments as many times as you wish by simply reselecting a previously assigned tank.

When you are done with the player tank assignments, press **FCTN-6** to move on to the computer tank assignments. Please note that all the available player tanks have to be assigned a type prior to continuing to the computer tanks assignment phase.

TI-99/4A – Game Shelf Extended Basic Games

In the computer assignment phase, the same process as the player phase applies. Press **FCTN-6** when done.

At that point, you will be prompted to enter a very brief scenario synopsis. You have a total of 10 lines to use. Press **ENTER** at the end of each line to move on to the next line. You cannot edit previously entered lines, only the current line. If you press **ENTER** at the end of line 10 or if you press **ENTER** on a blank line, then the editing process ends.

Obviously, this is a very limited text editing facility, so plan accordingly.

Once the scenario synopsis is completed, you will be prompted for a scenario name. It should be a valid disk file name. The scenario will then be saved to DSK1, ready to be used by Panzer Strike, and you will be taken back to the main Scenario Builder menu.

APPENDIX A – SCENARIOS

Battle of Kursk

Scenario name: KURSK

Difficulty level: Moderate

This was a decisive battle for the Germans on the Eastern front. They were by that time facing stiff resistance from the Soviets, and were running out of both supplies and human materiel. This last ditch offensive was meant to return the initiative to the Germans and halt the Russian onslaught, and they threw practically every remaining resource into it. It failed...

From there on, it was one continuous fighting retreat for the Germans out of the Eastern front, ultimately ending with the Russians and Americans overrunning Berlin.

You will command a mix of Panzer IV and Tiger I tanks, while the computer opponent will have the Soviet T34 tanks at its disposal and in larger numbers as was the case in the historical record. The battle map roughly approximates the historical terrain.

Can you reverse the course of history?

Second battle of El Alamein

Scenario name: ELALAMEIN

Difficulty level: Easy

The Afrika Corps under General Erwin Rommel is running out of steam after wreaking havoc with the British Expeditionary Forces in North Africa. It's supply chain was greatly weakened by the British control of the Mediterranean sea, as well as the fact that Hitler was shifting his focus to the Eastern Front.

Nonetheless, it was vital for the Germans to conquer Egypt and take control of the Suez Canal. Unfortunately for them, General Montgomery was in no mood to allow them to do so as he was in desperate need for a decisive victory in North Africa after a series of humiliating defeats. He therefore gathered a large freshly supplied armored force to face off the Desert Fox' battle hardened units as they tried to push towards El Alamein.

You will have only Panzer IV tanks at your disposal, whereas the British forces will wield the Sherman Firefly tank, essentially a Sherman tank with a better gun but slower speed.

With proper maneuvering, you should be able to overcome the British relatively easily as they will be hampered by their limited mobility and inferior armor. But don't get too cocky: they can still inflict on you a blistering defeat if you are not careful...

In the real historical record, Rommel did indeed inflict great damage on the British, but he ran out of supplies before he could overrun them.

David versus Goliath

Scenario name: DAVID

Difficulty level: Hard

This is a fictional battle pitting a slew of American Sherman tanks against a handful of fearsome Tiger II tanks. In the historical record, the Americans lost Shermans in great numbers, but in the end their sheer numbers overwhelmed the very limited numbers of Tiger II's produced by Germany.

Winning this scenario will be very difficult because the Sherman tank's gun cannot penetrate either the front or side armor of the Tiger II tank, so the only way to kill the latter will be to fire at it from behind at close range.

Figure out how to maneuver your forces in order to do this and you just might stand a chance at winning... Hint: Use of well-timed reconnaissance is vital here as well as the judicious use of cover to ambush the enemy.

Fortress attack

Scenario name: FORTRESS

Difficulty level: Moderate

In this other fictional battle, you are wielding the very powerful German Jagdpanther tank destroyer against the best tank the Soviets had, namely the Iosif Stalin tank. The target will be protected by natural defenses, so your maneuvering will be more limited.

The tanks on both side will have no difficulty penetrating each other's armor from any angle. The Jagdpanther will have the more powerful gun, so a hit from nearly any distance within the Jagdpanther's gun range will most likely destroy the Iosif Stalin tank. On the other hand, it has the weaker armor and thus will be more vulnerable to long distance attacks.

In other words, It should be a relatively even battle from an armor standpoint, and so it will come down to tactical skill in order to win the day.

APPENDIX B – TANK CHARACTERISTICS

Tank	Speed (km/hr)	Gun Bore (mm)	Maximum Penetration (mm)	Front Armor (mm)	Side Armor (mm)	Rear Armor (mm)
Panzer IV	42	75	166	88	49	10
Jagdpanther	46	88	214	80	45	40
Panther	46	75	174	120	67	15
Tiger I	45	88	134	120	72	25
Tiger II	41	88	214	185	105	25
M4 Sherman	48	75	74	76	38	38
Sherman Firefly	32	76	118	51	38	38
T34	53	76.2	75	47	45	40
T44	53	85	127	120	90	75
Iosif Stalin	37	122	163	120	75	30

Note: The maximum penetration value is under ideal conditions at close range and is proportionally reduced by the distance to target during combat.

APPENDIX C – DISK PATH PATCHING

Panzer Strike runs by default from DSK1. However, it can be easily patched so as to run from any drive of your choice. Below are listed the files that need to be patched and the appropriate line numbers in each.

Just edit each file at the stated line numbers and replace all instances of DSK1 with the path of your choice, then save the files. Do not modify any other aspects of the programs unless you know what you're doing.

File Name: PSTRIKE

- 240

File Name: PSMENU

- 200

File Name: PSMAIN

- 140
- 190

File Name: PSBUILDER

- 1950
- 2120

Once the line changes have been done, move all the following files to the new location:

- PSTRIKE
- PSMENU
- PSMAIN
- PSBUILDER
- CHARDEF
- All the scenario files

The Alien Strike Missions

Crafted by Iwantgames:) (Jake Allen)
For use with Panzer Strike on
the TI99/4A

Story -

Ravaged by countless wars, inept government agencies, and on the verge of destroying itself, the Earth is completely unprepared for the even greater danger that is quickly approaching from the darkness of space....

Can you help lead the remnants of humanity to freedom or will they fade into history?

Missions -

The story unfolds further as you play each mission getting closer to reaching the final days of the war and decide the fate of the world.

The correct playing order:

Mission 1: Escape - Easy

You must lead a convoy through the forest. The enemy is not perceived to be at full strength yet, so should be fairly easy but they are smart and devious so stay alert.

Mission 2: Defend - Easy

An Enemy squad has found the base. You must destroy them now before they can give away the position to larger forces.

Mission 3: Resupply - Hard

With dwindling food supplies, and scarce weapons and ammo, more supplies must be captured from the enemy by any means necessary.

Mission 4: Attack - Tough

It's time to take the fight to the enemy and show them that humanity will not die quietly.

Mission 5: Defeat - Hard

The enemy leader is near, you must take him out . . . or die trying.

Mission 6: End - Very Easy

It's the end of the war, what does the future hold for Earth? Does anyone really know?

Strategies -

If I told the strategies I used, it would be too easy :P go find your own LOL

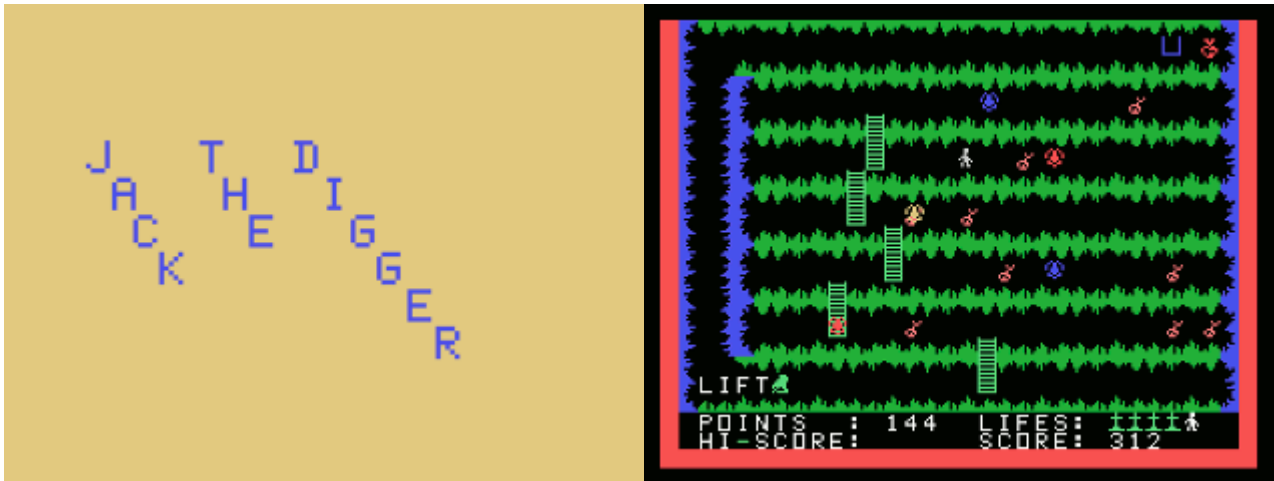
Thanks -

My sincere thanks to Vorticon for creating Panzer Strike and the extremely easy to learn editor :)
Also thanks to all the members of AA TI Forums for making this hobby more fun :)

Hope all you Tier's have fun playing . . . and go kick some alien butt :P

Jack The Digger

G-5-K [Disk: 148-JACK] By Willi Doltsch



This is the last missing Extended Basic game from Willi Doltsch, whose other great games can be found towards the end of this section. Here you represent a digger looking for treasure in a monster infested mine. Use joystick number 2 to move around and collect as much treasure as you can before heading down to the lift which will take you to the surface. The levels get progressively harder, and they do require good timing. The animations are extremely well done, with great associated sound effects, making for a really fun and challenging platformer. I expected nothing less from Willi. Highly enjoyable.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: JACKDIG

Download Jack The Digger:

[Disk Image](#)

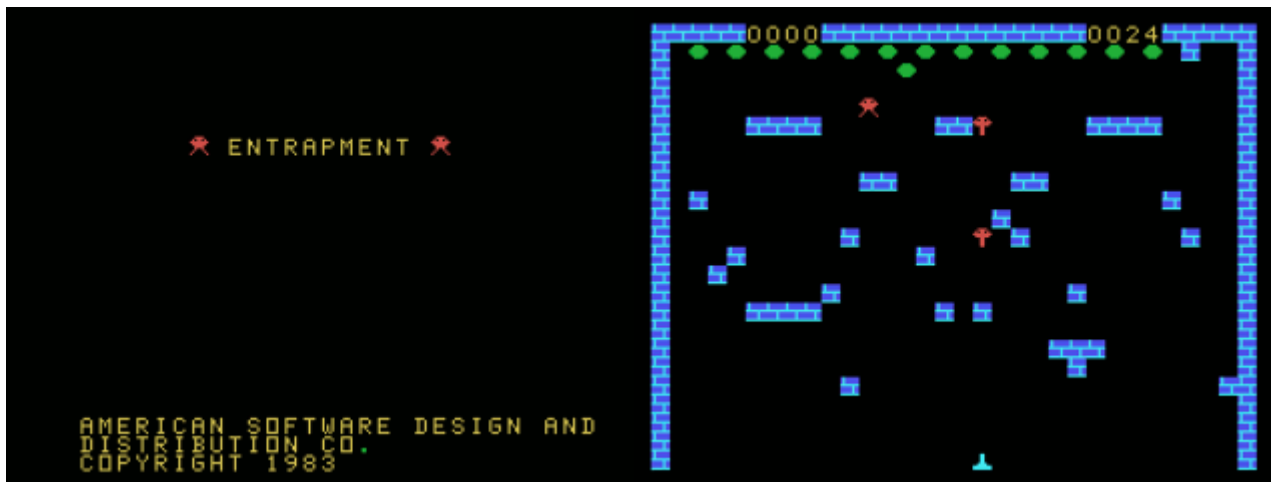
Start from mega menu: G – 5 – K

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 2

Entrapment

G-5-L [Disk: 149-ENTR] By American Software and Design



With clear inspiration from Centipede, you are tasked to stop hordes of nasty insects from invading Earth. You do so by shooting them down, but the twist here is that they turn to impenetrable bricks when they die. The solution then is to strategically kill as many of them as necessary to set up a continuous barrier which will stop the subsequent waves. Incredibly simple to play, yet supremely entertaining. The graphics are very well done and the animation is smooth. I am a fan.

Requirements: XB cartridge, 32K RAM.

Executable to run: XB AUTOLOAD

Download Entrapment:

[Disk Image](#)

Start from mega menu: G – 5 – L

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Prison Run

G-5-M [Disk: 150-PRIS] By Retrospect (TI 99/4A version)



Who knew busting out of prison was going to be so much fun? Use the arrow keys to move your aspiring escapee around as he tries to avoid the automated killer laser beams and make his way to the infirmary and then out to the escape tunnel. How many inmates can you free before the timer runs out? Frustrating as hell, but still very much fun.

Requirements: XB cartridge, 32K RAM.

Executable to run: PRISON

Download Prison Run:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

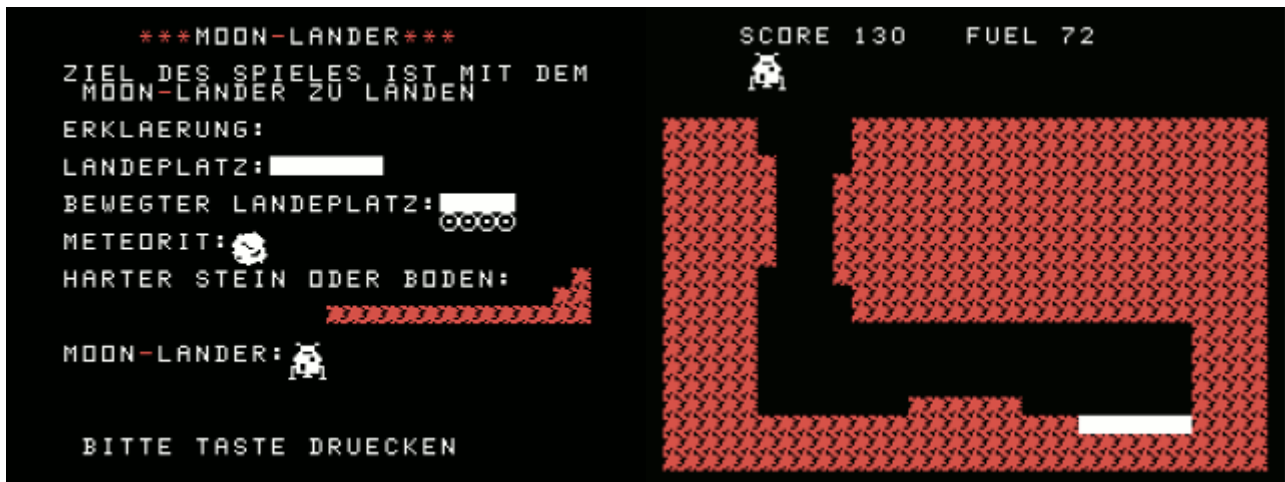
Start from mega menu: G – 5 – M

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Moon Lander

G-5-N [Disk: 151-MOLA] By Wolfgang Tichy



Again not an earth shattering concept, but this version does bring some extra twists like meteorites and moving platforms to keep things interesting. Every time you land you gain a fuel bonus to keep you going a little longer, but make no mistake, death will eventually find you... Very challenging play.

Requirements: XB cartridge, 32K RAM. Joysticks optional.

Executable to run: MOONLANDER

Download Moon Lander:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 5 – N

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joysticks

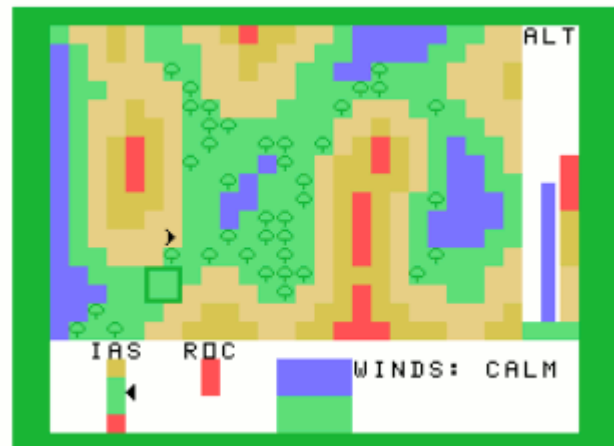
Hangglider Pilot

G-5-O [Disk: 152-HANG] By L.J. Sabo

MAPLE LEAF MICRO WARE

HANG GLIDER PILOT

COPYRIGHT 1983 LJ SABO
NOT TO BE COPIED



Now that's new! I have never seen a simulation of the sport of hang gliding, and this one appears to be quite sophisticated. As the title says, you are the pilot of a hang glider trying to stay aloft as long as possible riding the air currents while avoiding the mountains and other obstacles. This is definitely not an arcade game, and it will require quite a bit of skill to pilot this contraption. Given its complexity, it does run on the slow side, but surprisingly still manages to be quite captivating. Definitely well worth a try.

Requirements: XB cartridge, 32K RAM.

Executable to run: HANGGLIDER

Download Hangglider Pilot:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

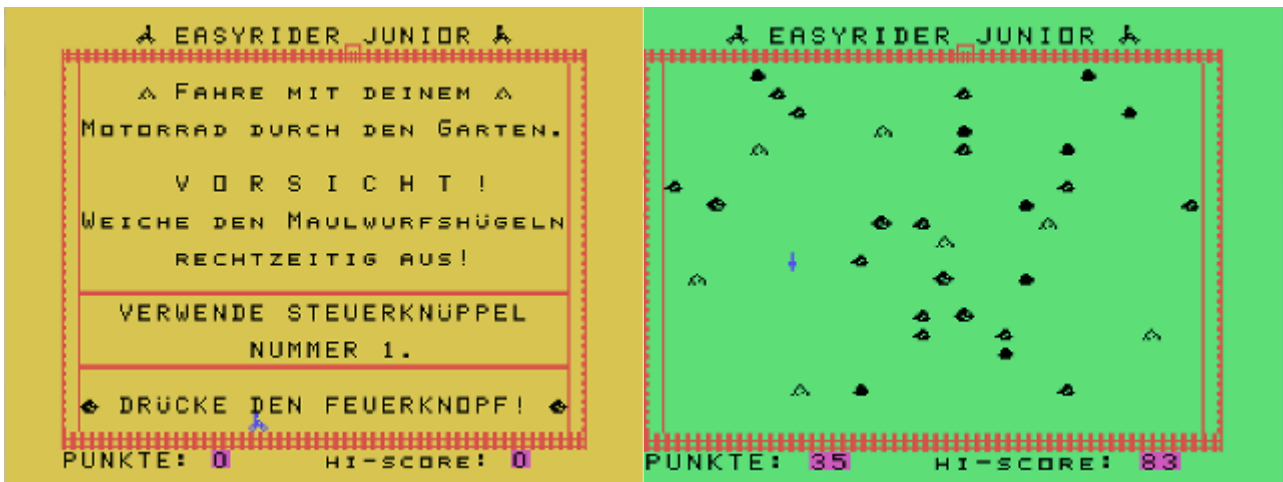
Start from mega menu: G – 5 – O

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

EasyRider Junior

G-5-P [Disk: 153-ERID] By Roland Schlosser



This is a fun little game where you ride a bike around trying to avoid rocks that keep popping up randomly around you. How long can you last before you crash? From time to time, something has to be said in favor of simple easy to play games when you just want to kill a little time without knotting yourself into a ball of nerves or getting a headache. Leasurly fun.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: EASYRIDER

Download Easy Rider:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

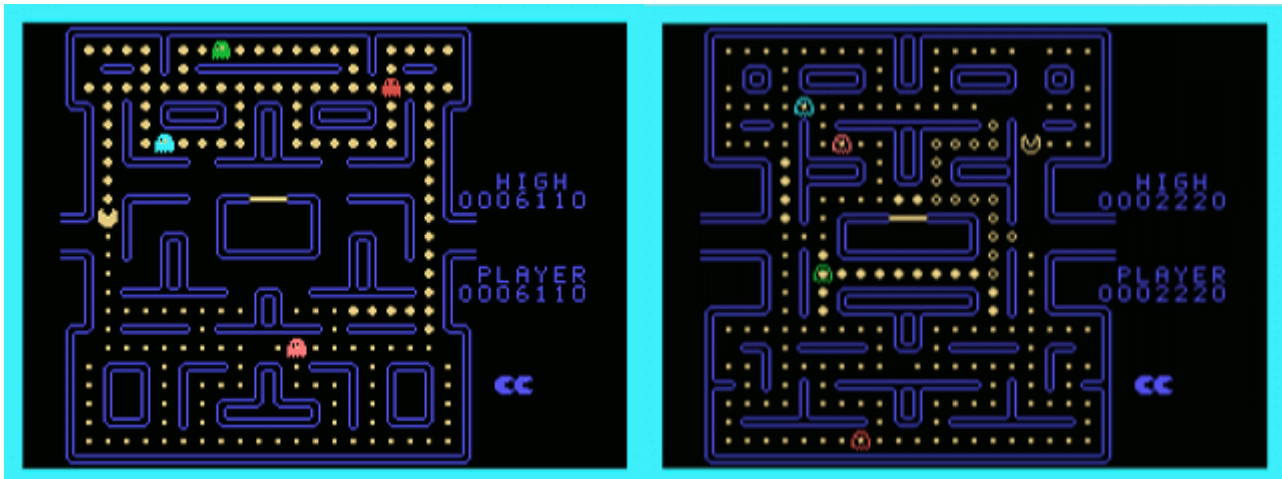
Start from mega menu: G – 5 – P

Features: Title Screen, XB, One Player, Sound, Speech

Controls: Joystick 1

Mirror Maze

G-5-Q [Disk: 154-MIMA] By 1980Gamer



If you thought you had seen every possible variation of Pac Man, then I suggest you think again... This version uncovers a previously hidden aspect of our friendly dot eating friend, a twilight zone of sorts where if you go into one of the tunnels, then you emerge into an alternate ghostly dimension with a similar maze which you also have to complete. As a matter of fact, you cannot move on to the next level until you eat all the dots in both the normal and alternate worlds! Needless to say, that this novel twist certainly freshens up the tired Pac Man concept, and it plays extremely well to boot. Coded in Extended Basic and compiled with Harry Wilhelm's XB Compiler.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: MIRRORMAZE

Download Mirror Maze:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

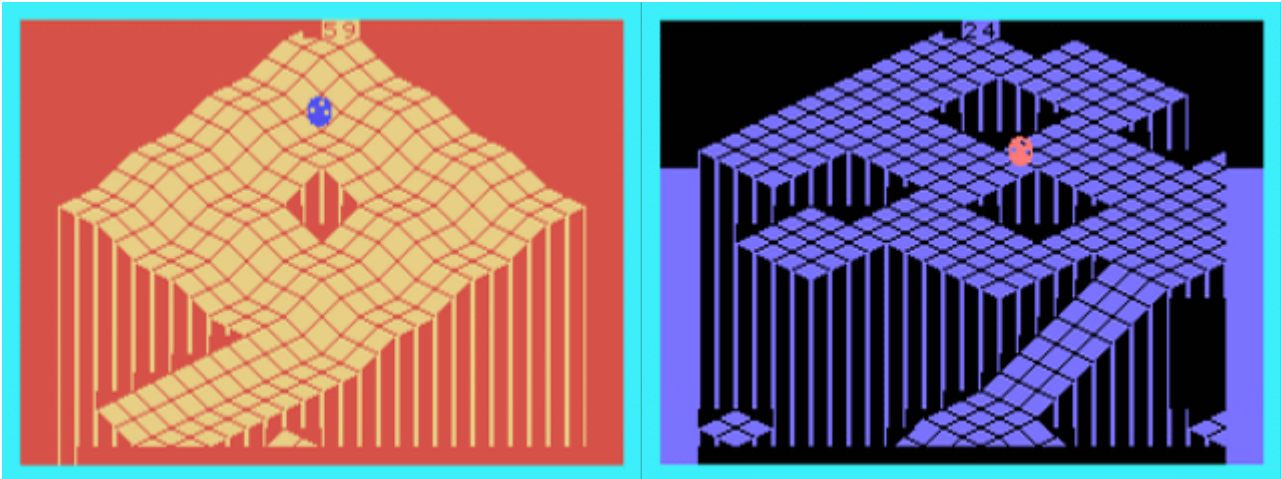
Start from mega menu: G – 5 – Q

Features: Title Screen, XB compiled, One Player, Sound

Controls: Joystick 1

Marble Madness

G-5-R [Disk: 155-MARB] By Kurt_Wolloch



This is a very nice remake of the classic Marble Madness game where you have to guide a rolling ball down brick wall paths while avoiding falling off the edge. Given that this is an Extended Basic game, it is extremely well executed and quite challenging, particularly since you have a limited amount of time in which to complete each level. Well done!

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: MARBLE

Download Marble Madness:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

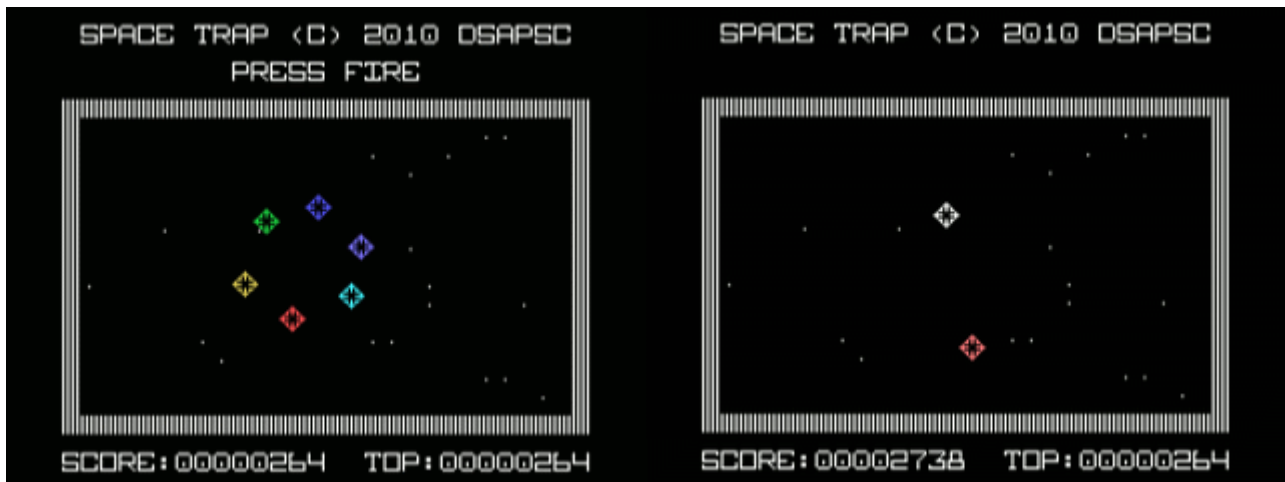
Start from mega menu: G – 5 – R

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Space Trap

G-5-S [Disk: 156-TRAP] By Marc Hull



You are a member of the Crystal Entity trapped in a prison created by the "Q". In order to stave off death you must consume other members of your species. The only problem seems to be that no matter how much you consume, your energy continues to dissipate at an alarming level. How long will you be able to survive in this outer space hell? Simple yet original and fun game where you have to bump other crystals in order to survive, made more difficult by the implementation of inertia. Very good use of sprites, but it does get a bit repetitive after a while.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: SPACE-TRAP

Download Space Trap:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Space Trap instructions](#)

Start from mega menu: G – 5 – S

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

SPACE TRAP...

Back ground (nerded up as much as possible ;-)...

You are a member of the Crystal Entity trapped in a prison created by the "Q". In order to stave off death you must consume other members of your species. The only problem seems to be that no matter how much you consume, your energy continues to dissapate at an alarming level. How long will you be able to survive in this outer space hell?

To start...

Press the fire button on joystick 1 when you see the orbiting crystals....

To Play...

Use joystick 1 to manuver your white crystal into contact with the other crystal on the screen. When you make contact; points are awarded, the other crystal dissapears and a new one appears at a different location. Be careful to avoid the energized walls of the prison or you will be disinegrated.

Hints...

Be careful of your momentum. It will carry you into the walls if you are not careful and remember you are in space so there is no friction to slow you !

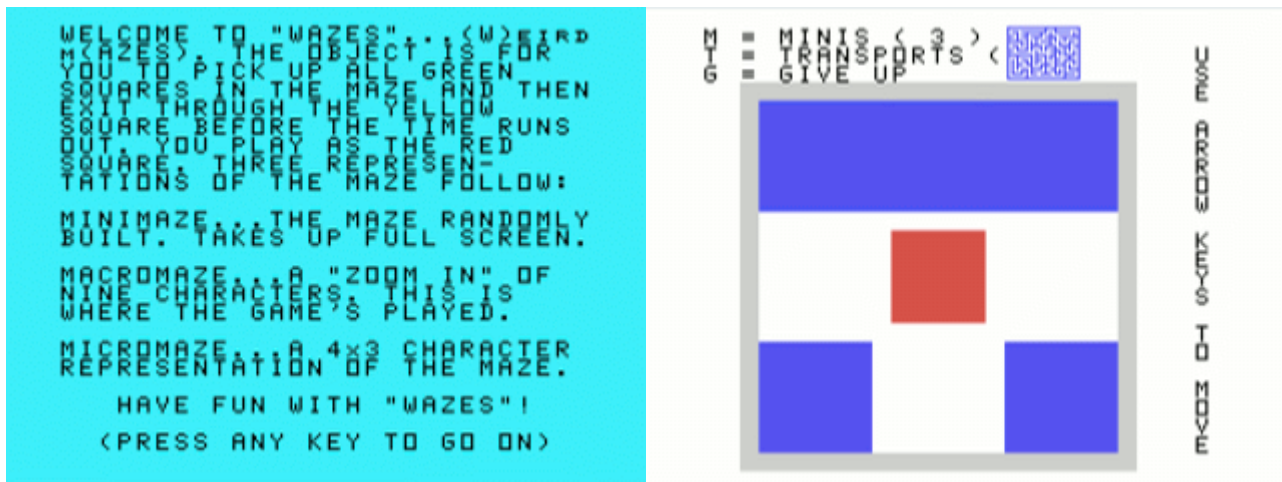
Your life force is indicated by the volume of the Crystal Entities 4 toned heart beat. If you begin to have trouble hearing it then you must get to another crystal quickly.

If you press and hold "A" during the intro screen you may get a suprise...

Enjoy !

Wazes

G-5-T [Disk: 157-WAZE] By GratedTopping / Original game by Bob Foley



Yes, this is yet another maze program, but with an original twist. You are presented with 3 different representations of a maze, from the micro to the macro, and you have to find your way out using the macro maze, which is essentially a small window of part of the maze and moves around with you. Therefore, at any time you only have a very limited view of the larger maze, making escape so much more interesting. Unfortunately, it is very slow in the running, so it's best to use the Classic 99 emulator in Overdrive mode to make the game more enjoyable.

Requirements: XB cartridge, 32K RAM.

Executable to run: WAZES

Download Wazes:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 5 – T

Features: Title Screen, XB, One Player

Controls: Keyboard

Texan Dealer

G-5-U [Disk: 158-TEXD] By Retrospect

TEXAN DEALER NUEVO LAREDO				TEXAN DEALER KINGSVILLE			
ITEM	QTY	PRICE	NUM	ITEM	QTY	PRICE	NUM
COCAINE	18	81268	1	COCAINE	2	33588	1
HEROIN	11	30463	2	HEROIN	1	6798	2
CANNABIS	10	1044	3	CANNABIS	10	220	3
KETAMIN	10	6624	4	KETAMIN	10	117	4
STASY	10	102	5	STASY	6	117	5
ACID	19	34	6	ACID	16	33	6

[1] BUY [2] SELL [3] TRAIN				1 KINGSVILLE CHOOSE			
[4] GOODS [5] QUIT				KINGSVILLE CHOOSE			
YOUR CASH \$ 1000 DAY 1				KINGSVILLE CHOOSE			

Life as a street drug dealer can be rather tough as demonstrated by this trading game where you buy and sell a variety of drugs in many different cities and try to eke out a living while hoping to evade the cops. Prices of drugs change daily, and you have 30 days to make as much profit as possible. A little trip to the dark side of society, but fun nonetheless.

Requirements: XB cartridge, 32K RAM.

Executable to run: TEXAN

Download Texan Dealer:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Instructions](#)

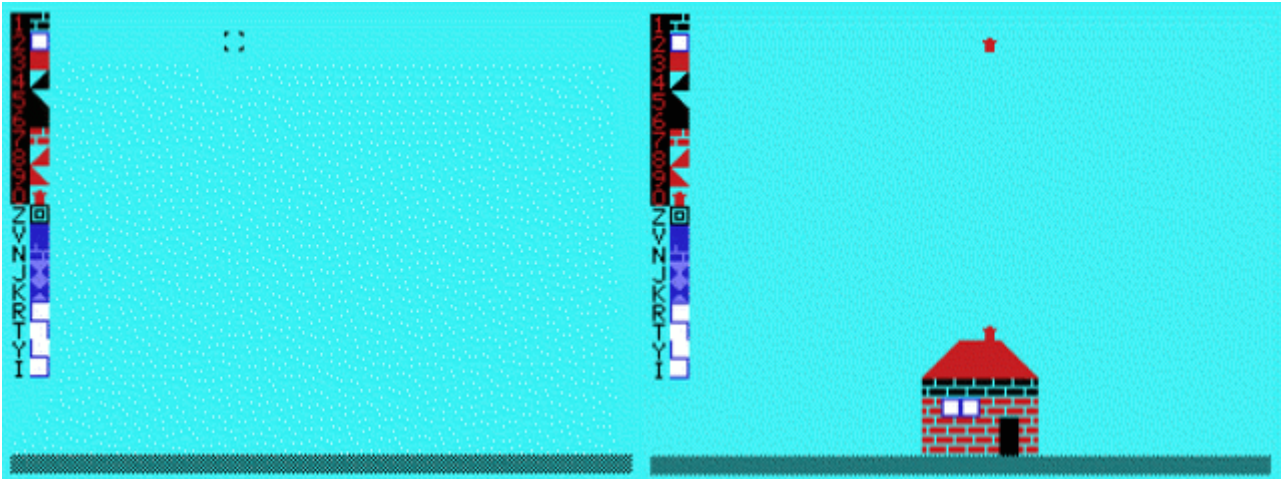
Start from mega menu: G – 5 – U

Features: Title Screen, XB, One Player

Controls: Keyboard

TI Lego

G-6-1 [Disk: 159-LEGO] By Joe Morris



Who amongst us has not played with Legos? This little gem gives you the opportunity to continue playing with these colorful blocks at any time. Simply select the block you want by pressing the number/letter next to it, move the cursor to where you want to place the block, then press the spacebar. Press U to undo, C to clear the entire structure. You are supplied with enough different shapes of blocks to allow for a surprising range of creativity. A great way to get back in touch with your childhood.

Requirements: XB cartridge, 32K RAM.

Executable to run: LEGO2

Download TI Lego:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 6 – 1

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Biplane

G-6-2 [Disk: 160-BIPL] By Joe Morris



Your plane has run out of fuel, and you are on a slow descent towards a densely built up city. What to do??? But of course, simply bomb the buildings so you can make yourself a nice landing strip. Failure to do so will result in your utter destruction. Much harder than it looks!

Requirements: XB cartridge, 32K RAM.

Executable to run: BIPLANE

Download Biplane:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 6 – 2

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard

Ghost House

G-6-3 [Disk: 161-GHOU] By Retrospect



Primarily a game of timing and reflexes, you have the unenviable job of whacking ghosts on the head when they randomly peak through the windows of a house and start making bone chilling screams. The twist here is that you can only truly get them when they are at the end of their scream. Attempt to whack them before or after and they just run away. There are 3 levels of difficulty. Colorful, simple fun.

Requirements: XB cartridge, 32K RAM.

Executable to run: GHOST2

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

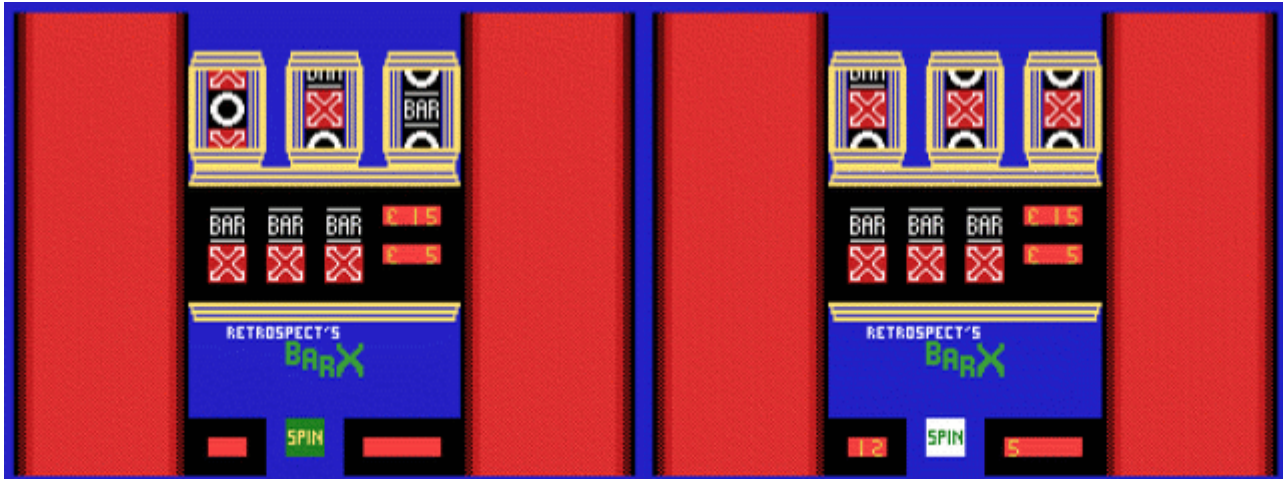
Start from mega menu: G – 6 – 3

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard

BAR X

G-6-4 [Disk: 162-BARX] By Retrospect



This is a very nicely executed Jackpot type of game where every so often you get the chance to nudge any of the reels for an added chance to win. Press 5 to insert coins, space bar to spin. You can collect your winnings by pressing C.

Requirements: XB cartridge, 32K RAM.

Executable to run: BARX2

Download BAR X:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

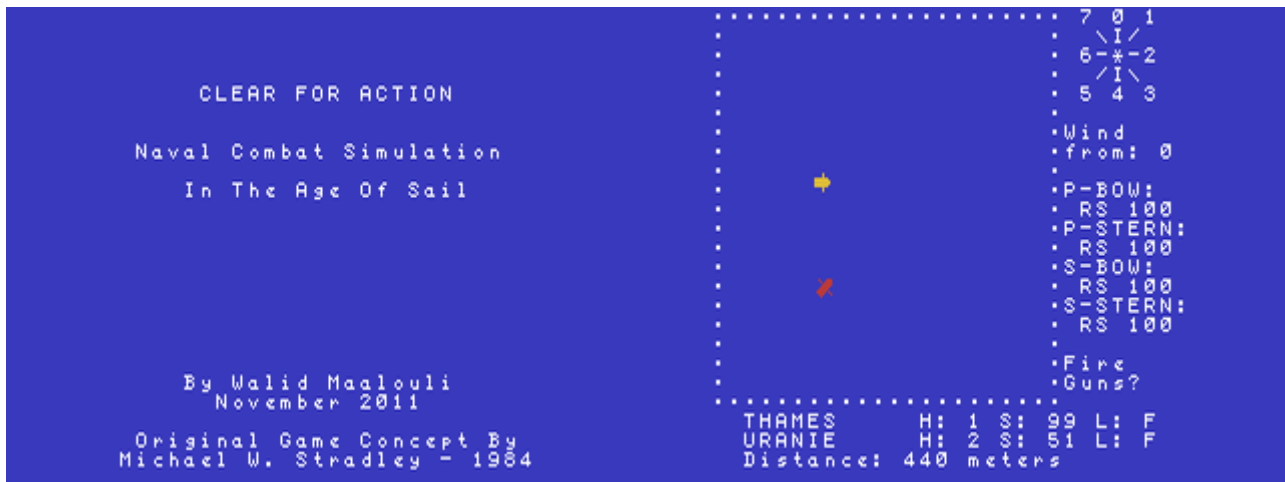
Start from mega menu: G – 6 – 4

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard

Clear For Action

G-6-5 [Disk: 163-CFAC] By Walid Maalouli / Original concept by Michael W. Stradley



You are placed in the boots of the great naval commanders of the 18th century at the helm of the majestic tall-sail battleships, fighting historic battles using top notch seamanship, cunning and audacity. This very detailed naval combat simulation will pit you against a computer opponent in a turn-based pitched battle, either historic or of your own design, and you will have to learn the skills of sailing, gun and crew management, as well as strategy in order to win the day. Can you match the historical outcome and join the rarefied ranks of the great sea commanders of old?

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: ACTION

Download Clear For Action:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Clear For Action Manual \(PDF\)](#)

[Clear For Action Appendices \(PDF\)](#)

Start from mega menu: G – 6 – 5

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Clear for Action

Naval Combat in the Age of Sail



For the TI 99/4A Computer

Author's Note

Clear for Action is a game of strategy pitting you against the computer in a pitched naval battle in the age of the great sail battleships of the 18th century. You are in command of a single ship and you have to demonstrate an excellent understanding of the basic principles of sailing, gun and crew management, as well as tactical acumen in order to prevail and win the day.

This game is based on a 1984 Avalon Hill computer game of the same title developed by Michael W. Stradley for the Atari and TRS-80 computers. One of the distinguishing features of that game was that it included 2 very detailed manuals that laid out the mechanics of play including formulas and tables (but not the AI algorithm), a fact which allowed me to re-create the essence of gameplay without using any of the original code. Given the significant differences between the TRS-80 and the TI 99/4A computers however, a lot of artistic license was taken in the design of the game to take into account some of the shortcomings as well as advantages of the TI, although I believe that it remained faithful to the original concept.

It is my hope that it will provide you with an interesting challenge and afford you the opportunity to slip into the shoes of the commanders of the day and experience the thrill and challenges of naval battle.

Walid Maalouli
November 2011

Running the Game

This game requires:

- 32K RAM
- Disk drive
- Extended Basic cartridge

To run the game, place the program disk into the first disk drive (DSK1) and type RUN "DSK1.ACTION" then press the ENTER key

Note: while this game was designed to run from DSK1, you can fairly easily modify it to run from any other device such as another drive, RAM disk or hard drive. Please refer to **Appendix B** for details on how to patch the game for that purpose. Running the game from a RAM or hard disk will likely speed up loading and gameplay significantly.

If you are running the game from within an emulator, you may use the overdrive or turbo feature if available to improve loading times. This game has been tested using the **Classic 99 emulator** in Overdrive mode with no issues identified except that the in-game messages and notifications will have a shortened screen time. Please refer to **Appendix B** for details on how to patch the game to adjust the messages screen time.

Please remember to keep the Caps Lock key depressed during the game.

Gameplay

Scenario Selection

Upon running the game, you are presented with the title screen. Press any key to dismiss, and then you are presented with a choice of either loading a scenario or creating a new one.



If you select to load a scenario, then you will have the option of either selecting one of the 8 built-in historical scenarios or load one from disk. Pressing 0 will take you back to the previous menu.



The details about the built-in scenarios can be found in **Appendix A**. If you choose to load a previously saved scenario from disk, simply enter the filename at the

TI-99/4A – Game Shelf Extended Basic Games

prompt and you will then be given the opportunity to edit the details of the scenario. If you enter a blank filename, then you will be taken back to the initial menu.

On the other hand, should you choose to create a new scenario, then you will be prompted to enter values for the 2 opposing ships in turn for the following parameters (details about each to be discussed later in the manual):

- Name (up to 10 characters)
- Nationality (up to 10 characters)
- Sailing class
- Hull strength
- Crew complement
- Total gun fire power
- Long guns fire power
- Carronades fire power
- Initial heading
- X grid coordinate
- Y grid coordinate

```
SHIP# 1
SHIP NAME: URANIE
NATIONALITY: FRENCH
SAILING CLASS: 2
HULL STRENGTH: 500
CREW COMPLEMENT: 340
CREW QUALITY: 1.2
TOTAL FIRE POWER: 45
LONG GUNS FIRE POWER: 30
CARRONADES FIRE POWER: 15
INITIAL HEADING: 2
GRID X COORDINATE: 300
GRID Y COORDINATE: 500

ACCEPT DATA? (Y/N)
```

Once you accept the entries, you will be prompted to enter a wind direction value (0-7) with 0 being north and 4 south. This wind direction will remain fixed for the duration of the battle. Once all the data has been entered, you may then save the scenario to disk for later use if you wish. If you had chosen to load a scenario from disk, you will be presented with the same screens, except that the fields will

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be pre-populated and you may edit them at will or just press ENTER to accept the values.

Once the scenario has been set up, then you will need to select which of the 2 ships you want to command, at which point the main game will load and launch.

Game Phases

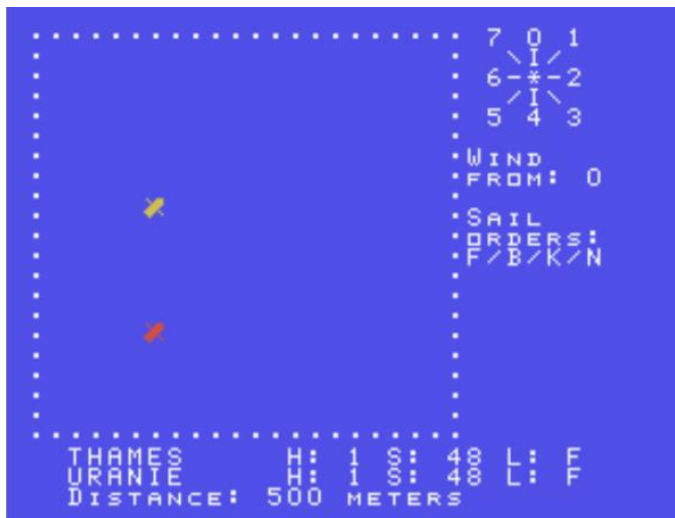
Clear for Action consists of 3 main playing phases:

- Sail set and helm orders
- Gun fire, reloading and boarding orders
- Ship status and crew management

On a standard TI 99/4A system with a floppy drive, there will be a loading time of approximately 25-40 seconds between each phase due to the fact that each phase is a separate program which needs to be loaded along with the necessary game data every time it is called. This is unfortunately a limitation of Extended Basic, however you can significantly shorten the loading time by using a RAM disk or a hard drive, or even an emulator in accelerated mode.

Sail Set and Helm Orders Phase

Once the main game is loaded, you will be presented with a playing field as depicted below



TI-99/4A – Game Shelf Extended Basic Games

The dotted square area is the ship action area, with each side representing 1,600 meters (1.6 kilometers) in length for a total area of 2,560,000 square meters (2,560 square kilometers). The ships are represented as icons with the pointed end indicating the direction of sail. Your ship is always colored red, and the computer's yellow. The X and Y coordinates of the ships are specified in the scenarios, and can vary from 0 to 1600, with the (0,0) origin being over the left upper corner.

Below the action area are the names of the ships as well as their current sailing status:

- H: heading (0-7)
- S: Speed (All ships start with an initial speed of 48)
- L: Sail set (F=Full sails, B=Battle sails, K=Back sails)

The current distance between the ships in meters is displayed on the bottom of the screen.

On the right upper corner of the screen you will see a compass rose with numbers from 0 to 7:

- 0: North
- 1: North East
- 2: East
- 3: South East
- 4: South
- 5: South West
- 6: West
- 7: North West

You will use that compass rose to visualize wind direction and ship orientation. Below the rose is the wind direction from which the wind is blowing. In other words, if wind direction is from 0, that means the wind is blowing from the North, i.e. the top of the screen towards the bottom. Wind direction has important implications regarding speed and ship maneuvering.

The first decision you will need to make as a captain is your sail set. Sailing warships had three major sail sets:

Full Sails: In this configuration, all your sails are unfurled and used to provide maximum speed to your ship. However, this configuration is also very vulnerable to enemy fire given the large surface area.

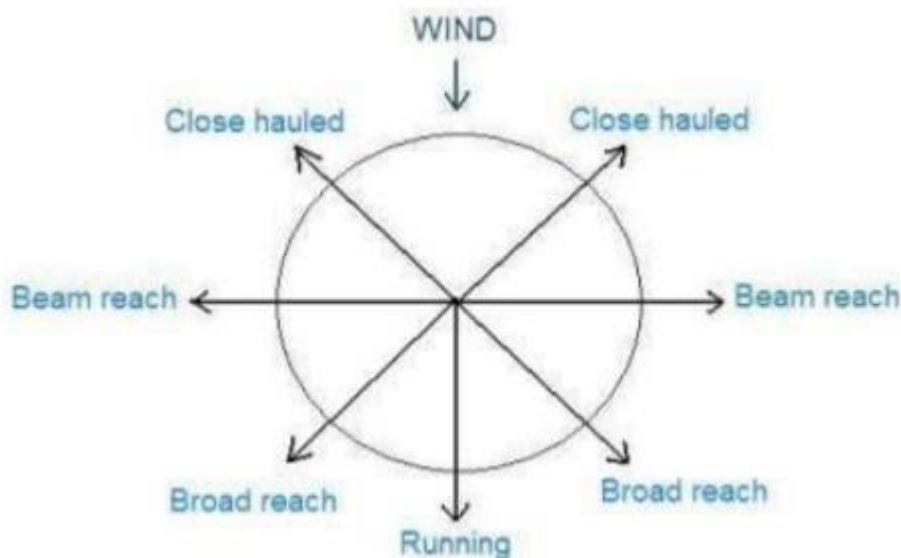
Battle Sails: This is the recommended configuration when you are engaged in battle. It provides the least practical surface area while still providing adequate speed. The trick here is determining when to go for battle sails versus full sails depending on your ship, and the enemy ship's, condition.

Back Sails: This is a special sail configuration used to slow down or even completely stop your ship. This is convenient if you have overtaken the enemy ship and need to slow down so you can bring it abreast and fire a broadside for example.

TI-99/4A – Game Shelf Extended Basic Games

In order to place a sail set order, simply press the corresponding letter for the requested sail set, or press **N** to keep the current sail set unchanged. However, the ability of your crew to carry out your sail orders will depend on the number of crew assigned to the decks, the crew quality, and the hull strength. Combined, these factors make up the Crew Sail Manning Factor (CSMF), and if it is too low, then your sail order will fail, and the computer will display the message **FAILED!** on the screen. Since crew quality is a fixed value for the entire scenario and hull strength goes down as your ship takes damage, the only way to possibly increase the CSMF is to increase the number of crew on the deck. If your order succeeds, then the appropriate sail set will be displayed in your ship status below the action area.

Furthermore, even if you have a high enough CSMF, in order to order Back Sails you will need to be Close Hauled or on Beam Reach, otherwise your order will fail. Below are the classic points of sail, with the arrows indicating your ship's heading:



Your ship's point of sail has a significant effect on final speed, with Close Hauled being the slowest, followed by Running, Beam Reach and Broad Reach which is the fastest. In addition, your ship's final speed is also dependent on your sail set, mast damage, sailing class, and base speed and the change is not instantaneous but rather occurs gradually. *The higher the sailing class, the faster the ship.*

After you have entered your sail set order, you will then be asked to enter turning orders. You may turn to **Port** (left), **Starboard** (right), **Tack** (turn across the wind) or **No change** (heading will remain the same). You cannot turn if your speed is less than 48.

Turning is also dependent on the CSMF, although it is more forgiving. However, **you cannot turn directly into the wind** unless you are tacking. In order to tack, you need to be Close Hauled and have a nearly perfect CSMF because it is a very taxing maneuver for the crew. Furthermore, tacking takes 2 turns to complete, with the ship turning into the wind on the first turn, then going into the opposite Close Hauled point of sail on the second turn. On that turn, the computer will display **TACKING!** and will not give you the option to change sail sets or heading.

TI-99/4A – Game Shelf Extended Basic Games

Should your helm order fail, then FAILED! will be displayed. After you have finished with your sail and helm orders, the computer will determine and execute its own orders and then the ships will move accordingly on the screen and their status as well as distance will also be updated. If the final position of any particular ship takes it beyond the action area border, then it will reappear along the opposite border.

Important: although you enter your orders before the computer, no action is taken until both you and the computer have entered your respective orders, so in effect sail sets and helm orders are simultaneous rather than sequential.

On the following turn, if the distance between the ships is 120 meters or less, then there is a chance that the sails of the ships will become **fouled** (entangled), which will effectively bring the speed of both ships to zero. The closer the distance between the ships, the higher the fouling probability. Should that happen, then FOULED! will be displayed and a small F will appear next to the name of both ships in the status area. In the subsequent turns, you will be given the option of un-fouling the sails, which chance of success is also probabilistic based on the distance between the ships. As long as the ships are fouled, no sail set or helm orders will be possible and NO MVT! will be displayed at the beginning of the phase. Depending on its strategy, the computer may or may not also attempt to un-foul the sails.

In addition, if the distance between the ships is 120 meters or less, you will be given the option of **grappling** the enemy ship, and the probability of success increases the closer the ships are to each other. If you succeed, then a small G will appear next to the enemy ship's name in the status area and both ships' speed will fall to zero. Grappling is essential for boarding action. On the subsequent turns, you will be given the option of removing the grapples if you so wish so, and success is also probabilistic based on the distance between the ships. As usual, your computer opponent may or may not choose to also grapple you or release the grapples depending on its internal assessment of the situation. The speed of both ships will remain zero as long as either or both ships are grappled, and NO MVT! will be displayed at the beginning of the phase with no option to change the sail set or the ship's heading available unless un-grappling is successful.

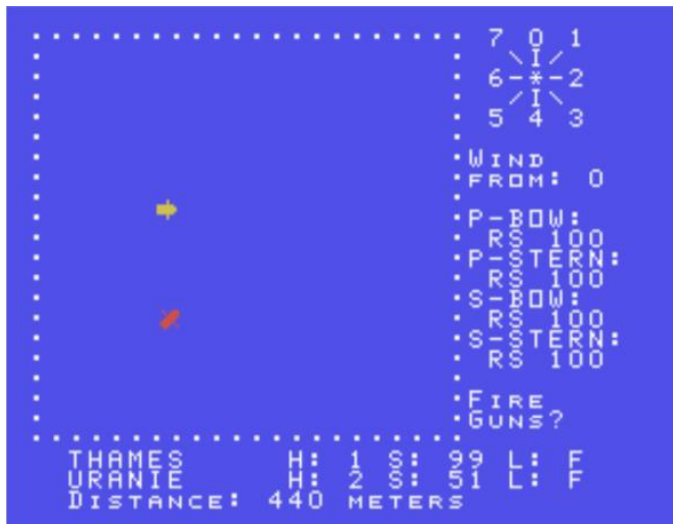
This completes the sail and helm orders phase, and the message PLEASE WAIT... will be displayed while the next phase loads. This is a good time to think about strategy.

Gun Fire, Reloading and Boarding Phase

The guns of the ships have a bearing arc of 45° from either side of their centerline and will not be able to acquire a target outside of that arc. At the beginning of that phase, if your guns do not bear, then the message GUNS DO NOT BEAR will be displayed and you will not be given the option to fire subsequently.

TI-99/4A – Game Shelf Extended Basic Games

Regardless of whether your guns bear or not, the reloading status of your guns will be displayed.



Your guns are distributed over 4 different ship sections, and are a mix of long guns and carronades in a proportion dependent on your ship's characteristics. The sections are:

- Port bow (P-BOW)
- Port stern (P-STERN)
- Starboard bow (S-BOW)
- Starboard stern (S-STERN)

These sections are listed on the right-hand side of the screen. Underneath each section will be the type of shot currently selected for that section, as well as the reloading percentage which varies from 0 to 100. The ships of that era were generally equipped with 2 types of guns:

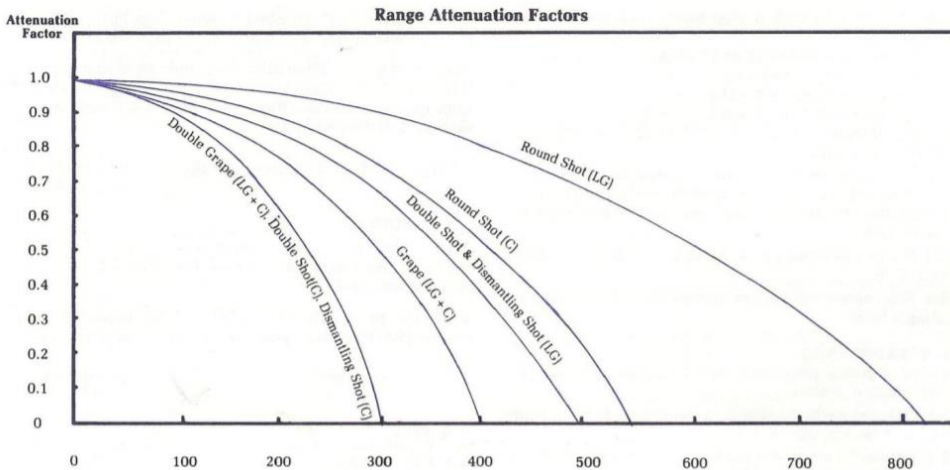
- Long guns – These typically had long ranges up to 800 meters depending on the type of ammunition loaded and were the main type of gun used.
- Carronades - Served as a powerful, short-range anti-ship and anti-crew weapon, and were an adjunct to the long guns.

Different types of ammunition were used, each with a specific purpose. Round shot (**RS**) was a solid ball intended to cause structural damage to the ship and its weight varied from 9 to 32 pounds. You could also double shot (**DS**) your guns for greater effectiveness, but at the expense of range. Other types of ammunition included grapeshot (**GP**) and double grapeshot (**DG**), which were mainly antipersonnel weapons consisting of hundreds of musket balls in a serge bag. The last type of ammunition available in this simulation is the dismantling shot (DM), a common form being two cannonballs chained together and designed to tear up the standing rigging which supported the masts and spars, causing them to crash.

The loading of the guns is not instantaneous, and depends on the number of effective gun strength in each section, the type of gun being reloaded, the number of crew assigned to the side of the guns being loaded, the morale of the crew, the type of shot being loaded and the quality of the crew.

TI-99/4A – Game Shelf Extended Basic Games

At that point, and assuming your guns are able to bear on the enemy ship, you will be given the option to fire your guns. Your decision to fire will need to take into account the range of the opposing ship as well the reloading percentage on the side that will fire. This last factor will be determined automatically by the computer depending on your ship's orientation. The chart below should give you an idea of the different range characteristics of each gun with each type of ammunition:



The range attenuation factor essentially indicates the potential damage your guns will inflict on the opposing ship, with 1 being the most damage and 0 no damage. The numbers on the x-axis indicate the range in meters of the chosen gun, with LG standing for long guns and C standing for carronades.

If you decide to fire, you will be given the option to either target the hull or the masts, and your guns will fire with the number of hits indicated subsequently. Then the opposing ship will fire if possible and the number of hits on your ship will be indicated.

Once firing is completed, you will be given the opportunity to change the type of ammunition loaded in each gun section. If you decide to do that, then you will be prompted to enter a new type of ammunition for each section by typing in its 2 letter designation (RS, DS, GP, DG, DM) and pressing ENTER. If you do not wish to change the load of a particular section, then simply press ENTER to keep the current loadout. Remember however that when you change the load of a gun section, then the reloading percentage of that section goes to zero and will increase gradually depending on the factors discussed previously. Your computer opponent will then make decisions about its gun loading.

At that stage, if one of the ships is grappled, then you will be asked whether you would like to board the enemy ship. The main objective of boarding is to eliminate as many deck crews as possible, thus reducing the opposing ship's morale as well as ability to maneuver. Please note that only deck crews are affected by boarding, and the other crew are not involved nor do they suffer casualties. This action can quickly force the enemy to strike its colors, but can also lead to significant casualties on your side as well, so use it carefully. The main predictors of boarding success are your crew morale and quality, and they should preferably be better than your opponent, although you can sometimes get away with boarding action using an inferior crew complement if you have a large amount of available crew and thus can take a fair amount of punishment while

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Hull strength indicates the remaining structural integrity of your hull following gun damage. The port and starboard fire powers indicate the effective gun strength on each respective side. If the fire power on a specific side goes to zero, then you will no longer have the ability to fire from that side. Mast damage is expressed as a percentage, and your maneuvering ability and speed will be reduced proportionately to the amount of incurred mast damage. Crew morale starts off at 100 and decreases as the ship and crew take damage. Crew casualties tend to have the greatest effect on crew morale, while gun damage has the least effect. At first you will likely not see much of a change in morale, however as you accumulate damage then the decline will accelerate. Finally, the total crew number indicates how many available crew you have left on the ship.

The crew of a particular ship is usually distributed between 4 different ship sections:

- Decks (Deck)
- Port guns (P-Guns)
- Starboard guns (S-Guns)
- Tops (Tops)

The status display will show you the **actual (A:)** crew distribution under each section and the **recommended (R:)** one as calculated by the computer based on your ship size and the number of effective guns still available. This recommendation is an estimate and you are not bound to follow it. At that point, you will be asked if you would like to adjust the crew distribution. If you answer Y, then you may select the *From* and *To* sections as well as the number of desired crew to transfer, and the adjustments will then be reflected on the status screen. You may repeat this process as many times as you see fit.

Once you are satisfied with your crew distribution, answer N to the crew adjustment option and you will be shown the opposing ship's status excluding the crew detail. Neither you nor the computer opponent will have access to the enemy's crew details in order to preserve a certain level of fog of war.

Once you have analyzed the enemy's status, press any key and you will be taken back to the Sail **Set and Helm Orders Phase** to continue the battle.

Appendix A

The Built-In Scenarios

There are 8 built-in scenarios in the game, each depicting an actual historical battle, and you can try to match the original outcome or see if you can reverse the fortunes of the loser.

Thames (Br.) vs Uranie (Fr.)

I. 24 October 1793 1015 hours Off Brest

HMS Thames, while watching Brest, was beset by a much larger French frigate. Undaunted, Captain Cotes elected to fight upon discovering the Frenchman was the faster. The battle commenced with Uranie's first broadside at 1020 hours and raged until 1420 hours when Uranie raked the Thames and then attempted to board across her quarter. This proved unsuccessful and with 60 casualties and a dead Captain, the Uranie hauled off. The Thames was virtually demasted with 11 dead and 23 wounded. About an hour later, three other French frigates and a corvette arrived on the scene and after one broadside, the Thames was forced to strike—a gallant defense in vain.

II. Ship Data

32 HMS Thames—Capt. Cotes

5th Rate Forecastle: 2 x 6#LG, 2 x 24#C
 656 Tons Main Deck: 26 x 12#LG
 187 Crew Quarterdeck: 4 x 6#LG, 4 x 24#C

40 Uranie

5th Rate Forecastle: 2 x 8#LG, 2 x 36#C
 1100 Tons Main Deck: 28 x 18#LG
 320 Crew Quarterdeck: 10 x 8#LG, 2 x 36#C

III. Game Data

Wind Direction: North

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Thames	1	2	360	187	1.6	41	29	12	1
Uranie	2	2	500	320	1.0	61	50	11	1

Notes:

TI-99/4A – Game Shelf Extended Basic Games

Blanche (Br.) vs Pique (Fr.)

**I. 5 January 1795 0020 hours
Outside Guadaloupe, West Indies**

The Blanche, Capt. Robert Faulknor, showed herself off shore on the afternoon of the 4th. Capt. Conseil of the Pique, confident of victory, sailed that evening to do battle. Shortly after midnight the action began and by 0100 the ships were running before the wind under all plain sail within pistol shot range. After some hour and a half of cannonade, the Blanche pulled ahead to cross the Pique's bow, but her main and mizen masts went overboard and she instead fell aboard the Pique and fouled. Capt. Faulknor and the 2nd Lt., David Milne, lashed the bowsprit of the Pique to the Blanche's capstan. Faulknor was shot dead in doing so. After several failed boarding attempts, the Pique broke free and drifted astern. The ships again fouled and this time, the Pique's bowsprit was lashed to the stump of Blanche's mainmast. Blanche started running before the wind towing the Pique astern of her. Every attempt by Pique's crew to cut the lashing was thwarted by the fire of Blanche's marines lined on the quarterdeck. Blanche's 1st Lieutenant, Lt. Watkins, ordered ports to be made for two 12# long guns in the stern by blowing holes in the stern frame. Subjected to this raking fire for almost two hours, the Pique, a demasted wreck, struck her colors.

Casualties on the Pique were appalling with 76 killed and 110 wounded including Capt Conseil mortally. Blanche suffered 7 killed and 23 wounded.

II. Ship Data

32 HMS Blanche—Capt. Robert Faulknor

5th Rate Forecastle: 2 x 6#LG, 2 x 24#C
722 Tons Main Deck: 26 x 12#LG
198 Crew Quarterdeck: 4 x 6#LG, 4 x 24#C

36 Pique—Capt. Conseil

5th Rate Forecastle: 2 x 6#LG, 2 x 36#C
906 Tons Main Deck: 26 x 12#LG
279 Crew Quarterdeck: 8 x 6#LG, 2 x 36#C

III. Game Data

Wind Direction: West

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Blanche	1	2	420	198	1.5	41	29	12	2
Pique	2	2	480	279	1.0	42	31	11	2

Notes:

TI-99/4A – Game Shelf Extended Basic Games

Ville de Milan (Fr.) vs Cleopatra (Br.)

I. 17 February 1805 1400 hours In the North Atlantic

HMS Cleopatra, Capt. Sir Robert Laurie, sighted the Ville de Milan, Capt. M. Renaud, on the morning of 16 February and immediately gave chase. The Ville de Milan was carrying urgent dispatches for Villeneuve's fleet from Napoleon and had been ordered to avoid any engagement. Capt. Laurie, surmising that the enemy was probably carrying dispatches, was determined to bring the Milan to action despite the Frenchman's obvious superiority. In the extremely light winds, the Cleopatra consistently gained on the heavier Milan only to have a vital piece of rigging damaged by the 8 pound chase guns which had been placed in the Milan's stern to discourage pursuit.

At 1030 on the 17th, the Ville de Milan shortened sail to await the inevitable action which began at 1430 hours and continued until just after 1700 when the two vessels, heavily damaged aloft, collided. The Cleopatra attempted to board but was repulsed as was the Milan's first attempt. A second attempt by the Milan at 1715 carried the Cleopatra. Cleopatra lost 22 killed and 36 wounded, including all officers but the Captain. The Milan had 10 killed and 20 wounded including her Captain. Both ships were virtually dismasted.

Captain Laurie had tried to dismast the Frenchman for a reason. England controlled the seas. On the morning of 23 February, with both ships in company with but jury-rigged masts, HMS Leader (50) arrived on the scene, and easily catching both vessels, retook Cleopatra and captured the Milan.

II. Ship Data

28 HMS Cleopatra—Capt. Sir Robert Laurie

5th Rate	Forecastle: 2 x 6#LG, 2 x 24#C
689 Tons	Main Deck: 26 x 12#LG
200 Crew	Quarterdeck: 8 x 24#C

44 Ville de Milan—Capt. M. Renaud

5th Rate	Forecastle: 2 x 8#LG, 2 x 36#C
1097 Tons	Main Deck: 26 x 18#LG
350 Crew	Quarterdeck: 16 x 8#LG

III. Game Data

Wind Direction: West

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Cleopatra	1	2	380	200	1.6	47	27	20	2
Ville de Milan	2	1*	540	350	1.1	58	52	6	2

*To give Cleopatra a speed advantage

Notes:

**TI-99/4A – Game Shelf Extended Basic Games
Nymphé (Br.) vs. Cleopatre (Fr.)**

**I. 18 June 1793 0610 hours
In the English Channel off Start**

At dawn the HMS Nymphé, Capt. Edward Pellew, sighted the Frenchman and immediately gave chase. By 0600, the Cleopatre, Capt. Mullon, decided to shorten sail and await the Nymphé. As the Nymphé came up, Capt. Mullon gave her three cheers and saluted as did Pellew. By 0615 the Nymphé was on the Cleopatre's starboard quarter and with both ships running before the wind, the action commenced at pistol shot range. Shortly before 0700, the Cleopatre's wheel was shot away and she fell aboard Nymphé. Pellew led his boarders across and Cleopatre struck. The Nymphé had 23 killed and 27 wounded. Cleopatre suffered 63 casualties including Capt. Mullon who was killed. This was the first in a long string of victories for Pellew, one of England's greatest Captains.

II. Ship Data

36 HMS Nymphé—Capt. Edward Pellew

5th Rate	Forecastle: 2 x 6#LG
937 Tons	Main Deck: 26 x 12#LG
240 Crew	Quarterdeck: 8 x 24#C

40 Cleopatre—Capt. Mullon

5th Rate	Forecastle: 2 x 6#LG, 2 x 36#C
913 Tons	Main Deck: 28 x 12#LG
320 Crew	Quarterdeck: 6 x 6#LG, 2 x 36#C

III. Game Data

Wind Direction: West

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Nymph	1	2	400	240	1.5	43	27	16	2
Cleopatre	2	2	380	320	1.0	43	32	11	2

Notes:

TI-99/4A – Game Shelf Extended Basic Games

Ambuscade (Br.) vs Baionnaise (Fr.)

I. 14 December 1798 0900 Off Bordeaux

This is a good scenario for "smaller" ship actions and represents one of the few instances where a British ship was taken by an equivalent Frenchman. The Ambuscade had captured a French brig and had transferred to it the ship's 2nd Lt. and a prize crew. While the prize sailed to England, the Ambuscade sailed to Bordeaux, where it expected to meet the 32-gun frigate Stag.

At 0700, sails were sighted, and thinking it was the Stag, the captain went off to breakfast. Two hours later, when the ship hauled to wind two miles away, they realized their error too late—it was the French ship Baionnaise. According to one account, the British crew became disheartened by the bursting of a gun on the main deck which wounded 11 seamen. With her Captain and most of the other officers slain, the Ambuscade succumbed to a successful boarding action lead by a detachment of French marines.

II. Ship Data

32 HMS Ambuscade—Capt. Henry Jenkins
 5th Rate Forecastle: 2 x 6#LG, 2 x 24#C
 Main Deck: 26 x 12#LG
 190 Crew Quarterdeck: 4 x 6#LG, 6 x 24#C

30 Baionnaise—Lt. de vaisseau Edmond Richer
 6th Rate Forecastle: 2 x 6#LG, 2 x 32#C
 Main Deck: 24 x 8#LG
 281 Crew including Quarterdeck: 4 x 6#LG, 2 x 32#C
 31 Marines

III. Game Data

Wind Direction: North

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Ambuscade	1	2	420	190	1.2	45	29	16	2
Baionnaise	2	2	390	281	1.2	31	21	10	2

Notes:

TI-99/4A – Game Shelf Extended Basic Games
Leander (Br.) vs Genereux (Fr.)

**I. 18 August 1798 0900 hours enroute from
 Alexandria to Gibraltar with Nelson's dispatches**

This scenario provides a definite challenge for the British player. Five days after Nelson's victory over the French fleet in Aboukir Bay, the Leander sailed from Alexandria with the Admiral's dispatches. At daybreak on the 18th of August, Captain Boulden Thompson, her commander, sighted the Genereaux, one of the two French ships that escaped from Nelson's fleet. Thompson tried to outdistance the superior ship, but finding the Genereaux gaining on him, he shortened sail.

For an hour and a half the two ships exchanged broadsides until Genereaux closed to board the Leander whose rigging was so damaged as to render her unmanageable. Numerous attempts to board were repulsed by the Leander's crew as the two ships lay side by side grinding against each other and continuing to fire their cannon. Failing to board, the Genereaux disengaged and eventually maneuvered to a position across the Leander's stern. Thompson, having lost fully one third of his crew and realizing the hopelessness of his situation surrendered after close to a six hour struggle.

Upon his eventual return to England, Thompson was tried by court martial whose verdict was that "The gallant and almost un-

precedented defense of Captain Thompson of H.M.'s late ship Leander against so superior a force as that of the Genereux is deserving of every praise his country and this court can give, and that his conduct, as well as that of his officers and men, reflects not only the highest honor on himself and them, but on their country at large."

II. Ship data

50 HMS Leander—Capt. Thompson

4th Rate First Battery: 22 x 24#LG
 Second Battery: 22 x 12#LG
 282 Crew Main Deck: 6 x 6#LG, 6 x 24#C, 4 x 12#C

74 Genereux

3rd Rate First Battery: 28 x 36#LG
 Second Battery: 30 x 24#LG
 936 Crew Main Deck: 14 x 8#LG, 6 x 36#C

III. Game Data

Wind Direction: North

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Leander	1	1	675	282	1.6	83	69	14	6
Genereaux	2	1	1040	936	1.0	164	147	17	5

Notes:

TI-99/4A – Game Shelf Extended Basic Games

Constitution (Am) vs Guerriere (Br)

I. 19 August 1812 1500 hours off the coast of Nova Scotia

Captain James Dacres of HMS Guerriere was not popular with American seamen. He and his ship were notorious for the seizing of ships and the impressment of seamen who might be British—a practice which was one of the principal causes of the War of 1812. Prior to the war, Dacres had boasted, in the salons of Baltimore, that he would wager a fine hat to any American Captain who thought that his ship could contend with the Guerriere for a quarter of an hour. The opportunity to make good his boast presented itself on the afternoon of August 19, 1812 when a frigate was spotted to the north—a frigate which came on so boldly that Dacres concluded that it could not be an American ship. The ship was the USS Constitution commanded by Captain Isaac Hull.

Constitution held her fire until she was close upon the Guerriere. Constitution's first broadside rocked the Guerriere and shortly thereafter the British ship's mizzenmast went by the board. The condition of the British ship continued to deteriorate as the accurate American fire smashed into her hull and brought down more rigging. Totally dismasted, unmaneuverable and facing a rake from the Constitution, Dacres ordered the British colors hauled down.

Captain Dacres, himself painfully wounded, came aboard the Constitution and proffered his sword to Captain Hull. "No, no, Captain," Hull said, "I'll not take a sword from one who knows so well how to use it. But—I'll trouble you for that hat."

Guerriere was so badly battered that she could not be salvaged. She was set afire and abandoned. The real answer to Constitution's victory lay not so much in her slight edge in broadside firepower but in the accurate fire of her well drilled gunners and the stout live oak planking on her sides which earned her the nickname of "Old Ironsides."

II. Ship Data

32 USS Constitution—Capt. Isaac Hull

4th Rate Gun Deck: 30 x 24#LG
476 Crew Main Deck: 2 x 18#LG, 22 x 32#C

26 HMS Guerriere—Capt. James Dacres

4th Rate Gun Decks: 22 x 24#LG
263 Crew Main Deck: 4 x 18#LG, 22 x 32#C

III. Game Data

Wind Direction: North

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Constitution	3	1	610	476	1.7	118	63	55	4
Guerriere	1	1	570	263	1.6	105	50	55	4

Notes:

TI-99/4A – Game Shelf Extended Basic Games

Shannon (Br.) vs Chesapeake (Am.)

I. 1 June 1813 1750 hours off Boston Harbor

The gunners of Captain Philip Broke's Shannon were probably the best in the British Navy. Broke had commanded the Shannon for seven years, drilling his crew incessantly often in violation of Admiralty orders. The Chesapeake, a fine ship ably commanded by James Lawrence, had had a recent turnover in seamen and officers so that at the time of her engagement with Shannon, the effectiveness of her crew was not up to the usual high standards of the fledgling American Navy.

Responding to Broke's challenge, Chesapeake cleared Boston harbor and closed with the Shannon. Before the action commenced, Broke presented his ship to a rake. Not to be outdone in a point of honor, Lawrence refused the advantage and both ships began the action broadside to broadside at point blank range.

The next 15 minutes were among the bloodiest in sailing warfare with Shannon suffering 83 casualties compared to 146 on the Chesapeake. The action ended as the two ships fell afoul of each other and the Shannon's crew, lead by Broke, rushed the American ship. With their Captain mortally wounded, the Americans were unable to organize a defense and were quickly overwhelmed by the crack British seamen.

Shannon's victory was greeted with much relief by the British Admiralty which had suffered a series of stunning defeats at the hands of American frigates and small craft. Broke was seriously wounded in the boarding action ending his naval career. Lawrence died two days later but his last order, "Don't give up the ship," lived on to become the motto of the American Navy.

II. Ship Data

38 HMS Shannon—Capt. Broke

5th Rate Gun Deck: 28 x 18#LG
330 Crew Main Deck: 2 x 12#LG, 16 x 32#C

38 USS Chesapeake—Capt. Lawrence

5th Rate Gun Deck: 28 x 18#LG
386 Crew Main Deck: 16 x 32#C

III. Game Data

Wind Direction: North

Ship	Nat'l	Sail Class	Hull St'gth	Crew	Crew Qual	TBFP	LGFP	CFP	HDG
Shannon	1	2	490	330	1.7	84	44	40	3
Chesapeake	3	2	500	386	1.4	82	42	40	4

Notes:

Appendix B

Patching the game

I- **Running the game using a device other than DSK1**

You may run the game from the device of your choice simply by editing the following program lines for each program section and replacing DSK1 with the device name desired:

- File ACTION: 1047, 1376, 1421, 1431
- File ACTION2: 1427, 3381, 3390
- File ACTION3: 180, 3950, 4620, 4710
- File ACTION4: 180, 4620, 4710

II- **Running the game under accelerated emulation**

Depending on the speed of your computer, if you run the game under accelerated emulation such as the Overdrive mode in Classic 99, the screen messages may be displayed too fast to be read comfortably. You may edit the following lines and replace the number 200 with a larger number to increase the screen time of the messages:

- File ACTION2: 6145
- File ACTION3: 6145

In addition, keypresses may become very sensitive under acceleration and duplicate keys may be entered erroneously. This is again dependent on the speed of your computer.

Quasimodo

G-6-6 [Disk: 164-QMOD] By Gordon Tomlinson



Based on the celebrated literary classic, The Hunchback Of Notre Dame, you are the hunchback Quasimodo trying to save you beloved lady. Unfortunately, there are quite a few hurdles you have to overcome first as you run through many game levels and avoiding rolling boulders and menacing knights in full armor, among other troubles. This game is absolutely amazing in its visual quality, and its gameplay does not disappoint either although it is quite taxing. Very highly recommended!

Requirements: XB cartridge, 32K RAM. Joysticks optional

Executable to run: QUASI

Download Quasimodo:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

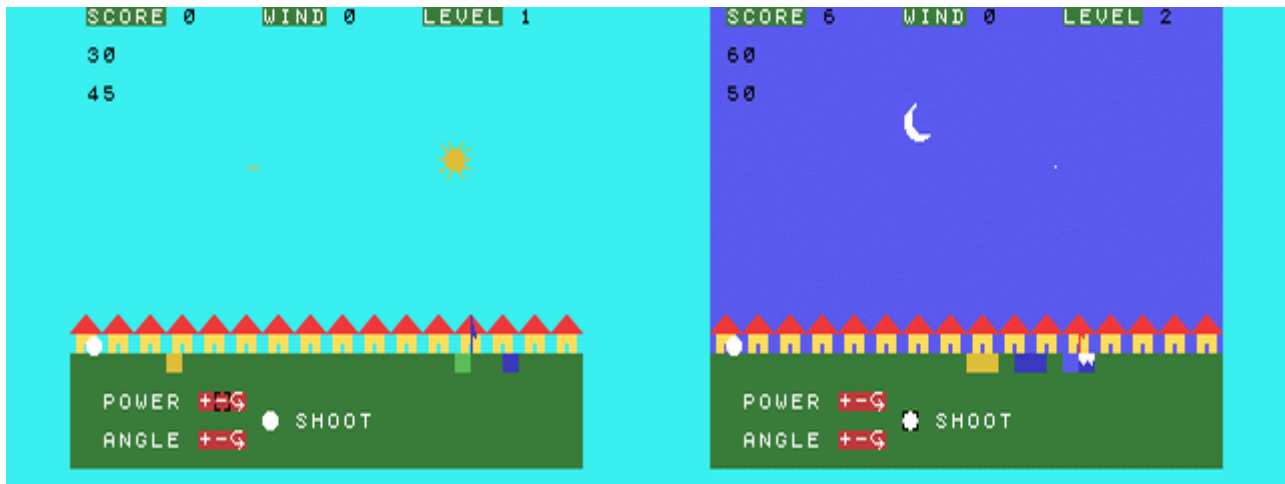
Start from mega menu: G – 6 – 6

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 1

Ball 2.0

G-6-7 [Disk: 165-BALL] By Alessandro Betori



This is a twist on the venerable artillery game, substituting cannons with golf clubs and a more cheery background. Armed with your favorite club, select the stroke power and the shot angle then let loose, with the objective of getting the ball into the hole while avoiding sandpits and ponds. There are many colorful screens to play through, and it's really not as easy as it seems!

Requirements: XB cartridge. (Minimem cartridge and disk drive optional)

Executable to run: BALL-XB

Download Ball 2.0:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Ball 2.0 instructions](#)

Start from mega menu: G – 6 – 7

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

INSTRUCTION TO LOAD "SMART BALL"

TI BASIC GAME. - 2.0 Version.

TI EXTENDED BASIC GAME. 1.2 Version.

Steps for TI-99/4A + Tape Recorder:

1. (Only first time) Enter Ti BASIC and digit and RUN this program
(or load BOOT file)...
100 CALL CLEAR
110 INPUT "REGISTRO(0-7),DATO(0-255)? ":R,D
120 A=18429-(256*R+D)
130 X\$=CHR\$(O)
140 OPEN #1:"CS1",OUTPUT,FIXED
150 PRINT #1:X\$&X\$&X\$&X\$&X\$&X\$&X\$&CHR\$(INT(A/256))&CHR\$(A)
2. (Only first time) Run program and insert 5,15 like input, then press ENTER key.
3. (Only first time) Program run and write (SAVE CS1) on tape a special file...
4. (Only first time) Reset Ti99/4A.
5. Enter Ti-Basic and Load special file from tape with OLD CS1.
6. RUN program and after few seconds, screen shows black lines.
Press any key (letter A,B etc.) and ENTER key: you get MEMORY FULL.
7. Write NEW and press ENTER key.
8. Load TI BASIC game BALL from tape with OLD CS1 and RUN game.

Steps for TI-99/4A + Tape Recorder + Mini memory module (optional):

1. Insert MINI MEMORY CARTRIDGE.
2. Enter TI BASIC and load game BALL-M from tape with OLD CS1 and RUN game.

Steps for TI-99/4A + Mini memory module (optional) + Disk COntroller (Optional):

1. Insert MINI MEMORY CARTRIDGE.
2. Enter TI BASIC and write CALL FILES(1), press ENTER key then write NEW and ENTER key.
3. Load game BALL-M from disk with OLD DSK1.BALL-M and RUN game.

Warning : disk version is deprecated! Game is slower then tape version!

Steps for TI-99/4A+ EXTENDED BASIC+ Tape Recorder:

1. Insert TI - EXTENDED BASIC CARTRIDGE.
2. Enter TI EXTENDED BASIC and LOAD BALL-XB from tape with OLD CS1 and RUN game.

TI-99/4A – Game Shelf Extended Basic Games

Steps for TI-99/4A+ EXTENDED BASIC+ Disk Controller:

1. Insert TI - EXTENDED BASIC CARTRIDGE.
 2. Enter TI EXTENDED BASIC and LOAD BALL-XB with OLD DSK1.BALL-XB and RUN game.
-

Armed with a white ball, you are determined to demonstrate your skills at the golf course.

Your goal is to get the ball in the hole in as few shots as possible.

Test your skills at calculating the right power and angle combination to achieve that.

Use E-S-D-X (also W-Z-C-R for diagonal moves) to place the cursor over the appropriate controls for power and angle and press Q to select. Move the cursor over the shoot symbol and press Q again to hit the ball.

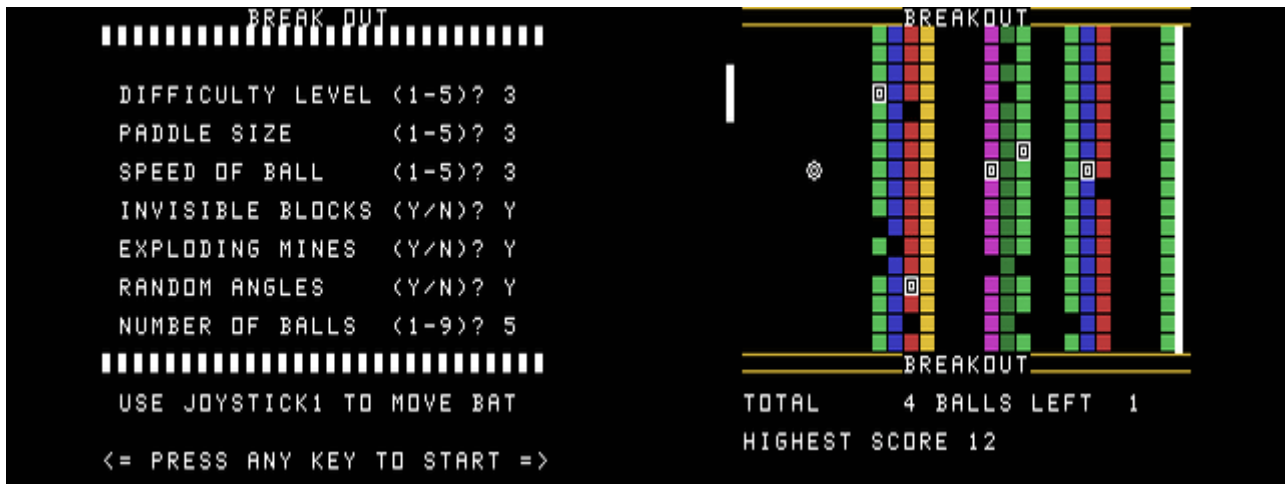
You can select POWER (from 5 to 100) and ANGLE (from 0 to 180), with 0 pointing straight to the right and 180 straight to the left, effectively allowing you to shoot the ball in any direction. The looping arrow next to the + and - controls allows you to reverse the current angle or power for quick adjustments.

Warning: wind, sand, water and ice will trap your ball, and so does shooting it beyond the screen boundaries. You have 3 balls in total, so aim carefully! How far can you get?

Alessandro Betori 27/08/2011

Break Out

G-6-8 [Disk: 166-BOUT] By Unknown Author



Who knew you could create such a great version of the classic Breakout in Extended Basic? Except that you are playing sideways instead of vertically. The game is highly customizable from the size of the paddle to the option of having invisible bricks. Great piece of programming. *[If you happen to know the name of the author, please let me know so I can provide appropriate credit]*

Requirements: XB cartridge, 32K RAM, Joystick.

Executable to run: BREAKOUT

Download Break Out:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

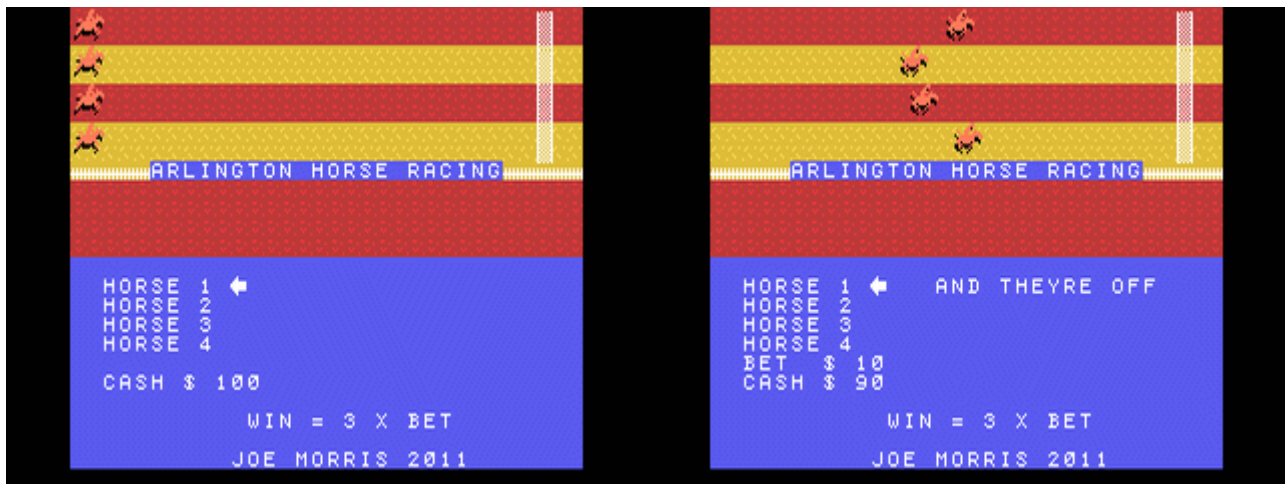
Start from mega menu: G – 6 – 8

Features: Title Screen, XB, One Player, Sound, Speech

Controls: Joystick 1

Arlington

G-6-9 [Disk: 167-ARLI] By Joe Morris



This is another well done horse racing simulation with really great animations. Bet on your favorite horse then sit back, relax, and watch the race unfold in front of you. Great for parties!

Requirements: XB cartridge, 32K RAM.

Executable to run: ARLINGTN

Download Arlington:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

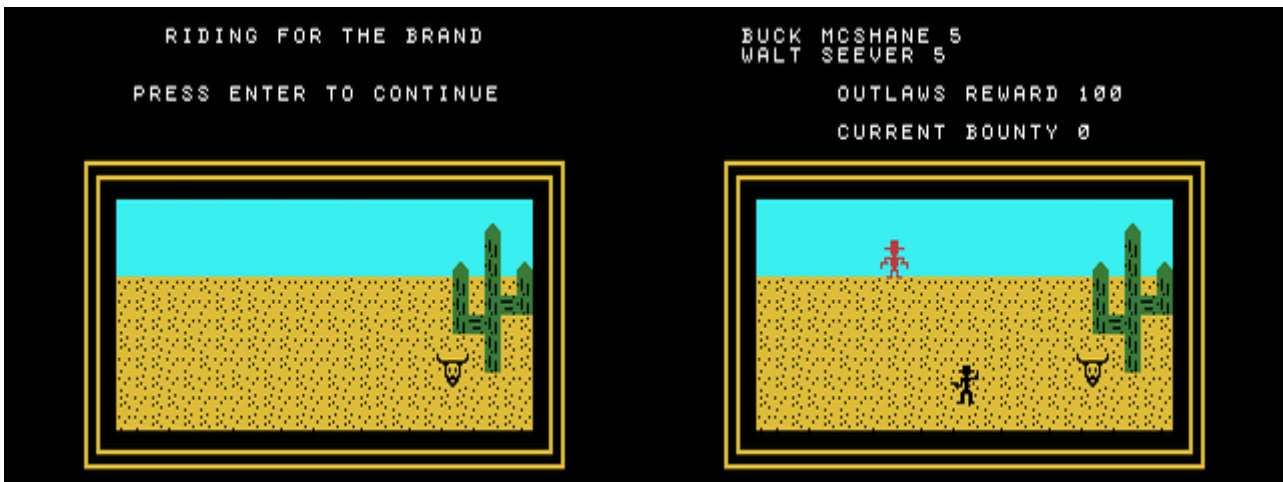
Start from mega menu: G – 6 – 9

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Riding For The Brand

G-6-A [Disk: 168-RIDI] By Owen Brand



You are Buck McShane, a loyal cowboy who's foreman was murdered by 9 outlaws who stole the majority of the cattle herd. A hefty bounty was placed on their heads, and you have every intention to collect. Armed with your sometimes unreliable gun, you are to face each outlaw in a shoot-out and hopefully live to tell your tale. Great graphics and easy controls, complemented by a nice musical track thanks to Matthew Haggerty's sound player.

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional

Executable to run: XB AUTOLOAD

Download Riding For The Brand:

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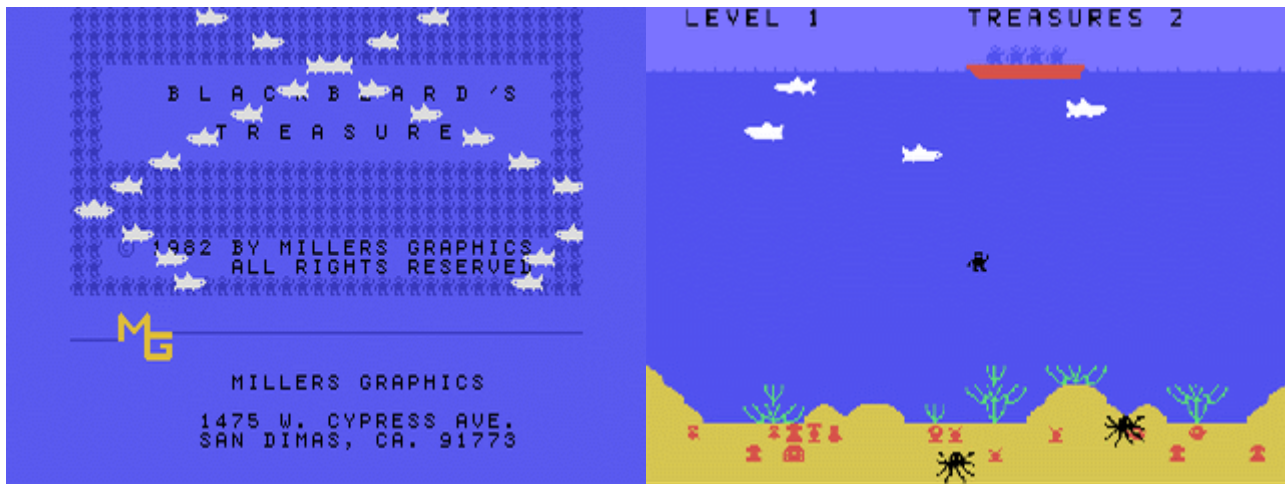
Start from mega menu: G – 6 – A

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 1

Blackbeard's Treasure

G-6-B [Disk: 169-BTRE] By Miller Graphics



Your five man team of deep see explorers have finally found the treasure of the infamous Blackbeard the pirate, but unfortunately it lies at the bottom of a shark infested sea and is protected by two giant octopuses...Sooo, you have no choice but to put on your wet suit and jump overboard. Avoid the sharks and the octopuses, collect as much treasure as you can, and make it back safely to the boat. Well, that's the theory anyway. You see, this game implements some realistic physics which means that you can't stop in your tracks or change direction instantly, and so there is a lot of finesse at play here. Really great game!

Requirements: XB cartridge, 32K RAM.

Executable to run: PIRATE

Download Blackbeard's Treasure:

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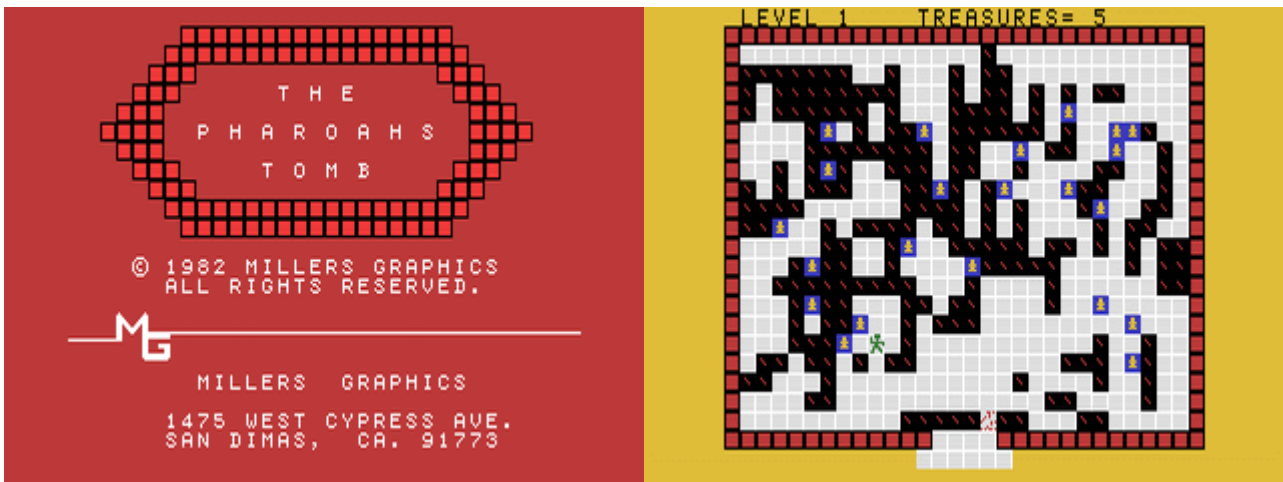
Start from mega menu: G – 6 – B

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 1

The Pharoah's Tomb

G-6-C [Disk: 170-PTOM] By Miller Graphics



An ancient pharoah has hidden his treasure inside a deep tomb, and you and your intrepid explorers are dead set on digging it out (no pun intended). This is no easy task given that the tomb is riddled with dangers such as traps, falling blocks, and the spirit of the Pharoah himself! Try to collect as much treasure as you can before losing your entire party, because yes, in the end you WILL die...

Requirements: XB cartridge, 32K RAM.

Executable to run: PHAROAH

Download The Pharoah's Tomb:

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[\[V9T9 .DSK Format\]](#)

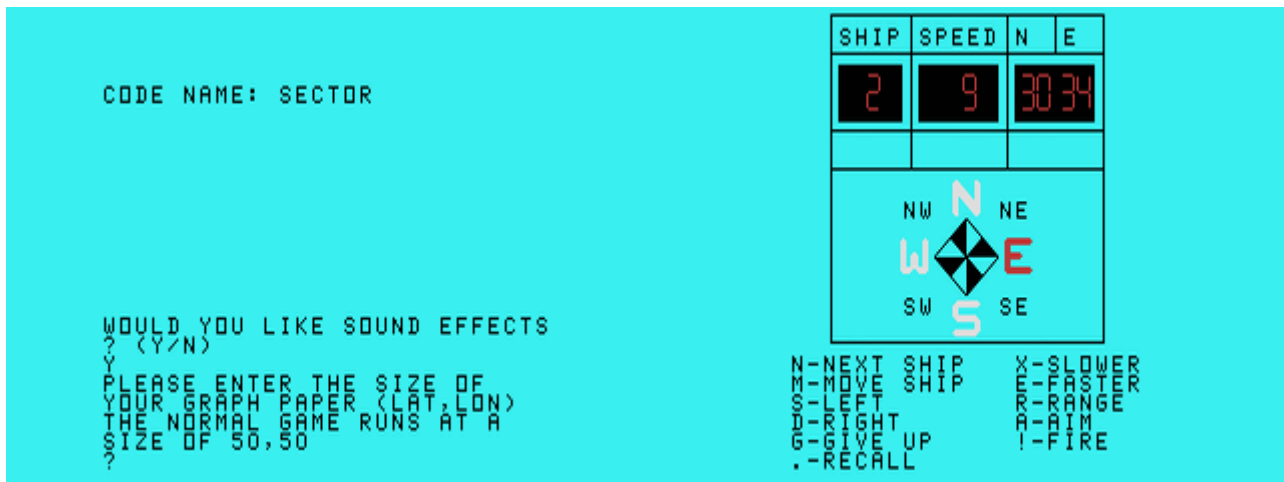
Start from mega menu: G – 6 – C

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Code Name: Sector

G-6-D [Disk: 171-SECT] By Mike Brent



This is a very faithful recreation of the 1977 game of the same name that was one of the first computerized games available. In essence, you have 4 destroyers hunting down an enemy submarine which heading and depth are unknown. Equipped with sonar, you can tell your range from the sub, which helps you delineate the area of your search. When you combine all 4 destroyers, then you can fairly quickly zoom in on the sub and eventually destroy it. While the original board game came equipped with a grid, colored crayons and a ruler, you will have to provide those yourself including graph paper. In the end, a very enjoyable game which will test your powers of logic and strategy. I love the LED display reproduction!

Requirements: XB cartridge, 32K RAM, graph paper, colored pencils, ruler.

Executable to run: SECTOR

Download Code Name: Sector:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[PDF scan of original manual](#)

[Implementation notes](#)

Start from mega menu: G – 6 – D

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

This is a simulation of the old game "Code Name: Sector". In it, you attempt to hunt and sink a hidden sub with 1-4 players, using only a range finder and some deduction.

I've made it mostly play like the original, enough, I believe, that the original documentation will suffice. There is one area that is fairly different, and I did this because the XB display update is a bit slow, and that is during the firing sequence.

Pressing AIM displays 'AIM'. While this is up, the normal left and right keys to turn the compass affect your aim, not your direction. You may exit AIM mode by pressing Recall, you are not committed yet! This is contrary to the original game, where you would repeatedly press AIM to change the direction.

During AIM mode, press FIRE. The game will ask you to enter depth, which is 1-3. This is contrary to the original game, which would sequence/flash the depths during AIM mode, and fire immediately.

If you try to move more than once in a turn, it will flash "NEXT".
If you try to fire more than once in a turn, it will ignore you.

The other differences are small. 'F' ranges (ranges that are ok to fire) are indicated with "F OK" in the status window, rather than an F in the range display. A collision automatically displays your relocated course and bearing rather than relying on you to press Recall (SOS does require RECALL however!). You can only set the Evasive Sub option at the beginning of the game, and if you want to reveal the sub's location, Give up, but that ends the game.

Finally, I don't have graph paper that is 50x50, so I made it configurable. You need at least 30x30 cells to play, up to 74x74. Remember, North Latitude counts UP from 25 at the bottom, and East longitude counts RIGHT from 25. (Although you can flip it any way you like, the charting is for your reference.)

I didn't put computer charting in for two reasons. First, time. ;) But secondly, the charting is the whole art of the puzzle. If the computer draws the charts, it might as well be playing by itself, as it will give away the answer.

In case you don't have the docs, the basic game play, per ship, is:

- 1) Press range - this is the distance to the sub. Range is measured as a square around the ship - so mark off only 90 degree and 45 degree lines, and draw the box. Further, the sub will not venture within 5 units of the edge of the map.
- 2) Set source and speed, and Move ship. Do not collide with other ships, if you do, you will be knocked to a random location and course.
- 3) Press range again. The sub has not moved, so use the new range to update your chart and eliminate impossible positions.
- 4) If you are within 2 units, and the sub is in a 45 degree or 90 degree line to you, the system will display "F OK" when you press range. If this is set, you may safely fire. If you fire when "F OK" is not valid, you will ALWAYS miss!
- 5) To fire, first press AIM (if you forget, AIM mode enters for you automatically). Select the direction with left and right, then press FIRE. The system will ask you for the depth. The sub resides at a

TI-99/4A – Game Shelf Extended Basic Games

depth of 1, 2 or 3, so press that value.

6) A hit displays as SUB! and ends the game. If you fire in the correct direction and have a direct shot (F OK), but get the incorrect depth, the system will display "OFF" and a number indicating how far off (1 level or 2 levels).

7) If you fire the wrong direction, out of range, or without a clear shot (F OK), "SOS!" lights up and the system will relocate you to a random position and course. (The sub 'retaliates'). Press RECALL to see your new position.

8) When done, press NEXT SHIP. The sub will move one unit but will stay at the same depth. The sub will not change course unless it reaches 5 units of the border, then it will turn to a new course.

9) EVASIVE SUB makes the game more difficult by allowing the sub to turn 45 degrees every time a shot is missed (OFF or SOS).

CODE NAME: SECTOR™

THE COMPUTER GAME OF
SUBMARINE PURSUIT

CODE NAME: SECTOR™ is a unique, challenging game. Its rules are unusual and may appear long and complex. But they're not at all difficult to learn. In fact, they can be mastered quickly and easily by playing the instructional game that starts on the following page. This first game – about an hour long – will lead you step-by-step through CODE NAME: SECTOR. When you finish this game, you'll be comfortable with the rules and ready to play on your own.

For this game we recommend either a 9-volt ALKALINE battery or a 9-volt BATTERY ELIMINATOR. See page 30 before you play.

 **PARKER
BROTHERS**

CODE NAME: SECTOR is Parker Brothers Trademark for its Computerized Submarine Pursuit Game.
RULES © 1977, 1978 Parker Brothers Div. of General Mills Fun Group Inc., Beverly, Mass. 01915

THE CHALLENGE

You are the commander of a destroyer. Your mission: to seek and destroy an enemy submarine.

THE COMPETITION

You sail into enemy waters with a fleet of three other ships. To locate the sub, you share information with your fellow commanders. But only one commander can destroy the sub, and each wants the glory for himself. Therefore, to succeed in your mission, you must sink the sub before your allied commanders do.

THE COMPUTER

The chase is controlled through a computer. At any given moment, the computer knows everything about your ship, your allied ships, and the enemy sub. With this information, the computer acts as a double agent: while helping you and your allies to find the sub, it also controls the sub's movement.

YOUR FIRST MISSION

CODE NAME: SECTOR is an easy game to learn because the computer contains a "Teach Mode." Teach Mode is a practice game – a single chase in which four destroyers, in a total of nine moves, sink a submarine. You can find the **TEACH MODE** button at the lower right-hand corner of the **COMBAT INFORMATION CENTER**. By the end of the Teach Mode game, you'll know almost all of **CODE NAME: SECTOR's** basic skills.

TEACH MODE: COMBAT PREPARATION

The ships' starting positions are numbered 1 through 4 at the lower left-hand corner of the **CHART**. The players will be known as Ship 1, Ship 2, Ship 3, and Ship 4. If you are playing alone, you command all four ships by yourself. If only two people are playing, it is suggested that one player command Ships 1 and 3, and that the other command Ships 2 and 4.

Ship 1 will move first, followed in order by Ships 2, 3, and 4. This same order will and must be maintained throughout the game. Assign each player a ship.

To plot his ship's movements on the chart, each player uses a different colored marking crayon. For this game, Ship 1 will be red, Ship 2 – green, Ship 3 – blue, and Ship 4 – black. Hand each player the appropriate crayon.

In a game with two or more players, it is suggested that one player read the following directions aloud, and that the others follow along. Select a player to read.

IMPORTANT: From this point on do only what the directions tell you to do. Do nothing else. While playing, if you discover that you've made an error, you must start Teach Mode again. Turn the game off, erase the chart with the cloth, and start again from here.

Turn the game on, press TEACH MODE, and man your battle stations.

(During the game, the display lights may go out and be replaced by two blinking dots. To prolong battery life, the display lights stay on for about 30 seconds. To recall display information, simply press RECALL.)

TEACH MODE: COMBAT PROCEDURES

SHIP 1

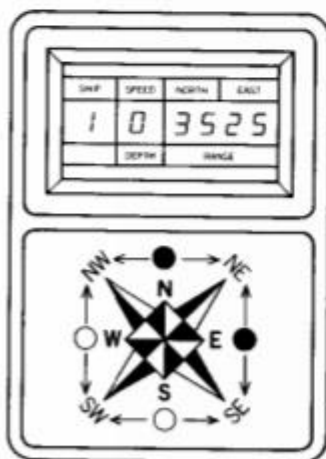


FIGURE 1

When the chase begins, the digital DISPLAY will look like Figure 1. The numbers – which relate to the top line of words on the display – tell you that Ship 1 is standing still at its starting position of COORDINATES 35N (North), 25E (East). The COMPASS lights, North and East, tell you that Ship 1, unless you decide differently, will travel in a NE (Northeasterly) direction.

So far you know nothing about the sub; only the computer does. The computer has already programmed the sub's location, direction of movement, and depth. At this point in the game, Ship 1 can only determine the sub's RANGE – its exact distance away from Ship 1.

Press RANGE. The number 10 appears on the display above the word RANGE. You now know that the sub is located exactly 10 points from Ship 1. A POINT is the intersection of any two lines on the chart.

PLOT the sub's range. Count 10 points away from Ship 1 in every direction – horizontally, vertically, and diagonally. Mark a small red dot at the 10th point in each direction. Then – using the game's parallel rule – draw a red line at this range by connecting your dots.

You have just established your RANGE LINE. Every point on this line is exactly the same distance from the sub. At one point on this line the sub is hiding. The sub is not located inside this line or beyond this line. It is somewhere on this line.

Your line probably looks like the one in Figure 2. But it shouldn't.

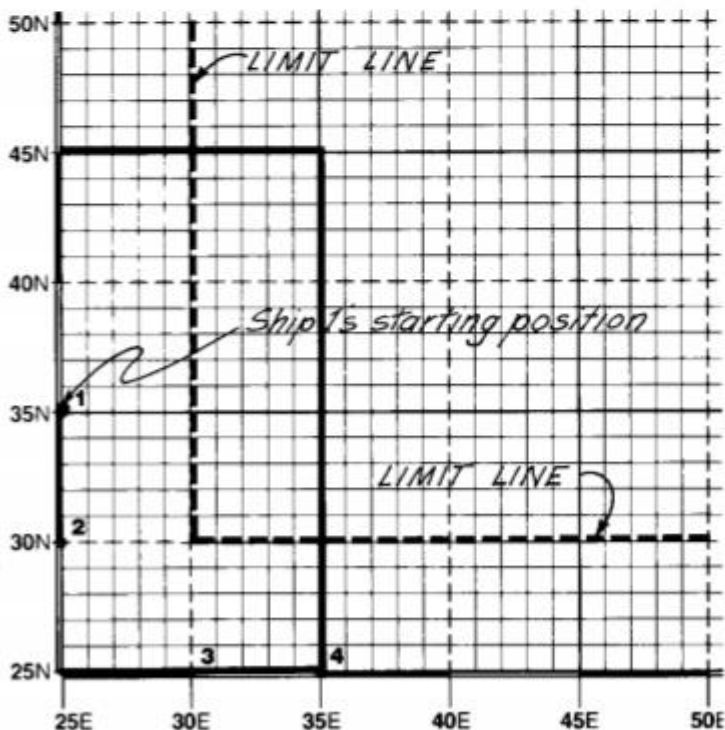


FIGURE 2

Why? Because the computer will never allow the sub to travel outside the (dotted red) LIMIT LINE. With the cloth, or a piece of tissue, erase your line until it looks like that in Figure 3.

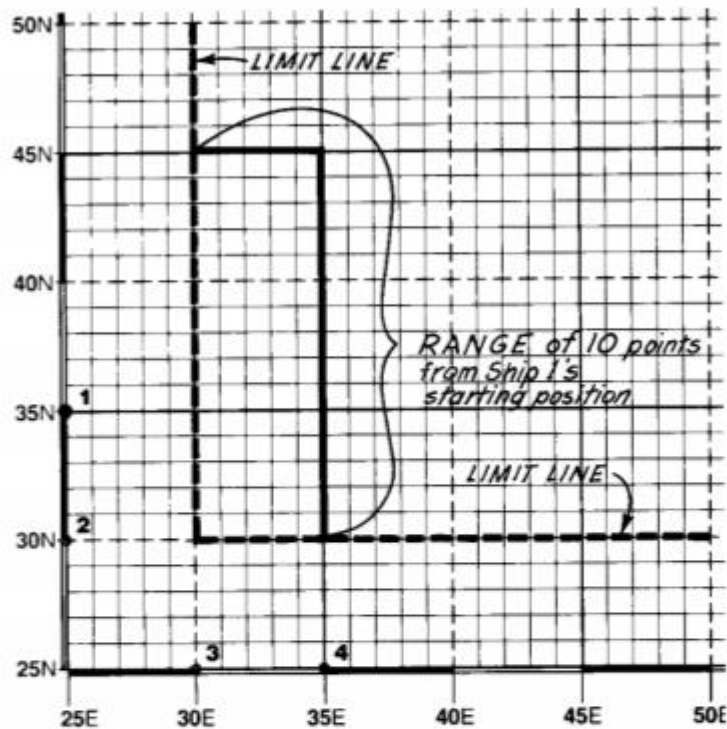


FIGURE 3

By counting along your range line, you can see that it covers a total of 21 points. The sub lies on one of these points. It must, since each of these points is exactly 10 points away from Ship 1.

You should also know that the range line you've just created is actually a square. A ship's entire range line is always a complete square. With the ship at port, however – at the edge of the chart and close to the Limit Line – only a portion of Ship 1's entire range line actually shows on the chart.

Figure 4, for example, shows a ship's entire range line. Located at 40N, 40E, this ship has just learned that the sub is hiding at a RANGE of 7. Therefore, each point that lies exactly 7 points away from the ship becomes a part of its range line. When connected, these points form a square.

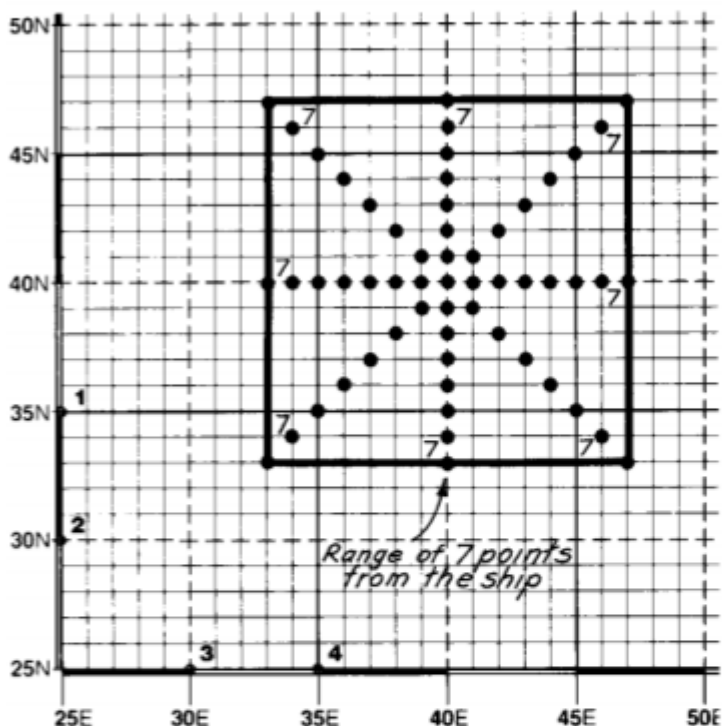


FIGURE 4

As you can see, drawing a range line requires point-counting. Figures 4 and 5 illustrate point-counting. They show that the distance from one point to the next equals a count of 1. They also show that you can count in these ways: a) in a straight line – horizontally, vertically or diagonally; b) in a diagonal/horizontal line; or c) in a diagonal/vertical line. You may not count points in a line that is both horizontal and vertical. And you should always try to count along the shortest possible route.

PLOT your course. Find your new location on the chart and mark the spot in red. Then – using the parallel rule – connect it with a red line to your previous location.

REMEMBER: Plotting is only a convenience and a reminder; it does not affect a ship's movement. A ship's position is affected only by pressing buttons. By plotting, you can see on the chart what is actually taking place inside the computer.

Press **RANGE**. A number 5 appears on the display. This tells you that the sub is now only 5 points away from your new position.

This new range information can help you to limit the area in which the sub can be found. To do this, locate all the points on your original range line which are now 5 points away from your new position. (Figure 6)

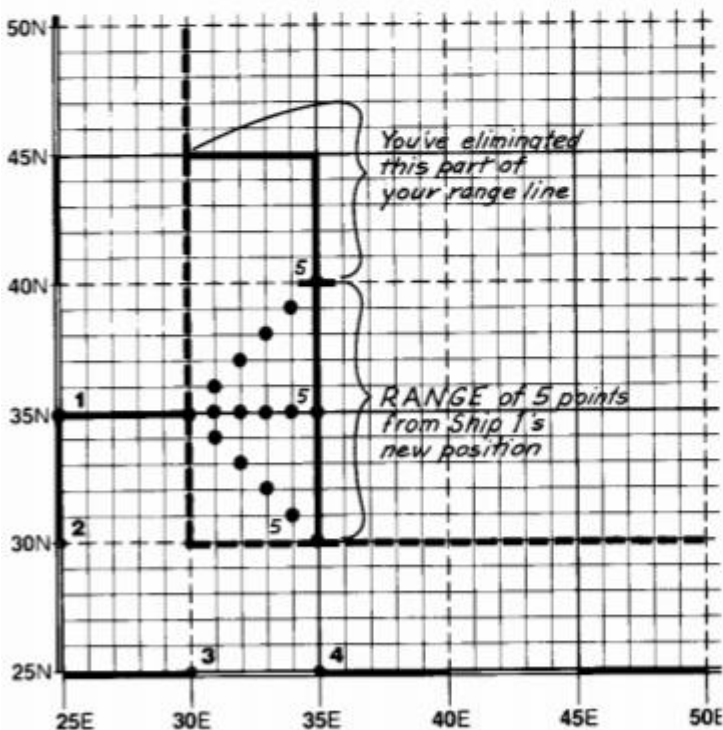


FIGURE 6

As you can see, you've just cut the sub's possible locations in half. Instead of being on 1 of 21 points, the sub now must be on 1 of only 11 points.

Press **NEXT SHIP**. The display shows Ship 2's speed (0) and location (30N, 25E); the compass shows your heading (NE). But there's something the computer is not telling you: the sub has just moved 1 point in an unknown direction.

The sub always moves 1 point whenever NEXT SHIP is pressed.

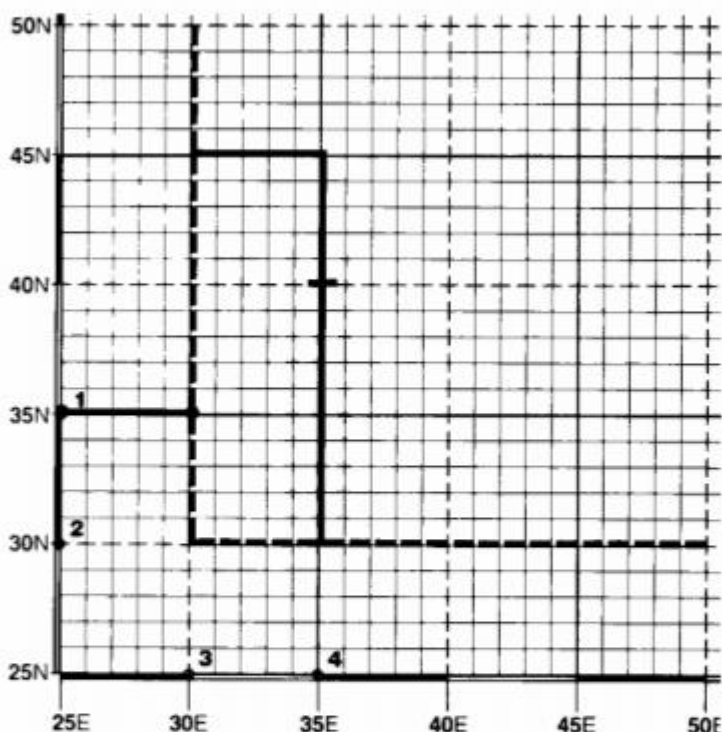


FIGURE 7

At this moment, the sub could be on any one of the 36 points shown in Figure 7. It might still be on Ship 1's final range line; or it might have moved 1 point away from that line. Right now you have no idea of the sub's direction. You only know that the sub has moved 1 point from where it was during Ship 1's turn.

Press **RANGE**. You see that the sub is exactly 11 points away from Ship 2. Using the green crayon,

PLOT your range line. Count 11 points in all directions from your starting position, then connect these points. Your range line should look like the one in Figure 8.

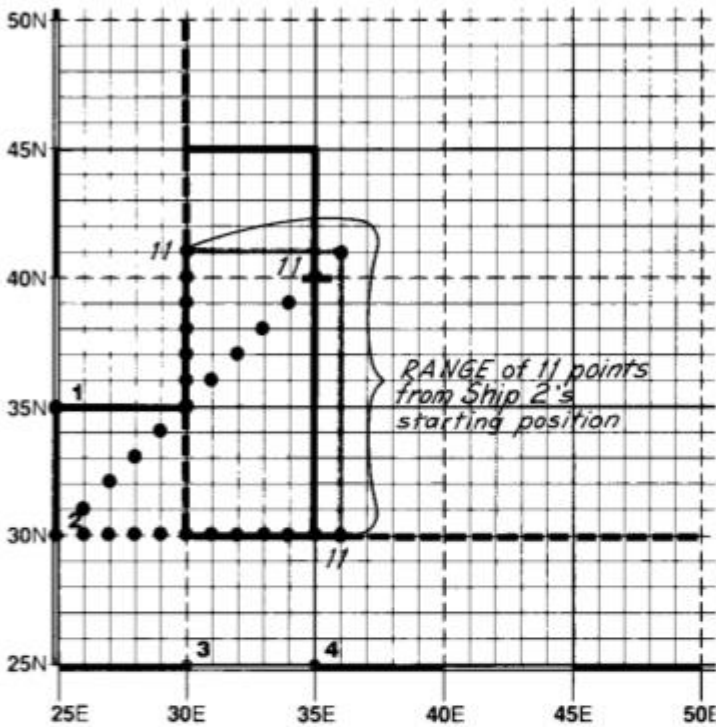


FIGURE 8

However, your range line need not be this long. Erase it until it looks like the one in Figure 9.

Why? Because the purpose of drawing range lines is to limit the sub's possible locations as much as you can. Ship 1 has already limited the sub's possible locations to a line that covers only 11 points. And you can see that the sub has just moved 1 point away from that line. Therefore, you need sketch in only the parts of your range line that fall within 1 point of Ship 1's final range line. By plotting in this way, you can limit the sub's possible locations even before you move.

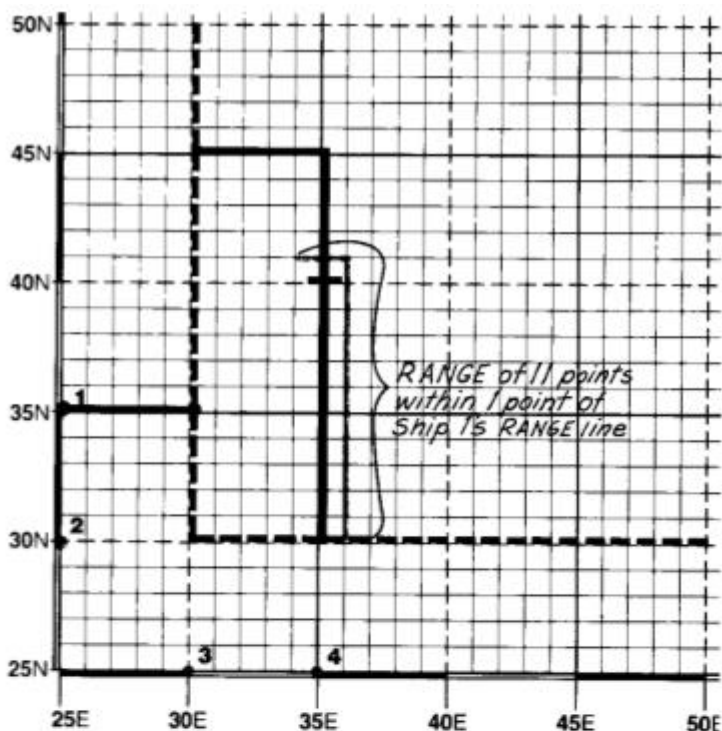


FIGURE 9

You must now plan your direction and speed. Notice that you should not sail to the Northeast, as presently indicated on the compass. To do so would result in a COLLISION with Ship 1. So you choose to sail East and get as close to the sub as you can.

Press RIGHT until only the E light is on.

Press FASTER until a speed of 9 shows on the display.

Press MOVE SHIP. The display shows your new speed (9) and location (30N, 34E); the compass shows your new course (E). With the green crayon,

PLOT your new position and course on the chart.

Press RANGE. You see that you're now only 6 points away from the sub.

But in determining your new range, you've learned something important: you can now pinpoint the sub's exact location. How? First, the sub has not yet moved again and is therefore still somewhere on your range line. Second, the computer has just told you that the sub is exactly 6 points away from your new position. Therefore, look for the points on your range line which are exactly 6 points away from your new position. Count carefully, along the shortest possible route, and you'll find only one point on your range line that is exactly 6 points away from your new position. This point is 36N, 36E. With your green crayon, mark this point on the chart. (Figure 10)

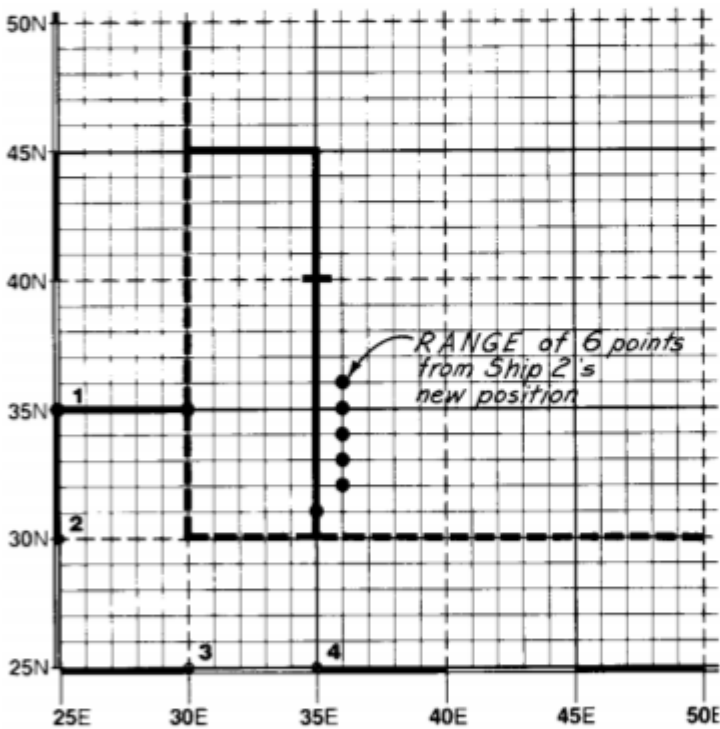


FIGURE 10

In this game you're lucky: it has taken only two moves to find the sub. In some games it takes longer.

SHIP 3

Press NEXT SHIP. The display and compass show Ship 3's starting information. You know that the sub has just moved 1 point. You also know that its general direction is East, since the sub's position on the newest range line (Figure 10 – green line) is one point to the East of the previous range line. Its exact direction – Northeast, East, or Southeast – still remains a mystery.

Press RANGE. You see that the sub is exactly 12 points from Ship 3. With the blue crayon,

PLOT your range line. Your whole range line – covering 20 points – looks like the one in Figure 11.

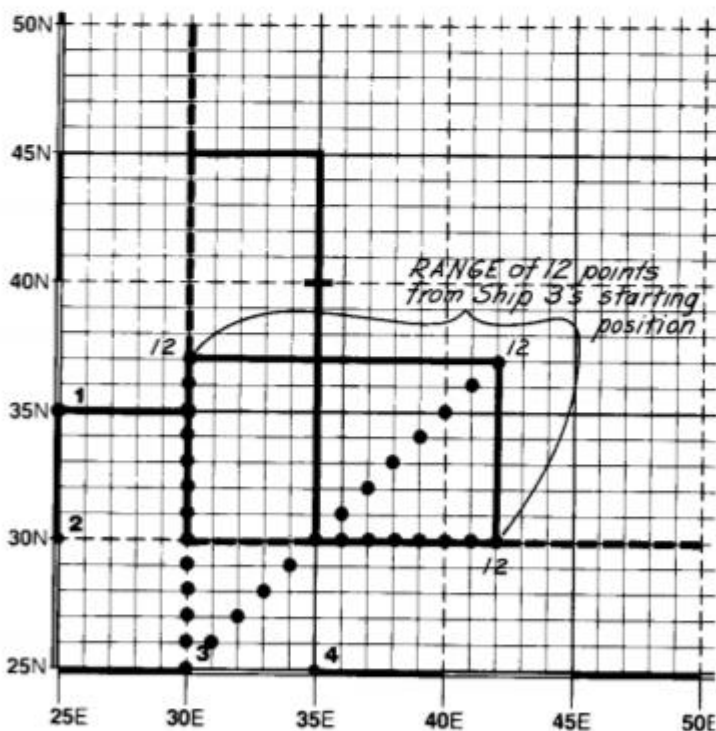


FIGURE 11

You already know, however, that you need not draw the whole line.

Your range line should show only those points that lie 1 point from the exact sub location found by Ship 2. (Figure 12)

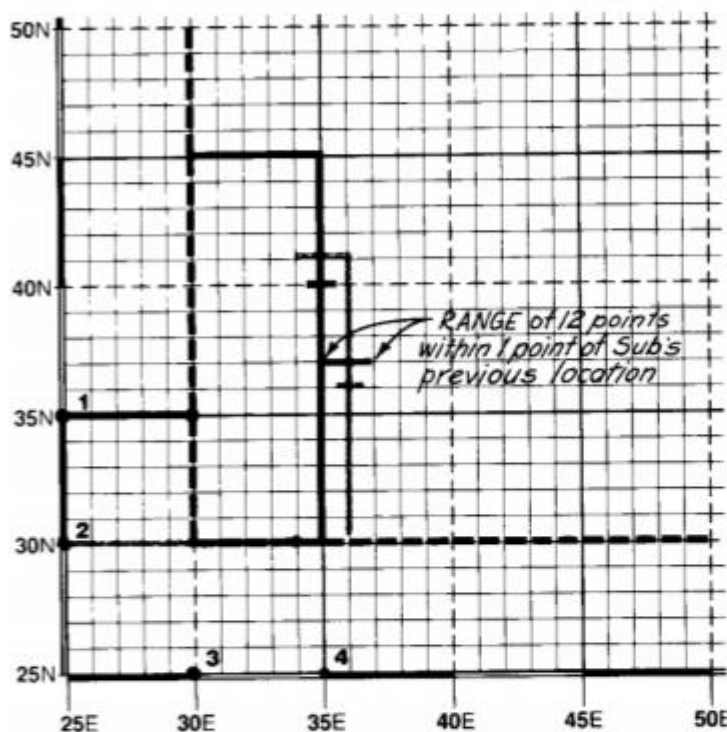


FIGURE 12

As you can see, your range line covers three points. Let's look at each of them:

- 1) One of these points lies directly on Ship 1's (red) range line. But the sub cannot be there. Why? Because the sub maintains a steady course throughout the chase; the sub will not change its direction of movement. You already know that the sub travelled generally Eastward of this (red) line. Therefore, it cannot now travel backwards toward the West.
- 2) A second point lies directly on Ship 2's (green) range line. But, for the same reason, the sub

cannot be on this point either. You know that the sub was on this (green) range line during Ship 2's turn. You also know that the sub has just moved 1 point from where it was. To be on this (green) range line now would mean that the sub has just moved either directly N (North) or directly S (South). Either direction is impossible, as the sub is moving on a generally Eastward course.

- 3) The only remaining point on your range line is 37N, 37E – the sub's new exact location. With the blue crayon, mark this point on the chart.

This point also reveals the sub's exact direction of movement. When you compare the sub's new location to its previously known position, it becomes clear that the sub is moving to the Northeast.

As shown in Figure 13, you can now predict the sub's entire course.

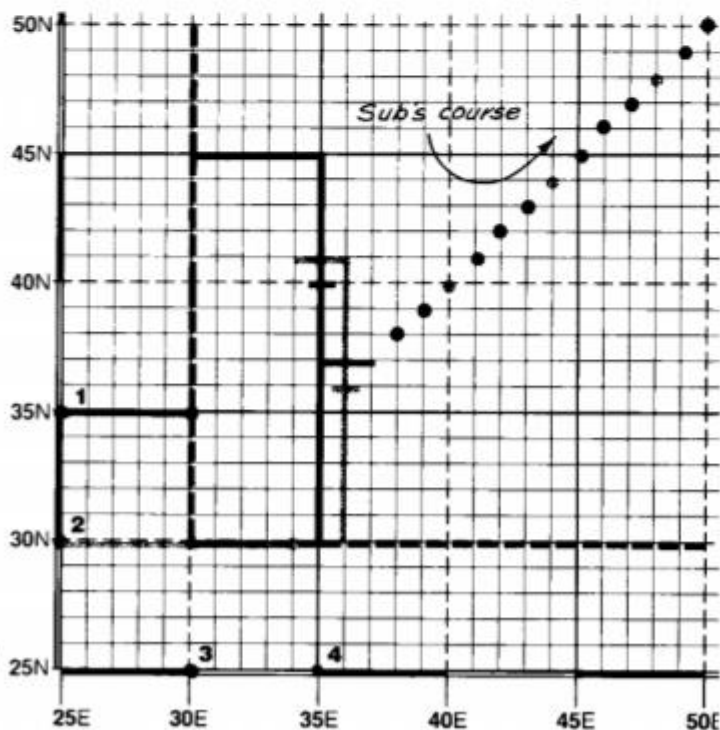


FIGURE 13

cannot be on this point either. You know that the sub was on this (green) range line during Ship 2's turn. You also know that the sub has just moved 1 point from where it was. To be on this (green) range line now would mean that the sub has just moved either directly N (North) or directly S (South). Either direction is impossible, as the sub is moving on a generally Eastward course.

- 3) The only remaining point on your range line is 37N, 37E – the sub's new exact location. With the blue crayon, mark this point on the chart.

This point also reveals the sub's exact direction of movement. When you compare the sub's new location to its previously known position, it becomes clear that the sub is moving to the Northeast.

As shown in Figure 13, you can now predict the sub's entire course.

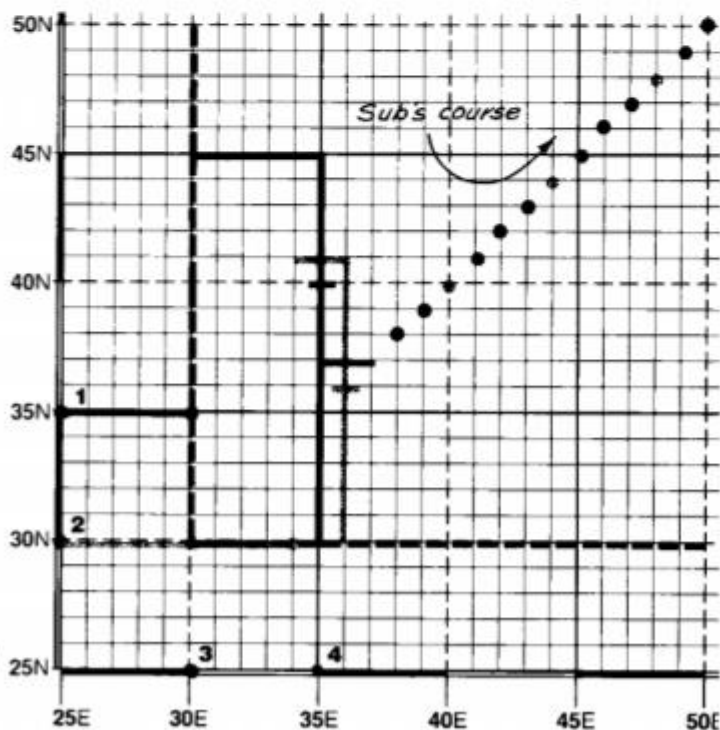


FIGURE 13

You want to move as close to the sub as you can.
So you decide to travel NE at maximum speed.

You are already headed in the desired direction.

Press FASTER until you've reached a speed of 9.

Press MOVE SHIP. The display shows your new speed and location; the compass shows your course. With the blue crayon,

PLOT your course and new location on the chart.

Press RANGE. You see that you're now only 3 points from the sub. If one of your allied ships does not sink it first, perhaps you can sink the sub on your next move.

SHIP 4

Press NEXT SHIP. The display and compass show Ship 4's starting information.

Press RANGE. The display places Ship 4 exactly 13 points from the sub. But at this moment, even before Ship 4 moves, you know exactly where the sub is. It has just moved to 38N, 38E – 1 point to the NE of its previously known position. Mark this point in black.

Ship 4 decides to move NE at a speed of 7. Why not maximum speed? After all, the sub is 13 points away. Because Ship 4 is playing it smart. You know that four moves from now – on your next turn – the sub will be located at 42N, 42E. (Figure 14)

If you move to 32N, 42E, you will then be located 10 points directly South of the sub's future position. This situation would place you within **FIRING RANGE** during your next turn. Whenever a ship is located 2 points or less from the sub, and in one of the eight compass directions, the display flashes the letter F, indicating permission to fire.

You are already headed in the desired direction.

Press FASTER until you've reached a speed of 7.

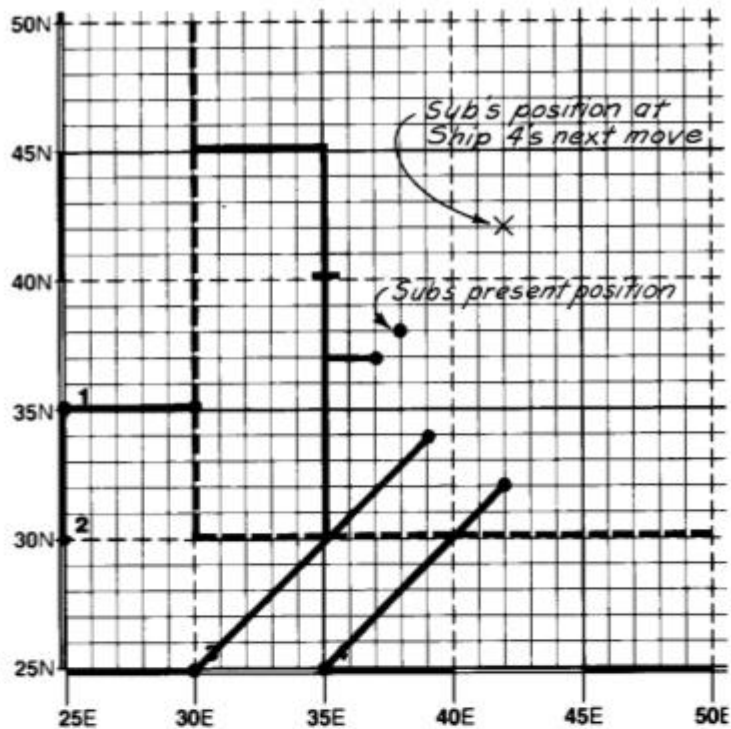


FIGURE 14

Press MOVE SHIP. The display shows your speed and new location; the compass shows your course. With the black crayon,

PLOT your course and new location on the chart.

Press RANGE. You are now exactly 6 points away from the sub.

SHIP 1

Press NEXT SHIP. As you can see from the display and compass, the computer has remembered Ship 1's previous position, speed, and course. It has you located at 35N, 30E, travelling E at a speed of 5.

Press RANGE. You are now 9 points from the sub. You know that the sub has just moved 1 point to the NE and is now located at 39N, 39E. With the red crayon, mark this point on the chart.

You look over the situation and can come to only one conclusion: no matter where you move you

will not come within firing range. So, like Ship 4 just before you, you plan ahead.

In four moves – on your next turn – you know the sub will be located at 43N, 43E. So you decide to move NE at a speed of 8. This will place you at 43N, 38E – 5 points directly West of the sub's future position. On your next move – if the sub hasn't already been sunk by another ship – you would be able to position yourself directly over the sub, and fire.

Press LEFT until both the N and E lights are on.

Press FASTER until you've reached a speed of 8.

Press MOVE SHIP. The display and compass show your new speed, location and course. With the red crayon,

PLOT your new position and course on the chart.

Press RANGE. The display shows you to be exactly 4 points from the sub.

Press NEXT SHIP. The display and compass show your previous speed, position, and course.

Press RANGE. You are now exactly 10 points from the sub. You know the sub has just moved 1 point to the Northeast and is now located at 40N, 40E. With the green crayon, mark the sub's new position on the chart.

You decide to travel NE at a speed of 8. This will place you at 38N, 42E – 2 points directly Southeast of the sub – within firing range.

Press LEFT until both the N and E lights are on.

Press SLOWER until you're at a speed of 8.

Press MOVE SHIP. The display and compass show you to be at 38N, 42E, travelling NE. With the green crayon,

PLOT your new position and course on the chart. You can see from the chart that the sub is now 2 points directly Northwest of you.

Press RANGE. The display shows a range of F2. You are indeed within firing range, 2 points away.

Before you can fire, you first have to aim. You know that the sub lies to the Northwest.

Press AIM. You see that the N light is blinking. Repeatedly press AIM until both the N and W lights are blinking.

If you aim incorrectly, just continue to press AIM until you arrive at the correct aiming direction.

At this moment the compass is showing only your aiming direction; it is not affecting your ship's direction of travel.

Notice, too, that the display now shows your ship number and the sequential flashing of the sub's possible depths – 1, 2, 3.

The computer is asking you to choose a **FIRING DEPTH**. Is the sub at Depth 1, Depth 2, or Depth 3? You have no idea of the sub's actual depth, and so must take a guess. You guess that the sub lies at Depth 2. (Figure 15) (If the display lights go out, simply re-AIM.)

You conceal the display from the other commanders, wait until the number 2 flashes on the display, then

Press FIRE. The display announces that you are OFF 1. (Figure 16)

OFF 1 tells you that the sub lies either at Depth 1 or Depth 3.

The sub's depth always remains the same throughout a game. You'd like to guess its depth again and fire once more, but you can't. The computer won't let you. No player is ever allowed to fire more than once during a turn.

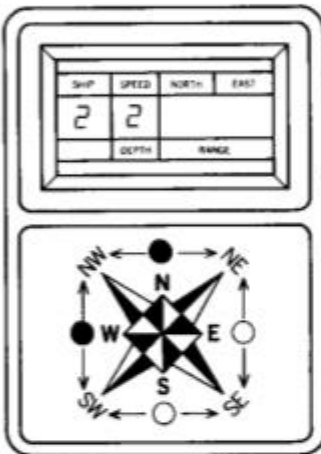


FIGURE 15

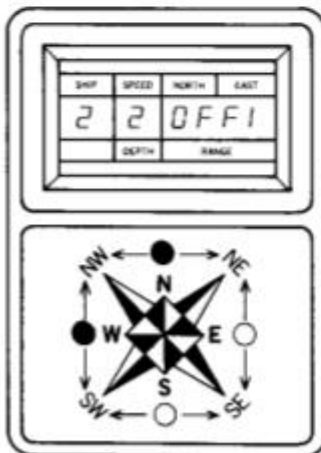


FIGURE 16

SHIP 3

Press NEXT SHIP. The display and compass show your previous speed, location, and course.

Press RANGE. You are now exactly 7 points from the sub. You know the sub has just moved 1 point to the Northeast and is now located at 41N, 41E. With the blue crayon, mark the sub's new location on the chart.

In planning your move, you see that the sub does not lie in a direct path from your ship. So you decide to travel straight N at a speed of 7. This will place you within firing range – 2 points due West of the sub.

Press LEFT until only the N light is on.

Press SLOWER until you're at a speed of 7.

Press MOVE SHIP. The display and compass show you now at 41N, 39E, travelling N. With the blue crayon,

PLOT your new position and course on the chart.

Press RANGE. F2 appears. Yes, you are within firing range, 2 points away. On the chart you can see that the sub lies directly East of you. This is the chance you've been waiting for.

Press AIM. You intend to aim E. But in the heat of combat, under tremendous pressure, you make a mistake. You don't notice it, but you continue to press until only the W light is on.

You have now aimed (incorrectly) and must next choose a depth at which to fire. When Ship 2 fired, he covered the display with his hand, not allowing his competitors to see which depth he chose. So you, too, guess that the sub lies at Depth 2. You also cover the display with your hand and, when the number 2 flashes on the display, you

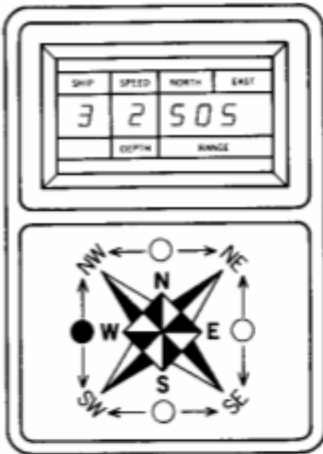


FIGURE 17

Press **FIRE**. The display flashes SOS...SOS! (Figure 17)

Now you know you've made a serious mistake. You've fired in the wrong direction and have alerted the sub to your position. In retaliation, the sub fires back, knocking you off course, to a new position. Your speed will remain as it was when you fired. Your new position and course have been randomly selected by the computer. To find out where you are and where you're going,

Press **RECALL**. The display reveals your new location and previous speed of 7; the compass indicates your new course. In blue,

PLOT your new position and course on the chart.

Figure 18 shows only one possible new position and course. Your actual position and course may be very different, depending on the random selection of the computer.

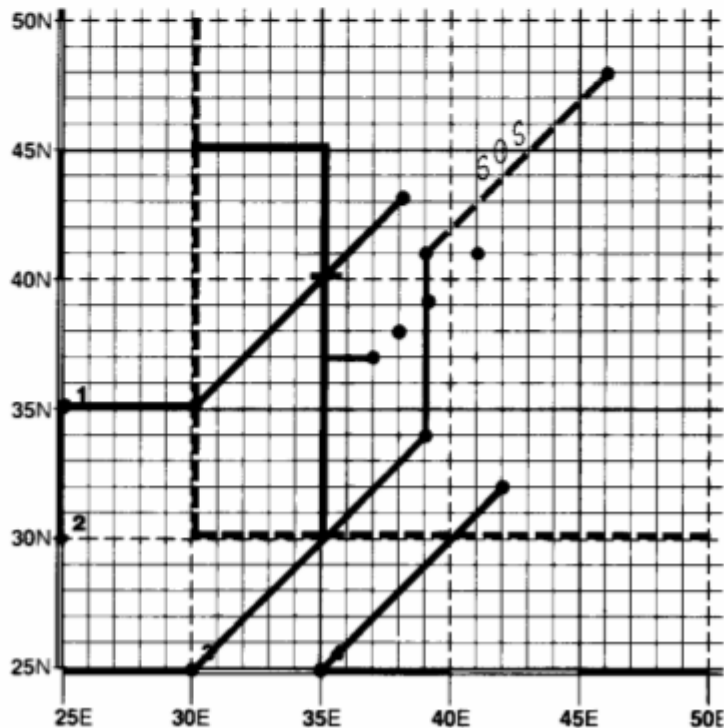


FIGURE 18

SHIP 4

Press NEXT SHIP. The display and compass show your previous speed, position, and course.

Press RANGE. You are now exactly 10 points from the sub. You know that the sub has just moved 1 point to the Northeast and is now located at 42N, 42E. With the black crayon, mark the sub's new location on the chart.

On the chart you see that the sub lies directly North of you. You decide to head N at maximum speed; this will place you within firing range, only 1 point from the sub.

Press LEFT until only the N light is on.

Press FASTER until you've reached a speed of 9.

Press MOVE SHIP. Something has happened! The display is flashing COLL... COLL. You've caused a collision! You check the chart and discover that you've incorrectly steered your ship directly into Ship 2.

To punish you for this carelessness (which does not affect Ship 2 in any way), the computer has already knocked you off course, to a new position. To find out where you are and where you're going,

Press RECALL. The display reveals your new position and previous speed of 9; the compass indicates your new course. In black,

PLOT your new position and course on the chart.

Press **RIGHT** until only the E light is on.

Press **SLOWER** until you're at a speed of 5.

Press **MOVE SHIP**. The display and compass show you now at 43N, 43E, travelling E. With the red crayon,

PLOT your new position and course.

According to the chart, you're directly over the sub.

Press **RANGE**. FO appears, confirming the chart's information. FO means that you're within firing range, directly above the sub.

When this happens, you may aim in any direction.

Although any aiming direction applies, you must hazard a guess at the sub's depth. To keep their opponents guessing, the commanders of Ships 2 and 3 both covered the display when they chose a firing depth.

Which, you wonder, is the smartest move to make? Should you take the middle road and fire at Depth 2? Suppose you misfire at that Depth? It would only tell you that you are OFF 1, and would therefore still leave you guessing. OFF 1 would mean that the sub lies either at Depth 1 or Depth 3; you'd still have to guess again if you got another chance to fire.

But you realize that a misfire at Depth 1 or Depth 3 would provide you with much more accurate information. A misfire at either depth would tell you exactly how deep the sub really is. If you misfire at Depth 1, the display will announce either OFF 1 or OFF 2. OFF 1 would tell you that the sub is at Depth 2; OFF 2 would mean that the sub is at Depth 3. If you guess Depth 3, and are wrong, you'll learn just as much. Which to guess? Depth 1 or Depth 3? You don't really know.

Based on nothing more than instinct, you guess that the sub is lurking at Depth 1.

Press AIM. Cover the display with your hand. When the number 1 flashes...

Press FIRE. You've guessed correctly! The display flashes SUB...SUB...SUB, announcing that you've sunk the sub and won the game! (Figure 20)

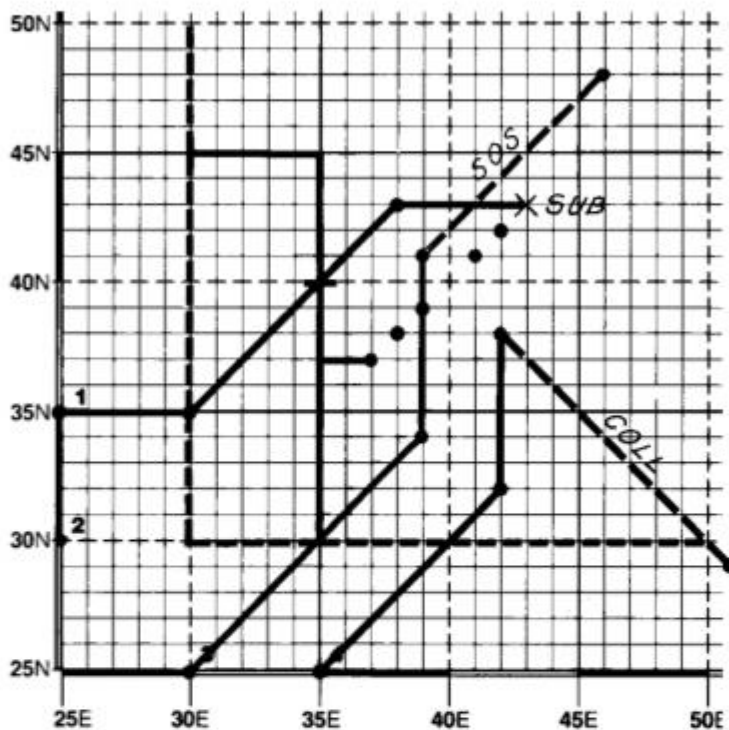


FIGURE 20

A NEW GAME

To start a new game do one of two things. Either press RANGE, to start a new game from your current positions; or – as is recommended for beginners – turn the switch off, then on again, to start a new game from port. In either case, the computer will randomly program a sub at a brand-new position, at perhaps a different depth, and travelling in an unknown direction.

Before putting away the game, remember to turn OFF the computer.

ADDITIONAL COMBAT INFORMATION

FIRING RESTRICTIONS

You remember that a ship can fire in any one of the eight compass directions, up to a range of 2 points. At a distance of 1 or 0 points the computer will always display an F preceding the range number.

Sometimes, however, the sub will be 2 points away from your ship, but not in one of the eight compass directions. When this happens, the computer will not display an F. If you do fire without a reading of F2, the display will register SOS, and the sub will fire back, knocking you off course, to a new position.

In Figure 21 the numbers show the sub at positions where firing is allowed; the red dots show the sub at ranges of 2 where firing is not allowed.

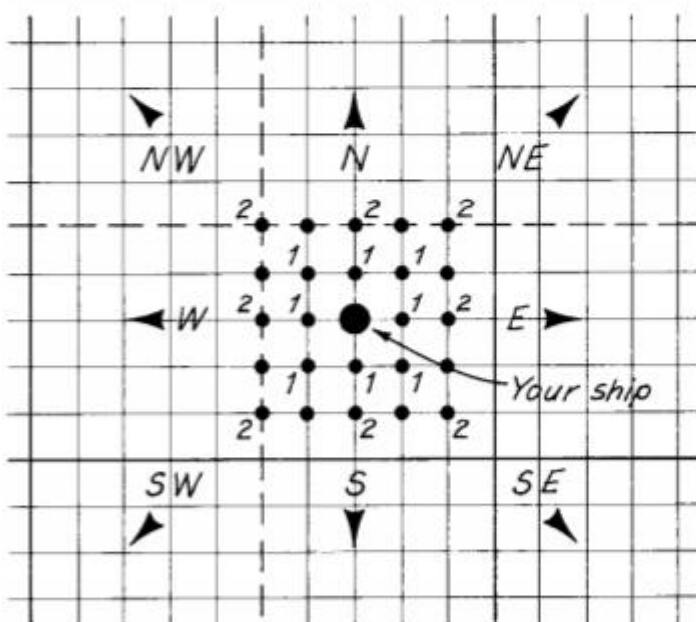


FIGURE 21

Remember, if the chart shows you to be only 2 points from the sub, but the computer does not give its permission to fire, do not assume that you've plotted your position incorrectly. You simply are unable to fire in one of the eight compass directions.

THE LIMIT LINE

You've already learned that the sub can never travel outside the red LIMIT LINE. Sometimes, however, the sub will reach the limit line and remain there during one ship's turn. If you don't sink it before this happens, when NEXT SHIP is pressed the sub will change direction and head back into the combat area, forcing you to relocate its position and redetermine its course.

The sub will travel only 1 point off the limit line and will assume a new course. Its new course will be in one of three directions and will relate to the limit line as shown in Figure 22.

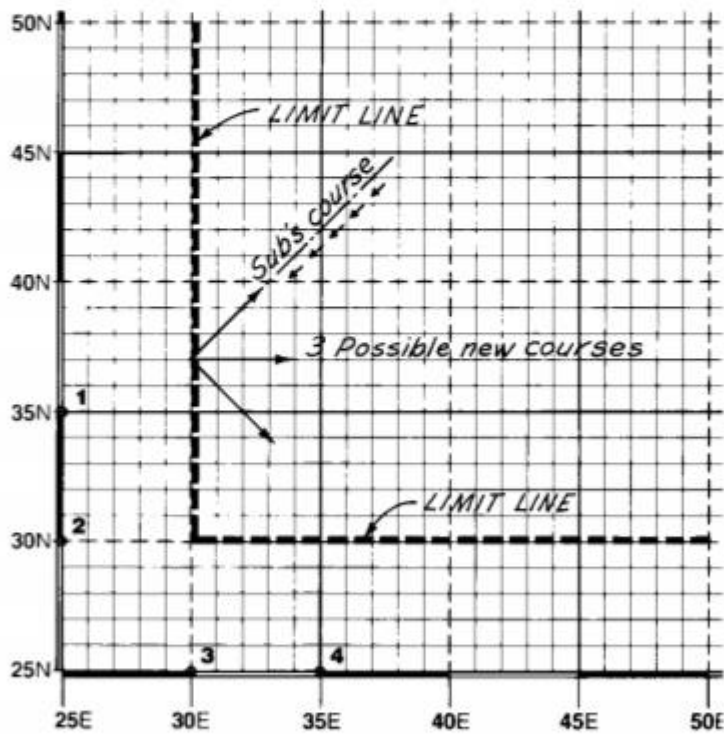


FIGURE 22

EVASIVE SUB

Earlier you were told that the sub could never change its direction during a game. This statement was only a half-truth. The sub can change its direction, but only if you tell it to.

On the Combat Information Center you see the words EVASIVE SUB. The Evasive Sub mode is designed only for seasoned combat veterans who seek an additional, and very challenging, dimension to the game.

If you press EVASIVE SUB with a ball point pen, the sub will take evasive action. When fired upon unsuccessfully, the sub may change its course. Each unsuccessful firing – OFF 1, OFF 2, or SOS – will cause the sub either to turn left or right by 45° or to maintain its present course.

You may start the EVASIVE SUB mode at any time during a game. If you've been playing a game in this mode, but want to start the next game without it, turn the game off, then on again.

Remember: EVASIVE SUB affects only the sub's course, not its depth or speed.

SUB FINDER

At any time during any game you may press SUB FINDER, and the computer will display the sub's exact location, depth, and compass heading.

As you can imagine, SUB FINDER reduces the game's challenge. So it should be employed only if the sub has tried the patience and sapped the strength of you and your fellow commanders.

OFF CHART

As you know, an SOS or COLL will knock you off course, to a new position. If your ship is ever knocked to a new position that's off the chart, don't panic. You can rejoin the fleet on your next move. Simply direct yourself, at the appropriate speed, back into the combat area.

SINGLE-PERSON PLAY

As mentioned before, one person playing alone may command the entire fleet of four ships. Sometimes, however, a solo player may prefer to command only one, two, or three ships.

Let's say that you're playing alone and wish to command only Ships 1 and 4. After Ship 1 has made its move, you must bypass Ships 2 and 3. To do this, first press NEXT SHIP: Ship 2 appears. Press MOVE SHIP, then press NEXT SHIP. Then do the same thing again: press MOVE SHIP, then press NEXT SHIP. Ship 4's starting information will now appear on the display and compass. Remember, the sub still moves 1 point each time NEXT SHIP is pressed.

SCORING

Included with the game are eight replica subs which may be used as scoring trophies. If a commander sinks a sub, he is awarded a trophy. The one who sinks the most subs is the winner. The winning number is up to the players and should be determined prior to the start of the game.

Some players, though, may prefer to score on a point system:

SUB – a direct hit, which sinks the sub – is worth 10 points.

OFF 1 – a very close shot, which does severe damage – is worth 5 points.

OFF 2 – a close shot, which does minor damage – is worth 3 points.

The winning point total is up to the players and might logically relate to their experience. Beginners, for instance, may feel that 15 points is worth a victory, while veterans may wish to play for 35 points or more.

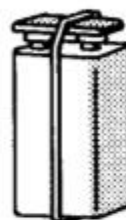
HAPPY HUNTING!

IMPORTANT

Before playing, please read this section. It will answer some important questions that may arise as you play.

A. BATTERY.

1. Alkaline. We strongly recommend the use of a 9-volt **alkaline battery** for this game. Its life span is much longer than that of a regular carbon transistor battery. A carbon battery of poor quality may last under an hour.
2. Contact. When you install the battery, be sure to create good contact between the battery and the clips. A loose connection will result in either a loss of power or a sudden switch to a new game. To ensure close contact, secure the battery to the clips with a rubber band.
3. Replacement. One or all of the following signs may indicate the need for a **new battery**:
 - a) dashes (---) on the display;
 - b) a steady dot between the display's numbers;
 - c) at the start of a game, a change in the display's reading from 1 0 35 25 to 10 38.85;
or
 - d) display readings that appear to be "haywire."



Should any of these signs appear, try a new (alkaline) battery. And remember: **When installing or detaching a battery, be sure to handle the clips and wires gently.**

- #### B. BATTERY ELIMINATOR.
- You may replace the battery with a 9-volt Battery Eliminator. With this device you can run the game on house current, thus playing without any battery at all.

As a battery eliminator, use RADIO SHACK's #270-1552. Connect the clip on the battery eliminator to the clip on the playing unit.

Do not connect a battery eliminator without adult supervision.

- C. **CRAYONS.** As replacements for worn out crayons, we recommend either BLAISDELL china markers or BLAISDELL cellophane pencils. Other brands may damage the playing surface.
- D. **LIQUID.** Do not use liquid of any kind to erase the playing surface or to clean any other part of the unit. Use only a soft cloth or piece of tissue.

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We will be happy to answer questions about this game.
 Parker Brothers, 50 Dunham Road, Beverly, Mass. 01915.

LIMITED WARRANTY PARKER BROTHERS CODE NAME: SECTOR
PARKER BROTHERS, DIVISION OF GENERAL MILLS FUN GROUP, INC. (PARKER BROTHERS) hereby warrants, subject to the conditions set forth below, that if the electronic components in this product, including the keyboard and console switches, prove defective because of improper workmanship or material:

During the period of 180 days from the date of original purchase, PARKER BROTHERS will repair the same effecting all necessary parts replacements, without charge for parts or labor.

CONDITIONS:

1. Registration: The enclosed registration card must be mailed to PARKER BROTHERS (address: P.O. Box 1001, Beverly, Mass. 01915) within 10 days after the date of original purchase at retail. If this registration card is not mailed, the retail sales receipt or other proof of purchase must be provided for work to be done under the terms of this LIMITED WARRANTY.

2. Proper Delivery: The unit must be shipped, prepaid, or delivered to PARKER BROTHERS (address: 190 Bridge Street, Salem, Ma. 01970 Attention: Quality Control Dept.) for servicing either in the original package or in a similar package providing an equal degree of protection.

3. Unauthorized Repair, Abuse, etc. The unit must not have been previously altered, repaired or serviced by anyone other than PARKER BROTHERS; the unit must not have been subjected to an accident, misuse, abuse or have been operated contrary to the instructions contained in the accompanying manual.

EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ALL IMPLIED WARRANTIES MADE BY PARKER BROTHERS IN CONNECTION WITH THE PRODUCT, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED IN DURATION TO A PERIOD OF 180 DAYS FROM THE DATE OF ORIGINAL PURCHASE; AND NO WARRANTIES, WHETHER EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY, SHALL APPLY TO THIS PRODUCT AFTER SAID PERIOD. SHOULD THIS PRODUCT PROVE DEFECTIVE IN WORKMANSHIP AND MATERIAL, THE CONSUMER'S SOLE REMEDY SHALL BE SUCH REPAIR OR REPLACEMENT AS IS HEREINABOVE EXPRESSLY PROVIDED; AND UNDER NO CIRCUMSTANCES SHALL PARKER BROTHERS BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE, THIS PRODUCT.

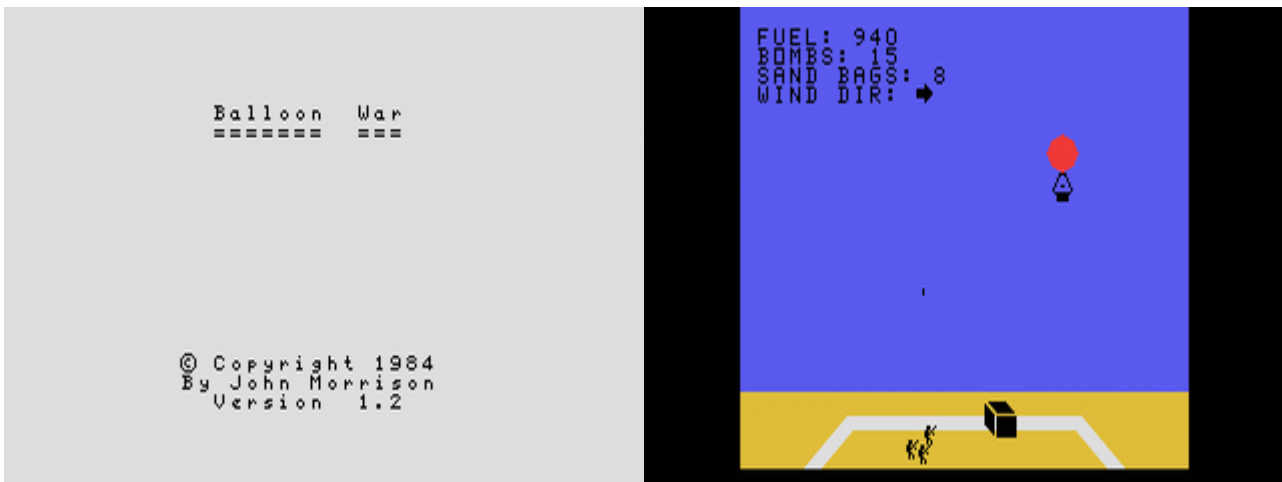
Some states do not allow limitations on how long an implied warranty lasts, or the exclusions or limitations of incidental or consequential damages, so the above limitations or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.



Made in U.S.A.

Balloon Wars

G-6-E [Disk: 172-BWAR] By John Morrison



In an original premise, you are ordered to deliver a crucial message to the British forces in North Africa during the second World War in 1942. Unfortunately, there is no access by land due to the inconvenient location of the opposing German forces, and so you are forced to take a rather leaky hot air balloon in a desperate attempt to complete your mission. You have limited fuel for the burners as well as a small number of sand bags and bombs. You can jettison sand bags in order to quickly gain altitude, and you must strive to avoid the projectiles being hurled at you by the German troops on the ground. You can replenish your supplies by landing at a Dump site, but not before you clear out all the enemies located there first. Otherwise, they will capture and execute you on the spot! You will succeed only if you can reach the British HQ in one piece. **Joystick commands: Left: move left against the wind Right: accelerate Up: jettison a sand bag Down: release a bomb Fire: fire up the burners.** And I thought ballooning was a relaxing activity...
Requirements: XB cartridge, 32K RAM, Disk drive, Joysticks.
Executable to run: XB AUTOLOAD

Download Balloon Wars:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

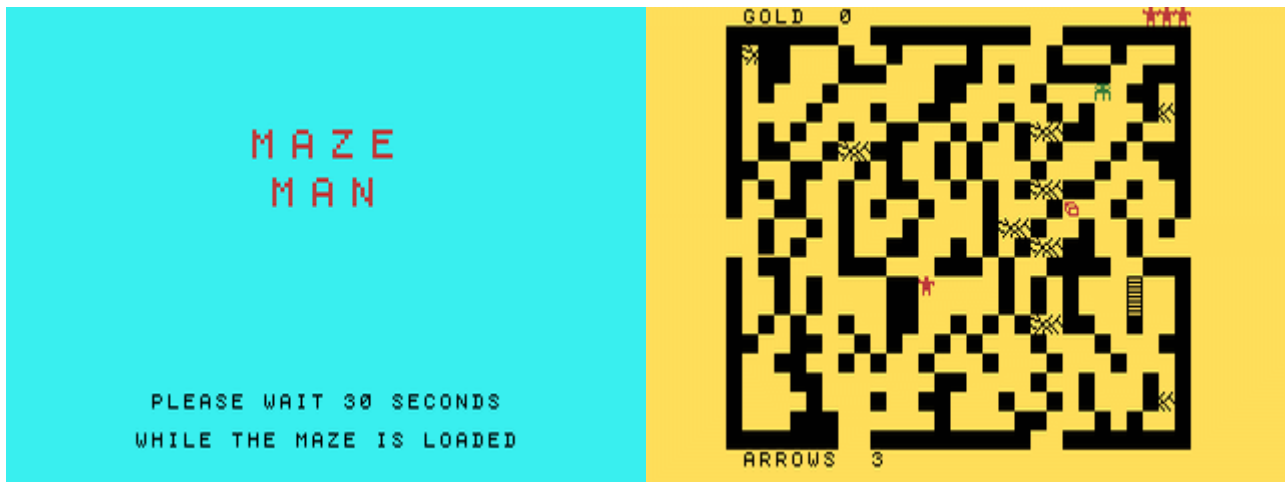
Start from mega menu: G – 6 – E

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Mazeman

G-6-F [Disk: 173-MAZE] By Compu-Things



Recently discovered by fellow Tler Owen Brand, this obscure game is actually pretty interesting. You are lost in a multilevel maze, initially armed with 3 arrows but no bow! Your quest is to collect as much gold as possible and explore all the mazes (100 of them!) while avoiding or shooting the deadly green monster and hiding from the giant ghost that steals your gold and arrows. Start by finding the bow, and explore the mazes by using teleportation gates, stairs and exits. Above all, get comfortable: this will take a while...

Requirements: XB cartridge, 32K RAM.

Executable to run: MAZEMAN

Download Mazeman:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

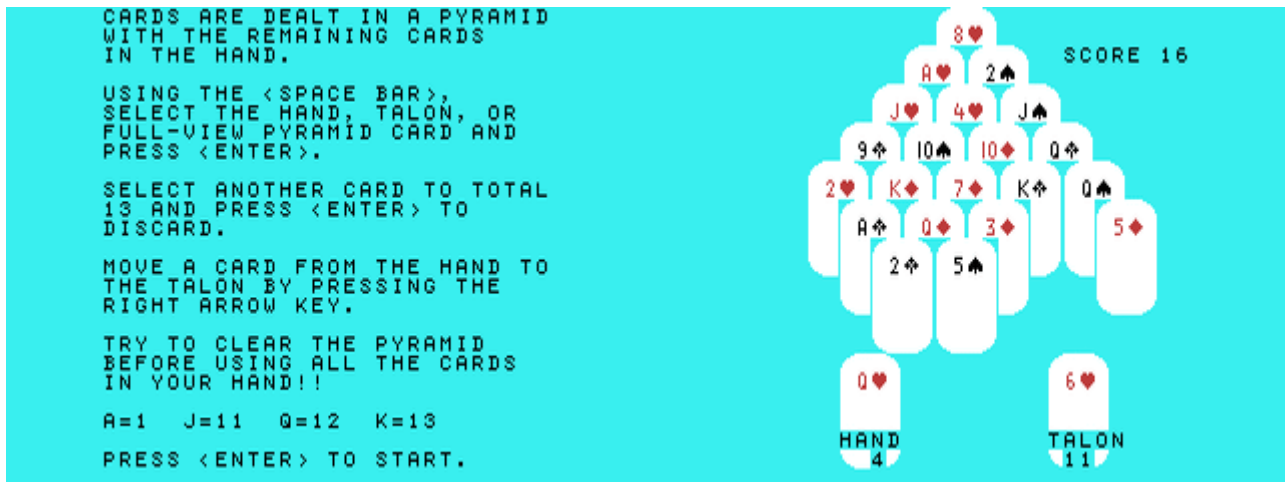
Start from mega menu: G – 6 – F

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Pyramid

G-6-G [Disk: 174-PYRA] By Regena



Everybody enjoys a nice card solitaire from time to time as a digression from the constant frag fest in Call of Duty, and this one certainly does not disappoint. The object of the game is to clear all the cards by matching and removing the pair of cards that add up to 13, starting from the bottom of the pyramid. Simple enough, but I have yet to beat it. Impeccable presentation and intuitive simple interface. A joy to play.

Requirements: XB cartridge, 32K RAM.

Executable to run: PYRAMID

Download Pyramid:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

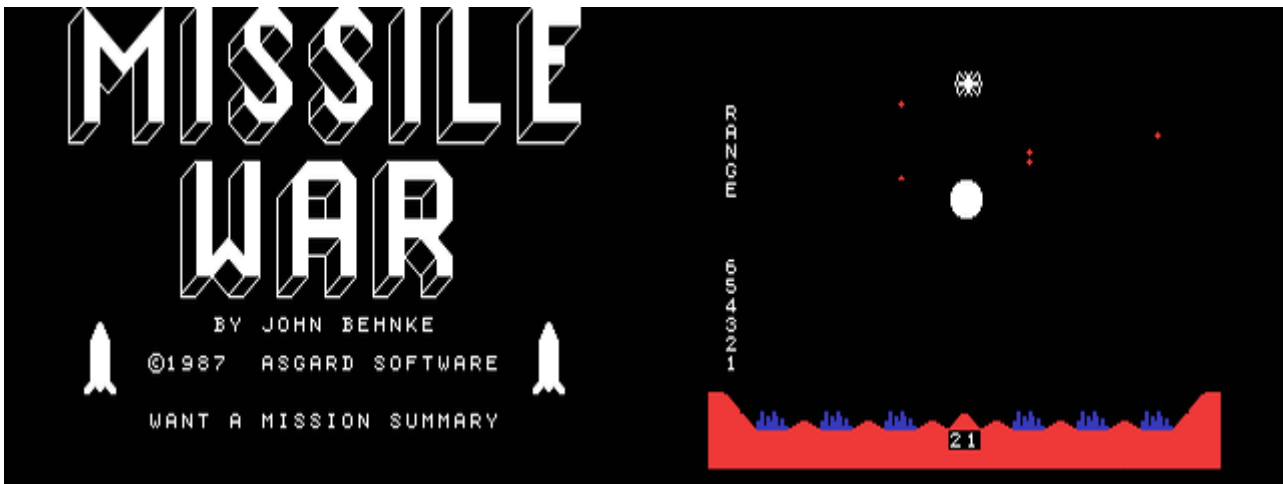
Start from mega menu: G – 6 – G

Features: Title Screen, XB, One Player

Controls: Keyboard

Missile War

G-6-H [Disk: 175-MIWA] By John Behnke



This is another re-creation of the venerable Missile Command, albeit a fantastic one. Use your joystick to control the targeting cursor and fire missiles at incoming enemy ones, trying to protect your cities as well as your weapons depot. How long can you survive before the apocalypse? A classic that never fails to entertain.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Missile War:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 6 – H

Features: Title Screen, XB, AL, One Player, Sound

Controls: Joystick 1, Keyboard (P=Pause)

Short & Sweet Game Contest

G-6-I [Disk: 176-SSGC] By various authors



This is a compilation of the Short and Sweet Game Contest (SSGC) organized by Owen Brand that ended in April 2010 where contestants created an XB game limited to 30 program lines and 10 Data lines. This contest was a huge success with no less than 17 entries, all of which demonstrated incredible creativity and highlighted the capabilities of the TI Extended Basic environment. The winning entry was **Lunar Rescue by Marc Hull** which is shown here, with the three runner-ups being Inaccurate Invaders by UnHuman, SSGC Racer by Kurt Woloch and Chronicles of Sniffing Zombie by Sometimes 99er. A fantastic collection that will keep you entertained for a long time!

Requirements: XB cartridge, 32K RAM, joysticks for some of the games.

Executable to run: Game Title

Download SSGC compilation:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Games documentation \(zipped\)](#)

Start from mega menu: G – 6 – I

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 1

TI-99/4A – Game Shelf Extended Basic Games

Sweet & Short Game Contest

- | | |
|---|-----------|
| 1. Chronicle of Sniffing Zombie | COSZ |
| 2. Dark Maze | DARKMAZE |
| 3. Beryl Reichardt & The Helm Of Wooldridge | DUNGEON |
| 4. Fly Guy | FLYGUY |
| 5. Iron Chef Meltdown - Kaga Goes Gaga! | IRONCHEF |
| 6. Lunar Rescue | LUNAR |
| 7. Space Trap | SPACETRAP |
| 8. SSGC Racer | SSGCRACER |
| 9. Thin Ice | THINICE |
| A. TI Chronic | CHRONIC |
| B. TI Farmer | TIFARMER |
| C. Them Zombies | ZOMBX |
| D. Canyon Bomber | CANYON |
| E. Cyber Run | CYBERRUN |
| F. Gravity Run | GRAVRUN |
| G. Inaccurate Invaders | INACINV |
| H. Skydiver | SKYDIVER |
| I. TI-Simon | TISIMON |

Sweet & Short Game Contest in MEGA MENU

From Main Menu choose G-6-I and "1" to "I" in the following submenu:

```

=====
09.01.2020                               16:00
RXB2015      SSG Contest
              AUSWAHL
=====
              CTRL+H=Hilfe
              G-In. Invaders
              H-Skydiver
              I-TI-Simon
              J-
              K-
              L-
              M-
              N-
              O-
              P-
              Q-
              R-
              S-
              T-
              U-
              10
              200
              11
              22
              33
              44
              55
              66
              77
              88
              99
              00
DSK1=MM
DSK2=MM.p.FW.W
DSK3=XB.XB256
    
```

=====

Chronicle of Sniffing Zombie (CoSZ) for TI Extended Basic

=====

One player action/puzzle/maze game. 10 menacing levels.
Immense sparkling colors, breathtaking sound effects and
heartbreaking graphics. End of game scene.

OPERATION

Place COSZ in the DSK1 folder of your Classic99 emulator.
Start Extended BASIC, load and run:
OLD DSK1.COSZ
RUN

STORY

Okay, so you woke up this morning feeling muzzy. You
tried to stand on your feet. You didn't mind the stench,
although it hit you somewhat. You reached for the light
switch, but there were none. Suddenly the floor caved in.
You found yourself close to a wall, could hardly see
anything. You looked at yourself only to discover the
horrifying truth. This morning you really looked like a
zombie.

Somehow you knew it would be a bad idea to touch the wall.
It would only set you back so much. Your senses were of
another world. You instinctively began to sniff, and felt
the number of hazardous surrounding walls.

Oh, what a nightmare. I gotta get out !

GAMEPLAY

Reach for the exit on the right. Use sniff information
to avoid running into walls.

CONTROLS

Use arrow keys.

TI-99/4A – Game Shelf Extended Basic Games

=====

Dark Maze v1.1 for TI Extended BASIC
(copyright 2010 Adam Haase/Quixotic Software)

=====

LOADING

Place the DARKMAZE file in the DSK1 folder of your Classic99 emulator

Launch Classic 99

Select "Extended Basic" from the Catridge->Apps menu

Press any key

Press the 2 key to select Extended Basic

Type the following command and press ENTER:

OLD "DSK1.DARKMAZE"
RUN

Recommended: Play on CPU Overdrive

GAMEPLAY

You are a fearless adventurer, braving the awful depths of a dark and sinister dungeon for precious treasure.

But beware! You are not alone in this foul place. You can hear something else moving down here... and it's getting closer... and louder!

Unfortunately, it's very difficult to see down in this place. You can scour around you and see everything close, but far away places are a mystery. As you traverse the dungeon, you uncover its secrets and learn its twisting passages.

There are a few things to help you. A bubbling potion is here, drinking it causes the monster chasing you to stop for a brief time, letting you catch your breath and get out of his immediate reach.

Better still is the mystical sword, a powerful blade that will frighten and drive the monster away from you, for with it you can vanquish him and explore at your leisure... but the sword will disappear after a short time, so move quickly to catch him!

To advance to the next level, you must collect all the treasure chests on the dungeon level. The first level had three, and one additional chest is needed

TI-99/4A – Game Shelf Extended Basic Games

for each level, to a maximum of eight.

You have three lives at the start of the game. Completing a level awards you one additional life, to a maximum of five. Each time the monster catches you, you reappear in a different portion of the maze, although areas you have already traversed will remain visible.

The game ends when your greed leads to your frightful doom...

SCORING

When you finally perish, your final score will be displayed. Two values separated by a slash indicate that the point award goes up per level, to the given maximum.

Picking up a Chest 50 points
Picking up the Sword 10 points
Picking up the Potion 10 points
Completing a level 100/1000 points
Killing the monster 100/1000 points

CONTROLS

Joystick - Move any of eight directions

Enjoy!

=====

Beryl Reichardt & The Helm Of Wooldridge

game (C)2010 Howard Kistler/Dream Codex Retrogames
Beryl Reichardt game world (C)2010 Owen Brand

=====

Place **DUNGEON** in the DSK1 folder of your Classic99 emulator,
launch with Extended BASIC enabled, and load with the
following commands:

OLD "DSK1.DUNGEON"
RUN

It's recommended to play this with CPU Overdrive on.

STORY

This game takes place before the epic event of the Legend of Beryl Reichardt. It is shortly after the slaying of the King, before Beryl has completed his training and set out to regain the Great Sword of Wooldridge. His trainer Markus and his teacher Reptoslicer have decided that the time has come for Beryl to undergo his first real challenge - regain the lost Helm of Wooldridge.

This legendary helm once passed down through Beryl's family but was lost in a forgotten underground ruin generations ago. The location has now been discovered, a subterranean lair now overrun by the foul creatures that serve the Demagon Underlord, Necrogon. Fearful creatures such as Darkhounds and Gorgons roam the halls, and deep below are the most terrible - the Doppelisks. These horrors are bred from the mirror realm and have the ability to become Doppels of terrible power when touched by Necrogon's magicks. This is a rare chance for Beryl to both obtain a heirloom of power, and to weaken the armies of Necrogon by slaying these still-unformed Doppelisks.

Go forth now Beryl and show the enemy your might!

GAMEPLAY

(See the "dungeon_key.png" image for game items.)

The game takes place in a six-level dungeon world. Each level occupies one screen and is filled with rooms, hallways, monsters, and treasure.

The bottom of the screen displays four statistics:

1) Hitpoints (Heart Symbol) - This is how much damage you can take in combat before you fall. You start with

TI-99/4A – Game Shelf Extended Basic Games

20 hitpoints, which are lost in varying amounts as enemies successfully attack you. If this goes below 0, you fail the quest. You can fully recover your hitpoints by collecting potions.

2) Weapon (Sword Symbol) - This is your weapon. You start the game with the lowest weapon, the Knife, and can get better weapons by collecting weapon icons. Each icon will improve your weapon up to the best one, the Sword. Better weapons have higher hit chances and do more damage. The weapons, in order, are: Knife -> Mace -> Stave -> Axe -> Sword

3) Armor (Armor Symbol) - This is your armor. You start the game with the lowest armor, Cloth, and can get better armor by collecting armor icons. Each icon will improve your armor up to the best one, Plate. Better armors have higher hit resistance and stop more damage. The armors, in order, are: Cloth -> Hide -> Scale -> Chain -> Plate

4) Level (Arrow Symbol) - This is how deep you are in the dungeon. The bottommost level is level six, where the Helm of Wooldridge awaits.

You move through the hallways and interact with the other game elements by moving into them. If you move into an enemy, you will attack with your weapon. Moving onto an item collects it. Moving onto a door takes you down to the next lower level. And finally, moving onto the helm completes the game.

Any time you are directly adjacent to an enemy, you may attack by moving in the enemy's direction. Likewise, any enemy directly adjacent to you will try to attack you.

ENEMIES

Bat - Corrupted giant cave bat, the weakest foe but can still inflict nasty scratches.

Slime - Gelatinous creature that feeds on prey by excreting digestive enzymes that melt flesh.

Spider - Huge cavern spider, tamed just enough that they server as watchdogs for the dungeon.

Adder - Large venomous snake, sacred to the followers of Necrogon. Their venom kills through rictus.

Orc - Brutish humanoid race that lives for warfare. Some degenerate tribes of orcs have formed religious cults around Necrogon.

Darkhound - Called up from the hellish realm, these

TI-99/4A – Game Shelf Extended Basic Games

canine lesser demons exude smoke and have skin that burns to the touch.

Gorgon - These lesser demons are from the fallen realm, resembling bull-men with scaly pelts.

Doppelisk - Greater demons from the mirror realm, they are towering beings that look like a beautiful woman merged with a salamander and a crow. They can enchant with their illusions when fully grown, but you will thankfully only encounter the larval forms here.

ITEMS

Weapon Icon - Upgrade to a better weapon

Armor Icon - Get a better suit of armor

Potion - Fully restore your hitpoints

CONTROLS

Move Beryl, attack, and collect with the arrow keys.

Exit the game at any time with the Q key.

Enjoy!

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Fly Guy for TI Extended BASIC

(copyright 2010 Howard Kistler/Dream Codex Retrogames)

Place in the DSK1 folder of your Classic99 emulator, launch with Extended BASIC enabled, and load with the following commands:

```
OLD "DSK1.FLYGUY"  
RUN
```

It's recommended to play this with CPU Overdrive on, otherwise it's painfully slow.

GAMEPLAY

You are Fly Guy, an above-average fly on a mission. Move along the gridwork of five levels, collecting the red pellets and avoiding the green spiders. The level advances when all pellets are collected, either by you or the spiders. Spiders that eat a pellet gain a quick burst of motion, so watch out! Gain 100 points for every pellet you snatch from the spiders, and win an extra fly at 2000 points. Gameplay ends when you have lost all your flies or you clear all five levels.

CONTROLS

Move your fly with the arrow keys.

Exit the game at any time with the X key.

Enjoy!

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Iron Chef Meltdown - Kaga Goes Gaga!

A TI Extended BASIC Game

(copyright 2010 Howard Kistler/Dream Codex Retrogames)

Place in the DSK1 folder of your Classic99 emulator,
launch with Extended BASIC enabled, and load with the
following commands:

```
OLD "DSK1.IRONCHEF"  
RUN
```

It's recommended to
play this with CPU Overdrive on.

GAMEPLAY

Welcome to Kitchen Stadium! Home to the Iron Chefs and
presided over by Chairman Kaga of Gourmet Academy, it
is usually the scene of intense battles where master
cooks prepare dishes using the Theme Ingredient.

At least, that's how it normally goes. But today is
different. Chairman Kaga, driven temporarily insane
from having bitten one too many bell peppers, has
ordered a monstrous amount of Theme Ingredients and
is throwing them around Kitchen Stadium with abandon.
It is up to the five Iron Chefs to collect these
precious items, while avoiding the Chairman's bitten
peppers.

The future of competitive cooking is in your hands!
Arise, Iron Chef! Allez cuisine!

CONTROLS

Summon the current Iron Chef with the SPACE key.
Move the Iron Chef left and right with the arrow keys.

Catch the Theme Ingredient and avoid the bitten Yellow
Bell Peppers. Dropping an ingredient or being hit by
a bell pepper will disqualify the Iron Chef and end the
current cooking battle. Summon the next Iron Chef and
continue, but be warned that Chairman Kaga will add a
new Theme Ingredient with each battle, and will throw
them more frequently. Play ends when all five of the
Iron Chefs are disqualified and Chairman Kaga is carried
away for bell pepper detox.

This game is produced in loving tribute to the original
Japanese competitive cooking show Iron Chef, which is
the property of the Fuji Television Network, who in no
way endorses this game. All Iron Chef personas are
used with respect, even if the game itself is very silly.

TI-99/4A – Game Shelf Extended Basic Games

Enjoy!

=====

Lunar Rescue... (c) 2010 DSAPSC (a blatant rip-off of an 80's arcade game in 30 lines)

=====

BACK STORY...

You are Major Crash, fearless pilot of the Lunar Evacuation Module (Suck it NASA, I didn't step on your trademark !) You are lazily playing video games on your TI99 when the call comes in.... "Meteor shower is threatening the mining operation on the lunar surface. We need to get the miners out of harms way. You immediatly and without fore thought run to your LEM and begin the rescue operation. Can you save the day ?

STARTING...

Follow the onscreen teaser to start play.

OBJECT...

Your mission is to navigate the meteors, land on one of the pads to collect a miner and escort him to the station at the top of the screen. Contact with a meteor or any part of the lunar surface other than one of the pads results in your untimely death and the end of the game. As you rescue miners the meteors will slowly increase in speed so be careful !

CONTROLS...

Use joystick #1. During station dock you will hear a repeating warning bell to alert you of your ready status. Press the fire button on the joystick to begin your descent. Control your horizontal movements with your joystick and slow you vertical descent with the fire button. When landing on a pad make sure that your are; 1: completely on the pad and 2: your descent is slowed by your thrusters. A hard landing will destroy your ship ! After the miner boards your LEM you automatically begin your ascent. Controls are the same except you thruster will now speed your ascent. When you dock at the station the miner will exit and you will be readied for another flight...

Good luck !

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SPACE TRAP...

=====

Back ground (nerded up as much as possible ;-)...

You are a member of the Crystal Entity trapped in a prison created by the "Q". In order to stave off death you must consume other members of your species. The only problem seems to be that no matter how much you consume, your energy continues to dissapate at an alarming level. How long will you be able to survive in this outer space hell?

To start...

Press the fire button on joystick 1 when you see the orbiting crystals....

To Play...

Use joystick 1 to manuver your white crystal into contact with the other crystal on the screen. When you make contact; points are awarded, the other crystal dissapears and a new one appears at a different location. Be careful to avoid the energized walls of the prison or you will be disinegrated.

Hints...

Be careful of your momentum. It will carry you into the walls if you are not careful and remember you are in space so there is no friction to slow you !

Your life force is indicated by the volume of the Crystal Entities 4 toned heart beat. If you begin to have trouble hearing it then you must get to another crystal quickly.

If you press and hold "A" during the intro screen you may get a suprise...

Enjoy !

TI-99/4A – Game Shelf Extended Basic Games

SSGC Racer

A (relatively) fast-paced racing game for the TI-99!

The story

=====

You are an old racing champion who has been world champion numerous times. Actually, you already resigned in 1985, but now you have spent all of the money you earned back in your golden death and have to starve if you can't get any new money from somewhere. Since you actually never learned anything except for racing, you decide to go back onto the track. However, the track seems to have resigned in 1985 too, so it's in a bit of bad shape... the curbs have deteriorated, and there's no signs, no tribunes and not even clouds in the sky. All you can see is the deteriorated track with some meadows to the left and right and a building at the start and finish, containing the starting lights. Somehow it seems like the track hasn't been used since "Pole Position" lost its place in the arcade to modern texture-mapping based racing games like Ridge Racer and Daytona USA.

Nevertheless, you decide to take on a veteran race on this track. Starting next to you are celebrities like Beryl Reichardt, Marc Owen, Owen Paul, Paul Simon and Simon Webbe. However, they all only seem to care for their own car. In fact, you can hardly see them, so you only care for your car too. So it's you against your car and the track. Will you make the four laps before your TI-99 crashes?

Preparation

=====

Preparation takes time. Oh, you know this. Alright. Then just let me tell you that for playing SSGC Racer, you need a TI-99/4A, a working joystick unit and a TI Extended Basic cartridge. A memory expansion is not required, although performance might be slightly degraded without one.

To start the game, first hook up your TI-99/4A like described in the owner's manual, then hook up the joysticks like described in the joystick manual, then insert the Extended BASIC cartridge. You can also first insert the Extended BASIC cartridge and then hook up the joysticks, however, you probably won't be able to do that before you've hooked up the TI-99/4A, unless you're doing all three things at once, which is called Multitasking nowadays. In any case, you have to turn on your TI-99/4A in order for it to work, and it's also very important to turn on the monitor or TV the TI-99/4A is hooked up to, otherwise you won't be able to see and hear anything from the game.

If you have a Speech Synthesizer unit, you should also hook it up for some words of courage spoken by your TI-99/4A, however, this might increase the chance of your TI-99 crashing, especially if you place everything on the floor instead of on a proper table.

After turning on your TI-99/4A, you have to enter Extended Basic by first pressing any key and then pressing the "2" key. This, however, will not work if your copy of Extended Basic is actually part of a multi cartridge in which it isn't assigned the number 2. In this case you will have to press the number Extended Basic is assigned to instead. Oh, and it also will not work if your TI-99 crashes before you get the chance to hit that "2" button. And if you get the chance to do it, it might still not work if your TI-99 crashes while Extended Basic starts up.

Anyway... once you've entered Extended Basic, you load SSGC Racer from tape or disk. Since I submit this to the Internet, I don't have a clue in which form the game might have reached you, so I can't give any further instructions here. But anyway, after loading you have to enter "RUN" in Extended basic and press the Enter key. That is, unless SSGC Racer has been placed on a disk as the LOAD program or has been called from a menu acting as the LOAD program.

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Playing the game

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After having started the program, the title screen appears. It prompts you to wait a while while data is being read and calculated. Even though this program is only 40 lines long, it still takes a while to calculate all the data needed. After the calculations have finished, the frame of the title screen begins to flash, and you are prompted to press Fire to start. In case you didn't notice, Fire is the red button on your joystick, but if you have a third-party joystick, it might as well be another color. In any case, pressing fire doesn't mean that you should start a fire in your home. This would serve no purpose in relation to the game. In fact, it would be highly counter-productive to do that, so I'm not endorsing it at all. In fact, I don't even take any responsibility if you start a fire instead of pressing the fire button.

So, after firmly pressing the fire button (at least on the original TI joysticks, you have to press it firmly, otherwise it won't react), the title screen disappears, and the main game screen appears, where you are treated with a 3D view of the track. Well, sort of, at least. In the background you can see a beautiful view of mountains... well, at least there is one mountain although it, too, appears to have shrunk considerably since 1985.

In addition to the badly rendered street, you can also see the not-so-badly drawn starting tower and the slightly overweight starting lights. After having listened to the introductory fanfare (you might know it from somewhere, it doesn't seem to be newly composed as well), the four starting lights light up, accompanied by three low and one high beep. On the high beep, it's your turn, which also gets announced by the Speech Synthesizer if hooked up and working.

Now you are on your own in your car and have to take four laps around the track. Your joystick now represents the steering wheel and the pedals in your car as follows:

- Pushing the joystick up represents pressing the gas pedal and will make your car accelerate. Please note that if you let go on the joystick, your car will slowly decelerate, just like a real car does if you're driving without giving it power.
- Pushing the joystick down represents pressing the brake pedal in your car and will make your car decelerate. However, it will only decelerate until zero speed, because there is no reverse gear built in.
- Pushing the joystick to the left will make your car go left.
- Pushing the joystick to the right will make your car go right.
- Pressing the fire button (which is also called action button on some joystick models) doesn't have any effect.

Most of the time, you will be best off just accelerating. However, you have to follow the road and its windings by steering left and right. Fortunately, thanks to the advanced 3D view of SSGC Racer, you will see each curve coming up some seconds before you have to react to it. Also, your car cannot be destroyed, but if you reach the left or right side of the road, it will slow down considerably, so you will not be able to make your laps in the time planned. There is also one U-turn (hint: it's a left turn) which is so sharp that you will have to decelerate a bit in order to get through it without hitting the roadside.

After each lap around the track, your lap time will get displayed, and if the speech synthesizer is hooked up, the next lap will also be announced in speech.

After you have completed four laps around the track, the game action will be stopped, and your best and average lap times will be displayed, while the ending tune plays. There will also be another meeting with the starting tower, which now has become the goal tower, but of course without the starting lights.

After the ending tune has completed, you will have three choices:

- You can start another game of SSGC Racer by pressing REDO (which is holding down the FCTN key and pressing 8 on the TI-99/4A)
- You can go back to the title screen of SSGC Racer by pressing BACK (which is holding down the FCTN key and pressing 9 on the TI-99/4A)
- You can quit the game and go back to Extended Basic by pressing Q (which is the key labeled Q, unless the label has come off)

TI-99/4A – Game Shelf Extended Basic Games

History

=====

How did SSGC Racer come about? Of course, it would have never been programmed if it weren't for the Short and Sweet Game Contest on the Atariage forum in the TI-99/4A programming section, and, to be honest, I probably wouldn't have done it if it wasn't for the CF7 drive which has been announced as the first prize. You see, I've made some attempts of transferring data from my TI-99 to the PC. I've got quite a few other programs I've written back in the day, mainly in Extended Basic, on the TI-99 and which are still stored on their disks (and nowhere else). I would really like to port all these over to the PC in order to put them on the Internet and show them to the world. Sadly, until now the only thing in this direction I got to work is by saving them to CS1 while actually hooking up the cassette cable to my PC's soundcard where the resulting WAV file gets processed into a file suitable for TI-99 emulators. This is a doable way, however it is rather slow (you have to process each program separately), and there are also some files which can't be transferred this way... some programs which are too big for saving them on cassette, and also some other files I wrote which aren't BASIC programs, such as Music Maker pieces, text files or Assembler programs.

So the CF7+ drive was actually my main motivation for entering since it probably would make things much easier. Another motivation was that on the previous contest, the Retroclouds Game Programming Competition, actually only two people entered their creations, and both entries, although Assembler would have been allowed, were only done in Extended Basic. So I thought I would have pretty high chances of winning. However, in the meantime 14 programs by 10 persons have been entered, so my chances might not be as good as I hoped for. But there's still hope...

Anyway, considering what I could do for an entry, I thought about that test project that drew a 3D street similar to that of "Pole Position" which I had done on the PC. This project was mostly about how such a street could be rendered with only few calculations in order to run as fast as possible. For this approach I used some lookup tables, since I learned that the original arcade version of "Pole Position" also worked with lookup tables. So I thought I'd give it a try to see how fast it would run on the TI-99. In order to speed things up since the TI is obviously not as fast as the PC, I decided to do a character-based approach where only 12 3D points actually get calculated via the lookup tables, and this proved to be reasonably fast, together with some pre-computed strings, excerpts of which get displayed on the lower part of the screen with "CALL DISPLAY". This approach is somewhat similar to Sega's approach in Sega's "Power Drift", where the track also consists of pre-drawn elements which get shifted and drawn according to where they are in the player's view.

I think this works reasonably fast considering I'm only working with Extended Basic. The "reference work" to compare it to is, of course, Atarisoft's Pole Position for the TI-99, which also hasn't got such a great framerate. Actually, I think nobody else tried to do a commercially released 3D racing game on the TI-99 while there are numerous ones on the other systems. I think SSGC Racer shows that this genre would have had some more potential on the TI-99. I think it would fly if it was converted to Assembler.

SSGC Racer also implements some things which Atarisoft didn't do in "Pole Position". There are the visible starting lights, the roadside curbs (OK, so it hasn't got a middle line), polyphonic music and a smoothly moving mountain in the background. Actually, I didn't think I would make it to include so many elements, but somehow each time I thought it would be finished now, I found some room for yet another feature.

(stepping off the boasting soapbox)

TI-99/4A – Game Shelf Extended Basic Games

Disclaimer

=====

This program isn't meant to fit any particular purpose except for the player's enjoyment.

This program is a product of:

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Kurt_Woloch@hotmail.com

Kurt Woloch makes no warranty with respect to the program and is under no obligation to provide any support or assistance with respect to the program. Kurt Woloch is under no obligation to provide upgrades to the program.

The following tools have been used to write this program:

- Classic99 emulator (emulates the TI-99/4A)
- Editor (included in Windows XP)
- Sprite Editor for the TI-99 by John Chase (PC based)
- pencil and paper

Any similarities and references to existing persons, facts, tracks or games are purely coincidental, though not necessarily unintentional.

TI-99/4A – Game Shelf Extended Basic Games

THIN ICE - version 1.1

program and documentation by Keith Bergman for Orphantech.com

(c) 2010

This file was last modified March 16, 2010.

1. OVERVIEW

Thin Ice is a game for the Texas Instruments 99/4A home computer. In it, you must help a penguin pick up treasure chests scattered across a frozen river, which is rapidly thawing, and get safely to the other side with as many chests as possible.

Thin Ice was conceived and written in March 2010 for the "30 Line Programming Contest" on the AtariAge.com TI 99/4A Programming forum.

Bugs, comments, suggestions, hate mail, love letters, and large cash PayPal transfers can be sent to exiletoledo@gmail.com.

Thanks to the AtariAge.com TI Programming forum, particularly Howard Kistler, whose suggestions made version 1.1 a much better game.

1. SYSTEM REQUIREMENTS

On original hardware, Thin Ice requires the TI Extended BASIC cartridge. It has been tested and found to work on the Classic99 emulator on a Windows Vista PC. The program is written in 100% "stock" Extended BASIC, so it should have no issues in other emulators. If using Classic99, the "CPU Overdrive" mode is recommended.

Thin Ice consists of one, self-contained program, which can be run from any disk. No file access is required during the game.

2. GAME PLAY AND SCORING

Your plucky penguin starts out on the grassy left shore of a frozen body of water. Scattered across the ice are twenty treasure chests. Even for penguins, who are notoriously bad at maintaining wealth, this is an unacceptable situation. Oh well, it's simple, though - just pick them up, cross the ice, and head for home on the right bank.

But what's this? Tiny blue cracks are beginning to appear in the ice. Our hero takes a step out onto the white expanse, and hears a series of bone-chilling crunching sounds as more cracks appear, and grow wider. Blue water is showing through holes in the ice. Every time the penguin takes a step, the ice gets weaker. One wrong move and it's into the drink, and the penguin loses all his money (and the game). Players get 2000 points for each chest they pick up (4000 if they choose a harder difficulty). In addition, a bonus accumulates for each move the penguin safely makes on the ice. The bonus increases twice as fast on the harder difficulty setting.

The player wins by reaching the right bank (the green strip on the right of your screen). You don't have to collect every chest, but you must collect at least one to win and end the game. The penguin can return to the left bank, or walk on the right bank without having picked up a chest, but while he's goofing off in the grass, the ice is only getting worse!

Player can move N, S, E, W, or diagonally, with the letter keys corresponding to TI's arrows (holding down the FCTN key is not required, but CAPS LOCK is). Movement keys are:

W E R
S D
Z X C

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=====

TI Chronic for TI Extended BASIC

(copyright 2010 Howard Kistler/Dream Codex Retrogames)

=====

Place in the DSK1 folder of your Classic99 emulator,
launch with Extended BASIC enabled, and load with the
following commands:

OLD "DSK1.CHRONIC"
RUN

GAMEPLAY

You are Dealer McOwen, a model of entrepreneurial gumption who dwells in the drug-loving heartland of twentieth century America. On your wide acreage you are growing that crop which was so beloved by the Founding Fathers - hemp. In order to prosper, you'll have to haul your stoned ass out to the fields and work a quadrant of land each season. Plow, seed, reap, and repeat to maximise your cash flow. Hire flunkies to help out, avoid the perils of illicit farming, and otherwise kick back and enjoy.

Each season you may do one of the following things:

PLOW

Break up the soil and plow under any remaining crop material from previous seasons. You will be asked which quad you want to plow. Make sure you choose one with plenty of unbroken ground (dark brown and cracked looking earth).

SEED

Plant seeds in all the plowed ground of a quad. Plowed ground is light brown and has a regular wavy texture. Seeded ground will mature into hi-grade weed at the end of each Spring.

REAP

Harvest any mature crops in a quad. Mature cannabis is dark green and leafy, while seedlings are light green and grass-like. You will receive \$1 for every crop you harvest, because your lazy butt tends to leave too many sticks and stems in.

HIRE

Hire a fellow head to help around the place. This will cost you \$250 each time, largely for beer and munchies. You've got crash space for up to four burnouts. They are displayed in red at the lower right,

TI-99/4A – Game Shelf Extended Basic Games

with the first person representing yourself.
Each stoner you hire reduces the impact of bad events and increases the benefits of good events.
The stoners available for hire are Rasta Boy, The Swami, Hey Dude, and Party Girl.

QUIT

Exit the game. You will get a summary of how much you earned by the time you quit. If you do not quit, the game will continue to the year 2000, at which point Dealer McOwen will flee to Mexico to escape the reach of the newly-formed Department of Homeland Security.

RANDOM EVENTS

Throughout the course of play random events will occur on the farm. Some will benefit you (like extra plants growing on their own or a friend volunteering to work your land), other events will set you back (the DEA may spray your crops with defoliants or you might confusedly plant oregano instead of the weed). Hiring stoners will help offset the losses of bad events and will boost the gains of good events, so keep a few handy.

CONTROLS

A = PLOW a quad
B = SEED a quad
C = REAP a quad
D = HIRE a stoner
E = QUIT the game
1-4 = Select the numbered quad for your action

Enjoy!

DISCLAIMER

This game is intended to be comedy and does not endorse or condone drug use. Remember, winners don't use drugs. Well, okay, some of them do, but they either don't get caught or they stick to legal drugs like alcohol. But you, you're the kind who gets caught and messes up their life with shit like this, I can just tell. So leave that crap alone, man.

TI-99/4A – Game Shelf Extended Basic Games

=====

TI Farmer for TI Extended BASIC

(copyright 2010 Howard Kistler/Dream Codex Retrogames)

=====

Place in the DSK1 folder of your Classic99 emulator, launch with Extended BASIC enabled, and load with the following commands:

```
OLD "DSK1.TIFARMER"  
RUN
```

The game file is named TIFARMER to distinguish it from the TI Farm project that's under discussion. Not that you'd mistake this for that anyway.

GAMEPLAY

You are Farmer McOwen, red-blooded homesteader in the America of 1900. You've set up a large farmhold and are working to bring in enough money to live a secure life. To do this you will need to work your land, an expanse of acreage which you can work one quad of each season. (The farm is very large, and you also follow the wise path of rotating your crops.)

Each season you may do one of the following things:

PLOW

Break up the soil and plow under any remaining crop material from previous seasons. You will be asked which quad you want to plow. Make sure you choose one with plenty of unbroken ground (dark brown and cracked looking earth).

SEED

Plant seeds in all the plowed ground of a quad. Plowed ground is light brown and has a regular wavy texture. Seeded ground will mature into harvestable crops at the end of each Spring.

REAP

Harvest any mature crops in a quad. Mature crops are dark green and leafy, while seedlings are light green and grass-like. You will receive \$1 for every crop you harvest.

TI-99/4A – Game Shelf Extended Basic Games

HIRE

Hire a farmhand to help around the place. This will cost you \$250 each time, and you can hire up to four farmhands. They are displayed in red at the lower right, with the first person representing yourself. Each farmhand you hire reduces the impact of bad events and increases the benefits of good events. The farmhands available for hire are Katie Sue, Slim Buck, Fat Roy, and L'il Rex.

QUIT

Exit the game. You will get a summary of how much you earned by the time you quit. If you do not quit, the game will continue to the year 2000, at which point Farmer McOwen will have had enough and quit himself.

RANDOM EVENTS

Throughout the course of play random events will occur on the farm. Some will benefit you (like a new tractor that helps you break ground or windfall profits from growing a high-demand crop), others will set you back (insects may devour mature crops and a farmhand may be eaten by one of the many zombies that roamed the plains at this time). Hiring farmhands will help offset the losses of bad events and will boost the gains of good events, so keep a few handy.

CONTROLS

A = PLOW a quad
B = SEED a quad
C = REAP a quad
D = HIRE a farmhand
E = QUIT the game
1-4 = Select the numbered quad for your action

Enjoy!

TI-99/4A – Game Shelf Extended Basic Games

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THEM ZOMBIES for TI Extended BASIC

=====

It was a normal day at Farmer Owen's farm. Too normal.

"Pa!" cried junior. "Them Zombies is in the pasture again!"

"Turn on the 'lectric fence," cried Farmer Owen, "an' git my laser rifle."

"I'll show dem zombies what for!"

They want to eat your brains, so stay one step ahead of them!

Use the joystick to move. You will automatically fire in the direction you are moving. The zombies are coming up everywhere, and moving in towards you. They're slow, but deadly, and only a head-shot will take them out. Some of these guys are JUST floating heads, take those out too! They will attack in waves - sometimes more, sometimes less, be watchful!

Don't worry about a headless body - eventually it will disintegrate. It's harmless!

You score one point for every step you take and survive. You get two points every time a zombie spawns, so keep blasting! (Score is displayed at the end).

Watch out for the electrified barriers - if you touch one, that's instant death!

Honeycomb Rapture

G-6-J [Disk: 177-HORA] By Owen Brand



Africanized killer bees are wreaking havoc with the world population of honeybees, which could lead to an ecological catastrophe given the essential role the latter play in plant pollination. In this game, you will attempt to evade the killer bees on your way from the flower field to the hive, and then once several bees make it to the safety of the hive they have to evade alien saucers determined to collect them for experimentation as well as fly through hoops for points and extra lives. There is definitely no lack of imagination here, making for quite a fun and colorful game with excellent animations and neat sprites.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Honeycomb Rapture:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

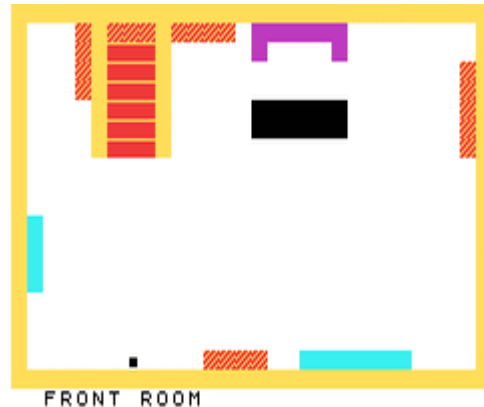
Start from mega menu: G – 6 – J

Features: Title Screen, XB, One Player, Sound, Music

Controls: Joystick 1

Thief

G-6-K [Disk: 178-THIE] By Thomas M. Perkowitz



A million dollars is enough to tempt anybody, more so if you are the famous thief Stelthful Smith. So, when a reclusive zillionaire dies, you plan on breaking into his mansion and get to the safe. Simple enough, if it wasn't for the very touchy alarm system protecting the house. One slip up and you will spend the next decade really getting familiar with you cell-mate at the local high security prison. Are you game? The graphics are very basic, but still manage to capture the tension of a high stakes robbery.

Requirements: None.

Executable to run: THIEF

Download Thief:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Manual](#)

Start from mega menu: G – 6 – K

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf Extended Basic Games

THIEF Instructions:

SCENARIO

You are the famous thief Stelthful Smith, and after months of planning, you have just entered the front room of the two story summer home belonging to the even more famous zillionaire, Harold Huge. Somewhere within the house is a safe containing over a million dollars in cash! Unfortunately, the house also has a very complex security system. Your job is to find the money and get out of the house without setting off any of the alarms.

MOVEMENT

Use the eight directions of the joystick. There are three uses for the button on the joystick:

- 1) By moving onto any object and pressing the button you will identify it and search it.
- 2) By moving onto one of the doors and pressing down the button, you will be transported into the next room.
- 3) By holding down the button and moving the joystick you can move slowly. This is very useful in navigating around walls and entering doors without hitting the wall behind it.

WALLS

Every yellow wall is wired. This means that if you run into it the alarm will go off and police will come.

ALARMED DOOR

One door is wired and must be disarmed before you can pass through it.

LOCKED DOOR

One door is locked and must be unlocked before you can pass through it.

SECRET ROOM

??

HINTS

- There are 11 rooms
- When you find the key, you automatically take it with you.
- When you find the combo, write it down so that you won't forget it.

WINNING THE GAME

After you find the \$MONEY\$, just get out of the house. After the game is over, you will get a time score -- a very good score is one that is less than 1000 time units.

GOOD LUCK!

Lemonade Stand

G-6-L [Disk: 179-LEMO] By Owen Brand



It sounds so easy! Just build a lemonade stand and they will come and make you rich... NOT! There is definitely nothing simple about running that establishment, where you have to contend not only with the weather and finicky customers, but also with customizing your lemonade recipe as well as your "advertising agent" who ALWAYS makes sure to get his piece of the action. Clear interface and uncluttered graphics allow you to focus on actually running your business and hopefully make a living. Great take on a classic premise!

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download Lemonade Stand:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

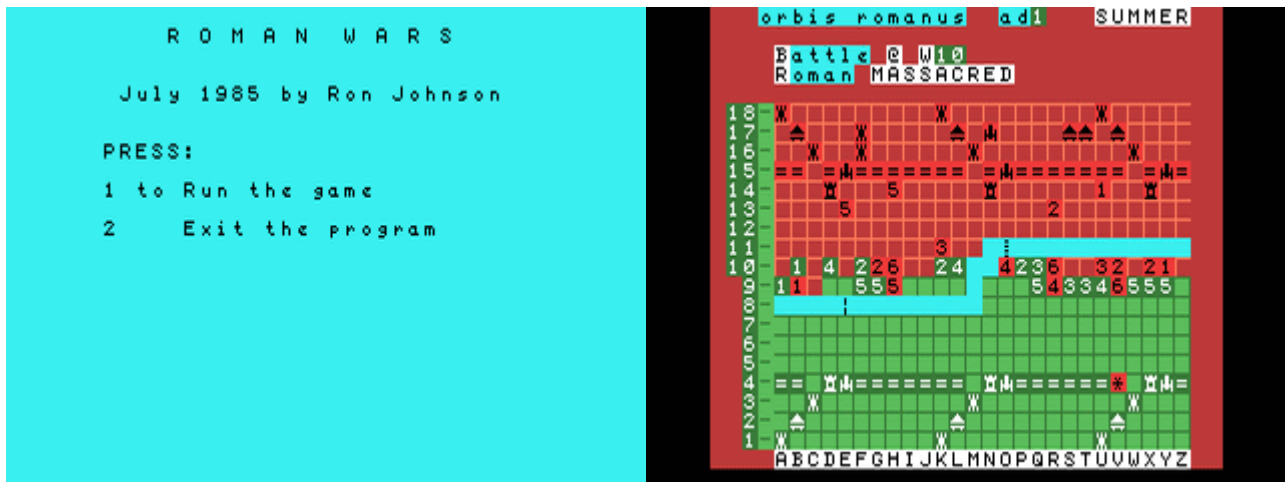
Start from mega menu: G – 6 – L

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard

Roman Wars

G-6-M [Disk: 180-RWAR] By Ron Johnson



This is the first true wargame for one player I have found so far for the TI, and it is absolutely a diamond in the rough. As the commander of the mighty Roman legions, you have to defend and eventually destroy the hordes of Germanic barbarians that are trying to invade the Empire. Your success will depend on strategically maneuvering your troops, as well as managing supplies to feed your men. There are a variety of orders available to you from building castles, villages and granaries to troop and artillery movements as well as pontoon building, supported by an intelligence report you can view at the beginning of each phase. The computer controlled enemy is quite savvy and will definitely put up an excellent fight. The interface is very easy to use and the graphics manage to convey a clear picture of the battlefield. Very highly recommended for the wargamers among you.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download Roman Wars:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 6 – M

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Devastator

G-6-N [Disk: 181-DEVA] By David R. Arnold / TI version by Patrick Parrish



You are the last defense against alien invaders and you must shoot down a wave of 19 aliens before time runs out and the earth is annihilated. Of course, the aliens are not terribly accommodating, so you will need to muster every ounce of dexterity in your body to achieve your goal. I was only able to destroy up to 12 aliens in any one session, so I hope the Earth has a better hero than myself! Colorful and fun.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: DEVAST

Download Devastator:

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[\[V9T9 .DSK Format\]](#)

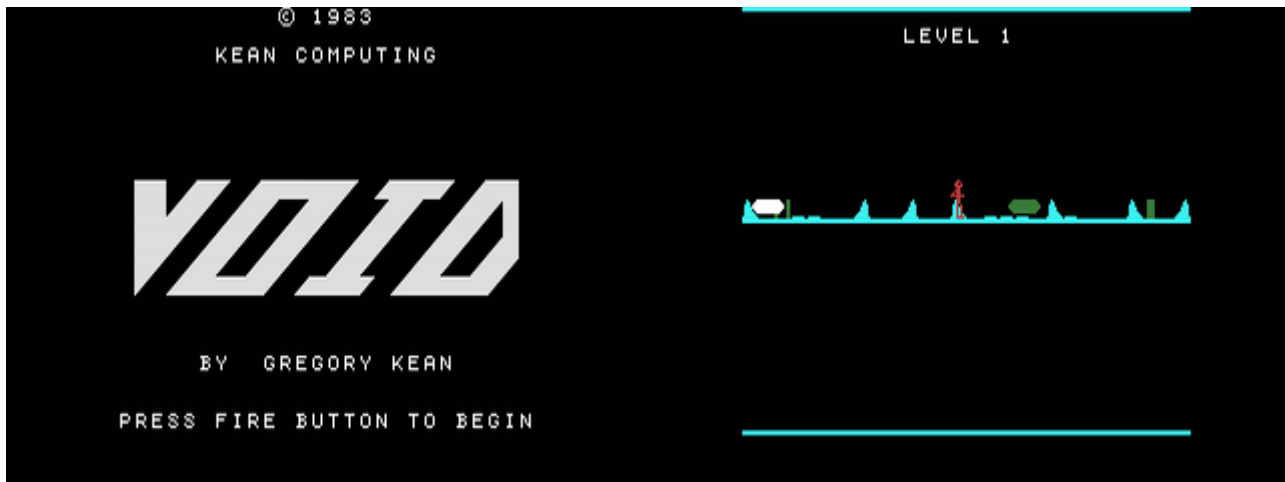
Start from mega menu: G – 6 – N

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Void

G-6-O [Disk: 182-VOID] By Gregory Kean



This is a somewhat surreal game with a science fiction feel where you are trying to move from one level to another by jumping over moving obstacles that will kill you on contact and activating the doorway to the next level. Requires precise hand eye coordination and cool nerves. Very original presentation and addictive albeit difficult gameplay.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: VOID

Download Void:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

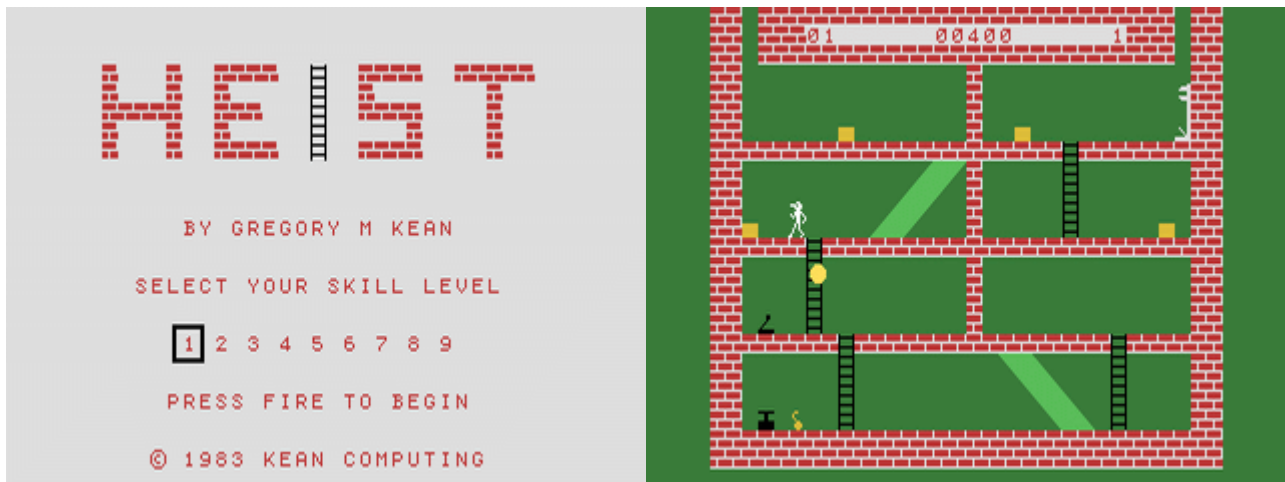
Start from mega menu: G – 6 – O

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Heist

G-6-P [Disk: 183-HEIS] By Gregory Keen



In this platformer, you are going through a house collecting items and finding ways to move between floors while avoiding booby traps as well as a pesky ethereal sentinel that will vaporize you on contact. There are multiple screens with great animations and graphics, but I found the difficulty level to be quite high, so patience is definitely a must. This however does not diminish in any way the fun to be had.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: HEIST

Download Heist:

[\[TIFILES format\]](#)

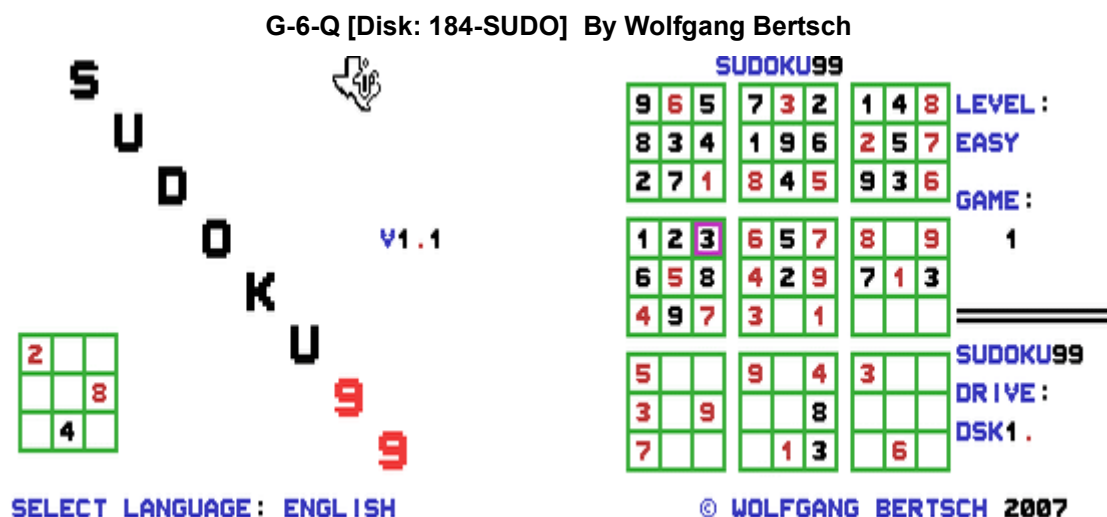
[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 6 – P

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Sudoku99 v1.1



This is another version of classic game of Sudoku that comprises 400 puzzles with 4 different levels of difficulty as well as multiple languages! There is enough here to keep you entertained for a very long time... Games in progress can be saved to disk for later retrieval, and the computer can check your solutions for mistakes. There is no provision however to input a new puzzle in this version. Beautiful presentation and intuitive interface.

Requirements: XB cartridge, 32K RAM. Joysticks optional.

Executable to run: SUDOKU991

Download Sudoku99:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 6 – Q

Features: Title Screen, XB, One Player

Controls: Keyboard, Joystick 1

SUDOKU99 v1.0 instruction

=====

1. The idea

For many years I'm a man, who is fascinated by mathematics and logical thinking. Therefore, I was interested in computers very early and also immediately began after the purchase of my TI99/4a with programming. This fascination don't stop until today. I still like to solve crossword puzzles, number games and logically. Since some time there now is a new variety. It calls itself Sudoku, comes from Japan originally and first has itself spreads in America, later in Europe, too. Already since I discovered this game, I was enthusiastic about it. Meanwhile I play it not only on paper, but have a version on my PC and my cell phone, too. Only therefore I miss the version for the TI. Admittedly, it exists already a program to support the solution of Sudokus. And Torben Karsten Andersen wrote a demo for assembler, but it is no full game. So, the idea of SUDOKU99 was born.

2. The program

I already made the first attempts on the return trip of the International TI Treff from Flensburg in the last year. Unfortunately, it turned out soon that it gives bigger difficulties to generate a Sudoku per random-number generator. Almost the whole project would have failed because of this. Then I found the side of Sudoku-Fan from Liechtenstein in the internet(www.sudoku.li), who puts hundreds of games with solution online to the disposal. He kindly allows me to use his Sudokus in my program. So, I only had to create the surface for the game. I had intended ideas for the program even. The game should run on each TI with Extended Basic. Also, I wanted to create a possibility that all TI-User on the world can use it without big language knowledge. It therefore had to be multi-lingual. Furthermore, it should be quite comfortable and offers all possible features. I think that I could fulfill these requests.

3. The game

Sudoku is a logical number game, that is played with 9x9 boxes in a field. The field is subdivided into 9 fields a' 3x3 boxes. Goal of the game is to write down the numbers 1 until 9 so, that each number occurs in each line, in each column and in any 3x3 sphere only once. According to complexity, numbers are included more or less already pre-determined. These cannot be changed either.

4. Starting of the program

SUDOKU99 requires only a TI99/4a with 32k memory expansion, Extended Basic and a disk drive to running. Optional you can use joysticks. The games can also load from each other data carrier, and saved to it, too.

The program will be started with RUN "DSKx.SUDOKU99". The "x" is for the number of the drive with the program disc.

Hint: After deleting all lines with REM's as well as '!' and all not required Speech-DATA lines (up from line 4220) from the program, it should also run on a TI99/4a without memory expansion.

5. The play

First a word about the controlling of the program. In principle the program is controlled with the joystick. On that occasion a cursor moves into the desired direction or you can scroll through a menu list. Alternatively, the control can be done with the arrow keys or the buttons E, S, D and X. The selection will be completed alternatively with the fire button, the ENTER button or the button Q. A break can sometimes be done with the button FCTN-9(BACK). If text input is necessary, it can be inputted like usually over the keyboard and completed

TI-99/4A – Game Shelf Extended Basic Games

with ENTER. However only CAPITAL LETTERS are allowed.

After the start, the title screen appears. Here you can select the desired language. The actual game field builds up after it. As first you can now pick the desired complexity. Afterwards the program asks for the drive or the path where the game files are. If the necessary file was found you can now select a game. This game then is loaded.

Now you move the cursor with the joystick over the game field to playing. If you come on a free box you can either input a number over the digit keyboard or with ENTER. 0 correspond to the blank character on that occasion. Using the joystick you can scroll through the numbers with the fire button. If you press FCTN-9/BACK, the selection menu appears.

6. The selection menu

All additional functions are located in the selection menu for the game control. Through the menu, you navigate with a Cursor (blue bars), which is moved by the arrow keys or with the joystick. You activate a function with ENTER or the fire button. FCTN-9/BACK returns to the game. The functions of the selection menu are:

- RESTART all complaints are deleted after a security retrieval and the game is put back to the beginning.
- NEW after a security retrieval the game field is deleted and you can choose a new complexity and a new game.
- LOAD here you, after the security retrieval, can load a before stored game. First the computer asks for the drive as well as the path where the file with the saved games is. Now the selection of the game takes place. Saved games are similar the original games in a common file, where each record contains a game. Consequently, each game becomes unequivocally identified with a number. To the relief, you can input a commentary at the storage of a game. This commentary now appears at the screen. Hagggle it for the desired game for itself, answer the retrieval with YES. If you choose NO, another game can be chosen. Otherwise the game now is loaded and the program finally still asks for the drive as well as the path where the original files are. This is necessary for checking the game later as well as to load a new game.
- SAVE with this function the current game is stored. As first the program wants the drive as well as the path where the game should be stored. If already a file with saved games exists, the current game is stored in it, otherwise a new, empty file is generated. Now you can input a commentary, with which can later be recognized the game again at the loading of it. This complaint is optional. Next, the game is stored. Finally, the program asks again for the drive as well as the path to the original files. It comes back to the game after it. -HELP if you are on an empty box with the game cursor, this function determines the allowed numbers for this box. This eases the overview and allows the simpler solution of the game.
- CHECK if you mean the game is solved, you can choose this function. The computer tests, whether the solution is right. If this is the case, it congratulates the player and he will be asked to play again. Provided the game was solved incorrectly also a message appear, the game cursor is placed on the position of the mistake and you will be returned to the game.
- RETURN the selection menu finishes and you will be returned to the game. Identically to FCTN-9/BACK.
- QUIT after a security retrieval appears a copyright note and the program will end.

7. The preview

At the moment the program package consists of the actual game program in the version 1.0 and the game files, approximately 130 Sudokus contain in 4 different complexities. In the course of the time, these game files are still widened. Approximately 400 ready-for-use Sudokus suit for me at this time and even essentially more unsolved to the disposal. Interest in it should exist that the program is widened as well. So already a function is anticipated in order to mark already solved games. Also, an editor would be possible in order to input own games or a random number generator to generate about accidental games.

8. To the good end

As usual the hints at the copyright. The entire game package is FAIRWARE. It is allowed to copy it freely in complete form anytime and distribute it. A sale is not allowed. Changes of the program code are only generally allowed in order to bring the program to running on TIs with particular equipment. Shortenings of the program like above described to play on a standard TI also are allowed. Alterations at the game files are NOT ALLOWED since these are not subject to my paternity.

The game files contain Sudokus, that can be called in internet over the URL <http://www.sudoku.li>. They are freely available there. Nevertheless, I kindly have get permission from Matthias Mahr, the operator of this side, to convert Sudokus for the TI and to use in my program package. Therefore, at this place a cordial thanks for him.

If questions still should be, I like to help. For criticism, as far as it is constructive, I'm frankly anytime. And should have somebody the need to gives me something for my work, I also am very grateful for it. Whoever wants to reach me requires still following statements:

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Fax. +49 7142 41504
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Homepage of the TI-Club Errorfree
<http://www.errorfree.de>

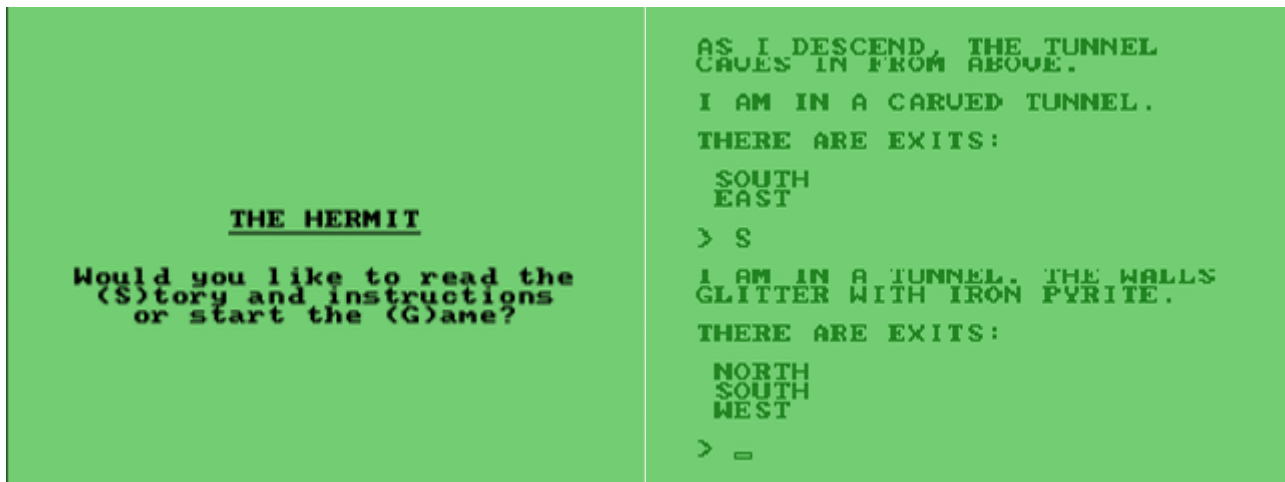
I wish much fun with this program and when solving the Sudokus.

Wolfgang Bertsch Freiberg a.N. in April 2007.

This document was partly translated with Axelab Translation 10.0 plus.

The Hermit

G-6-R [Disk: 185-HERM] By Brian C. Horner



The reclusive man known simply as the hermit was by all accounts very rich, although the source of his riches was subject to much controversy. Now that he is dead, you are going to try to get into his mansion and look for his hidden treasures. Unfortunately, the chances of you making it out alive, let alone with some loot, are not very good, but feel free to try anyway... Fun very well executed text based adventure with embedded assembly routines that will keep you scratching your head more often than not.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download The Hermit:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

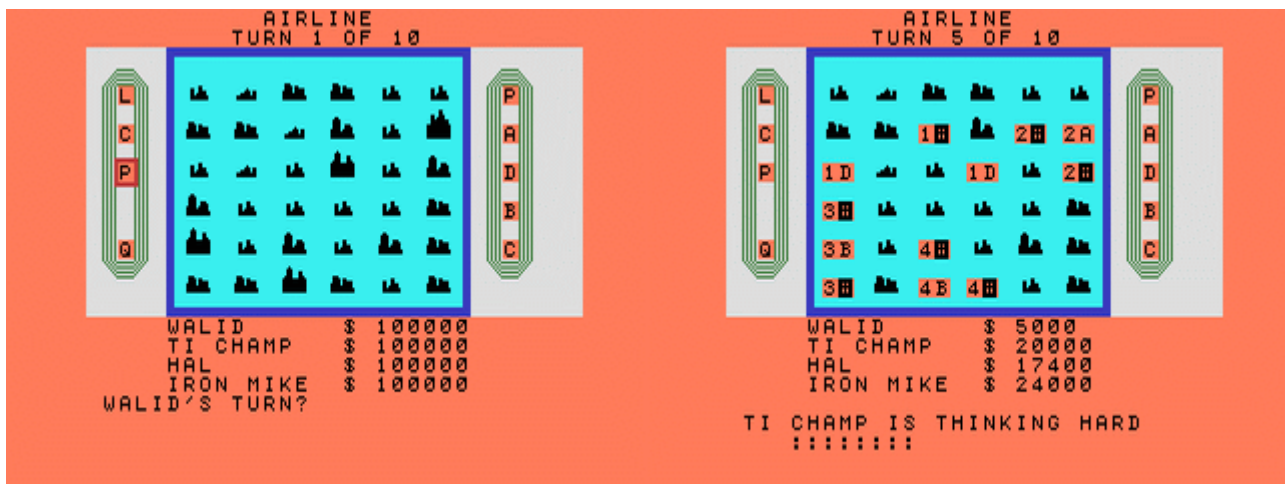
Start from mega menu: G – 6 – R

Features: Title Screen, XB, AL, One Player

Controls: Keyboard

Airline

G-6-S [Disk: 186-AIRL] By Ann & Phillip Case



If you enjoy financial simulation games, then you're going to love that one. As a financier with money to burn, you decide to create an airline business. You will start by acquiring landing rights at various airports across the country, purchase aircrafts, and establish flight routes. In the process, you will need to manage your available cash carefully while maximizing your return on investment and ward off up to 3 computer competitors. While the game's graphical presentation is pretty basic, the play itself however is devilishly attractive.

Requirements: XB cartridge, 32K RAM.

Executable to run: AIRLINE

Download Airline:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Download instructions here](#)

Start from mega menu: G – 6 – S

Features: Title Screen, XB, AL, One or 2-4 Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

AIRLINE Instructions

Airline is a strategy game that provides you with a starting capital of \$100,000 and you have to use that money to create an airline empire by purchasing airports and airplanes and creating flight routes that generate income for you while competing against tough computer or human players.

There are 36 major cities with one airport in each as well as 5 different airplane types available. Before you can purchase an airplane, you must first purchase landing rights at an airport, then you can place an airplane (limit of one per airport) in it. Once you have at least 2 airports and at least 1 airplane, then you start collecting travel fares automatically. The bigger the city and the larger the airplane, then the higher the fares are.

After you select the type of players at the start of the game, you will need to indicate how many turns you would like to play. Keep in mind that on the last turn fare income is multiplied by 10.

Available commands are on the left side of the screen and plane types are on the right. The center of the screen displays the cities and the bottom the current financial status of each player. Use the arrow keys to move around and the space bar to select.

Commands:

L: Purchase landing rights
C: Check landing rights costs
P: Purchase plane
Q: Quit - Take no action that turn

Plane Types:

P: Prop	\$3000
A: Airbus	\$12000
D: DC-10	\$27000
B: B-747	\$48000
C: Concorde	\$75000

The screen will update as players take action with the players being numbered 1-4.

At the end of the last turn, the player with the most capital wins.

Mars Attack

G-6-T [Disk: 187-MARS] By Francesco Ugga



In a cross between Space Invaders and Demon Attack, this space shooter makes very skillful use of the TI's color, sprite and sound capabilities to create a very addictive game where you have to shoot down waves of colorful aliens using surface to air missiles before they make contact with the ground. Requires precise timing and quick thinking. While the instructions are in Italian, gameplay is pretty straightforward. **Requirements:** XB cartridge, 32K RAM.

Executable to run: MATTACK

Download Mars Attack:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

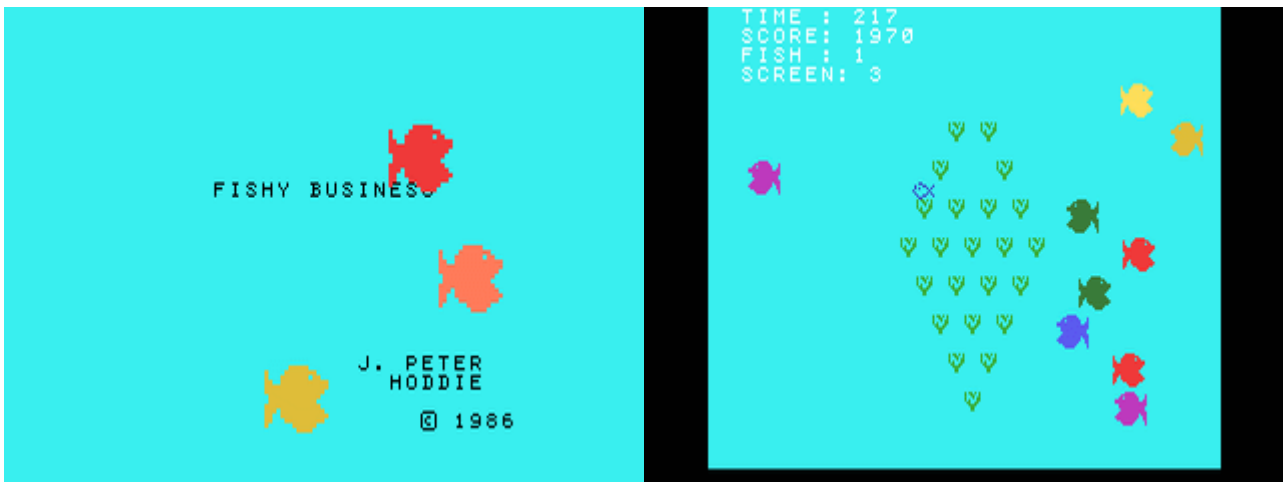
Start from mega menu: G – 6 – T

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard (S,D,L)

Fishy Business

G-6-U [Disk: 188-FISH] By J. Peter Hoddie



This challenging arcade game incarnates you into a lone small fish in a pool of much larger and hungry fishes, where you struggle to survive and avoid being eaten. In the process, you need to gather energy for yourself also by eating algae scattered across the playing field. Once you clear a screen of algae, then you move on to the next one with more challenges ahead. Great fun!

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: FISH

Download Fishy Business:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 6 – U

Features: Title Screen, XB, One Player, Sound, Music

Controls: Joystick 1

Aztec Challenge

G-7-1 [Disk: 189-AZTE] By Robert T. Bonifacio



You have been chosen to be sacrificed to the Gods by the Aztec priests, and the only way out is to prove your worth by competing in an endurance and obstacle course. Are you up to the challenge or should you just lie down on the sacrificial altar? Use the joystick to jump over obstacles: The position of the stick (forward, neutral and back) along with the fire button determine the height of your jump. Nicely done platformer.

Requirements: XB cartridge.

Executable to run: AZTEC

Download Aztec Challenge:

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[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – 1

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Night Sniper

G-7-2 [Disk: 190-SNIP] By J. Bulakowski



In a very original game, you are a sniper hunting down bad guys in the middle of the night. Your rifle scope gives you a very limited field of view with night vision, so you must pan around the screen trying to locate and shoot the brigands while avoiding people with their hands up or other objects. You have a limited time to kill all the bad guys, and the game gets harder as you progress. I was hooked instantly...

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Night Sniper:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

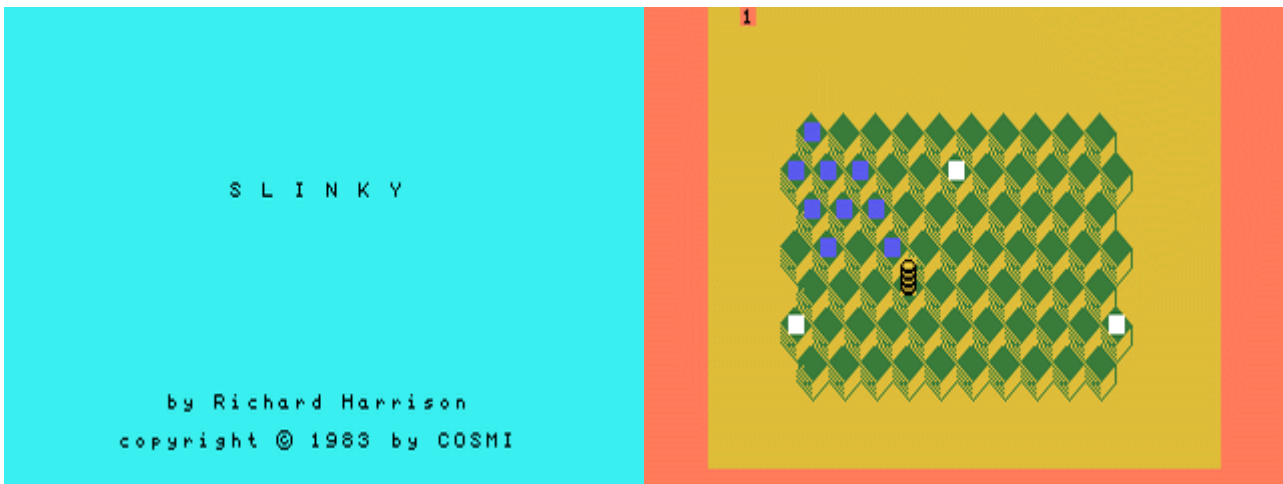
Start from mega menu: G – 7 – 2

Features: Title Screen, XB, AL, One Player, Sound

Controls: Joystick 1

Slinky

G-7-3 [Disk: 191-SLIN] By Richard Harrison



Inspired by Q-Bert, you are a slinky (that's right) trying to land on every square of this well drawn isometric staircase field. You can only move diagonally, and you die the second you jump outside the field. The white squares are transport gates that will take you back to your starting position, and you must avoid the holes created by falling rocks. Harder than it looks!

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: SLINKY

Download Slinky:

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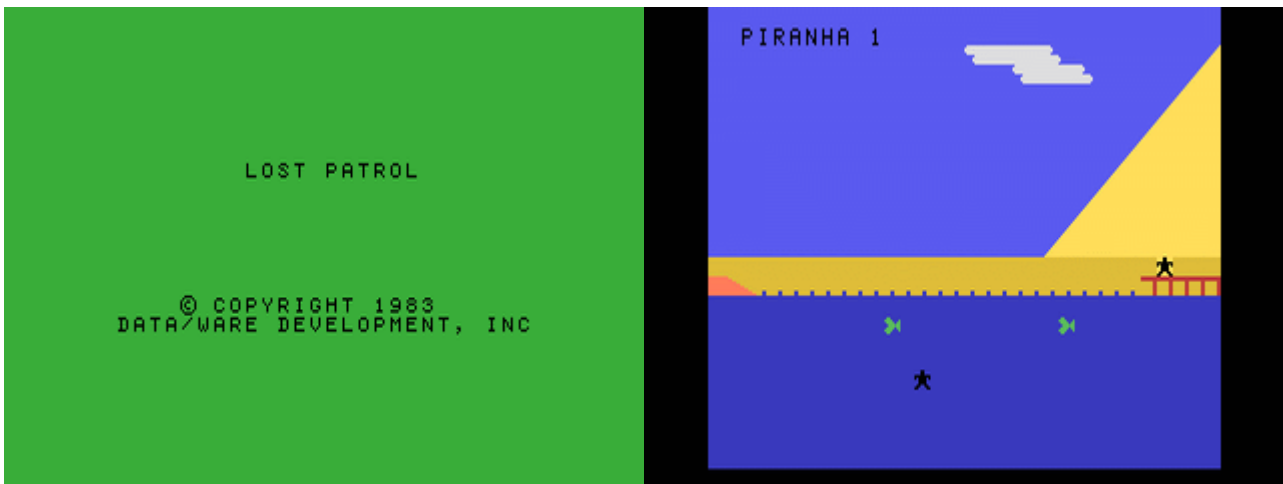
Start from mega menu: G – 7 – 3

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Lost Patrol

G-7-4 [Disk: 192-LOPA] By Data/Ware Development, Inc.



Your 5-member elite squad is faced with multiple obstacles while performing its mission, including deadly acid rain, mines and hungry Piranhas among other exotic faire. How many of your team will survive this ordeal? That's up to you (no pressure). Challenging and enjoyable.

Requirements: XB cartridge, 32K RAM.

Executable to run: XB AUTOLOAD

Download Lost Patrol:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

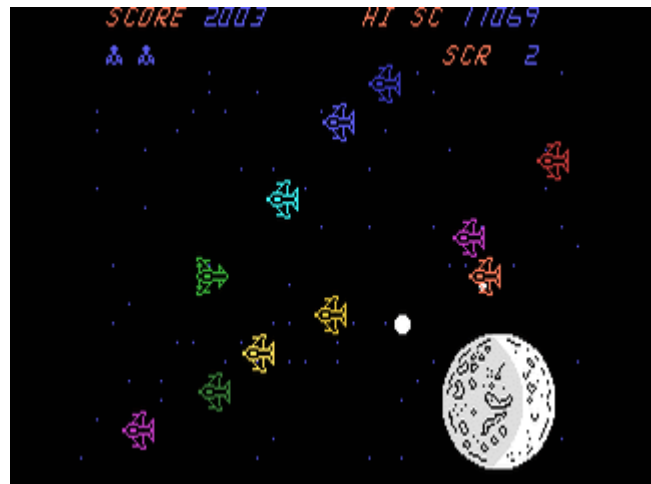
Start from mega menu: G – 7 – 4

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard, Joystick 1

Frenzy

G-7-5 [Disk: 193-FREN] By Bob Gagle and Greg Swagler



On the theme of Star Wars, you set on a multi-staged space mission dodging asteroid fields and enemy spacecrafts. Graded difficulty levels, excellent use of color and sprites, along with well executed sound effects more than compensate for the "yet another space shooter" impression.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Frenzy:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – 5

Features: Title Screen, XB, AL, One Player, Sound, Music
Very long loading time, be patient

Controls: Joystick 1

TI-99/4A – Game Shelf Extended Basic Games

-----> SPECTROGRAPHIC SOFTWARE <-----

P R E S E N T S

```
FFFFF RRRRR EEEEE N  N ZZZZZ Y  Y
F      R  R E      N N N   Z  Y  Y
FFF    RRRRR EEE   N N N   Z   Y Y Y
F      R  R   E     N  NN  Z    Y
F      R  R   EEEEE N  N ZZZZZ  Y
```

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VERSION 1.1

BY: ROBERT J. GAGLE & GREGORY D. SWAGLER

<----->

Commander:

We, the high command of Strayton, have selected you to command a squadron of star fighters on a very special mission.

Our planet, Strayton, has been attacked by our neighboring planet, Ryloor. The Ryloorians have captured our space station, and have taken control of our base on our first moon, Trogon. Luckily, they have not yet discovered how to operate the space station, but they have taken control of the defense system on Trogon.

The Ryloorians also have control over a meteor belt covering the perimeter of our planet. They use it to keep all of our cargo ships from leaving Strayton. We have already lost many good men and ships to the Ryloorians. It is up to you and your squadron to fly to Trogon and pick up a supply of Langite, used to power Strayton's forcefield protecting the last remaining city.

It has been rumored that the Ryloorians have Suicide ships in space quadrant two (2), just above Trogon. In addition, there are Robot destroyer ships that never miss when their prey is caught in their invisible tractor beam!

It has been noted that inside the meteor belt, your phasers will not operate properly because of an excess of Electro-neutron radiation, which freezes the firing mechanism. Also, the Ryloorians have placed the Robot Suicide ships between Trogon's orbit and its defense shield. This is important because if encountered, you will not be able to escape by flying too high or too low. Your ship's computer has been programmed to switch pressure conditions in the ship very slowly when it enters any of these areas. Hence, if you fly into these areas, your ship will explode!! The same condition occurs over Trogon's surface. If you fly too low, you will hit the mountains. If you fly too high, your ship won't handle the pressure change, and will explode!! Once under Trogon's surface (in the

TI-99/4A – Game Shelf Extended Basic Games

Langite mines) you must beware of and creatures that the Ryloorians have set loose.

One more word of caution: The mines are located very close to the planet's core. Thus, the effect of gravity on your ship will be magnified at least 5 times. It will very difficult to fly in the mines and land your ship on the landing pad.

GOOD LUCK IN YOUR VENTURE TO SAVE STRAYTON!!

Signed,

LANGRI - The high commander of Strayton

<----->

SYSTEM REQUIREMENTS:

'FRENZY' requires the following equipment - A Texas Instruments 99/4A Home Computer, a monitor or TV (preferably color so that you may enjoy the fantastic array of color graphics), Extended Basic, 1 Disk Drive, a VERY GOOD joystick (or a friend that has one!)

NOTE: 'FRENZY' does not require Memory Expansion (32K) to run.

NOTE: The disk that 'FRENZY' is on MUST remain in Drive #1 during
---- the game. ----

<----->

LOADING INSTRUCTIONS :

'FRENZY' is a totally disk based game.

To play 'FRENZY' first insert the Extended Basic cartridge into your computer. Next, insert the diskette with 'FRENZY' on it into drive #1. Turn on the monitor (or TV), the disk drive (Expansion System), and then the computer.

Press any key to go to the Master Selection Screen. Next, press (2) for Extended Basic. The disk will automatically boot 'FRENZY', so you need not do anything else.

NOTE: Please release the Alpha-Lock key (up position) for proper
----- game play.

Use joystick #1. 'FRENZY' is a one (1) player game.

<----->

TITLE SCREEN:

When the title screen appears, the theme song for 'FRENZY' will play. At any time during the music, you may exit by pressing the fire button on the joystick. You will then see the screen come alive! Press the fire button again to exit.

After this has been done, the screen will clear, and 'FRENZY' will be loaded.

<----->

SCREEN DESCRIPTION:

'FRENZY'S' screens are set-up in the following manner: Your present score is located at the top left-hand side of the screen. The high score (loaded from disk at the start of each session) is located at the top right-hand side of the screen.

Your number of ships remaining is underneath your score. The present screen you are on is located underneath the high score.

<----->

GAME PLAY INSTRUCTIONS:

'FRENZY' has four (4) main screens, and one (1) mini-screen. Every time you complete screen four (4), you gain one (1) level. You start the game with four (4) ships.

SCREEN #1:

You start in the middle at the bottom of the screen, faced by a meteor belt above Strayton's orbit. In the distance, you can see your space station, which has been captured by the Ryloorians. It is up to you to maneuver through the meteor storm. Each time your level increases, you are returned to this screen and the meteor belt grows. Remember, on this screen, you cannot fire, only dodge! You may only move left & right, and you can wrap around the screen. However, be careful! When you have successfully maneuvered through the meteor storm, your ship's computer will warp you to the next sector.

TI-99/4A – Game Shelf Extended Basic Games

SCREEN #2:

You start at the middle right-hand side of the screen. You can see Trogon in the distance. You must make your way through the deadly Ryloorian Robot ships. These ships don't fire at you, but attack you in waves at various velocities. You can defend yourself by firing a single phaser shot at them. However, your phaser's maximum range is only 25% of the screen's length. Each time you destroy an enemy vessel, a new one from the squadron replaces it. Your objective is to reach the opposite side of the screen.

Your controls are: To accelerate, push the joystick to the right, up, and down, respectively. Your phasers are activated by pressing the fire button on the joystick. You cannot entirely stop your ship's motion, for you are in orbit and subject to Trogon's gravitational attraction.

Don't forget that you may not exceed the vertical limits of the screen.

SCREEN #3:

You start the left-hand middle of the screen. Your ship is now over the surface of Trogon. As you observe the lunar surface, you can see mountains, a lake, and two lunar outposts. In the distance, you can see your home planet, Strayton. Your objective is to reach the other side of the defense system on the surface. You will be confronted by space mines, and a wrath of missiles, which the Ryloorians have taken control over.

You cannot fire on this screen - you may only dodge the enemy.

Once your ship is in motion, you cannot stop it. Don't forget that you may not exceed not vertical boundaries of the screen (including the mountains). You may accelerate your ship by push the joystick right.

SCREEN #3.5: (MINI-SCREEN)

After you have reach your destination, the mines will explode, and a wave of Robot Destroyer's with very precise tracking mechanisms. Once in their sights, give it up! THEY NEVER MISS!!!

The number of ships that you must battle is equal to the level you are presently on multilyed by five (5).

Your only defense against these Robot Destroyer's is you photon gun. This gun will fire a bolt of cosmic energy toward the enemy at a startling velocity. You may only move up and down while in combat.

After this, you will proceed to the Langite mines deep under Trogon's surface.

TI-99/4A – Game Shelf Extended Basic Games

SCREEN #4:

You are now in the Langite mines of Trogon. Your objective is to avoid the Ryloorian monsters, and set your ship down on the landing pad below. Be VERY careful! The gravity is extremely strong here, so you must compensate by thrusting up constantly, keeping your ship's velocity balanced.

You may not hit anything on the screen (this includes the moat, the stalagmites, or the walls). In order to make a safe landing, your ship's velocity must be relatively low, and you must land near the center of the pad.

After a successful landing, you, your ship, and the Langite will be transported back to Strayton. You rendezvous with your commanding officer, and you will proceed to attain more Langite from Trogon. (Return to screen #1)

<----->

EXTRA SHIPS:

You will receive an extra ships every time you complete a new screen. The computer will internally store your number of ships if it exceeds the limits of the screen.

<----->

RESTARTING 'FRENZY':

After the game is over, a haunting melody will be played while you are asked if you want to play again. If so, move the joystick left. If not, move it right.

NOTE: Your high score will be updated at the end of every session.

<----->

SCORING:

SCREEN #1: You will receive 25 points for each asteroid rotation. The length of each meteor shower is dependent upon the level you are on.

SCREEN #2: You will receive 25 points times the level you are on for each enemy ship that is destroyed.

In addition, you will receive bonus points dependent upon

TI-99/4A – Game Shelf Extended Basic Games

how far you travel across the screen (percentage amount).

SCREEN #3: You will receive a point value dependent upon how far you have traveled across the screen (percentage amount).

Also, on SCREEN #3.5, you will receive 100 points times the level you are on for each Robot Destroyer Ship that that is destroyed.

SCREEN #4: You will receive 1000 points times the level you are on for successfully landing your ship on the designated pad.

<----->

```
*****
*                                     *
*           R E M I N D E R           *
*                                     *
*****
```

'FRENZY' is distributed under the "fair ware" or Freeware (tm) concept. If you think that 'FRENZY' is worthwhile to you, please send \$10.00 to the author at the address below. I also appreciate any comments and/or suggestions you may have in regard to the program.

ROBERT J. GAGLE

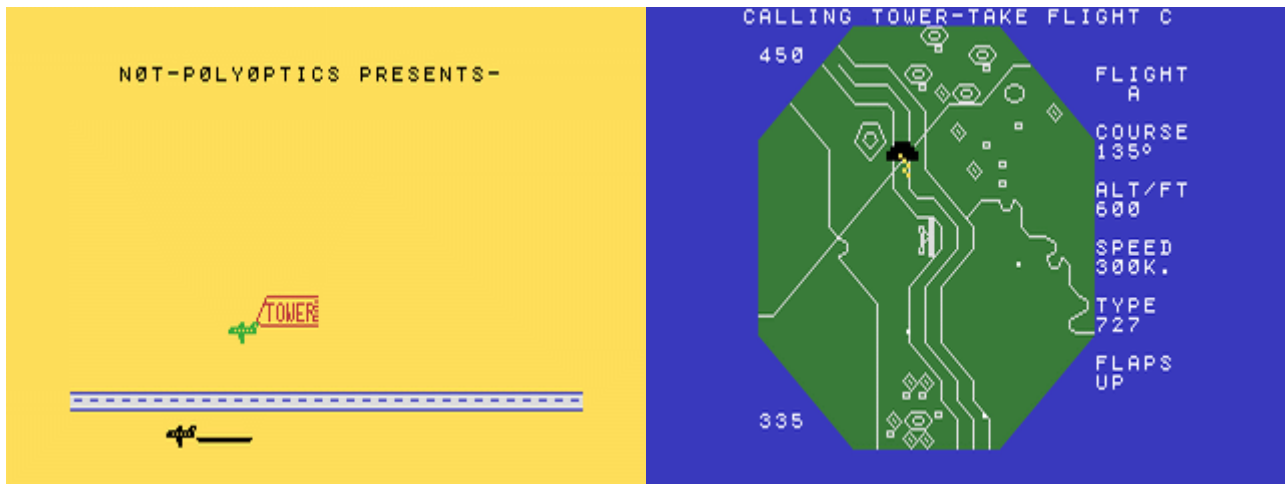
300 COLLEGE PARK AVE. \
DAYTON, OH 45469 > SCHOOL ADDRESS
STUART HALL ROOM 232-B /

1475 EVALIE DRIVE \ HOME ADDRESS
FAIRFIELD, OH 45014 /

```
<----- EEEEE N N JJJJ OOOO Y Y !! !! ----->
E      N N N J O O Y Y !! !!
<----- EEE N N N J O O YYY !! !! ----->
E      N N N J J O O Y
<----- EEEEE N N JJJ OOOO Y !! !! ----->
```

Tower

G-7-6 [Disk: 194-TOWE] By Not Polyoptics



This game is a simulation of a Civilian Air traffic Controller's duties at Washington's National Airport on a dark night with poor visibility. The ceiling is 400 feet or less. The screen represents your radar CRT displaying a map of the airport and surrounding area. On the right are displayed the selected flight's ID, course in degrees, altitude in feet, speed in knots, type of plane and flaps position. Your goal is to land 5 planes (A-E) and allow 5 planes to take off (F-J). Controller messages are entered on the bottom of the screen. Click [here](#) for command selection. How good are your multi-tasking skills? The lives of hundreds of passengers are depending on you... Engrossing gameplay!

Requirements: XB cartridge, 32K RAM.

Executable to run: XTOWER

Download Tower:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – 6

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

Tower Commands:

(_ stands for specific flight letter A-J, n is a number)

Altitude:	F_An	Change altitude request where n is the altitude divided by 100
Course:	F_Cn	Course is 0-360 degrees with 0 and 360 being due north
Identify:	F_I	
Hold:	F_H	Request circular holding pattern
Flaps:	F_FU or F_FD	Flaps Up or Down
Take Off:	F_N or F_S	Instruct to take off on north or south runway
Identify:I		Request all flights to identify
Ready To Take Off: T		Request all planes that are ready to take off to identify
Landed: L		Request all planes that have landed to identify
Pause: !		Suspend the game. Press again to resume

Hangman LightPen Edition

G-7-7 [Disk: 195-HAMA] By Walid Maalouli



While the game concept is nothing new, this version has been designed for use with a TI lightpen. The selectable areas on the screen are sequentially highlighted by a white sprite, and all you have to do is point and press the switch on the lightpen. Find the lightpen schematic [here](#).

Requirements: XB cartridge, 32K RAM, lightpen.

Executable to run: HANGMAN

Download Hangman LightPen Edition:

[\[TIFILES format\]](#)

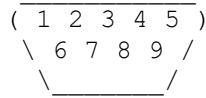
[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – 7

Features: Title Screen, XB, One Player, Sound, Speech

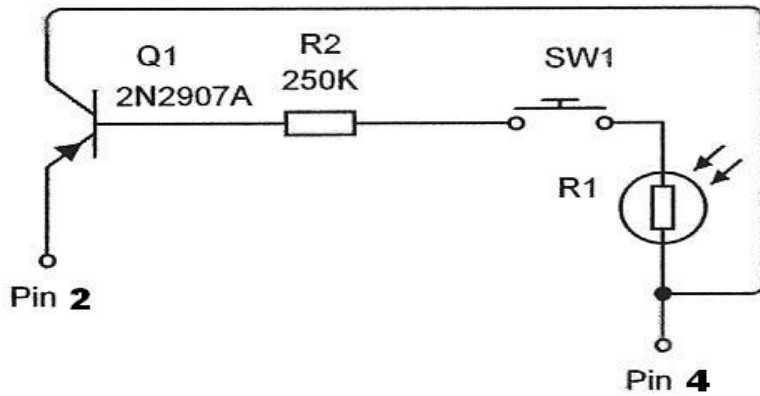
Controls: Lightpen on Joystick Port

Joystick port



I/O Use

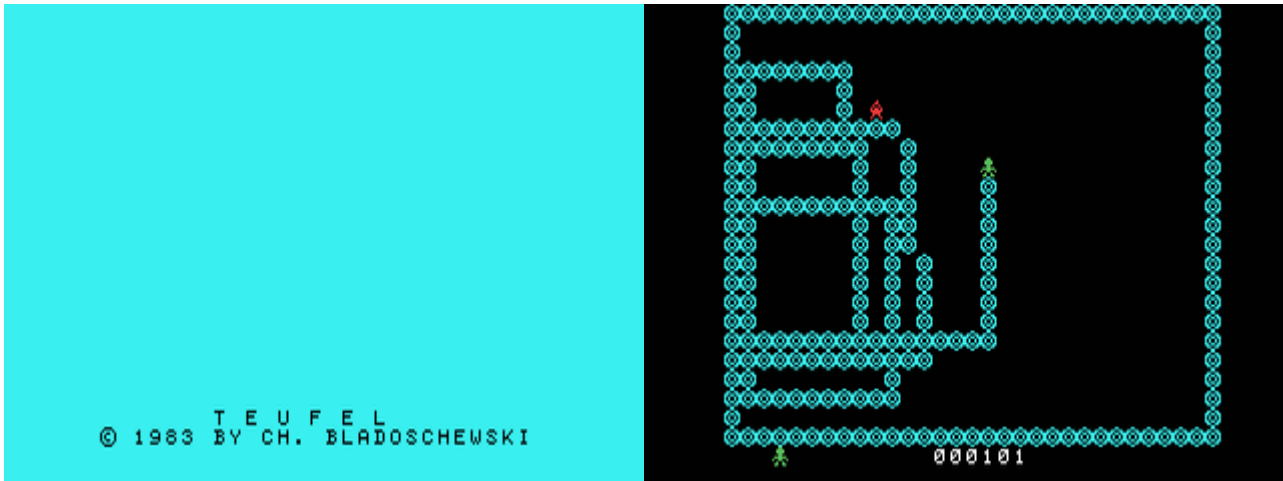
-
- 1 not used
 - 2 > Test joystick 2
 - 3 < Up
 - 4 < Fire button pressed
 - 5 < Left
 - 6 not used
 - 7 > Test joystick 1
 - 8 < Down
 - 9 < Right



Note: R2 needs to be adjusted for your monitor. Use of a potentiometer is recommended.

Teufel

G-7-8 [Disk: 196-TEUF] By CH. Bladoschewski



In this game, you are facing an increasing number of devils (Teufel) bent on capturing your eternal soul, and your only defense is to build enclosures around them with holy symbols. But beware! If they so much as touch you, you die instantly... These suckers are very sneaky, so you must think quickly lest you spend eternity in a flaming tub. Addictive gameplay.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: TEUFEL

Download Teufel:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

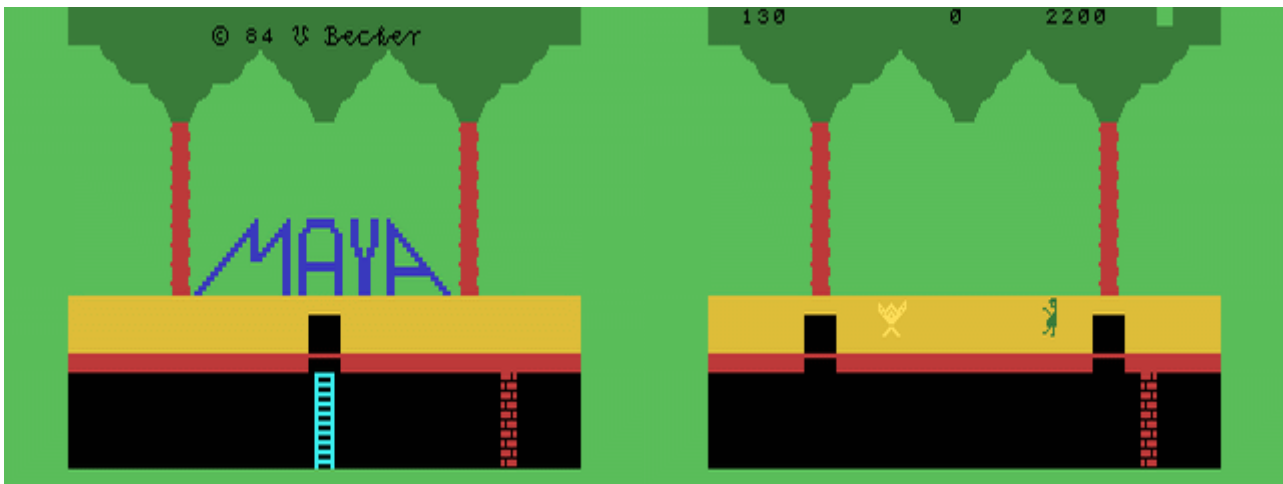
Start from mega menu: G – 7 – 8

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Maya I

G-7-9 [Disk: 310-MAYA] By V. Becker



In the spirit of the classic Atari 2600 game Pitfall, you are an intrepid explorer looking for treasure over and under ground while being constantly challenged by rolling logs, snakes and pits. There is only one level of play, but the game consists of a whopping 378 screens! Needless to say that I have a loooong way to go still. Hint: to go down the ladder, move the joystick diagonally, not straight down. Can you make it to the end? Is there a surprise ending? Why don't you try and find out?

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: MAYA1

Download Maya I:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – 9

Features: Title Screen, XB, One Player, Sound, Music

Controls: Joystick 1

TI Psychiatrist

G-7-A [Disk: 197-PSYC] By Scott Morrow



This is a somewhat more advanced and polished version of the venerable Eliza psychoanalysis program, where your computer becomes a psychoanalyst and prods you to discuss your troubles while interjecting smart snippets leading you on to more humiliating confessions. Very nicely executed and can lead to some hilarious conversations. Who knows, you may even end-up feeling better...

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download TI Psychiatrist:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – A

Features: Title Screen, XB, One Player

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

This disk contains 5 files which are used with the TI-Psychiatrist program.

They are as follows:

L-PSYC	-	XB Load prgm
PSYCHO	-	Psychiatrist Pt. 1
PSYCHO1	-	Psychiatrist Pt. 2
PSYCHO2	-	Psychiatrist Pt. 3
PSYLABL-LB	-	CSGD disk label

Please ensure that all files remain on the disk if you pass it to a friend.

Scott Morrow
December 1989

Sliding Block Puzzles

G-7-B [Disk: 198-PUZZ] By Norman Rokke

SLIDING BLOCK PUZZLES
SERIES III
COPYRIGHT 1991 NORMAN ROKKE



1

B BACK N NEXT Q QUIT S START

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A B C D E F G

H I J K L M N

O OBJECT Q QUIT S SAVE

BLOCK?

DIRECTION?



MOVES 17

HALFWAY

Whom among us has not at some point dabbled with sliding block puzzles? Well, here is your chance to reminisce on a simple yet devilishly frustrating set of puzzles that will keep you up at night. The objective is simple: move the big red block to the right lower corner. Getting there is another story entirely. The puzzles are arranged in increasing levels of difficulty, but thankfully the interface is simple and the graphics sharp and clear. Nicely done.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Sliding Block Puzzles:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – B

Features: Title Screen, XB, One Player

Controls: Keyboard

TI Casino

G-7-C [Disk: 199-CASI] By Ken Gilliland



As far as gambling games go for the TI, this is the **ULTIMATE** program. It includes accurate versions of Craps, Draw Poker, Keno, Acey Deucey, Baccarat, Blackjack, Roulette and Slot Machines, each rendered with amazing graphics, smooth easy to use interface and excellent sound effects. The documentation is extensive and complete, which makes this program a great training tool prior to your next Vegas trip. An absolute gem!

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB Autoload

Download TI Casino:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[TI Casino Manual \(PDF format\)](#)

Start from mega menu: G – 7 – C

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard, Joystick 1, Joystick 2



TI CASINO

by Ken Gilliland

CRAPS ♠ DRAW POKER ♠ KENO
ACEY DEUCEY ♠ BACCARAT ♠ BLACKJACK
ROULETTE ♠ SLOT MACHINES

Distributed by Notung Software
7647 Mc Groarty St, Tujunga CA 91042

This package is dedicated to
my Father,
R. Keith Gilliland,
It's a couple years late, but thanks for being
so patient!

TI Casino by Ken Gilliland. All programs included in
this package and the manual are copyrighted 1991.
All rights reserved.

Shuffle Routine by Jim Reiss. Copyrighted 1991. All
rights reserved. Any usage of code outside this
product must be approved by Jim Reiss.

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An Overview

TI CASINO was designed to simulate a Casino gambling experience without quite as much damage to your pocket-book. On the disk, it is possible to play multiple games with the same money and even cash in at the end of a session, receiving a printed check. The play has been made as easy as possible, so you don't have to be swallowed in this rather large manual. However, you'll find the manual interesting reading with it's Games Histories and Betting Strategies.

Loading the Program

TI Casino loads in TI EXTENDED BASIC. You also need a 32K Card, joysticks and an optional Printer. TI Casino comes in two Versions; On one DSSD (720 Sector format) and on two SSSD (360 Sector format, labeled "A" and "B") Disks. Insert the Disk (or Disk "A") into DSK1 and run Extended Basic. You will then be prompted to either press the FIRE BUTTON of either joystick. Do so and turn off Alpha Lock. The Title and Music will then Load and Play. To escape early from this, press FIRE.

Idiosyncrasies

Here's a couple quick things before we begin. TI Casino is almost completely menu driven. Your selection on the menu is always represented by a red dot being to the left of your choice. To change the selection, move the joystick up or down. Also, in betting a cash amount, the dollar amount go up and down in single increments by moving the joystick up or down. Moving the joystick sideways makes

makes the dollar amount increase and decrease more rapidly.

The Lobby

Upon entering TI Casino for the first time, or with an empty wallet, you will completely bypass the Lobby and go straight to the Cashier. If you do, in fact, have money, a bird's eye view of the Lobby will appear.

First, a quick rundown on what you see on the screen. You'll notice 8 boxed areas labeled with various Casino games such as "Blackjack" and "Crap Tables". These are the Gambling Tables. On the lower left-hand side of the screen is a graphic representation of your chips. TI Casino has three different denominations of chips; \$10,000 (blue chips), \$100 (red chips), and \$1 (grey chips). The equal sign and the number to the right of it, refers to how of each type of chip you have. Directly above the Chips is the Cashier box. Inside the white box is the actual amount of money your chips are worth. Also you'll notice a Hand in the box. This is your cursor. You may move the cursor everywhere on the screen, but if you move it on top of one of the Gambling Tables and press FIRE, TI Casino will clear a place for you at the desired table so you can play that game. If you press FIRE while in the Cashier's Box, you will go to the Cashier. Pressing FIRE in the Chips area does nothing.

The Cashier

There are several things you can do at the Cashier's. Go to the Credit Office, Readyteller, Return to the Lobby or Leave TI Casino. If you have no money,

you'll want to go to the Credit Office.

In order to play TI Casino, you'll need money. TI Casino, you'll find is one of the most friendly lending intuitions around. They love to lend you money, the more the better! So if you have no money, or less than \$100 why not APPLY FOR CREDIT. TI Casino lends in generous \$1000 loans.

Now suppose, you've had an incredible lucky streak and made \$3000. You can go to PAY OFF LOAN and either PAY OFF LOAN (handy if you've borrowed several \$1000) or PAY OFF \$1000. Then you can go back to gambling with a clear conscience since you'll be playing with your own money.

Readyteller allows you to Deposit Winnings (Save Game), Withdraw Winnings (Load old Game), and Print a Check. If you were to print a check, let's say for that \$2000 you won ("\$2000! I thought it was \$5--" "Remember you paid the original \$1000 back"), then you would select Print a Check. The next option allows you to change your printer device name. Default is PIO. If you so decide to change it, don't worry about Alpha Lock, TI Casino, will make your lowercase into uppercase. At the next menu, you will be asked to enter your name. Do so, like this: IGRATE GAMBLER, and press ENTER. Then enter the date like this: 29 FEBRUARY 1991, and press ENTER. TI Casino doesn't like certain characters like commas and will not allow you to type them in. Give the printer a minute and you'll have your check. TI Casino will also remove your chips as payment, so if you wish to continue playing you must go back to the Cashier.

In order to exit TI Casino properly, use the LEAVE TI

CASINO option. If you exit by other means and then try to reload TI Casino again, you will find TI Casino remembers who you are and bring you straight to the Lobby or Cashier. It also, just like your creditors, remembers how much you owe...



ACEY DEUCEY



BEFORE anyone calls foul, I know that Acey Deucey is not a normal Casino game. I have, however, run across it once at a "Casino Night" which was my inspiration to put it in TI Casino. Acey Deucey has been a popular "poker night" game as well. It has been called "Between the Sheets" and "Red Dog" as well.

PLAYING ACEY DEUCEY at TI Casino

THE Object of Acey Deucey is simple-- to get as many cards between the first two cards as possible. For instance, if an ACE and a 9 is drawn, the Ace is considered low, the 9 high. You will be dealt one card immediately, if the card is between the Ace and 9, you win your original bet back. If the card is higher than 9, lower than the Ace (which it couldn't be), or ties either, you lose.

If you win you will be prompted to either GO FOR IT or BAIL OUT. Here's where the money is made. Let's say the first card between the sheets was a 7 and you bet \$50. So you have an Ace-7-9 and your original bet back. You decide to GO FOR IT. What luck, you drew a 2! You now have \$150 (you're up \$100). You decide better to be wiser than richer and BAIL OUT. The \$150 is tallied with your cash total and you can restart again (hopefully getting an ACE-KING spread). For those hind-sighters,... let's say up didn't BAIL and drew another card, it was a 6, now you're at 10 to 1 odds and at \$500. You go for it again and draw an Ace. Sorry Charlie-- you lose it all!

Acey Deucey may seem impossible to play at times, you'll go through some devastating losing streaks. You'll find though, that one 5 card hand at 50 to 1 will have you swearing it's the best game at the Casino.



BACCARAT
(Sometimes called
Chemin-de-fer or Banco)

THE English word "CARD" stems from the Greek term for paper, but card games go back over 2,000 years. Historians have been unable to pinpoint the exact origin of cards, but they were present in Ancient China, Egypt and India. Like dice, cards were brought back to Europe during the Crusades and although the church claimed that they were the product of the devil himself, they became extremely popular. John Gutenberg printed the first deck of cards the same year he printed the first Bible in 1440. The deck had 78 cards and was called the Tarot. It contained four suits presenting the four classes of Feudal society. The Nobility was symbolized by SWORDS (in Spanish, "ESPADAS"). The Merchants were COINS (which were frequently square in shape and on end look like a Diamond). The Serfs were STICKS (which can also be called a Club) and the emblem for the Church was CUPS or GRAILS (which is shaped somewhat like a Heart in more ways than one.) The deck also consisted of 22 ATOUTS or "Trumps", however by 1500 these 22 cards were dropped and only the four suits consisting of 14 cards each, stayed.

In 1490, a game called "Nine Gods" was introduced by Felix Falguiere to the French King Charles VIII's court. It was based on the Etruscan Legend of "The Temple of Golden Hair". The Nine Gods prayed standing on their toes to a golden-tressed virgin who cast a Nine-Sided Dice at their feet. If her throw was a 8 or 9, she would become Princess. If she threw a 6 or 7, she would be disqualified from further Vestal activities and if she threw a 5

or lower, she would gracefully walk into the Sea. Baccarat (pronounced BA-KA-RA) was designed with similar scoring, though less dramatic payoffs...

PLAYING BACCARAT at TI Casino

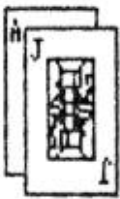
BACCARAT is one of those games you've heard of, but never try. It's a shame too, because the game is incredibly easy to play and pays off 49% in your favor. The rules are simple, the closest one to nine wins. All tens equal zero (including face cards) and totals over 9 lose their tens digit. For instance, you are dealt a 5 and a 9. $5+9=14$, right? Wrong, in Baccarat it equals 4.

As a player, you must hit on a total of 0 to 4, and stay on 6 or above. On a total of 5, it's your choice. Now depending on your total, if and what third card you may have drawn, will determine how the dealer plays his hand. A total of 8 or 9 with your first two cards is called a Natural, and a Natural will break a tie. Here's now the card rules work:

HAVING a	The Player...
0-1-2-3-4	Draw a Card
5	Optional, can Draw or stand
6-7	Must Stand
8-9	Must Stand (Bank cannot draw)

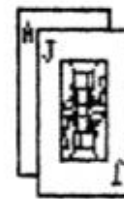
THE DEALER'S HAND

HAVING a	Draws when giving	Doesn't draw W.G.
3	1-2-3-4-5-6-7-9-0	8
4	2-3-4-5-6-7	1-8-9-0
5	4-5-6-7	1-2-3-8-9-0
6	6-7	1-2-3-4-5-8-9-0
7	STANDS	
8-9	NATURAL, Must Stand	



BLACKJACK

(Also Known as "Twenty One")



AFTER Johann Gutenberg printed the first deck of cards in Germany, 1440, gambling spread quickly throughout Europe. Most games involved trying to reach a particular total. Baccarat appeared in 1490 in Italy with its players striving to reach the magic number nine. Other games, such as Seven and a half, soon followed, in which the players would lose if they went over a certain total. It is believed that Blackjack evolved from these games.

Beginning in 1827, Casinos began to flourish. In France, the game of "Trente et Quarante" (30 and 40) became extremely popular. This game evolved into "Vingt et Un" (20 and One). And in 1875, this game crossed the Atlantic and became known as "Twenty-One" in the American "Hoyle's Book of Games".

In 1910, tables for "Twenty-One" were offered in Evansville, Indiana at the local Casinos. Acceptance was slow, so many Casino flavored the game's appeal. Odds of 3 to 2 were paid for any 21 and 10 to 1 for any Ace and Jack of Spades or Clubs combination. The name, "Blackjack", stuck. Unfortunately, the 10 to 1 odds, didn't.

By 1931, Blackjack had become a staple of the Casino, beating out Faro for third place. In 1955, it had climbed in to the number two slot and today, Blackjack, is enjoyed as America's favorite Casino game.

PLAYING BLACKJACK AT TI CASINO

BLACKJACK requires probably most player decisions than any other Casino game. It has perhaps the best odds, 49 to 51, in the Casino's favor, of course. The object is simple. The person with the closest total to 21, without going over that amount, wins. All face cards count as 10's, and Aces can be counted as 11 or one, depending on the player's preference.

At the Blackjack Table in TI Casino, you must first place a bet from \$2 to \$100. The cards will then be shuffled. TI Casino uses a Four Deck Shoe (208 cards), to limit the talents of professional card counters. The Dealer then deals two cards to each player. The player's cards and Dealer's last card are dealt up.

INSURANCE, ANYONE?

If the Dealer has an Ace showing, you be asked if you want Insurance. Insurance costs half the amount of your bet and what it does is to protect your bet against that possibility the Dealer has 21. When the Dealer reveal his cards, if in fact he does have 21, then Insurance would return your bet. If he doesn't have 21 you lose the money you set on Insurance and the winning hand decides the fate of your original bet.

Once you do get your cards, you'll notice their total at the top of the menu area. TI Casino assumes you want your Aces to be worth 11. If you go over 21 and have an Ace it will revert back to an One. (Eg. You are dealt a 3 and an Ace, thus your total is 14. You hit and get a 9, the Ace turns back to an One and your total is 13. You hit again, you get an Ace. Talk about lousy luck! This Ace will stay an One

because 13+11=Busted. Your total turns to 14. You decide not to push your luck and stay with the 14. In case you were curious, the dealer did draw a Jack and busted. Aren't you glad you stayed?)

HIT

If you wish another card select "HIT" on the menu. If your total remains 21 or under, you are free to hit as many times as you desire.

STAY

If you're happy with your current card point total, then select "STAY" and let the Dealer play out his hand.

DOUBLE DOWN

If your first two cards total to a 9, 10 or 11 you may wish to "DOUBLE DOWN". In Doubling Down, you must double your original bet and receive only one additional card (Banking on it being an Ace or Face Card). The Dealer then plays out his hand.

SPLITS

If your first two cards are of the same value such as a 9 ♦ and a 9 ♠, then you may wish to "SPLIT" the cards. In Splitting the cards, you double your original bet and receive two additional face-up cards, thus making two hands instead of the original one. You can now play each of these hands much like your original one, either Hitting, Staying or Doubling Down. In TI Casino, you cannot split a split (simply because the screen isn't big enough). After the Dealer plays his hand, each split hand will be valued on it's own merits.

THE DEALER AND THE PAYOFFS

The Dealer will play his hand until his card total is 17 or over. He cannot Double Down, Split and must hit on a "soft" 17 (3 or more cards). He may not draw more than 5 cards either.

Blackjacks (a "Hard" 21), are paid off 3 to 2. In ties, it becomes a "Push" in which your bet is returned to you. A "Hard" 21 will break a tie for either side. A total over 21 or less than the Dealers' will lose your bet. Beating the Dealer's hand pays One to One.

PLAYING STRATEGY for a FOUR DECK SHOE

Player's Hand	Dealer's Up-Card
5-8	Always Hit
9	Double Down if 5-6, otherwise just hit
10	Double Down if 2-9, hit on a 10 or Ace
11	Double Down if 2-10, hit on an Ace
12	Stay on 4-6, otherwise hit
13	Stay on 2-6, otherwise hit
14	Stay on 2-6, otherwise hit
15	Stay on 2-6, otherwise hit
16	Stay on 2-6, otherwise hit
17-21	Always Stay



CASINO CRAPS



TODAY'S Casino game of Craps as evolved over thousands of years and is inextricably interwoven with the development of humanity. It is believed that prehistoric man cast six-sided bones which came from the ankles of clove-footed animals. In the mythology of Egypt, Greece and Rome, there are many mentions of how the Gods amused themselves at dice, and how their totals would decide the fate of the world. Dice have been found in the burial chambers of Egypt and the ash-covered homes of Pompeii. From have been used by Pharaohs and Caesars for amusement, gain, divination and even judicial decisions. When Julius Caesar marched his troops across the Rubicon against the will of the Roman Senate, he exclaimed, "Iacta alea est" (The die is cast).

The Craps we know today can be traced the Crusades in the 12th century. Tosses of a 2, 3, or 12 were referred to a "Crabs". It wasn't until the early 1800's when these Crabs scurried into New Orleans and became "Craps". It spread quickly on the riverboats and soon replaced Faro as the most popular game. It was John H. Winn who created the "Philadelphia Layout", a close resemblance to today's board.

PLAYING THE CRAPS TABLE at TI Casino

CRAPS to most people is a confusing game. To be honest, I never played it before TI Casino because I didn't understand it either. So what I'll try to do here is explain it as easily as I can. It's probably easiest to think of Craps as a game with two parts, The Come-out Roll and the Point Roll.

The COME OUT Roll

The Object of betting on the Come-out roll is simple: If the roller rolls a 7 or 11, he wins. If a 2, 3 or 12 is rolled, he loses and Craps-out. At TI Casino, during the Come-out roll you can bet one of three different ways, Pass (7 or 11 wins), Don't Pass (2, 3 or 12 wins) or no bet at all. To play, select SHOOT CRAPS. From there, if you want to bet Pass or Don't Pass, select PLACE BETS. Once this is done move the joystick up or down to choose Pass or Don't Pass and FIRE to select. You will then be prompted to enter a bet. Do so and then you will be returned to the menu. You'll notice that a Magneta chip will be placed on the Pass or Don't Pass Line. That's right! That's your bet. An important thing to note is that TI Casino will not allow you to add or remove your Pass Line bet unless you leave the Craps Table, Win or Lose. If you choose no to bet or have completed your bets, select READY FOR THE ROLL and "lacta alea est!"

Now if a 2, 3, 7, 11 or 12 is rolled, the Pass and Don't Pass Line bets will be paid-off and your chips will be removed from the table. If a 4, 5, 6, 8, 9 or 10 is rolled, that becomes known as "The Point" which brings us into the Second Part of Craps.

The POINT Roll

In the Point Roll, the rules change a little bit. Now you want to roll anything but a 7. A 7 will crap out. Your objective is to roll the Point number again. Either rolling the Point or 7 will return you to the Come-out Roll again and decide the outcome of your Pass or Don't Pass bets.

The Point is represented by a black © marker placed near the top of the PLACE number field on the board. On each roll, the menu part of the screen will also remind what number your point is.

As the rules did change with the point roll so does the betting strategies. Here is where the real money is made in Craps-- by "Playing the Numbers". There's lots of different betting combinations, but they all fall into two categories, multiple roll bets and one roll bets. The multiple roll bet pay usually less than the single roll bets, but are much safer. Here they are:

Betting the Come and Don't Come Line

Come and Don't Come are exactly like Pass and Don't Pass, with the exception of now you're betting on hitting the Point or Crapping Out with a 7. These bets pay 1 to 1 and are payable upon hitting the Point or Craps (7).

Big Six and Big Eight

When betting Big Six or Big Eight you win when the roll is either a 6 or an 8 respectively. Both bets pay 1 to 1. When winning, the original bet

will stay on the table while the winnings will go directly to your available cash. If you wish to add to it, or remove it, select that same bet again and you will be prompted to do so. If a 7 is rolled you lose your bet. However if the point is rolled, your bets remain in their respective fields, while the game switches over to the Come out roll. These bets will stay inactive until you return to the Point Roll portion of the game.

To PLACE or not to PLACE

Placing a bet is my personal favorite, probably because they have a best Multiple Roll Odds on the board. When placing a number you make money every time that number is rolled. It loses with a 7 just like Big 6 and 8, and goes inactive with the hitting of the Point until a new point is established. If a new point is established and you have PLACED money on that number, it will be returned to you, since Placing the Point isn't considered a very intelligent bet. To PLACE a number using TI Casino, first select PLACE Bet with the joystick and press FIRE. The Red Cursor will now appear in the PLACE 4 area. You can now move the joystick right or left to select the number you wish to place. Press FIRE to choose. You will then be prompted to bet a dollar amount. Placing the 4, 5, 9 or 10 must be bet in \$5 multiples. Placing the 6 or 8 must be done in \$6 multiples. Don't panic if you can't remember that though, TI Casino will only let you bet in correct multiples on PLACE. So why the strange multiples? Well if a 4 or a 10 is rolled, PLACE 4 or 10 pays 9 to 5. If a 5 or a 9 is rolled, PLACE 5 or 9 pays 5 to 7 and if a 6 or an 8 is rolled PLACE 6 or 8 pays 6 to 7. As you can see, PLACE 6 or PLACE 8 pays better than BIG 6 or BIG 8 and is probably a wiser bet!

Playing the Field

My favorite single roll bet is the FIELD. In a Field bet, if the number rolled is 3, 4, 9, 10 or 11, you are paid 1 to 1. If it's a 2 or 12, you're paid 2 to 1. And if it's none of the above, you lose it.

The Hardways

Betting the Hardways is risky but possibly very profitable business. It's a One Roll bet and basically you're betting the dice are going to come up as a selected set of doubles. To play the HARDWAYS on TI Casino, select it on the betting number then position the red cursor on the set of doubles you wish to bet and press FIRE. Then enter a dollar amount for the bet. Here's the odds paid: a Hard One (Snake-eyes) or Hard Six (Box-cars) pays 30 to 1, a Hard Two or Hard Five pays 7 to 1 and a Hard Three or Hard Four pays 9 to 1.

Proposition Bets; Any 7 and Any Craps




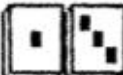





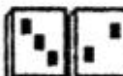


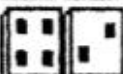
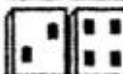






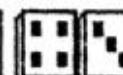



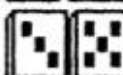











Proposition bets are also one roll bets. To some, they are used to protect a portion of their bets in PLACE and the FIELD. For Instance, betting a Proposition ANY SEVEN pays 4 to 1, thus laying out \$20 just in case you crap out would pay \$80. ANY CRAPS pays even better, 7 to 1. You bet that the next roll will be a 2, 3 or 12.

Cashing Out and Leaving the Table

Suppose your already late for a appointment and you will have money out on the Craps Table, don't

panic-- just return to the lobby, TI Casino will pull all your chips off the table and return them to you.

Here's a dice layout to show you the odds of rolling any particular number:

2		One Way 1 in 36
3	 	Two Ways 1 in 18
4	  	Three Ways 1 in 12
5	   	Four Ways 1 in 9
6	    	Five Ways 1 in 7.2
7	     	Six Ways 1 in 6
8	    	Five Ways 1 in 7.2
9	   	Four Ways 1 in 9
10	  	Three Ways 1 in 12
11	 	Two Ways 1 in 18
12		One Way 1 in 36



THE Game of Poker is popular throughout the world. It combines the principles of many different card games from Europe and the Orient. In it's present form, however, it is distinctly American in origin. there's hundreds of different variations of Poker; Closed Poker, Stud Poker, Lowball, Hi-Low, Baseball, Football... to name a few.

PLAYING DRAW POKER at TI Casino

IN TI Casino's Draw Poker, you are dealt 5 cards face-up. The object of the game is to get the best Poker Hand possible. You will be paid odds depending on the value of your hand. In a pair, you must have JACKS or Better to win. I'll explain each winning combination in detail in just a little bit...

Now in order to play, you must select PLAY DRAW POKER on the menu. You will then be prompted to bet an amount from \$5 to \$100. The cards will then be shuffled and your hand will be dealt. Now, you may DISCARD up to all five cards if you wish by positioning the "↗" symbol at the card you wish to discard. To position the cursor, move the joystick UP or DOWN. To discard the unwanted card, move the joystick sideways. If you change your mind, go and position the cursor on the marked card, then move the joystick sideways again. When you are ready to discard all your unwanted cards, press FIRE and new cards will be dealt to you, replacing the discards and hopefully

improving your hand.

Okay, here's the Hands that pay-off from worst to best:

JACKS OR BETTER pays 1 to 1

One pair is any two cards of the same rank. A pair is dealt to a player about twice in every 5 hands. In TI Casino, only a Pair of Jacks or better (Queen, King, Ace) will win. A pair is the only hand the Jacks or better rule applies to. The payoff is 1 to 1.

TWO PAIRS pays 3 to 1

Two pairs are two cards of any one rank and two cards of any other rank, with one unmatched card. For example, a hand on 2-5-8-5-2, would be Two Pairs, 5's over 2's. The payoff for two pair is 3 to 1.

THREE OF A KIND pays 5 to 1

Three of a Kind or Triplets are three cards of the same rank, with two remaining non-matching cards. For example, a hand of 5-7-K-5-5, would be three 5's, or Three of a Kind which pays 5 to 1.

A STRAIGHT pays 10 to 1

A Straight is any five cards in sequence, but not all of the same suit. Some Straights are higher than others such as with a Royal Straight, A-K-Q-J-10, which would beat normal straight, 3-4-5-6-7. TI Casino makes no judgement however between Royal and Normal Straights. All Straights pay 10 to 1 odds.

A FLUSH pays 15 to 1

A Flush is achieved when all five cards from your hand are of the same suit. For instance, on your first hand, you get a 2♦-6♦-J♥-9♦-6♦. If you were trying for a Flush, you'd discard the J♥. Congratulations, you drew a A♦! A Flush pays 15 to 1 odds.

A FULL HOUSE pays 20 to 1

A Full House is a combination hand. It's a pair and Three of a Kind. For example, a hand of 5-5-7-5-7, is a Full House, 5's over 7's. A full house pays off at 20 to 1 odds.

FOUR OF A KIND pays 50 to 1

Four of a Kind is four cards of the same rank, with one remaining unmatching card (Since there's nothing wild, something's up if it is matching!). Four of a Kind is not easy to get and the odds reflect it, at 50 to 1.

A STRAIGHT FLUSH pays 100 to 1

The highest hand in Draw Poker is a Straight Flush. This too, is a combination hand. You must meet all the requirements of both a Straight and a Flush. The highest hand you could have in Draw Poker is a Royal Straight Flush, however again, TI Casino makes no special ranking for that. Getting a Straight Flush is a miracle in it's self and the odds reflect that, paying a handsome 100 to 1.

BETTING STRATEGIES for DRAW POKER

It doesn't help much to know the chances of being dealt a straight flush or a full house or even a pair. But it does help to know the odds against improving any particular hand. The odds for the most frequently encountered situations are given below:

Draw	Result	Odds Against
Three cards to a Pair	Two Pairs	5.25 : 1
	Triplets	7.75 : 1
	Full House	97 : 1
	Four of a Kind	360 : 1
	Any Improvement	2.5 : 1
Two cards to a Pair & Ace	Aces up	7.5 : 1
	Another Pair	17 : 1
	Total Two Pairs	4.75 : 1
	Triplets	12 : 1
	Full House	120 : 1
	Four of a Kind	1080 : 1
	Aces up or better	4 : 1
Any Improvement	2.75 : 1	
Two cards to Triplets	Full House	15.5 : 1
	Four of a Kind	22.5 : 1
	Any Improvement	8.6 : 1
One Card to Triplets	Full House	14.6 : 1
	Four of a Kind	46 : 1
	Any Improvement	10.75 : 1
Four to an Ace	Aces or better	3 : 1
	Two Pairs or better	11 : 1
	Aces up or better	14 : 1
3 to A-K (1 suit)	Two Pairs or better	12 : 1
2 to a 3-Str-Flsh (such as J-10-9) (Q-J-10 or 4-3-2) (A-K-Q or 3-2-A)	Two Pairs or better	7.5 : 1
	Straight or better	11 : 1
	Straight or better	13.5 : 1
	Straight or better	20 : 1



KENO's Origin has been lost in time, however the idea of picking a number between a low and high number has been a popular gambling theme for thousands of years. Bingo and Lotto, I sure are brother and sister to Keno. Keno is played everywhere at Las Vegas. I played in at Restaurants, lounging in the bar and even while playing Blackjack!

PLAYING KENO and DINING at TI Casino

THE Game is KENO is easy. You select from 1 to 15 numbers between 1 and 80. Then, "The House" selects 20 numbers randomly. Depending on how many numbers you selected and were chosen by the house, decides your pay-off. At TI Casino, our KENO game is at Jocko's Green Parrot Restaurant. You can either have dinner and play or just play in the lounge. I won't ruin the dinner surprises in store—the menus are easy enough to figure out without my notations here. But I will say that pressing the "W" key at either a Booth or the lounge before selecting a Keno Card at the \$1-\$5-\$10 Menu, will call the Waitress to your table. And please note, anything you do order, you will be expected to pay for!

Playing Keno is easy. First, select a Keno Card (\$1-\$5-\$10). You will then be prompted to select your Keno number(s). Move the joystick anywhere across the field of green numbers. To select a number, press FIRE. This will turn the number RED. If you change your mind, press FIRE over it again and it will turn back to Green. The House will not let you pick over 15 numbers and if you try, they will provide you from a rather annoying honking sound. When you've chosen

your number(s), press the SPACE BAR, and the game will begin. Losing (unpicked numbers) will appear with a short honking sound and a white background. Winning numbers will turn White with a Dark Blue background and make a fitting fanfare for your triumph. At the end of the game, provided you've picked the right numbers and enough of them, you will be awarded your winnings. If you play another game, you will be prompted with a PLAY SAME NUMBERS AGAIN? It does what it says.

Here's the pay-offs for KENO:

PLAYING 1 NUMBER

	1
\$1 CARD	3
\$5 CARD	15
\$10 CARD	30

PLAYING 2 NUMBERS

	1	2
\$1 CARD	2	6
\$5 CARD	10	30
\$10 CARD	20	60

PLAYING 3 NUMBERS

	1	2	3
\$1 CARD	0	2	5
\$5 CARD	0	10	25
\$10 CARD	0	20	50

PLAYING 4 NUMBERS

	1	2	3	4
\$1 CARD	0	2	5	25
\$5 CARD	0	10	25	125
\$10 CARD	0	20	50	250

TI-99/4A – Game Shelf Extended Basic Games

PLAYING 5 NUMBERS

	1	2	3	4	5
\$1 CARD	0	0	3	10	35
\$5 CARD	0	0	15	50	175
\$10 CARD	0	0	30	100	350

PLAYING 6 NUMBERS

	1	2	3	4	5	6
\$1 CARD	0	0	2	6	20	50
\$5 CARD	0	0	10	30	100	250
\$10 CARD	0	0	20	60	200	500

PLAYING 7 NUMBERS

	1	2	3	4	5	6	7
\$1 CARD	0	0	0	3	8	35	85
\$5 CARD	0	0	0	15	40	175	425
\$10 CARD	0	0	0	30	80	350	850

PLAYING 8 NUMBERS

	1	2	3	4	5	6	7	8
\$1 CARD	0	0	0	0	3	12	50	135
\$5 CARD	0	0	0	0	15	60	250	675
\$10 CARD	0	0	0	0	30	120	500	1350

PLAYING 9 NUMBERS

	1	2	3	4	5	6	7	8	9
\$1 CARD	0	0	0	0	2	3	15	75	200
\$5 CARD	0	0	0	0	10	15	75	375	1000
\$10 CARD	0	0	0	0	20	30	150	750	2000

PLAYING 10 NUMBERS

	1	2	3	4	5	6	7	8	9	10
\$1 CARD	0	0	0	0	3	8	15	35	100	350
\$5 CARD	0	0	0	0	15	40	75	175	500	1750
\$10 CARD	0	0	0	0	30	80	150	350	1000	3500

TI-99/4A – Game Shelf Extended Basic Games

PLAYING 11 NUMBERS

	1	2	3	4	5	6	7	8	9	10	11
\$1 CARD	0	0	0	0	2	4	8	15	50	200	500
\$5 CARD	0	0	0	0	10	20	40	75	250	1000	2500
\$10 CARD	0	0	0	0	20	40	80	150	500	2000	5000

PLAYING 12 NUMBERS

	1	2	3	4	5	6	7	8	9	10	11	12
\$1 CARD	0	0	0	0	0	2	3	10	20	60	300	700
\$5 CARD	0	0	0	0	0	10	15	50	100	300	1500	3500
\$10 CARD	0	0	0	0	0	20	30	100	200	600	3000	7000

PLAYING 13 NUMBERS

	1	2	3	4	5	6	7	8	9	10	11	12	13
\$1 CARD	0	0	0	0	0	2	2	3	5	18	80	400	1000
\$5 CARD	0	0	0	0	0	10	10	15	25	90	400	2000	5000
\$10 CARD	0	0	0	0	0	20	20	30	50	180	800	4000	10000

PLAYING 14 NUMBERS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
\$1 CARD	0	0	0	0	0	2	2	3	5	10	25	100	600	1500
\$5 CARD	0	0	0	0	0	10	10	15	25	50	125	500	3000	7500
\$10 CARD	0	0	0	0	0	20	20	30	50	100	250	1000	6000	15000

PLAYING 15 NUMBERS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
\$1 CARD	0	0	0	0	0	0	2	5	10	15	25	50	300	1000	5000
\$5 CARD	0	0	0	0	0	0	10	25	50	75	125	250	1500	5000	25000
\$10 CARD	0	0	0	0	0	0	20	50	100	150	250	500	3000	10000	50000



ROULETTE

THE Game of Roulette is the oldest Casino game still in existence. There's ample evidence that men have gambled with spinning wheels since ancient times. Ancient warriors spun their shields on their swords. The Romans toppled chariots so they could spin the wheels on their axles. It wasn't until 1765 though, that someone had the sense to make a wheel specifically for gambling. In Paris, a police official, Gabriel de Sartine, created the Roulette Wheel to thwart the crooked games plaguing the city. It had both zero and double zero much like the wheel of today. The single zero wheel was introduced in Bavaria 1842 by Francois and Louis Blanc, which cut the house edge from 5.26 to 2.70%, hoping to draw more business. It did, making it the most popular gambling to this day in Europe.

Roulette came to America through New Orleans in the early 1800's with the Double Zero rules, but to this day hasn't not reached the popularity it has in Europe.

PLAYING ROULETTE AT TI CASINO

THE Roulette Wheel is divided into 38 sections, alternating in color, Red and Black. In addition, the wheel is numbered between 1 and 36 in random order, with

a 0 and 00 at opposite ends. The object of Roulette is simple, you can place a variety of bets on certain number combinations. Once done, the Roulette Wheel is spun and a ball is dropped into the wheel. Once the wheel stops, the winning number and color are decided by where the ball decided to rest. If a 0 or 00 come up, all bets are lost (except if you specifically chose the 0 or 00 as a single number).

To play Roulette at TI Casino you must first select "MAKE SOME WAGERS". If you have already play once you can play "KEEP THE SAME NUMBERS", provided you have the funds to cover the bets. If "Make Some Wagers" is selected, a current bets will be wiped from the Roulette Board allowing you to make a fresh start. The wagers can be bet anywhere from \$1 to \$100

SINGLE NUMBER BETS

When selecting a single number you are betting it will turn up on the next spin of the wheel. You can select numbers 1 through 36 plus the 0 and 00 by mving the joystick up or down. Press FIRE to select. You will then be prompted for the wager amount. Single Number bets pay 35 to 1.

TWO NUMBER BETS

There are 57 different positions you can

play in a Two-Number combo. It making this bet, you are betting that the winning number will be one of two adjoining numbers on the table. For instance, if 3 is the winning number, then the 2-3 and the 3-6 Two-Number combos would win. To play Two-Numbers, position the chip marker on the two number combo desired and press FIRE. You will then be prompted for the wager amount. The payoff is 17 to 1.

FOUR NUMBER BETS

There are 22 different position you can play with Four-Numbers. Four-Numbers plays exactly like Two-Numbers except your odds are far greater of winning. A winning number 20 will payoff combos of 16-17-19-20, 19-20-22-23, 17-18-20-21 and 20-21-23-24 at 8 to 1.

COLUMN BETS

In Columns, you are betting that the number will fall in the First Column (3-6-9-12-etc), the Second (2,5,9,11...) or the Third (1,4,7,10...). The payoff is 2 to 1.

DOZENS BETS

In Dozens, it's much like Columns except you're betting the number will be 1 to 12, 13 to 24 or 25 to 36. The payoff is 2 to 1.

LOW AND HIGH NUMBER BETS

Low and High Numbers are 1 to 1 bets with numbers 1 to 18 being low and 19 to 36 High.

EVEN AND ODD NUMBER BETS

In Even and Odd Numbers, you are betting that the number will be even or odd. The payoff is 1 to 1.

RED AND BLACK NUMBER BETS

Betting Red or Black means you are choosing the color that the Roulette ball will rest on. Red Numbers are 1, 3, 5, 7, 9, 12, 14, 16, 18, 19, 21, 23, 25, 27, 30, 32, 34 and 36. Black Numbers are 2, 4, 6, 8, 10, 11, 13, 15, 17, 20, 22, 24, 26, 28, 29, 31, 33 and 35. The payoff is 1 to 1.

QUIRKS, PAYOFFS and STRATEGIES

Unfortunately, there is no way to display all your bets visually on the TI Screen (Not too surprizing when you consider that there is 129 different betting possibilities and TI Casino will allow you to do them all at once!), so we've put in a couple reminders to help your betting strategy. First, when a bet is made, a grey dot will appear to the left of the betting screen area. Also the cash amount betted will appear to the left of the odds on the betting screen area. If more than one

bet is made in the same area (Eg. Two-Numbers: \$10 on 2-3, then Two-Numbers: \$35 on 3-6), it will tally the \$10 and \$35 and display their total. \$45. Secondly, TI Casino keep track of each bet and won't erase your bet if you select it again. (Eg. You bet again on Two-Numbers: 3-6. When you go to place money on the 3-6, the \$35 you already put on the bet will appear and allow you to add or subtract from it.) It is STRONGLY recommended that you keep a piece of paper handy to keep track of your bets.

When you've finished placing the bet, select READY TO PLAY and the Roulette Wheel will spin and select a winning number. The Roulette Table Crew will then check your bets and pay any winning wagers. After the payoffs you can either play the same numbers again, select new ones or leave the Roulette Table.

Bet Type	True Odds	Payoff Odds
Single Number	37 to 1	35 to 1
Two Numbers	18 to 1	17 to 1
Four Numbers	17 to 2	8 to 1
Columns	13 to 6	2 to 1
Dozens	13 to 6	2 to 1
High or Low	20 to 18	1 to 1
Even or Odd	20 to 18	1 to 1
Red or Black	20 to 18	1 to 1



SLOT MACHINES



THE Slot Machine, or One-Armed Bandit, is a creature of this century, though is probably a descendant of games of chance such as the shell game. It's popularity is due to it's simplicity. Contrary to popular belief, there is no strategy for the Slot Machine. Some players still pump dollars into the machine, insisting it's long over due for a payoff. It doesn't work that way. The three reels in the machine could hit two jackpots in succession just as easily as no jackpot for several hundred pulls. As hard as I try though, I can't convince Ray Kazmer of this!

Las Vegas however claims to pay 97% of the money taken in these One-Armed Bandits out.

Playing the SLOT MACHINE at TI Casino

THE TI Casino Slot Machine is simple to play as the real thing. To play, select PLAY THE SLOTS, a dollar will automatically be deposited and deducted from your cash total. To insert more Silver dollars, press FIRE. Up to \$5 can be played at one time. If you press over \$5, 4 of your coins will be returned. To Play, pull BACK on the Joystick. The cylinders will spin, stop one at a time, and payoff the odds shown on the machine.

The Story of TI Casino

THE Story behind TI Casino goes way back to 1982 when I, an avid video game player ran across a Texas Instruments Home Computer display. I had been thinking about getting a computer at the time but was leaning more towards the Commodore 64. It just happen that TI had a sales representative in the store about the same time my wallet was in the "go for it" mood. The salesman showed me numerous cartridges, but what eventually sold me was the Voice Synthesizer and the fact that now I didn't have to buy any more games, I could write my own. It only took 8 years for that dream to come true!

So I brought the Silver and Black console, and after a week of late night sessions, was writing my own music programs. The unfortunate problem was there was no way to save them! I returned to the TI representative and explained my dilemma. He was happy to help (and make a sale of a tape recorder), and was genuinely surprized to hear I was already programming. He asked me to return with some examples, and I did. He later introduced me to 99er Magazine, from which, I learned much more about programming-- plus it had some cool games I could type in. About 6 months later, I found that extended basic was just about as necessary as the tape recorder was, so I bought that as well. Building my system was a slow process-- I had the PE Box 6 months before I had a disk controller and another 4 months before I had the drive! Back then, a fully expanded PE Box was in the \$600 to \$800 range. And yes, I brought everything about 6 months BEFORE (ouch!) the big price cut. During this time, I continued

to type in 99er Magazine programs and even dare to alter them a bit.

Probably the break-through in my programming style occurred when I brought a modem and became a member of The Source and numerous bulletin boards. Within a few short months of BBS hopping, I was dreaming about being a SysOp, but couldn't, since at that time there were no TI Boards. You can imagine my delight when not one but two adds ran for TI BBSes. At that time, there were two different systems, CALTEX and TIBBS. After a few telephone conversations, I chose CALTEX and became a happy BBS operator (I might add, the first TI BBS operator in Los Angeles). The reason why I consider the BBS part of my TI life important, was that it helped me to make many new TI friends, honed my programming skills and introduced me to User Groups.

I can still remember my first San Fernando Valley 99ers meeting. I was terrified. I expected everyone to be talking in ASSEMBLY CODE. Much to my surprise, the people turned out to be friendly, and not near as intimidating as I expected. (Except for this strange guy named Ray Kazmer -grin-) For the next 6 months or so, I made the rounds to most of the local user groups showing CALTEX Number 9 (also known as "The KBGB BBS" from whence came the first (1985) KBGB Girlie Calendar). The BBS became more and more complex, but I still hadn't written my game!

I grew tired of being a slave to my BBS and closed it down at about 2 years old. I then began to program Fairware. Writing first, the TE-2 Encoder and the Girlie Calendar. Back in August of 1985, I

had written a music program called, "Siegfried's Funeral Music" and even won first place in the Source's programming contest. I rewrote the program using a more efficient programming style and created what was to be the first of numerous Fairware music disks. About the same time, I unlocked a few secrets about the Voice Synthesizer that had fascinated me years before and created the singing disks series, "South Pacific", "Patsy Cline", et al. But still no game.

My life took yet another course when early in 1987, I sold some TI-Artist fonts to Asgard Software for use with a program called, "Font Writer". I quickly wrote a Tunnels of Doom game called "Daring Adventures in Kmart" and more fonts (Artist Fonts D) which were also published through Asgard. The owner, Chris Bobbit, asked me if I'd consider drawing some animals through TI Artist. I asked him what type he's like and he answered, "Anything, use your imagination..." I did, and thus "Disk of Dinosaurs" was born. "Disk of Pyrates" soon followed with a rewrite of a 99er game, but still not really my own.

In Christmas 1989, I gave my Father a 99/4a as a present and in the following months helped him to use it. One of the disks I gave him was a collection of what I considered, the best gambling games on the 99. He did enjoy them, however, asked if there wasn't a way to let him play more than one game with the same money. I told him, I'd think about it. And a week later-- or so, TI Casino was born.

The first part of code was written at a surprising rate. The marquee of TI Casino read "Asgard Software presents a program by Ken Gilliland". By early May 1989, I was half-finished and cocky

enough to show it at the local user groups (confident it would be finished in another month). The marquee had also changed to "A Fairware Program by..." But in late May, however, an emotional disaster struck-- the girl I was to marry in two months time, left me for another man. On hind-sight, it's probably the best thing that ever happened to me, but at the time-- I was devastated. TI Casino was indefinitely shelved.

In October, Steve Mehr and Rodger Merritt convinced me to finish TI Casino and release it with them. So again the Marquee changed to "Comprodine presents..." However, after some disagreements on the flight back from the Chicago Faire the Marquee returned to "A Fairware Program..."

In December, struggling with the emotional mental block connected with finishing TI Casino, I handed the project to Ray Kazmer for help and the Marquee again changed to "Ken Gilliland and Ray Kazmer". For several months we bickered, argued and fumed over differences in programming styles. Finally the Marquee did again change, this time to "Babasoft" (My own company).

While Ray and I were at odds about TI Casino, we did agree to form our own company and thus in August of 1990, "Notung Software" was born. About this time, my girlfriend, Carrie Contreras, saw the half-finished TI Casino for the first time. And from that day until now, has consistently urged me to finish it.

I had anticipated releasing TI Casino at the Chicago Faire '90, but instead chose to finish six packages I had been working on. After all, I wasn't sure I

could finish Casino by the show anyways and wanted something to sell. I did do the mistake of showing my half-finished Casino at the Show and even mentioned it was to be released at Fest-West '91. To make matters worse, Micropedium published that boast. Now, I was going to have to finish the damn thing.

Work began slow, but surprizingly moved along once I got started again. Ray was given a different "working" play-test version literally every night for about three weeks! But finally, it began to fully work and debugging went into full swing. One nightmare remained however, this manual.

A funny thing happened today. It's Saturday, February 9th, exactly one week before the show. Just as I was typing this paragraph, the phone rang. It was my Dad. After the normal "Hello's", "I'm doing fine's", he asked, "Ken, did you ever finish that gambling game?". "It's funny you should ask, Dad..."

August 17, 1988

DATEBOOK

His part-time work is full-time love

By DAVID PERRY**Correspondent**

From the very first time he picked up a paint brush, Ken Gilliland knew painting would be his lifelong love.

Over the years, that love has strengthened with each finished work and intensified with every subsequent sale.

Now, 15 years after turning professional, the Glendale painter is on a major borderline of his career. He has removed his face from the candy store window and is headed through the door with his first personal exhibit at Gorky's in downtown Los Angeles.

THE ARTS

No big art galleries yet, but as far as the 29-year old artist is concerned, Gorky's (a popular dining and entertainment spot for the hip crowd) is definitely a move in the right direction.

"I have appeared in some street shows," said the Glendale painter, "but this is my first real exhibit. And what I hope to get out of this is some gallery bookings."

Gilliland said the exhibit, which goes from Aug. 22 through Sept. 6, features a series of people paintings using what he calls a loose realistic style.

"I paint very realistically," he said, "but they (the paintings)

look more like paintings than photographs.

"I like to create things. I like to be able to express my own ideas," he continued. "And painting has a lot of advantage over photography in the sense that you can change things any way that you please. I think that's what appeals to me."

The people portrayed in the paintings which will be on exhibit are all friends of Gilliland's caught in moments of still life while at parties. In a way, the works somewhat look like large snapshots only done in oil paint on canvas.

"I like to call them contemporary portraits," Gilliland said. "They're all unorthodox portraits of people, because I not only paint the resemblance, but try to include everything I know about them and feel about them. So hopefully, they come to life on canvas."

Gilliland said that although he's always liked to draw and paint, it wasn't until his early teens that he really caught the bug. It was during that time that he studied for three years under his mentor Dorie McLellan, who taught him the proper techniques for oil painting.

He continued his training on through his high school years at Crescenta Valley and into a summer term at Pasadena's Art Center. At the end of the term, however, the artist opted for Cal State Northridge,

where he later earned his bachelor's degree.

As to the reason for his switch, Gilliland said, "Art Center produces more of a standard product, whereas Northridge (professors) were freer in how they taught. Art Center is good for commercial artists, but not so good for fine artists."

It has been said that to be a true artist, one must first endure a little suffering. Ken, however, would have none of that.

Instead, to support his full-time love, he got a full-time job in the pest control field, while keeping his painting to a part-time business.

Remembering back to the day he sold his first work — a scenery painting of Cypress Point in Carmel which sold for \$250 — Gilliland said it actually hurt him to give it up.

As time went by though, he came to the realization that "once I'm through with a painting, it's no longer mine, but for everybody else."

Yet even with that type of thinking, something happened a few years ago that changed his whole approach to his artwork: that still allows him to

pour his passion into his paintings and keep it there long after they've been sold.

It was at a sidewalk show at Verdugo Park, Ken said that "I realized my paintings were being bought as furniture.

"I wanted to paint paintings that were emotionally true with my audience. The best way I could see to do that was to paint people, because people relate best to people. And of course they have to be life-size, because you're basically confronting another person."

Describing the creation time for each painting as taking anywhere from six hours to six months, Ken said, "It's work, just like everything else. The inspiration just makes it that much easier. But, it's still work."

At present, Gilliland has been spending all his extra time getting ready for the exhibit (there will be a reception 7:30 p.m. on Aug. 23), finishing his paintings and fine-tuning others.

Once it's over, anything could happen for him. But, whatever it is will be fine with Ken, "As long as I'm happy at what I'm doing."



Sources & Credits

Two books that I found invaluable for help with TI Casino were:

PLAY ACCORDING TO HOYLE. by Philip and Andrew Morehead. Signet Classics, New York, New York.

CASINO GAMBLING. by Jerry L. Patterson and Walter Jaye. G.P.Putnam's Sons, New York. New York.

In addition, I wish to credit the following people,...

To my Dad, R. Keith Gilliland, for inspiring me to start this project.

To my Sweetheart, Carrie Contreras, for kicking me in the pants and getting me to finish this project.

To my Boss, James Parrish, for his Encyclopedic Knowledge of the Craps Table.

To my Partner, Ray Kazmer for his suggestions, insight and play-testing.

To my Brother, Mark Gilliland, for play testing.

To Jim Reiss, for his support and last minute shuffle routine fixes.

To Jocko and Jackie, my Australian Ring-Neck Parrots, for screaming so much during this project, I almost had Parrot-Stew.

I created TI Casino on a TI-99/4a with extended basic. Software involved to create this project was TI-ARTIST, The INSTANCE CONVERTER (from "Disk of Pyrates" by Asgard) and TPA MDOS (for the manual).

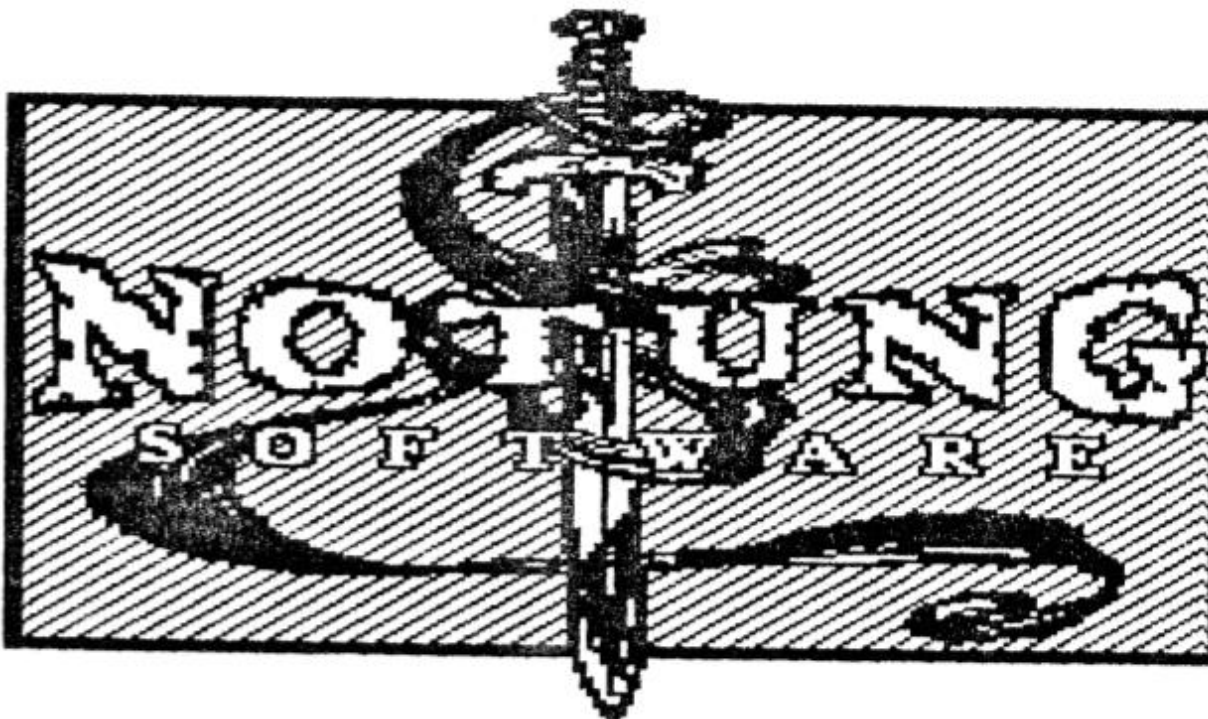
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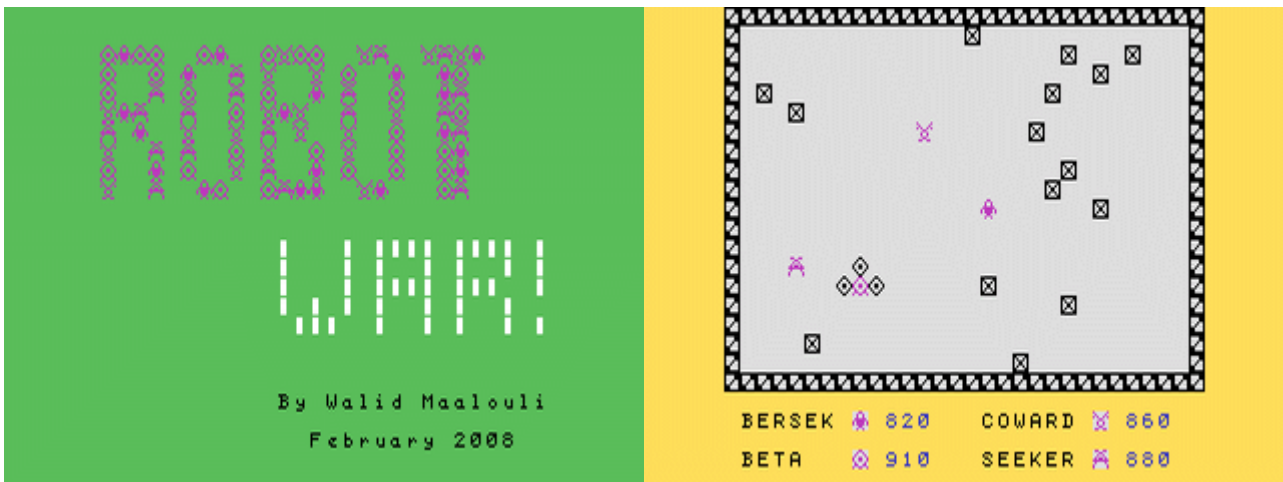
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Robot War

G-7-D [Disk: 200-ROWA] By Walid Maalouli



In this game, you attempt to program a robot using a simple macro-instruction set and let it loose inside an arena with three other robots in a fight to the death, kind of like robotic gladiators. Even better yet, you can exchange robots with other players and challenge each other in friendly (or not) tournaments. Are you up to the challenge? Note: do not attempt to play without reading the instructions first unless frustration is your thing...

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: ROBOT

Download Robot War:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – D

Features: Title Screen, XB, 0 - 4 Player, Sound

Controls: Keyboard

ROBOT WAR INSTRUCTIONS

Robot War is a game where you pit a programmed robot in an arena against other human or computer controlled robots in a fight to the death. Up to 4 robots can fight at a time.

When the program starts, there will be a splash screen displayed. Press any key to move on, and you will then be asked the number of human players ranging from 0 to 4. Pressing zero will result in 4 computer controlled robots to be picked at random from the program's robot library. If less than 4 human players are chosen, then the remainder robots will be computer robots randomly chosen.

Next you will be asked to choose the energy level of the robots, up to 9999 energy points. This will become the starting energy level for ALL the robots in this session. A good starting point is 1000.

If no human players are selected, then the game will go straight to the arena (more on that later). Otherwise, for each human controlled robot, you will be asked to either load a previously saved robot from disk or enter the robot program manually.

If you decide to load a robot from disk, then you will be prompted to enter first the disk path and then the filename. Entering a blank string at the filename will cancel the load operation.

Once the robot is loaded, then the entry sequence is similar to the manual entry option.

You will first be asked to enter a robot name (6 letters maximum). This field will already be filled if you loaded a robot from disk, but it can still be edited or you can just press <ENTER> to accept the entry.

Next you will have to enter the program sequence. Again there will be an entry displayed if a robot has already been loaded, and it can be edited by using the arrow keys to move the cursor and the standard TI editing functions. Press <ENTER> to accept.

The program sequence consists of a string of up to 28 macro-instructions. The first instruction entered is always the emergency instruction used by your robot if its program becomes corrupted (details later).

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Each instruction has a corresponding number from 1-9 and is listed on the screen. Here are the details:

1- Non-Random Movement: -----

The robot will look up the next instruction and depending on the result will move in a selected direction. A 1 will move it up, 2 right, 3 down and 4 left. Any other number will be ignored. If the movement path is block by another robot, the arena perimeter or a random obstruction inside the arena, then nothing happens. A mine is NOT considered an obstruction. Regardless of whether actual movement occurs or not, energy is spent. The cost of this instruction is 20.

2- Random Movement: -----

Here the robot will pick a random non-diagonal direction and attempt to move there. The same movement restrictions apply here as in the previous instruction. The cost of this instruction is 10..

3- Find And Track: -----

Your robot is equipped with a long-range radar that covers the entire arena. With this instruction, it will attempt to find the closest robot and move towards it orthogonally or diagonally. The same movement restrictions as above also apply here. The cost of this instruction is 40..

4- Run Away: -----

This instruction is the exact opposite of Find And Track, where the robot will attempt to run away from the closest robot. Same movement restrictions apply. The cost of this instruction is 40.

5- Place Mine: -----

The robot will attempt to place a mine randomly in any of the available space immediately adjacent to it except the diagonal spaces. If no space is available, then nothing happens and there is no energy cost. Otherwise the cost is 30.

Each mine can recognize the electronic signature of its owner and will automatically deactivate if that robot moves on it. Otherwise, the enemy robot will suffer 200 energy points in damage. In addition to that, the mine blast is

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so powerful that it causes the current enemy robot program step to be corrupted at which point that step will be replaced by the pre-programmed emergency instruction. Step on enough enemy mines and your robot's program will become severely altered... The mine is the most damaging weapon available in the game.

6- Horizontal Fire: -----

This instruction will cause the robot to fire its conventional guns, but only horizontally in both directions. If the shot hits the arena perimeter or a random arena obstruction, then nothing happens. If it hits a mine, then that mine is destroyed. If an enemy robot is hit, then that robot incurs 50 points of energy loss. The cost of this instruction is 30.

7- Vertical Fire: -----

This instruction is identical to Horizontal Fire except that the guns are fired in the vertical direction up and down simultaneously. The cost of this instructing is 30..

.

8- Photon Torpedo: -----

Here the robot scans its environment using the long range radar, and will fire a photon torpedo at the closest enemy robot that is within 10 spaces from it. If all of the enemy robots are out of range, then nothing happens. The torpedo will home-in on its target in the most direct path possible, however it will dissipate harmlessly if it hits an arena obstruction or the arena perimeter. If a mine is hit, then the mine will be destroyed. If an enemy robot is hit, then that robot will incur a 150 energy point loss. Please note that you only have 4 photon torpedoes available, and if the robot runs out then nothing happens. The cost of this instruction is 50, but only if a torpedo is fired..

.

9- Proximity Test: -----

With this instruction, the robot will use its short range scanner with a range of only 4 spaces in any direction. If an enemy robot is detected within that range, then the program instruction immediately following that instruction is executed, then the program ignores the following instruction and jumps to the one after it. On the other hand, if no enemy robot is detected within 4 spaces, then the program jumps the immediate instruction following the Proximity Test one and executes the one following it. From there it resumes normally..

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For example, let's say your robot's program is 2149824. When the robot reaches instruction 9 (proximity test), it will scan its surrounding. If an enemy robot is detected, then instruction 8 will be executed then it will jump to instruction 4 and continue from there. If no robot is detected, then it will skip instruction 8 and execute instruction 2 and continue from there. It is not advised to use instructions 1 or 9 after the proximity test instruction because they require follow up instructions which will not be handled correctly by the proximity test instruction.

When a program reaches the end of its instructions, it will loop back automatically to the second instruction in the program and continue from there. Once the program is entered, press <ENTER> and you will be asked to accept the data entered. Pressing N will take you let you edit your entries, otherwise you will given the option to save your robot data to disk. If you choose to do so, then you will be prompted to enter a disk path. Enter that information as diskpath.filename then press <ENTER> and your robot will be saved. You can cancel the saving operation by entering a blank string at the prompt.

Once all the data has been entered, the arena will be displayed and the robots will be placed at random locations within it. Each robot will be assigned an icon which will be displayed on the bottom of the screen along with its name and current energy level. The blocks with an X inside the arena are random impenetrable obstructions.

The battle consists of up to 50 rounds, with each round ending when each live robot has executed one instruction (2 if it is a proximity test instruction).

Press any key to start the battle, and from there on the robots will become autonomous. As they execute instructions and incur potential damage, their energy level will go down. Any robot that reaches 0 energy level is destroyed and taken out of the arena. However, if executing an instruction brings the energy level to 0 or less, that instruction is still executed but the robot will be destroyed immediately afterwards.

If during a round there is only one robot left with an energy level above 0, the that robot is declared the winner. If 50 rounds have passed without this condition occurring, then the game ends and the robot with the most energy wins. It is also possible to have a tie situation here and the game is a draw.

During each round, each robot is assigned an order of action randomly

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(initiative) and the currently active robot's name will briefly flash at the bottom of the arena. The round number will also flash at the top of the arena at the beginning of the round.

Once you become familiar with the game, you will be able to create robots with complex behaviors that will be fascinating to watch.

I hope you will enjoy this game. Please contact me should you have any comments or find any bugs. As usual, this game is freeware and you may modify at will.

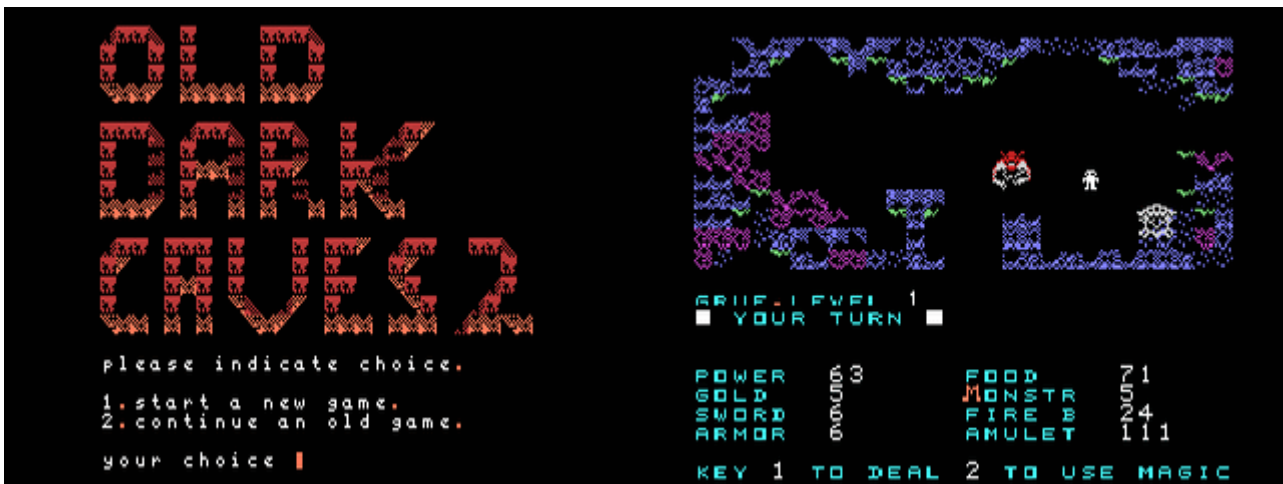
Walid Maalouli

email: [wmaalouli\(at\)comcast.net](mailto:wmaalouli(at)comcast.net)

February 11, 2008

Old Dark Caves 2

G-7-E [Disk: 201-ODC2] By Donn Granros



This adventure pre-dates the Legends series by Donn Granros, yet one can see a lot of similarities, mostly in the graphics. On the other hand, it is a much simpler adventure than Legends, with rudimentary game mechanics as you roam a labyrinth of caves in search of treasure while defeating resident monsters. It is still massive in scope however, providing a quick fix for that sudden adventuring urge.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB AUTOLOAD

Download Old Dark Caves 2:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – E

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

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OLD DARK CAVES

The last friendly dragon of old earth has been imprisoned in the old dark caves by a group of evil wizards and their allies.

Your mission in the old dark caves is to rescue the friendly dragon thereby restoring peace and harmony to your world. There are rumors of riches to be found along the way and of creatures of dazzling color and very poor manners. There are stories of fountains, chests, gold and magic. Who knows, some of them may be true. There is a cave in the distance if it beckons enter now....OLD DARK CAVES VERSION 2.

Program and design by Donn R. Granros
216 East 60th St.
MPLS, MINN 55419.

Requires TI-99/4A, Extended Basic, 32K Memory Expansion and Disk Drive.

Program and Documentation Copyright 1986.
By Donn R. Granros

Loading and running Old Dark Caves Version 2

Insert the disk enclosed in drive #1. The game will automatically load and run when you select Extended Basic. If you are already in Extended Basic mode type: RUN "DSK1.LOAD".

After loading in the program, the screen will display this:

1. Start a new game.
2. Continue an old game.

**** 1. Start a new game ****

The program will then go to the Dark Caves store. Here you can select the level of difficulty, select a character trait and buy items for use in the caves.

Difficulty Level: This affects starting game variables such as power, gold, etc.

Character Trait: Gives you greater initial ability in a given area. Example; those with greater magic ability start out with greater power in their amulets but less range and accuracy when using weapons.

Buying Goods at the Dark Caves store: You may purchase only one sword and one suit of armor at the store. The more expensive items are the best, offering greater protection or damage capability. It is recommended that you purchase food and fireballs while here, you will need both.

..... Press "9" when finished to enter the upper caves

**** 2. Continue an old game ****

Do not use this option until you have actually saved a game. Do not use until you have reviewed the section on saving and loading old games. If you have selected this option in error type "XXXX" and press "ENTER" to return to the selection menu.

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Travelling in the caves (no monsters present)

1. Use the arrow keys (E,S,D,X) to move.
2. Press the "Q" key to bring up your magic utility screen. Select the number of the menu that corresponds to what you wish to do. The save game feature of Old Dark Caves is operated from this menu.
3. Pickup treasure chests and goblets by walking over them.

When monsters are present (combat and stuff). Display shows "YOUR TURN".

1. Use the arrow keys (E,S,D,X) to move. You are allowed to move up to 5 times. You can use weapons, magic, etc at any time during the 5 turns and then it is the monsters turn. The monsters will not respond until you have either moved 5 times or used one the options shown below.
2. Press the "Q" key to hit with your sword.
3. Press the "F" key to launch a fireball.
4. Press the "1" key to see if the monster will leave in exchange for some gold.
5. Press the "2" key to bring up your battle magic menu.

Most options are shown on the bottom line of the screen when needed.

Note: After finding the sorcerers amulet and advancing to the lower caves an additional magic screen is provided with 4 new spells. No details available on what these might do.

Monster options in combat. Display reads "CREATURES TURN"

Being an equal opportunity adventure game, the creatures of Old Dark Caves also have options in combat. They can also move and attack in ways that are appropriate to their species. It is unwise to assume that your opponent is stupid. Some species make decisions in a fashion not unlike humans. This is especially true in the lower caves. To a degree, how you behave will affect how you are treated.

Many factors influence game play. The most important variables are constantly displayed and updated on the lower portion of the screen. The following is a list of these items and a description of what they represent:

Power- This is the indicator of your characters health and ability to withstand attack from monsters. If you defeat a monster in battle, your power is increased by a factor determined by the strength of the monster you have defeated.

Food- Food is consumed during your time in the caves. If your supply of food falls to zero then points will be deducted from your power level. If your supply of food reaches zero and your power level reaches zero then you will have starved to death and the game will end. You can find food in treasure chests or purchase some from the cave trader.

Gold- Gold is useful for buying items from the cave trader and has value when dealing with some of the cave inhabitants. To some gold is a measure of success in its own right. Only 255 pieces of gold can be carried from the upper caves to elvis ogres store or from his store to the lower caves.

Armor- Armor lessens the impact of a monsters blows in combat. It is a highly recommended purchase. Some monsters destroy armor. You can perform limited armor repair yourself but the cave trader has more skill at this sort of thing..

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Monstr/monhit- Monstr is an indicator of the number of hit points a monster has. Monhit is an indication of how hard you can be hit. During battle the display alternates these values. The special attack capabilities of some monsters are not shown. Do not rely on this in place of common sense.

Sword- The starting hit capability of your sword is determined by which sword you have purchased at the Dark Caves store. Hits with your sword are scored as a hit, miss or glancing blow. With experience your percentage of hits will tend to increase. Some monsters can weaken your sword through magic or flames.

Fireballs- Fireballs are your long range weapon. The amount of fireballs you start with is determined by how many you bought at the Dark Caves store. The distance you can hurl a fireball is dictated by your experience in battle. Loss of experience through magic or certain things drunk at fountains can reduce your range and accuracy. In extreme cases they can be rendered virtually useless.

Amulet- You are given an amulet when the game begins. The amulet controls your ability to use magic spells and contains a limited amount of charges. As you use magic spells, the power needed to use the spell is deducted from the charges left in the amulet. The amulet gains power gradually as you move from cave to cave. The amount of power required to cast a particular spell varies according to the magic experience of the user. Treasure chests may contain magic, also fountains. The cave healer can recharge your amulet for a price.

Keys- A key is required to advance to another level of the caves. Keys are always gained by defeating a monster in battle. When found the key will appear on the screen and will stay there until used to open the door to the next level.

Fountains- There are fountains located in the caves. Drinking from fountains can restore a weary adventurer's health and magic. They could also contribute to early termination of your game. The choice is yours.

Treasure Chests- Treasure chests can be found throughout the caves. Periodically a monster defeated in battle will leave a chest. They may contain gold, magic and other useful things. Some contain traps which are not considered an asset.

Goblets- Goblets can slowly be found in the caves. Goblets always contain a potion. Potions have many attributes, some of them require positive. It is difficult to tell a good potion from a bad one as the liquid is colorless. There is always one way to find out....

Sorcerers Amulet- Six pieces of the sorcerers amulet have been placed in the caves by the evil wizards. You must find all six to advance to Elvis Ogres store and the lower caves. A rumor has it that five pieces are hidden in chests lying on the cave floor. Nobody seems to know the location of the sixth.

Snakes (Bitus Poisonous)- Snakes are unique to the upper caves. Speculation has it that they were imported into the caves to prevent anyone from finding the pieces of the amulet thereby allowing the evil wizards to rule the lower caves without interference. What is known for

TI-99/4A – Game Shelf Extended Basic Games

sure is that their bite causes slow and painful death to the unwary. Fortunately the cave healer sells a cure for this and a potion might work.

Cave Trader- A trader has set up shop in the caves. He sells a number of items and tends to have more inventory than he can keep track of. Some items are lumped into piles such as "Surplus, maybe Junk." If you choose to purchase these items you could end up with some useless stuff. You can also find things of value.

Cave Healer- There is a healer in the caves. good guy to find if your snake-bit or your amulet needs recharging. Healers are only found in the upper caves as most people do not survive long enough in the lower caves to require one. Note: The lower caves trader provides some healing, although he charges a lot, considers it hazard pay.

Traps- Yes, there are some traps here. Try to avoid them if possible.

Magic- This is a fairly obscure area and not easily described. Experiment and learn is the best advice we can offer.

Elvis Ogres Place- Every battle weary adventurer stops off at Elvis Ogres place before resuming his quest in the lower caves. Elvis was quite famous as a musician in the upper world but the pressures of public life made him return to the caves where he has setup a store. As a reminder of other times and places he has installed a Blackjack game as a diversion for those who stop by. On a more practical note, you might try to win some gold playing Blackjack so you will be able to purchase some of the better weapons and armor which are offered as the maximum amount of gold you can take with you when you leave the upper caves is 255 pieces. Also, depending on the level of experience you have gained in the upper caves you may not have the qualifications necessary to wield some of the better swords or armor types that are available.

You can only carry 255 pieces of gold into the lower caves so gamble if you choose and buy the best items you can. In the case of gold at least, you can't take it with you.

The lower caves and the dragons stone

When the friendly dragon was captured by the evil wizards they also took away the dragons stone of power robbing him of any chance to escape. This stone allows the dragon to fly and do other things that dragons are known for. You can find the friendly dragon who is known to be held captive on level six, but it will not help until you have recovered the dragons stone and have brought it to the friendly dragon. In typical wizard fashion they have broken the stone into 5 pieces, 4 of the pieces have been hidden in chests and the fifth was given to a creature of ill repute. Before he was killed a message was scrawled on a cave wall by a brave gnome "Trust that which should never be#\$\$\$*****(-1/!". He went on to gnome heaven before he could finish.

Inhabitants of the lower caves

The lower caves are a very dangerous place. You can expect to run into fire dragons, imps, vampire slimes, yellow trolls, grey ogres, and wizards here. All of these creatures can inflict a great amount of damage. It is rumored that many wizards can defy even death. Wizards are capable of casting the dreaded fireflame spell which can turn most adventurers into french fires. There might also be a few other species

TI-99/4A – Game Shelf Extended Basic Games

hanging around the lower caves waiting to meet you, but you should expect this. Being a hero was never easy.

A few suggestions and hints

1. Remember that sometimes running is better than fighting and that a little kindness can provide large returns. Few who choose only to fight will survive here very long.

2. Magic is the key. Learn your spells and use the power of your amulet wisely. To be trapped in the lower caves with no power left to perform healing is an invitation to doom.

3. Observe your opponents in battle, a monster with a very high level of armor protection may not be hurt by the sword but could be vulnerable to fireballs or spells. Do not shoot fireballs at the fire dragons, they eat them for snacks.

4. It is a good idea to map out the caves as you travel.

5. A certain spell you possess can prevent the wizard's fireball from harming you.

6. Remember the gnomes' final words and reflect on them. They have great importance.

7. Try to enter Elvis' ogre's store with 250 pieces of gold so you have enough to stop at Cave Medical, Inc. The healers here are capable of giving you up to 250 power. (if you have the gold)

Saving and loading old games, file procedures

Old Dark Caves is played in two main sections. These have been described as the upper and lower caves. The upper caves consist of levels 1 to 3. The lower caves contain levels 4 to 6. All games saved in the upper caves have been assigned the prefix "DSK1.UPPER". Games saved in the lower caves have the prefix "DSK1.LOWER". You may assign any number you wish to the end of each prefix to allow identification of your saved games. Examples; "DSK1.UPPER10",... "DSK1.LOWER20", etc.

Saving a game

You can save a game at any time when you are travelling in the caves and no monsters are present. Press the "Q" key to bring up the utility magic screen and select the save game option. Directions are shown on the screen.

Loading in an old game

Press item 2 ("Continue an old game") on the dark caves title screen. The program will respond with "Enter file name". If you wish to load in a game file that was saved in levels 1 to 3, type "UPPER" and press enter. The upper caves section will be loaded in. Follow the same procedure for levels 4 to 6 except type "LOWER". When the program segment you have selected has loaded, instructions will be displayed on the screen. Follow these to load in your file. Note: You cannot lower an "UPPER" saved game into the lower caves or vice versa the computer will go into a loop and you will have to reboot.

Game over

In the event you should lose a game, you have two options. When the game over display appears press "Y" to begin again or "N" to end the game. The program saves a memory image of your player when you enter the caves.

If you choose to play again you will be restored to level one in the upper caves or level four in the lower caves.

You will be restored to the original condition you were in when you started. All keys or sorcerer's amulet or dragon's stone will be replaced in the caves so you will have to find them again.

Daffy

G-7-F [Disk: 202-DAFF] By Fabrice Montupet



While the premise of this platformer is fairly common, the theme and execution are on the other hand original and well done. Daffy Duck being one of my favorite characters, I instantly developed a soft spot for this fun game. It remains quite challenging however especially on the jumps which have to be pixel perfect.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks (uses joystick #2).

Executable to run: DAFFY

Download Daffy:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

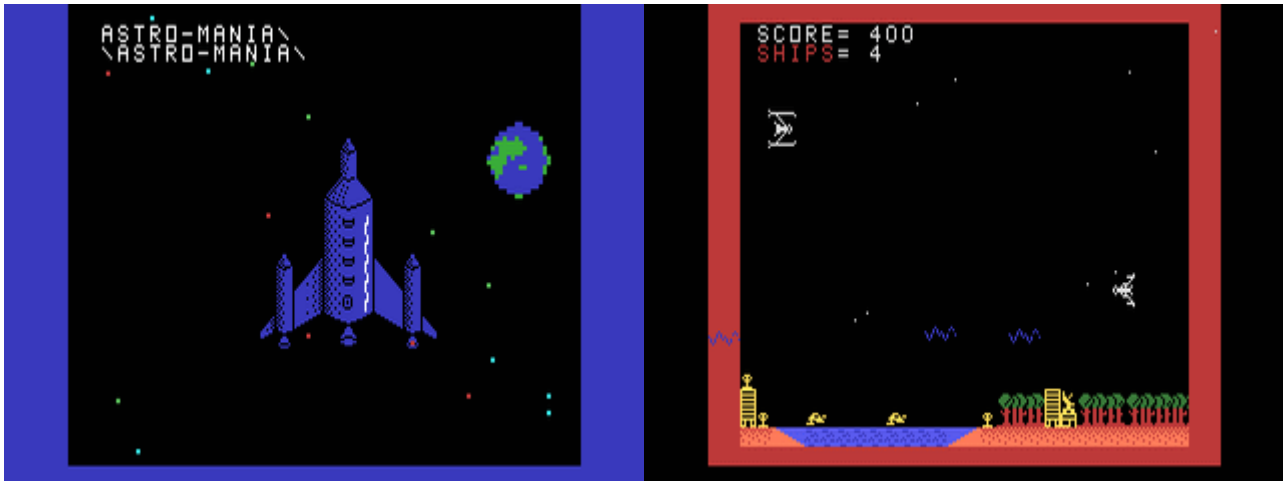
Start from mega menu: G – 7 – F

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 2

Astromania

G-7-G [Disk: 203-ASMA] By Chris Bodenmiller



In yet another excellent space shooter, you have the great honor and responsibility of protecting the World from the Frizoid invaders. You battle the attackers outside of the force field that protects your planets, with the hope of destroying the mothership in the end. As usual, quick reflexes can make the difference between life and death, so don't panic! Great animations and sound effects. Very well executed.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB AUTOLOAD

Download Astromania:

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[\[V9T9 .DSK Format\]](#)

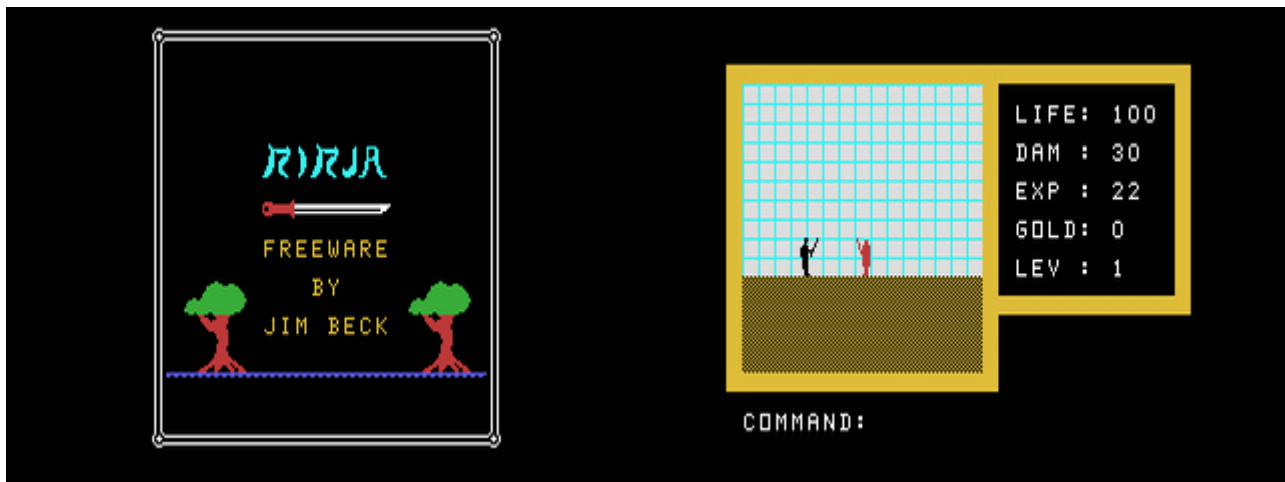
Start from mega menu: G – 7 – G

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard (P=pause), Joystick 1

Ninja

G-7-H [Disk: 204-NINA] By Jim Beck



This is an interesting game with an Oriental premise: You are a ninja seeking to kill the Evil Master in his lair. You are armed with a sword and have to roam the dungeons killing any guards that stand in your way and collecting gold and a variety of other items, until the final battle with the Evil Master. As you gain experience, things get tougher. Combat is a matter of who gets through the most blows, but the outcome seemed a little too random for my taste. The trick is to be able to survive all the way to the end, which is not a given...

Requirements: XB cartridge, 32K RAM.

Executable to run: XB AUTOLOAD

Download Ninja:

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Start from mega menu: G – 7 – H

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard (S=left, D=right, F=attack, I=up, M=down, G=get item)

UFO Invasion

G-7-I [Disk: 205-UFOI] By Roland Schlosser



While this game may seem like Space Invaders Lite, it is actually quite challenging, especially at the higher levels. Your task is to shoot down the zipping saucers one at a time all the while trying to dodge a hail of falling bombs. After taking out 20 aliens, then it's time to refuel, except that the power station is behind a curtain of bombs. Talk about the gas station from hell! Things speed up significantly at the higher levels. Quite fun!

Requirements: XB cartridge, Joysticks.

Executable to run: UFOINV

Download UFO Invasion:

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[\[V9T9 .DSK Format\]](#)

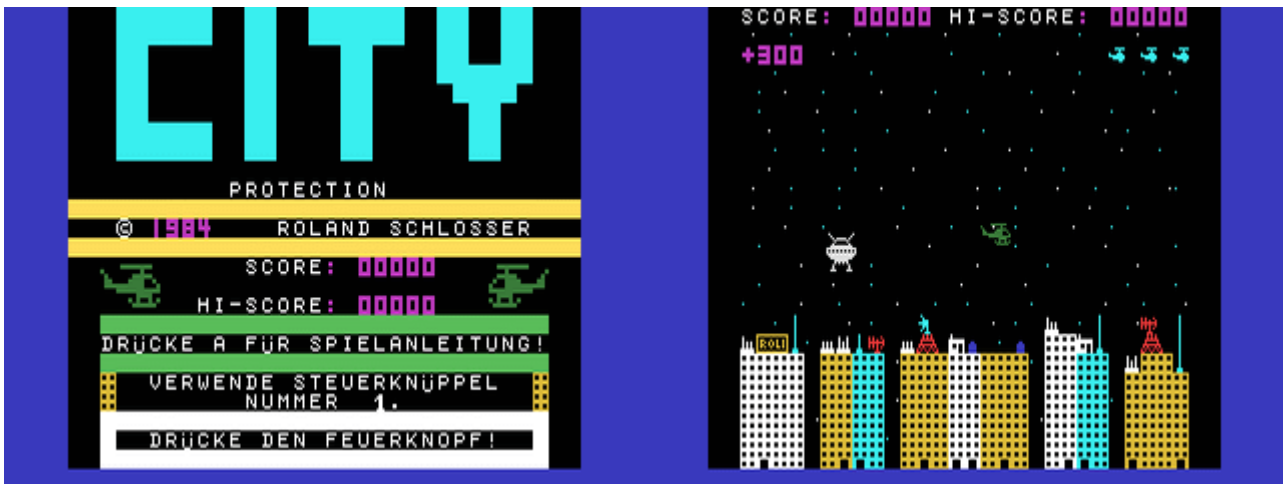
Start from mega menu: G – 7 – I

Features: Title Screen, XB, One Player, Sound, Music, Speech

Controls: Joystick 1

City Protection

G-7-J [Disk: 206-CITY] By Roland Schlosser



In yet another take on the alien invasion theme, you are a lone helicopter pilot charged with defending your city from alien invaders. Use the joystick to maneuver your helicopter and fire at the descending alien UFO's. The game is over if one of them manages to land. Excellent graphics and challenging gameplay.

Requirements: XB cartridge, Joysticks.

Executable to run: CITYPROT

Download City Protection:

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[\[V9T9 .DSK Format\]](#)

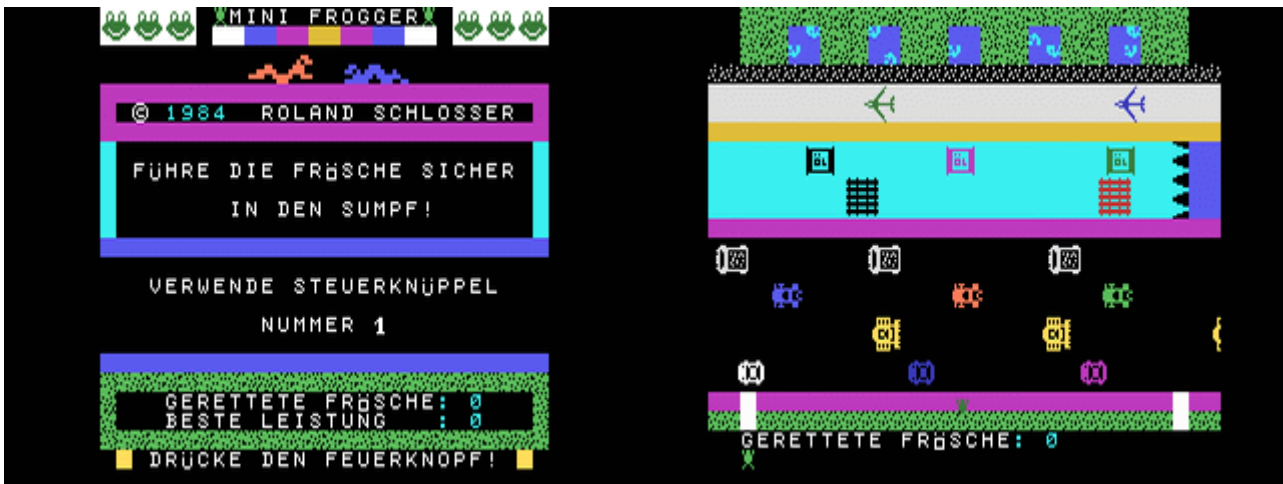
Start from mega menu: G – 7 – J

Features: Title Screen, XB, One Player, Sound, Music, Speech

Controls: Joystick 1

Mini Frogger

G-7-K [Disk: 207-FROG] By Roland Schlosser



This is one of the best XB recreations of the timeless Frogger game, with beautiful graphics and excellent animation. Gameplay is fairly simple: use your joystick to maneuver Frogger across a busy highway, river and runway (!) to the safety of his pond. All the ponds have to be occupied before moving to the next level. Easier said than done... Great fun!

Requirements: XB cartridge, Joysticks.

Executable to run: MINIFROG

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[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – K

Features: Title Screen, XB, One Player, Sound, Music, Speech

Controls: Joystick 1

Tex-Raiders

G-7-L [Disk: 208-TEXR] By John D. Gardner & John C. Williams



Alien invaders are attacking your sector and you have to seek them out and destroy them while avoiding asteroid fields. While the theme is not terribly original, the gameplay is however well executed taking good advantage of sprites, color and sounds. There are multiple screens to go through and the action can get very frantic.

Requirements: XB cartridge. Joysticks optional.

Executable to run: XB Autoload

Download Tex-Raiders:

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[\[V9T9 .DSK Format\]](#)

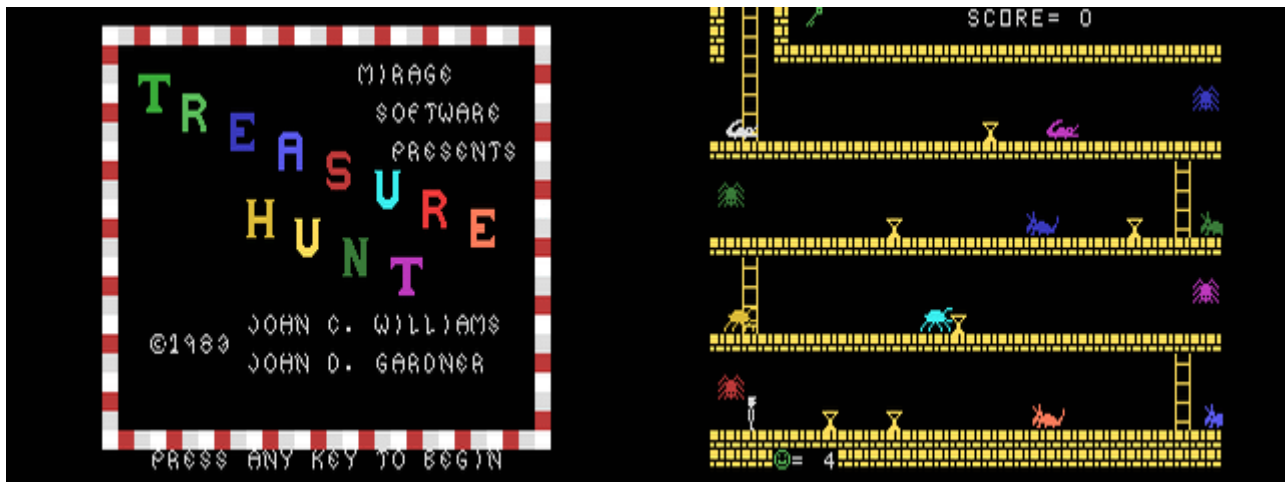
Start from mega menu: G – 7 – L

Features: Title Screen, XB, One Player, Sound, Music, Speech

Controls: Keyboard (E,X,D,S, “.”=fire, “H”=Hyperspace, “M”=map), Joystick 1

Treasure Hunt

G-7-M [Disk: 209-HUNT] By John D. Gardner & John C. Williams



This is a very well done platformer on the theme of a tomb explorer with four different screens that repeat with increasing difficulty. The action is very reminiscent of Donkey Kong as you jump your way over monsters and traps. The animation is very smooth and the sound effects well executed. Colorful and quite entertaining.

Requirements: XB cartridge. Joysticks and 32K RAM optional.

Executable to run: XB Autoload

Download Treasure Hunt:

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[\[V9T9 .DSK Format\]](#)

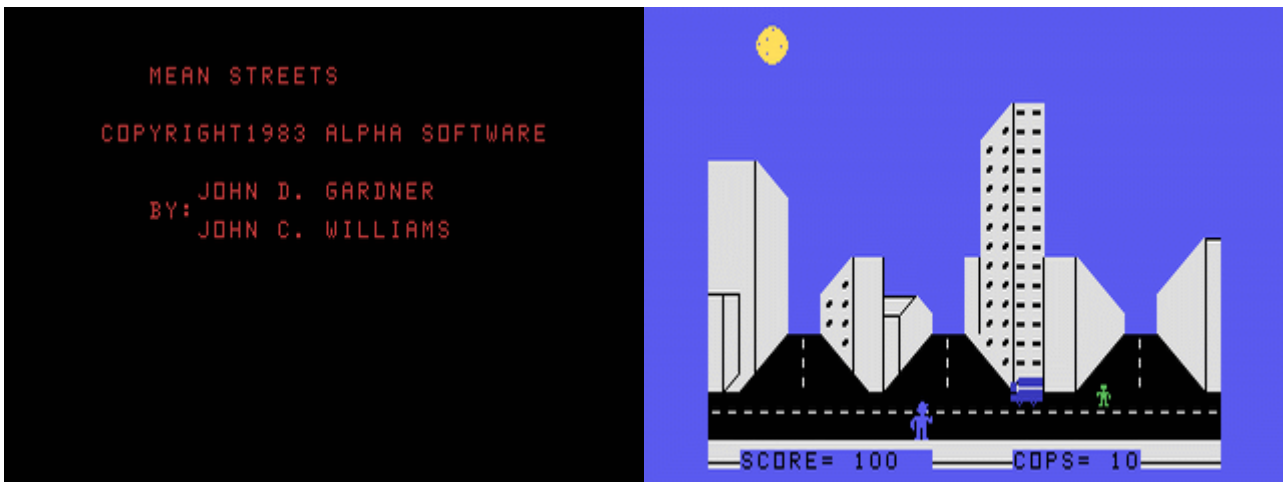
Start from mega menu: G – 7 – M

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 1

Mean Streets

G-7-N [Disk: 210-MEAN] By John D. Gardner & John C. Williams



As a member of a SWAT team, you have been assigned to clear the streets from trigger-happy mean guys. You have to patrol up and down the street, locate the thugs and hopefully shoot them before they shoot you. Starts off easy but then gets hairier. You score points with each kill and you have 10 lives. The ambulance animation is particularly well done. Basic fun.

Requirements: XB cartridge, joysticks.

Executable to run: XB Autoload

Download Mean Streets:

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[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – N

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Wizard's Lair

G-7-O [Disk: 211-WILA] By Rainbow Software



Compared to the Legends series, this is a pure dungeon quest game with the objective of killing the evil Wizard while disposing of any pesky monsters standing in your way and collecting as much treasure, spells and weapons that you can find. There are 4 levels of increasing difficulty, each with a time limit: if you run out of time, then you are automatically transported to the next level. The game ends when you kill the Wizard or you run out of time on level 4. The dungeon is displayed in 3D and clever use of sprites and color is made to enhance play. A mapping function is available to help you along. Quite enjoyable without too many complications.

Requirements: XB cartridge, 32K RAM.

Executable to run: XB Autoload

Download Wizard's Lair:

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[\[V9T9 .DSK Format\]](#)

[Wizard's Lair Manual \(PDF format\)](#)

Start from mega menu: G – 7 – O

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard



BACKGROUND

An Evil Wizard has taken residence in the dungeons of Weymoor Castle. It is rumored among the townspeople that strange creatures have been seen in the vicinity, and panic has started to set in as they wonder what will happen next. A few brave souls have dared to enter the castle, some of them skilled warriors, some magic-users, but none have ever returned. Word has it that the Evil Wizard has great powers, and that he's created his own force of fierce monsters to guard his treasures and keep intruders out. The townspeople have offered to pay you well should you rid them of the Evil Wizard, but you know that their reward would be nothing compared to the incredible riches that belong to the Wizard. Armed with only a long wooden stick and a few minor spells in your equipment pack, you cautiously take your first step into the unknown.

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GETTING STARTED

Make sure Alpha-lock is in the down position. Cassette users type RUN"CS1", press ENTER and follow the screen instructions to load. Disk users can either load during power up or type RUN"DSK1. LOAD" and press ENTER. After LOADING, the Title screen will appear, and the computer will take a few minutes to generate dungeon level one. When the "PRESS ENTER:" prompt appears, press ENTER to begin level one.

INTERPRETING THE SCREEN

The large window shows a three dimensional view of the dungeon chamber you are currently in. You can also see passages and doorways for up to two chambers ahead. To the right of the window are the status indicators. The top line displays the direction in which you are now facing; north, south, east or west. The next line down is your current score. The following lines are interpreted as follows:

- C: CONSTITUTION. This is you overall health value.
- S: STRENGTH. The stronger you are, the easier it will be to defeat monsters. You start with a value of 2.
- L: LUCK. Similar to strength but not as reliable. You start with a value of 2.
- T: TREASURE POINTS. You get treasure points for picking up treasures.
- E: EXPERIENCE. You get experience points for defeating monsters and picking up items.

Further down the screen on the right is displayed the last piece of equipment on your equipment list. It is always abbreviated by the first three letters. You entered the Castle with a Vanish spell in your pack so this area now displays VAN.

Near the bottom right is displayed the current level you are on; LV=1. All commands are entered from the keyboard and will be displayed following the word "ACTION?:" under the window. Below this is displayed whatever weapon and/or shield you are now holding. You have entered the Castle with a STICK and no shield.

THE COMMANDS

The following is a list of all commands used in the game. All commands must be followed by pressing ENTER except those marked with an asterisk (*). Hold the keys down until the "beep" sounds.

M	Move ahead.
R	Turn right.
L	Turn left.
B*	Turn 180 degrees and move. (Retreat)
A*	Attack.
P	Pick up.
DM	Display map.
DE	Display the equipment list. (The items in your backpack)
T	Locate traps. (Locate spell must be in effect)
N	Go to the next level.
U	Use the most recently picked up item.
U1,U2	Use a specific item from the equipment list.
D	Drop the most recently picked up item.
D1,D2	Drop a specific item from the equipment list.
;	Backspace. (semicolon)

MOVEMENT

If you are facing an open passage, you can ENTER **M** to move into the next chamber. If you are facing a wall, you must first turn and then move. You cannot move through a chamber if a monster is present (except for the Wizard). You can retreat however by pressing **B**, providing that you haven't made any turns since entering the chamber.

PICKING UP ITEMS

Each chamber can hold one item. The gold chests contain the Wizard's treasure. The green cases contain weapons or shields, and the glowing white bottles are magic. ENTER **P** to pick up an item. When you pick it up, you will be shown what it is. If it is treasure, your treasure total will increase. Values are: Lead,0; Brass,25; Silver,100; Gold,300; Diamonds,500. If you pick up weapons or magic, they will be added to your equipment pack. Ten items can be held in your pack.

USE and DROP ITEMS

ENTER **U** to use the most recently picked up item (the one abbreviated at mid-screen right). To use a different item, ENTER **U** and the item number. You can find the item number by displaying the equipment list. For example, ENTERing **U3** causes item number three to be used. ENTER **D** to drop the most recently picked up item. To drop a different item, ENTER **D** and the item number. An item will be dropped only if the chamber is already empty.

WEAPONS

The better your weapon, the easier it is to kill monsters. The better your shield, the less damage you take when you are attacked. You may hold one weapon and one shield at any time. Shield names are displayed with a colon (:) preceding them. To change weapons or shields, ENTER the appropriate **U** command. The new item from your equipment list will replace the old one, which will be discarded.

ATTACKING

If you enter a chamber containing a monster (except the Wizard), you cannot proceed unless the monster is dead or you've used magic on him. You may retreat from the chamber by pressing and holding B. When a monster is present, you must remember to hold the keys down until they are displayed on the screen. A monster may not attack you right away, so you may have time to pick up. If you decide to attack, press and hold A. Once a monster is attacked, he will begin attacking you and by holding A you will be guaranteed to get your hits in between his. You may have to hit a monster quite a few times before killing him, depending on the strength of the monster and your strength, luck and weapon. For example, if you are low on strength and luck, and have only a STICK for a weapon and no shield, a long battle with a tough monster may kill you. Always keep an eye on your Constitution during battle, and be ready to retreat if it gets close to zero. Watch your strength and luck also as they will drop slightly, especially against the stronger monsters. If your strength should drop to zero and you continue to attack, there is a chance that the monster will knock the weapon or shield from your hands, and you will lose it. If this happens, you may still continue to fight (using your hands) ,

but your effectiveness will be greatly diminished. If you defeat a monster, you will gain the appropriate experience points. If you leave a chamber during an attack, the monster will rejuvenate (except the Wizard) and will again be at full strength when you return. If you are under attack and you wish to enter commands other than **A** or **B**, don't forget to hold each key down until it is displayed on the screen and then press and hold ENTER. If you see a monster in the chamber ahead, be wary, for he may decide to run down into your location. Monsters tend to roam around a bit, so always be ready for the unexpected.

TRAPS

Any item found in a chamber may have been booby trapped by the Evil Wizard. You can search for traps by ENTERing **T**, providing that your LOCATE SPELL value has not reached zero. You have entered the Castle with a LOCATE SPELL value of four, and it is decreased by one every time you ENTER **T**. Whenever you use a new LOCATE SPELL, the value it is currently at will be increased by twelve.

MAGICAL SPELLS and DEVICES

There are ten different types of magic spells and devices which can be found throughout the dungeon. Any magic listed on your equipment list can be used at any time by ENTERing the appropriate **U** command. Spells used to increase strength or luck will not increase these values past four.

THE MAP

ENTER **DM** to display the map. You can also enter this command from the equipment list screen or from the "PRESS ENTER:" prompt which appears prior to game play before each new level. The top of the screen will display the direction you are facing and the amount of time units which have elapsed. The map itself is oriented so that north is always at the top. The unexplored chambers are shown as magenta boxes and the explored chambers as light blue boxes. Your position is marked by a black box. To get back to the game, press ENTER. If you wish to view the equipment list from this screen, press **DE** and then ENTER.

LEVELS

The dungeon of Weymoor Castle contains four levels. The deeper you get, the harder it becomes to survive. You may at any time proceed to the next level by ENTERing N. You will be asked for verification if you do this. There is also a time limit for each level. When the time is up, you will automatically be sent to the next level. Try not to waste time, the clock is running even when no keys are being pressed. The following is a list of the number of chambers and time limits for each level:

LEVEL 1	Chambers=24	Time units=60
LEVEL 2	Chambers=31	Time units=75
LEVEL 3	Chambers=38	Time units=90
LEVEL 4	Chambers=45	Time units=105

The computer takes a few minutes to set up each new level. If you run out of time on level 4, the game ends.

RATINGS

Whenever a game ends, your rating for that game will appear at the top of the screen. This rating is based on your overall performance; time, points and health values.

WINNING THE GAME

To win the game, you must reach level 4 and kill the Evil Wizard. This is not an easy task, for the Wizard has incredible strength. Unlike the monsters, the Wizard will not gain his strength back if you leave and then return. The Wizard will also allow you to pass by him. Not all spells will work against the Evil Wizard.

To replay the game, press (FUNCTION) 4, type RUN and press ENTER.

Good luck!

WARRANTY

Rainbow Software warrants that the media on which this program is furnished will be free from defects in material or construction for a period of thirty (30) days from the date of delivery to the consumer. This program is provided on an "as is" basis and Rainbow Software will not be liable for any damages, including incidental or consequential damages resulting from the use or operation of this product. This warranty will be void if the product has been damaged by misuse, accident, neglect or any other cause not directly related to defects in material or construction.



**Rainbow
Software**

15 ROSE STREET BROOKLYN, N.Y. 11238

Wizard's Revenge

G-7-P [Disk: 212-WIRE] By Rainbow Software



This is the sequel to Wizard's Lair with an additional level and improved graphics and sound. Gameplay is essentially the same with a few streamlined commands. Even more enjoyable than the first installment.

Requirements: XB cartridge, 32K RAM.

Executable to run: XB Autoload

Download Wizard's Revenge:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Wizard's Revenge Manual \(PDF format\)](#)

Start from mega menu: G – 7 – P

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard



BACKGROUND

"It's the Evil Wizard. . . the Evil Wizard". . . . The townspeople of Bleylock shuddered as they whispered the words. It was thought that the Wizard was slain long ago in the dungeons of Weymoor Castle by a brave warrior, but now it seems he had just vanished into the forbidden zone, waiting to regain his energy force so he could come back and seek revenge on innocent victims. Since his return, a few great warriors and skilled magic-users have dared to enter Bleylock Castle's dungeons, intent on slaying the Wizard and pillaging his priceless treasures. None have ever returned. Word has it that the Wizard has incredible powers and has created a force of strange creatures to guard himself and his riches and to do his evil bidding. The townspeople have offered to pay you well should you rid them of the Wizard, but you know that the treasures in the dungeon will dwarf their meager rewards by a hundred fold. You walk up to the front doors of the Castle, intending only to inspect the perimeter. Suddenly the doors fly open and you gasp as a cold wind pulls you inside, the doors slamming shut and locking behind you. Ghastly sounds are coming from the dungeon below and death chills the very air you breathe. Empty handed and still shaking, you realize that the time has come for you to meet your destiny.

GETTING STARTED

Make sure Alpha-lock is in the down position. Cassette users type RUN"CS1", press ENTER and follow the screen instructions to load. Disk users can either load during power up or type RUN"DSK1. LOAD" and press ENTER. After LOADING, the Title screen will appear, and the computer will take a few minutes to generate dungeon level one. When the "PRESS ANY KEY" prompt appears, press any key to begin level one.

INTERPRETING THE SCREEN

The large window shows a three dimensional view of the dungeon chamber you are currently in. You can also see passages and doorways for up to two chambers ahead. To the right of the window are the status indicators. The top line displays the direction in which you are now facing; north, south, east or west. The following lines are interpreted as follows:

- H: HEALTH. This is your life force value.
- S: STRENGTH. The stronger you are, the easier it will be to defeat monsters. You start with a value of 25.
- A: AGILITY. Determines your ability to dodge and strike effectively during battle. You start with a value of 25.
- T: TREASURE POINTS. You get treasure points for picking up treasures.
- E: EXPERIENCE. You get experience points for defeating monsters and picking up items.

Further down the screen on the right is displayed the current item selected from your backpack. It is always abbreviated by the first six letters. You have entered the Castle empty handed so this area is now blank.

All commands are entered from the keyboard and will be displayed following the word "ACTION?:" under the window. Below this is displayed whatever weapon and/or shield you are now holding.

THE COMMANDS

The following is a list of all commands used in the game. All commands must be followed by pressing ENTER except those marked with an asterisk (*). Hold the keys down until the "beep" sounds.

M	Move ahead.
R	Turn right.
L	Turn left.
B	Turn 180 degrees.
RM	Turn right and move.
LM	Turn left and move.
BM	Turn 180 degrees and move.
E	Display the equipment list. (The items in your backpack)
P	Pick up items.
Q	Display map. Uses two HEALTH units.
T	Locate traps. Uses two HEALTH units.
N	Go down to the next level. (From exit chambers only)
D	Drop the currently selected item.
< *	Use the currently selected item. (SHIFT) comma
A *	Attack.
. *	Select/cycle through the items in your backpack. (period)
/ *	Quick retreat. (slash)
; *	Backspace. (semicolon)

MOVEMENT

If you are facing an open passage, you can ENTER **M** to move into the next chamber. If you are facing a wall, you must first turn and then move. You cannot move through a chamber if a monster is present (except for the Wizard). You can retreat from a monster only by moving back to the chamber that you were previously in.

PICKING UP ITEMS

Each chamber can hold one item. The gold chests contain the Wizard's treasures and on later levels, food. The green cases contain weapons or shields, and the glowing white cases contain special treasures and magic. ENTER **P** to pick up an item. When you pick it up, you will be shown what it is. If it is treasure, your treasure total will increase. If you pick up weapons, special treasures or magic, they will be added to your equipment pack. Ten items can be held in your pack.

USE and DROP ITEMS

To use an item in your backpack, hold the period key (.) to select the item you wish to use, then press (<) (SHIFT comma) to use it. To drop an item, hold the period key to select the item, then ENTER **D**. To display all the items in your backpack, ENTER **E**. This command can also be used to pause the game.

WEAPONS

The better your weapon, the easier it is to kill monsters. The better your shield, the less damage you take when you are attacked. You may hold one weapon and one shield at any time. Shield names are displayed with a colon (:) preceding them. To change weapons or shields, SELECT and USE them from your backpack. The new item will replace the old one, which will be discarded.

ATTACKING

If you enter a chamber containing a monster (except the Wizard), you cannot proceed unless the monster is dead or you've used magic on him. You can retreat from the chamber (See MOVEMENT). When a monster is present, you must remember to hold the keys down until they are displayed on the screen. A monster may not attack you right away, so you may have time to pick up. If you decide to attack, press and hold **A**. Once a monster is attacked, he will begin attacking you and by holding **A** you will be guaranteed to get your hits in between his. If you successfully hit a monster, the dungeon will flash green. If the monster hits you successfully, the dungeon will flash red. Your agility determines whether hits are successful or not. You may have to hit a monster quite a few times before killing him, depending on the strength of the monster and your strength, agility and weapon. For example, if you are low on strength and agility, and have only a WHIP for a weapon and no shield, a long battle with a tough monster may kill you. Always keep an eye on your HEALTH during battle, and be ready to retreat if it gets close to zero. Watch your strength and agility also as they will drop slightly, especially against the stronger monsters. If your strength should drop below ten and you continue to attack, there is a chance that the monster will knock the weapon or shield from your hands, and you will lose it. If this happens, you may still continue to fight (using your hands), but your effectiveness will be greatly diminished. If you defeat a monster, you will gain the appropriate experience points. If you leave a chamber

TI-99/4A – Game Shelf Extended Basic Games

during an attack, the monster will rejuvenate (except the Wizard) and will again be at full strength when you return. If you are under attack and you wish to enter commands other than the ones marked with an asterisk, don't forget to hold each key down until it is displayed on the screen and then press and hold ENTER. If you see a monster in the chamber ahead, be wary, for he may decide to run down into your location. Monsters tend to roam around a bit, so always be ready for the unexpected.

TRAPS

Any item found in a chamber may have been booby trapped by the Evil Wizard. You can search for traps by ENTERing T. Searching for traps uses two HEALTH units.

MAGICAL SPELLS and DEVICES

There are thirteen different types of magic spells and devices which can be found throughout the dungeon. Any magic listed in your backpack can be used at any time (See USE and DROP). Spells used to increase strength or agility will not increase these values past fifty.

THE MAP

ENTER Q to display the map. The map will appear at the right of the screen, and is oriented so that north is always at the top. You will only be shown the areas that you have already explored, which will be marked by black squares. Your position will be marked by an "X". Displaying the map uses two HEALTH units. To get back to the game, press any key.

LEVELS

The dungeon of Bleylock Castle contains five levels. The deeper you get, the harder it becomes to survive. If you are in an exit chamber, you may if you wish proceed down to the next level by ENTERing N. You will be asked for verification if you do this. Exit chambers are the ones with openings in the floor leading down.

The computer will take a few minutes to set up each new level. Between levels, the rest you receive will boost your HEALTH value.

RATINGS

Whenever a game ends, your rating for that game will appear at the top of the screen. This rating is based on your overall performance; time, points and health values.

WINNING THE GAME

To win the game, you must reach level 5 and kill the Evil Wizard. This is not an easy task, for the Wizard has incredible strength. Unlike the monsters, the Wizard will not gain his strength back if you leave and then return. The Wizard will also allow you to pass by him. Not all spells will work against the Evil Wizard.

To replay the game, press (FUNCTION) 4, type RUN and press ENTER.

Good luck!

WARRANTY

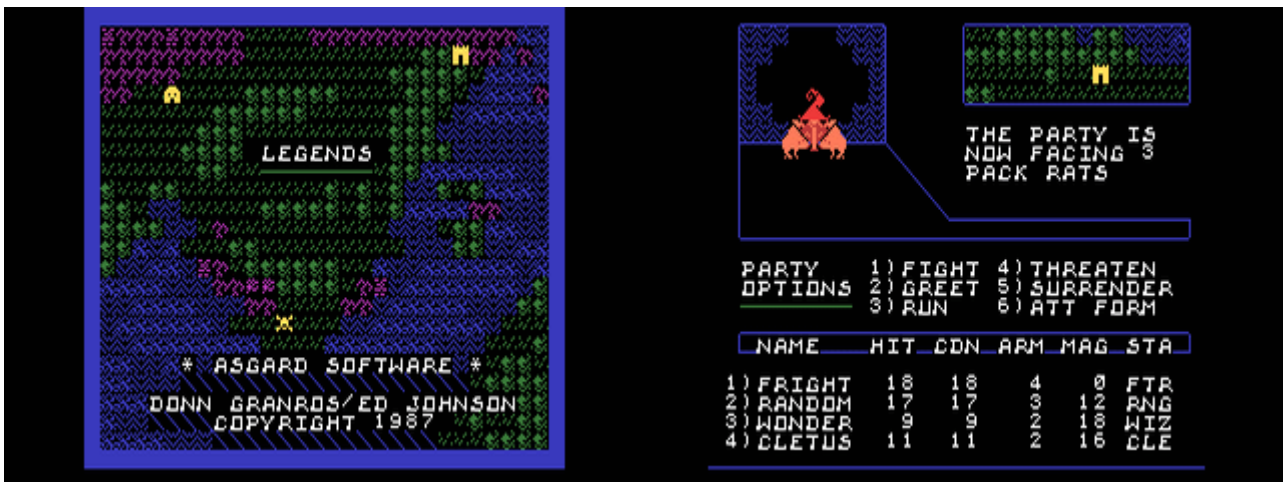
Rainbow Software warrants that the media on which this program is furnished will be free from defects in material or construction for a period of thirty (30) days from the date of delivery to the consumer. This program is provided on an "as is" basis and Rainbow Software will not be liable for any damages, including incidental or consequential damages resulting from the use or operation of this product. This warranty will be void if the product has been damaged by misuse, accident, neglect or any other cause not directly related to defects in material or construction.



15 ROSE STREET BROOKLYN, N.Y. 11236

Legends

G-7-Q [Disk: 213-LEG1] By Donn Granros & Ed Johnson



Of all the graphic adventure games available for the TI, this game (and its sequel) is the benchmark against which all other RPG's are measured. It is remarkable in its ease of use, breadth, and entertainment value. It is essentially a four characters fantasy adventure game set in the island of Edonland on the planet Legends, a land plagued by roaming monsters and Dark Knights released through the "Western Portal" by the evil mage Ashtar Creel. Your mission is to close the portal and return alive to boast the tale of your exploits. You start as a weak party whose powers, strengths and wealth grow through combat and exploration in the spirit of Dungeons & Dragons. Are you up to it?

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Legends:

[\[zipped TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[\[Version 1.1 zipped TIFILES format\]](#)

[\[Version 1.1 zipped V9T9 .DSK Format\]](#)

[Legends Manual \(PDF format\)](#)

Disk: 311-LEGE Legends I v1.0

Disk: 213-LEG1 Legends I v1.1

Start from mega menu: G – 7 – Q

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

LEGENDS



By Donn Granros
and Ed Johnson

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Part of the rather improbable history of Legends
(As reported by Fingus the Minor, famous local sage)

Several decades ago, several events occurred which altered forever the lives of the inhabitants of Edonland, located here on this planet of *Legends*.

The first could be classified as a natural disaster of incredibly large proportions. The island suffered a series of massive earthquakes. The tremors created massive fissures across the length of the island. Because of an unfortunate choice of scenic but earthquake prone locations by architects, most of the shops, mansions, hovels and churches fell into these gigantic caverns. Shortly after everything was swallowed up by the ground, more earthquakes occurred which caused the earth to shift and the fissures to close. This left a rather barren island with a whole bunch of building underneath. Wise men of the time noted that this would be bad for business. More practical types simply shrugged and took residence in their newly relocated homes, or sought to rebuild on the surface. And life went on as always, at least for a while.

Years passed with relative harmony and little stress (other than an unusually muddy front yard for some). The rich became richer (the shovel business boomed), and the peasants toiled in their fields and shops whistling quaint peasant tunes as they went about their labors.

In time, however, travellers returning from the outlands began to report strange sightings of many improbable and vicious monsters. Others reported that groups of huge, metal clad warriors would stop them on their journeys and demand gold and tribute. Needless to say, the more cautious thought perhaps some people had been drinking a

bit too much. That is until the sightings became closer and closer to the cities and the numbers increased dramatically.

By that time, wise men, noting that this was indeed bad for business, lobbied the king to do something about it. An elite group of *Legends* knights were dispatched to find out what was going on. Unfortunately, they were never seen again. To make things worse, the monsters and metal warriors (now called the Dark Knights) were roaming the countryside openly and doing pretty much what they pleased, even in the capital of Wizards Rock.

Brave members of the populace fought and many perished before even the most stubborn admitted defeat and bowed to the rule of the Dark Knights and the continuing fear of the monsters that wandered the countryside.

Still, in the quiet of the night in the back rooms of taverns some still gathered and pondered the questions "Who rules the Dark Knights and who has summoned the monsters that harm us all?".

Very recently, these questions were being argued over in the Tall Tales Pub (a local haven for adventurers and other such types), when a very old, wizened cleric staggered in, bloodied and battered, and looked over the crowd with a weary eye. The room fell silent as one after another noted the arrival of this world-worn stranger. Finally, a patron called out, "Do you know the answer to these things that we discuss, sir?" - and the cleric drew himself to his full height, took a deep breath, and said quietly as in thought "It is Ashtar Creel who you seek. It is he who stole the Magic Book of Spells and the Azure Amulet. Ashtar Creel opened the western portal to the Land of the Dead and loosed it's monsters to our verdant island. He created the Dark Knights from the dread thoughts of his evil soul and his dark magic." Spent, he collapsed on the closest bench, and said in a whisper that could still be heard plainly through the dead-silent room "The question has been answered."

Unlike any other type of game, adventures are designed to be played over a long period of time, and not at one sitting, *Legends* is no different. In fact, the world of *Legends* will most likely take dozens of sessions to explore just the island and dozens more for the six large, multi-level dungeons scattered around.

Legends is programmed in Extended BASIC with support from a large group of very powerful assembly language programs for such things as high-speed disk access and graphics. Without the months spent on perfecting and honing these routines, written especially for *Legends*, this program would be impossible.

Legends has four major segments: The Guild, the Island, and the two segments that control the six dungeons. Virtually all the remaining disk space is used to store graphics and monster data which is called by the program as needed. The program uses over 700 sectors on 2 SS/SD disks, or around 180K of code - by most standards a large program.

Disk #1: The Guild and the Island and graphics data.

Disk #2: The six Dungeons and graphics data.

Acknowledgements

From Donn Granros

Programmers, computers and people do not exist in a vacuum. They all require input and every once in a while we all benefit from a little help from our friends. So with this in mind, on behalf of Ed Johnson and myself, we would like to thank the following people who contributed to *Legends*:

From the MSP99 Users Group: Dick Dunbar, he remembered what

we never knew. Rick Rosario, for playtesting and his insights. Glenn Davis, for his highly efficient key routine, and to all the other members who supported our effort. And to several others: Jack Sughrue and his son Matthew for their time and suggestions. Chris Bobbitt for his assistance and support both for *Legends* and the TI Home Computer and its users. Barry Boone who wrote the remarkable SYSTEX loader used in *Legends*, and John Clulow who wrote the excellent DSRLNK routine.

Startup Procedure

IMPORTANT

Do Not Remove remove the program disk from the disk drive when playing *Legends*.

Legends is furnished unprotected so you can make backup copies for personal use only. It is recommended that you make a copy of the disk set and store the originals as the program permanently alters the Dungeon disk during your explorations.

Customizing *Legends* to your system

Legends is supplied on two SS/SD diskettes. If your system is capable of using double sided and/or double density disks, you can copy all the files on both disks to a single disk. The program will then bypass prompts to change the disks automatically.

Using *Legends* with a RAM-disk

If your system has at least 180K of RAM-disk storage, you will probably find it very desirable to copy all of the *Legends* files to your RAM-disk. This will greatly speed up the game (at least the disk operations of the game). Be sure to set your RAM-disk to emulate disk drive one and to copy the files back to the game disks when finished playing so as to save your game for the next session.

Loading the Legends program

Insert the "Island" disk in Drive #1 and select Extended BASIC from the menu. The program will automatically load and run. If you are already in Extended BASIC type: *RUN "DSK1.LOAD"*.

Wizards Rock

All *Legends* games start and end at Wizards Rock.

A party has already been created for your use and will be automatically loaded the first time you run *Legends*. You can change any or all of the members of the party, or just their names if you desire. Refer to the *ADVENTURERS GUILD* section for more detailed information about your party and creating a new one.

Leaving Town

After you are finished at Wizards Rock, you can press the fourth option on the Wizards Rock main menu *LEAVE WIZARDS ROCK* to leave town. *Legends* will ask you if you really want to do this and to press either *Y* or *N*. If you choose to leave you will be asked if you want to deposit some of your gold in a local bank (to protect it from monsters in case something were to happen), and then to select the difficulty level of your quest. *1* is the easiest level and *6* is the most difficult (pretty much suicidal to be truthful). You can reset the difficulty whenever you leave town, and you may want to re-adjust it upwards as the level of your characters increases.

Moving On

If you are one of those that dislikes reading instructions you may want to jump ahead to the section on *The Island and the Dungeons*. Those desiring detailed information may want to read the whole manual before beginning.

Wizards Rock and the Adventurers Guild

Playing *Legends* isn't so much one big quest but more like a sequence of smaller quests, each beginning and ending at Wizards Rock. Wizards Rock is both an outfitter and a rest stop away from the mayhem of the game. Here your party can rest, catch a drink at the pub, buy some potions from the local alchemist, or pay for training in the arts of combat and spells. When you first begin the game you come here to create a party of hardy adventurers, or later on to replace characters killed in battle.

WIZARDS ROCK MAIN MENU

Press -1- Enter the Adventurers Guild: *Legends* will go to the Adventurers Guild section described below.

Press -2- Stay at the Legends Inn: Your party will enter the Legends Inn where you can 1)*REST FOR A WHILE*, 2)*VISIT THE TALL TALES PUB*, or 3)*LEAVE THE INN*. If you choose 1) your party can get a good nights sleep. Characters will awaken feeling much better and with health and magic points fully restored. Unfortunately, staying at the inn won't revive dead characters. If you choose 2) the party will enter the pub where if you listen, you might find some interesting clues that will assist you on your quest.

Press -3- Visit the Alchemist: Your party will enter the alchemists shop. Here you can buy both healing and magic potions which are vital to the success of your quest. The alchemist will offer you what he has on hand. If you don't want what he has to offer, press "N". He will then offer you another or you can leave.

Press -4- Leave Wizards Rock: As described above in the *Startup Procedure* section.

If you want to train your characters for higher levels, create new ones, or simply save the game for next time, the Adventurers Guild is where

you want to be.

MAIN MENU ADVENTURERS GUILD

Press -1- Create a new Character: It is *IMPORTANT* that you do not use this option unless you intend to create a new character. It will alter all the attributes of the character currently in memory. This only affects the character you select (you can have one of each profession in your party), and not all the party members.

To create a new character you will first need to select the profession of the character you are creating. After deciding this, the program will then display the following:

STR DEX INT CON CHA HIT MAG

Values will be displayed under each. The higher the value, the better. See the section called *AN OVERVIEW OF CHARACTERS AND PARTIES* for more information about these things. If you don't like the randomly generated statistics, you can have the program generate a different set, over and over until you find the one you like.

After selecting a set of attributes, enter the name of the character (which is limited to 6 characters or less). The complete profile of the character will be displayed and you will be given the option of creating another character or of returning to the guild menu.

Press -2- Review Player: On selecting this option you will be allowed to view the statistics about each player individually. Press 5 to return to the guild menu after viewing the characters you want to view.

Press -3- Review Party: This option is used to look at the assets of the party in general. Such things as gold and potions are held in common by all party members. Press any key when done.

Press -4- Train: A character may wish to train for higher for higher levels as his or her experience increases. The chart below indicates the amount of experience needed by each profession to train for higher levels. The cost to train a character is higher with each level he or she wishes to advance to. Training cost is greatly affected also by the characters charisma. A character can advance through 16 levels. All new characters start at level one.

Table of Experience Required for Training by Profession

FIGHTERS Level 1 to Level 2: 700 pts + 1200 pts for each level.
RANGERS Level 1 to Level 2: 800 pts + 1300 pts for each level.
WIZARDS Level 1 to Level 2: 900 pts + 1400 pts for each level.
CLERICS level 1 to Level 2: 900 pts + 1400 pts for each level.

If you choose to train a character you will be asked: *TRAIN WHOM?*
1-4. Select the number of the character you wish to train. If the character does not have enough experience to train you will be informed how many experience points are needed before training can be done to for the next level.

Assuming you have enough experience points, the training cost will be calculated. The amount of gold required to train the character will be displayed and you must decide whether your party can afford it or not. If you choose to proceed and you have enough gold, training will commence.

Press -5- Utilities: Several miscellaneous, but important utilities are provided in this area for saving your party to another disk, taking a party from another disk, saving your game, changing the names of

your characters, etc.

BACKING UP YOUR PARTY: Only one party can be saved to a backup disk. *Legends* parties all use common file names and you would overwrite a party stored on a disk unless the party is saved to another.

LOADING AN OLD PARTY: This utility is used to load a party from another disk into the game. Unless the party is then saved to the game disk you are using, the party on that disk will remain the same.

SAVE: Will save the current status of your party to your disk. Use this option at the end of a mini-quest so that you can start the game where you left off the next time you run it. If you are using a RAM-disk make sure you copy all the files on the RAM-disk back to a physical one before turning off your computer or you will lose your saved game.

PRESSING "5" ON THE UTILITIES MENU RETURNS TO THE ADVENTURERS GUILD MENU

**** PRESSING "6" WILL EXIT THE LEGENDS PROGRAM ****

An overview of Characters and Parties

All parties in *Legends* are composed of four characters. Each of which represents a specific class or profession. Your adventuring party is made up of a Fighter, Ranger, Wizard and a Cleric. Each of these character classes represented has specific skills and abilities which, used properly, will prove important in completing your quest. While those familiar with adventure games in general will recognize the differences between these professions, and overview is provided below.

Character Classes:

Fighter: The fighter is a someone whose profession depends on his or her strength, cunning, skill with weapons, and detailed knowledge of monsters and opponents. The fighter makes up for an inability to cast spells with an uncanny ability to evaluate his or her foes, and brute strength and power. The fighter is essential in any quest to protect the weaker characters with more specialized skills.

Ranger: The ranger is one with nature. Like the fighter, he or she is skilled in the arts of combats, and like a cleric he or she is capable of casting spells. A ranger has a complete knowledge of the environment, and is much like the famed woodsmen of ancient lore. A ranger is useful in a quest as an aid to both the fighter and the cleric.

Wizard: The wizard is an adept of the arts of magic. Magic is his or her ally and foe. The wizard studies magic and is familiar with all it's forms, and in it's use. While in the beginning a wizard is quite weak, more experienced wizards can cast spells powerful enough to strike down the strongest opponents in a single blow, and shake the very earth. As part of a team, the wizard can make the difference between death and success.

Cleric: The cleric is a person with most profound religious beliefs. Through studying his or her god, he or she becomes familiar with the arts of healing, and of those of combat. The cleric gains this knowledge through an intimate association with the rites and ceremonies of his or her religion. The cleric's fighting and healing abilities are essential to the success of any venture.

Character Attributes:

Although you cannot alter the basic composition of your party (one of each class), you can create the individual members that make up the party. The skill and care which you employ when creating characters has a major effect on your success. The following is a list of

the attributes which apply to the characters you create:

STR (strength): Refers to physical strength, important in combat. Fighters need great strength to wield more powerful weapons.

DEX (dexterity): Refers to agility. This is important to all classes as it effects such things as skill with weapons, disarming traps, and casting spells. In combat, dexterity is a major factor in how well you are able to parry against the attacks of monsters.

INT (intelligence): This is important primarily for spell-casting. It effects the maximum amount of magic points (see below) that a character can acquire. It also important for disarming traps.

CON (constitution): This attribute refers to how much a character is able to stand the rigors of travel and combat. The greater the constitution, the more hit points a character has (see below).

CHA (charisma): A characters charisma refers more to personal magnetism then how the character looks. A charming person may have more charisma then someone who could win a beauty contest. Characters with low charisma will pay a lot more for training and the total charisma of the party is considered when you are buying potions.

HIT (hit points): This number represents the maximum amount of damage that a character can receive before being killed. When a monster attacks a character, the damage sustained is reflected in this number decreasing. The number of hit points can be restored to it's original level after resting at an inn or through potions. This base amount of hit points can be increased through training. *CDN* represents the current amount you have and *HIT* represents the maximum you can have at one time.

MAG (magic points): This is the maximum amount of magical power a character has at his or her disposal. Every time a spell is cast, this number decreases, but can be restored to it's original level by resting at an inn or through potions.

Character Bonuses due to Professional Class:

Characters of one profession naturally have an advantage over other characters and opponents in their profession's specialty. For example, a fighter would be expected to fight better than other characters in combat because he or she has had more training in that specialty. These bonuses are detailed below:

Fighters: Have a +3 chance on attacks and +2 in defending against attacks from monsters.

Rangers: Have an automatic +1 on attacks, +2 on defense, and +12 to successfully disarm traps.

Wizards: A +5 on casting spells successfully and a +5 on resisting magic attacks.

Clerics: Has a +4 in defending against monster attacks.

These bonuses can be increased if the character has a very high number for his or her "prime requisite" - or primary skill of his or her profession (strength for fighters, etc.). Very strong fighters gain a bonus in their attacks and in defense, while highly intelligent wizards cast spells better than a wizard of average intelligence, and so on.

Additional Skills:

In addition to the skills mentioned above, there are other skills which are necessary for day-to-day survival and are effected directly by the basic attributes. These are such things as the Attack, Protect, Cast Spell, Resist Magical Attack, and Disarm Traps skills. Characters progress in these skills solely through additional training. The skills learned are added to the bonuses a character may already have by virtue of class or high attribute scores in some areas.

The Island and the Dungeons

After leaving Wizards Rock and the Adventurers Guild, your most immediate destination is the Island of *Legends*. Because of Ashtar Creel, conditions aren't all that healthy for adventurers right now. Quite a few wandering monsters have been seen wandering about, and some of them are quite bloodthirsty. Rumor has it that the portal entrance to the monsters home is in the south, and hence the closer you get to the entrance the nastier and more deadly the beasts encountered. The worst are the Dark Knights found everywhere.

Fortunately, Dark Knights, for all their fighting ability, are pretty lousy at hiding their presence - in other words you can see them coming a mile away. An astute party will avoid them at all costs at least until it's characters are to a level where they can handle these metal behemoths better.

As your explorations of the island continue, you will come across teleporters and entrances to the dungeons. Most teleporters, if you know the codes, will take you to Wizards Rock (though it isn't certain where they will go, unfortunately). The dungeons are portals to the world beneath where greater challenges and treasures beacon.

Finally, no matter where your party is, it is recommended that you keep your party ready for combat at all times. After a battle make sure your characters are healed and their magic points restored if necessary. This can be done by staying at one of the inns scattered about, or by using potions purchased ahead of time. This takes us to the next section, *Combat...*

Combat

As your party travels and explores there is one sure guarantee, you will fight many battles. Virtually any type of monster can cause difficulty for a beginning party and many are capable of defeating even a powerful party if you aren't careful.

When you encounter a monster in *Legends* you automatically shift into the combat mode. The number and type of monsters you are facing is shown on the upper right side of the screen. Immediately above is a small window which shows your current location, either on the island or in the dungeons. You may be surprised, and if so the monsters attack first, otherwise your party has the option to. Other relevant information is also displayed and described below.

When you first enter the mode your party is presented a number of options:

- 1)FIGHT 2)GREET 3)RUN 4)THREATEN
- 5)SURRENDER 6)ATT FORM

FIGHT: Switches *Legends* into individual combat mode.

GREET: This is essentially saying "hello" to the monsters. The monsters may want to avoid a confrontation and greet you and leave, or attack you despite your attempt to be friendly.

RUN: Select this if you want to attempt to flee from combat.

THREATEN: Sometimes, if you intimidate the monsters enough, they will give you gold to leave them alone.

SURRENDER: If you have enough gold, you can bribe the monsters into letting you pass.

ATT FORM: If you want to change the order in which your characters fight, you can use this option, *ATTack FORM* to do so.

When you enter individual combat mode, more options are available to the user:

1)HIT 2)LUNGE 3)PARRY 4)CAST

HIT: This means taking a normal swing at your opponent.

LUNGE: This is a less controlled, wilder attack. While the amount of damage that can be inflicted is higher, your characters chance to hit is less.

PARRY: If you want a character (particularly one that is hurt badly), to assume a defensive stance during the monsters turn to attack, this option should be selected.

CAST: Refer to the manual on *MAGIC SPELLS* for more information on the type of spells that can be cast by the individual characters.

Legends will constantly display the results of your attacks on monsters and the monsters attacks on your party as the battle progresses.

A few thoughts on Monsters

The only good monster is a dead one? Maybe... However, in all seriousness, it is important for your party's survival that you know as much about monsters as possible.

There are approximately 45 species of monsters who are known to inhabit the island of *Legends*. All of them dislike adventurers, except when roasted over a low flame. Monsters have varied skills. Some are only so-so at attacking and defending skills, while others have great skills in those areas, and lots of hits points to boot.

Some monsters can cast spells of various kinds. Certain high level

monsters can even cast the devastating *Firestorm* spell as effectively as any wizard. A seemingly weak monster can destroy an entire party if given time to cast it's spells.

Finally, remember that it is often better to use words before resorting to combat. Also, some will give you quite a bit of gold if you let them get on with terrorizing peasants and such.

Magic

Rangers, Wizards and Clerics can cast spells in *Legends*. While the description of exactly what they can cast is given over the the *MAGIC SPELLS* manual, it is worth mentioning some things here first.

Rangers generally are the weakest magic users. Their spells are usually defensive in nature. On the other end of the spectrum, Wizards have the most powerful spells. However, this is not to say that each class doesn't have advantages in spell-casting. Ranger spells often need less magic points to be cast, and often provide much-needed backup to the Clerics essential array of spells. Clerics have very powerful spells in the form of *Turn Undead* and *Weakness*, in addition to their collection of protection and healing spells. Wizards, finally, have very powerful spells like *Rot Armor*, *Firestorm*³ and *Strength*. Furthermore, Wizards get the important *Dispel Magic* much earlier than do Clerics. Wizards need their spells more because they have little talent for combat - and do the least damage when they hit anyway.

Finally, it is important to note that spells are absolutely essential to your success or failure. Ashtar Creel created all this havoc with magic, and the only way it can be cleared up is with more magic. Let's just hope your characters have enough...

Events, Objects and other things of Interest

Scattered around the island and the dungeons are numerous things of interest. In the following description the notations "I" and "D" indicate whether something is located on the island or in the dungeons.

INNS (I): Inns are found throughout the island from the coasts to the mountains. The cost to stay at an inn is 250 gold pieces - 10 to the innkeeper and the rest to the Dark Knights for property taxes.

ICONS (I,D): These can be found both on the island and in the dungeon ruins. Some can provide clues, while others provide more information about the area you are exploring.

TELEPORTERS (I): You will find teleporters scattered over the island. A code number is required to activate them, but unfortunately we forgot the numbers, sorry. All teleporters will transport the party from where they are to Wizards Rock, maybe. The teleporters, for some odd reason, will disappear after five attempts to guess the right code. They will reappear if they see you leave and you come back later.

ITEMS (D): These can be weapons, armor or shields. The power of an item is rated by *Damage Value* or *Protection Value*. Taking an item requires that the character drop the weapon, armor or shield he or she is currently carrying. Depending on a characters class or strength, you may or may not be able to use an item. If the item is a weapon of some type and the character is not qualified to use it, *Legends* will check all characters present and if no one is qualified to use it, it will respond: "NONE OF YOU CAN USE THIS". Otherwise, you can try to have another party member take it. You may wish to note that items not taken by the party are lost irretrievably (they usually leave in a huff - you know how touchy they can be). Wizards are also restricted in what they can use.

TRAPS (D): Some dungeons have been protected with traps of various types. You can avoid a trap by choosing not to disarm it. But traps sometimes will block your path, or are guarding a valuable item or chest, and hence must be disarmed. Assuming that you wish to disarm the trap, *Legends* will display the *Disarm Traps* screen, and ask you who will disarm it. If a character fails to disarm a trap any number of things could occur - the trap may be designed to injure only one character or the whole party. Weak characters could die. Intelligence and Dexterity are major factors in trap-disarming ability. Rangers automatically have an advantage because of their special skills, but could actually be worse at this than other party members if he or she is particularly clumsy or stupid. No experience is gained in disarming traps.

TREASURES (D): These are located in chests scattered throughout the dungeons. Contents can include gold, potions, items, or the occasional deadly trap.

COFFINS (D): Coffins and crypts are also found in some dungeons. They contain gold or potions, and sometimes something that will slither out.

SECRET PASSAGES (D): Passages are located in almost all dungeons. Traps or monsters could be lurking in them just waiting to explode or stomp your party into oblivion.

SECRET DOORS (D): Doors are located in most dungeons which connect one part of the dungeon to another. Most dungeons have several parts which must be explored to solve your quest (we never said this was going to be easy!). If you choose to go through a secret door, you will be asked if you want to "SAVE THIS SCREEN? Y OR N". If you type "Y" the section of the dungeon you are leaving will be saved exactly as you left it, meaning the traps you have disarmed will stay disarmed, dead monsters stay dead, etc. Funny things these magic doors.

EVENTS (D): In *Legends* there are quite a few non-combat encounters with the local denizens of the dungeons. These can involve either your party and a person or an object of some type.

QUEST OBJECTS (D): These ultimate reasons for your quest are located in the dungeons. Two are needed to cast the spell which will close off the monster's portal to this land. These objects might require the name of a certain spell to be effective. Another quest object may assist in some other fashion. Unfortunately, no one we've talked to seems to know the details about it.

HEAL-O-MATIC (D): These vending machines have been installed in some areas. An enterprising gnome noticed the large numbers of traps in some areas were killing off inhabitants left and right. So, he opened up a franchise in which a miniature cleric would sit in a vending machine. When you drop in 300 gold pieces the cleric wakes up and will heal a party member. A really neat concept.

WIZARDS ROCK TEMPLE (I): This temple was locked up years ago by the Dark Knights. It was formerly a place of great power and the High Clerics in it were renowned for their goodness and decency (no wonder the temple was closed).

POTIONS (I,D): There are six different potions available in *Legends*. Actually, there are two types and they come in three different strengths. Potions are entirely beneficial - some will heal wounds and others will restore magic points. The following is a list of their effects: *HEALING1* restores 1 to 9 hit points, *HEALING2* restores 1 to 20 hit points, *HEALING3* restores 1 to 40 hit points, *MAGIC1* restores 6 to 18 magic points, *MAGIC2* restores 7 to 25 magic points, and *MAGIC3* restores 8 to 30 magic points. Potions can be purchased from either the alchemist of Wizards Rock or found in the dungeons.

Terms and Abbreviations

AC,ARM... Armor class, the higher the better armor you have.
ATTK... Attack skill.
CAST... Spell Casting skill.
CDN... Condition, or number of hit points remaining before death.
DEFY... The Resist Magic Spells ability.
EXP... Number of Experience points.
HIT... Number of Hit points the player can have.
PRO... Protection bonus.
PROTECT LEVEL... The AC or armor class of an item.
STA.. Character status - this area will turn blue if a character is dead or otherwise will display the characters class.

Suggestions for Playing

- (1) Find a way to enter the Wizards Rock Temple. It will help you throughout your quest.
- (2) Find the correct numbers to activate the teleporters. A fast escape from some areas can be an excellent decision.
- (3) If you find information of value, write it down. In some areas you will need *VERY* specific information.
- (4) Passive magic spells can sometimes be more effective than Active magic spells depending on the monsters you are facing.
- (5) Always rest at the Legends Inn after training a character so he or she is up to his or her new maximum hit and magic points.
- (6) Remember that all dungeons have multiple levels (as many as four). Sometimes the doors are hard to find, but they are there.

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COMBAT REFERENCE SHEET

1)FIGHT 2)GREET 3)RUN 4)THREATEN
5)THREATEN 6)ATT FORM

FIGHT: Switches *Legends* into individual combat mode.

GREET: This is essentially saying “hello” to the monsters. The monsters may want to avoid a confrontation and greet you and leave, or attack you despite your friendly overture.

RUN: Select this if you want to attempt to flee from combat.

THREATEN: Sometimes, if you intimidate the monsters enough, they will give you gold to leave them alone.

SURRENDER: If you have enough gold, you can bribe the monsters into letting you pass.

ATT FORM: If you want to change the order in which your characters fight, use this option, *ATTack FORM* to do it.

Choosing *FIGHT* brings up the following menu:

1)HIT 2)LUNGE 3)PARRY 4)CAST

HIT: Take a normal swing at your opponent.

LUNGE: A less controlled, wilder, but potentially more devastating swing.

PARRY: Used for placing a character in a defensive stance during the monsters turn to attack.

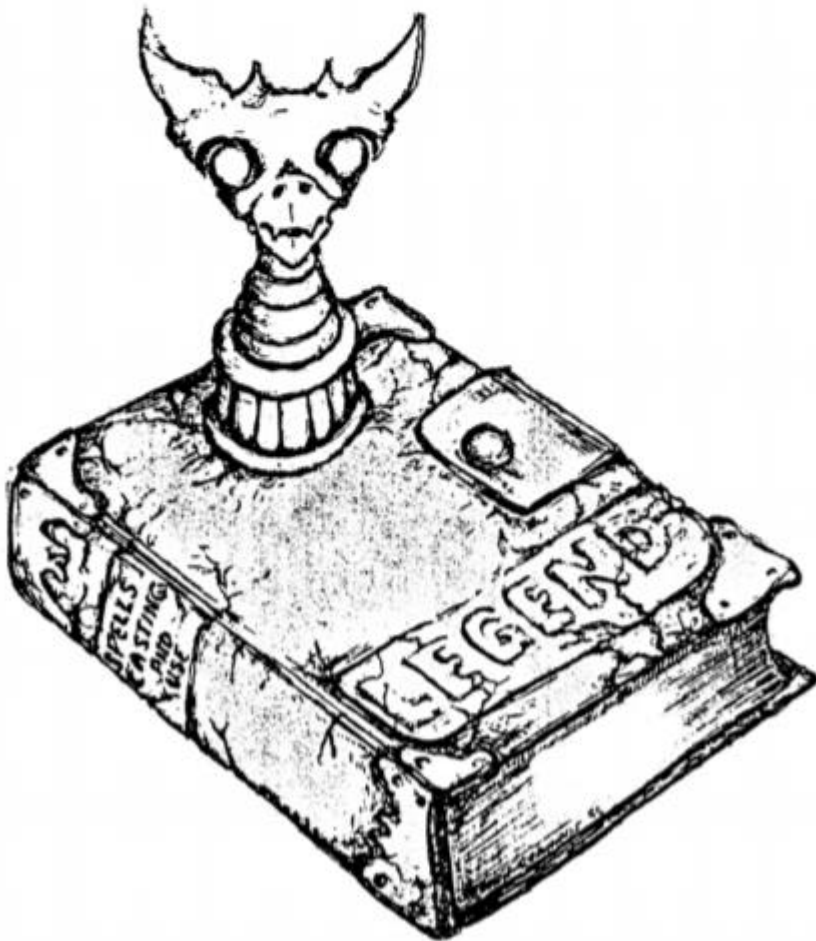
CAST: Used to cast magic spells or evaluate monsters.

Embarrassing Addition to the Legends Manual

Unfortunately, when we were writing the manual, as often the case, we forgot to note something. Usually, when this occurs, it's relatively minor. In this case it isn't. When you are on the Island or in a Dungeon, and are not in combat mode, you can press the Arrow keys to move your party around (E,S,D,X) and the Q key to bring up an action menu. In this menu you can do an inventory of your party's assets, or use the party's potions to restore health and magic points. When you select the action menu, no other events can occur (no wandering monsters can attack, etc.), and hence it is an effective “pause” key. Simply select the third option of the menu to continue the game.

LEGENDS

Magic Spells



MAGIC USE IN LEGENDS

Magic spells play a very important part in Legends. Using spells properly and with good judgment can determine the success or failure of even the strongest party. Magic spells fall into two basic categories: Active and Passive.

Passive and Active Magic

Passive magic spells always work. These include healing spells and other spells to protect the members of the party in combat.

Active magic spells are more difficult to cast successfully. These spells take into consideration the cast spell skill of the caster versus the resist magic ability of the adversary the spell is being cast upon. This type of spell is offensive in nature and is intended to cause damage to an opponent.

Each spell requires a certain amount of energy to cast. These are called *Magic Points*. A character can restore depleted Magic Points by drinking Magic potions or by staying at the local inns to rest.

Types of Spells

Firestorm(1-3): This fires a blast of pure energy at the opponent the spellcaster is facing in combat. Depending on the spell level and the skill of the caster, the spell will do the following damage:

FIRESTORM1 - 1 to 10 damage
FIRESTORM2 - 1 to 40 damage
FIRESTORM3 - 1 to 99 damage

Dispel Magic: Neutralizes any monster's spells currently in effect.

Lifesteal: Does no immediate damage but robs all monsters you are fighting of some of their hit points.

Rot Armor: Destroys all or part of a monster's armor, making them more vulnerable to attack.

Resist Magic: Renders the party less vulnerable to spells cast by attacking monsters.

Weakness: Lessens the amount of damage a monster can do if he strikes a character.

Turn Undead: Will immediately destroy any one undead creature. Works only on undead creatures.

Healing(1-3): Allows the spell caster to heal some or all of the injuries of any party member, including the caster. Depending on the level of the spell and the skill of the caster, it will restore hit points as noted:

HEALING1 - 1 to 10 hit points

HEALING2 - 1 to 20 hit points

HEALING3 - 1 to 32 hit points

Casting Spells

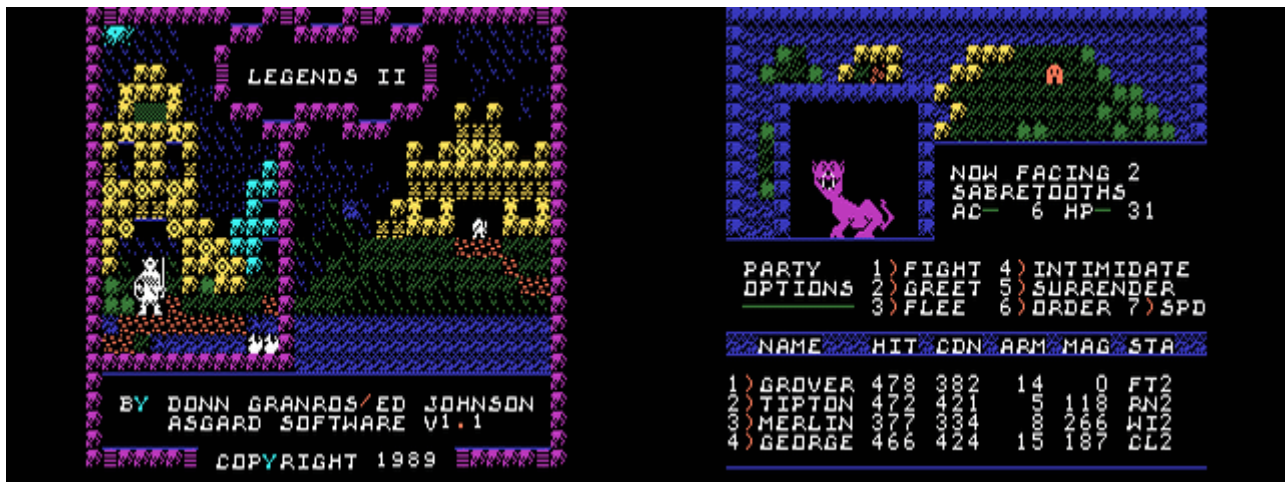
Magic spells can only be used in combat. To cast a spell, press "4" on the individual combat action list. Legends will then prompt "CAST WHICH SPELL?" At this point, press the number of the spell you wish to cast. You will not be able to cast the spell if you haven't learned it yet (i.e. you aren't at the required Level) or if you don't have enough magic points. If either is the case, you can press the number for "EXIT CAST PHASE" or choose another spell.

TI-99/4A – Game Shelf Extended Basic Games

Class	Spell No.	Spell Name	Level	Type	Magic Pts. Req'd
WIZARD	1	FIRESTORM1	1	A	2
	2	DISPEL MAGIC	2	A	3
	3	STRENGTH	3	P	3
	4	FIRESTORM2	4	A	4
	5	ROT ARMOR	5	A	5
	6	LIFESTEAL	6	A	6
	7	FIRESTORM3	7	A	6
	8	RESIST MAGIC	8	P	7
	9	EXIT CASTING			
CLERIC	1	HEALING1	1	P	2
	2	PROTECTION2	2	P	3
	3	HEALING2	3	P	4
	4	DISPEL MAGIC	4	A	4
	5	TURN UNDEAD	5	A	5
	6	WEAKNESS	6	A	6
	7	HEALING3	7	P	6
	8	FIRESTORM2	8	A	5
	9	EXIT CASTING			
RANGER	1	HEALING1	1	A	2
	2	PROTECTION1	2	P	2
	3	FIRESTORM1	3	A	3
	4	HEALING2	4	P	4
	5	FIRESTORM2	5	A	5
	6	PROTECTION2	6	P	5
	7	EXIT CASTING			
FIGHTER		CASTING WILL "EVALUATE" THE MONSTER, DISPLAYING INFORMATION ON ARMOR CLASS, STRENGTH, AND DAMAGE CAPACITY			

Legends II: The Sequel

G-7-R [Disk: 214-LEG2] By Donn Granros & Ed Johnson



As the title indicates, this adventure is the sequel to Legends I, and although it can be played as a standalone game, it is highly suggested that you import your high level characters from Legends I because it is more challenging. Game mechanics remain essentially the same, but there are many graphical improvements. If you liked the first Legends installment, then you will surely love this one.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Legends II, The Sequel:

[\[zipped TIFILES format\]](#)

[\[zipped V9T9 .DSK Format\]](#)

[Legends II Manual \(PDF format\)](#)

Disk: 214-LEG2 Legends II v1.1
 Disk: 312-L2DS Legends II v1.0
 Disk: 313-L2CN Legend Character Converter

Start from mega menu: G – 7 – R

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Legends II: The Sequel



By Donn Granros

.....
Produced by Asgard Software

Boredom settles on Legends...

After fighting dark knights and evil monsters, vanquishing Ashtar Kreeel and closing the Western Portal, going back to a life of trading lies in the Tall Tales Pub seemed very hard. Sure, you could have rested on your laurels and driven your future grandchildren crazy repeating the stories of your exploits over and over, but you felt too young to let moss grow over you yet.

Hearing of recent sightings by fisherman of a new land over the Eastern ocean, you and your comrades gathered arms and armor and charted a ship to sail you to the land over the horizon. After an arduous voyage (which you mainly spent guarding the railing against sea-monster attacks, or so you told the laughing sailors), land was finally sighted.

As luck would have it, though, a storm began brewing as your vessel approached the shore. High winds whipped enough cold ocean-spray to drench you to your bones as the dark waters churned and the sky became as dark as night. Afraid of the one monster you can never best, the sea in all its fury, you and your friends retired to the ship's cabin. After minutes of rocking and buffeting, the ship began to creak and groan. Then, you heard a massive crunch - the ship was going down! You grabbed your weapons and as many of your possessions as you could and scrambled up the stairway as water began to flood your cabin.

Your ship was foundered on the shoals at the entrance to a bay, which the pilot, for good or ill, attempted to enter to weather out the storm. As the ship began to list to the side and massive waves crashed on the deck, you and your party hurriedly stripped off your armor and abandoned most of your weapons and gold. Heavy armor and weapons, despite their uses, are not an asset when trying to do the backstroke.

Sighting one of the few remaining lifeboats you jumped aboard as the huge ship sank from view.

At this point you were reconsidering the wisdom of not becoming a farmer, like your father.

With the longboats lashed together, the sailors started to row away from the forbidding rocks that guarded the entrance to the safe harbor ahead - rocks that your ship, unfortunately, didn't avoid as well. Suddenly, a sailor to your left gave out a cry, and pointed inside the harbor. Lights! Everyone saw them and let out a cheer... civilization and, perhaps, safety ahead!

Hours later, after the storm died, your boat pulled to the beach about a mile or two away from a town on the shore of the bay. Resisting the temptation to kiss the ground, you and your party headed towards the town wearing nothing but rather damp underwear. You hoped that this style of dress was not considered too unusual in this part of the world.

Upon entering town, the arrival of your party in its current state of attire, was preceded by hoots, howls and guffaws by some of the village louts. Several more compassionate citizens supplied your band with poor but serviceable clothing after hearing of your plight.

Now, dressed and feeling just a bit less conspicuous you ventured farther into town to explore and get your bearings. During your wanderings you ran into the ship captain and his crew. After exchanging greetings and wishing each other luck, the captain headed off in search of another ship. Your party ventured off towards the nearest tavern - which as any experienced adventurer knows, is the best place to ask for information (besides, you could use a few drinks right now).

An hour later, you've learned quite a few things. One, you don't have nearly enough money to pay for passage home (after all, most of your gold is now sitting at the bottom of the ocean with the fishes). Two, you overhear many interesting tales, one of which concerns a hidden treasure trove. Maybe, just maybe, there is an adventure here for you.....

What Is Legends II: The Sequel?

As the title indicates, *Legends II: The Sequel* , is a sequel to the enormously popular *Legends* ' fantasy role-playing graphics adventure, also by Donn Granros. This program is a continuation of the previous game. This manual assumes that you have read the manual for *Legends* ' and you are familiar with the terms and concepts in it.

If not, please re-read pages 8-13 of the *Legends'* manual for information about characters, parties, the various classes, and so on. You may also wish to refer to the sections "Combat", "Monsters" and "Events, Objects and Other Things of Interest". There are many differences in these areas from the first game, which will be noted in this manual, but many similarities as well. It is assumed that you are familiar with *Legends'*.

Legends' is not required to play *Legends II:The Sequel'*, but it is highly recommended. If you use the stock players that come with the game it will prove very difficult to solve. Your characters have a distinct advantage depending on how far they progressed in the original game - what levels they achieved, the number of quest objects they found, and the amount of gold and weapons they garnered in the first game.

Startup Procedure

Legends II:The Sequel' is distributed on three disks - appropriately labeled "Disk 1", "Disk 2" and "Disk 3". This game is undoubtedly the largest ever written for the TI-99/4A (who else would be stupid enough to spend over a year writing such a game for a "dead" computer?).

The game is a combination of assembly language and Extended BASIC, and requires the Extended BASIC module, 32K and a single disk drive, or a Geneve 9640. A color monitor is recommended to fully appreciate the graphics.

Before doing anything with the game, load a disk manager and back-up copies of the game disks onto new disks. If you have Double-Sided/Double-Density disk capability, you can place all of the disks onto one disk. Store your original disks in a safe place. Don't give away copies of either to your friends - we didn't put copy-protection on this software for your convenience, and because we trust the TI community will purchase our software and keep us in business - not because we don't know how.

If you currently own a copy of *Legends*, you can transfer your party into *Legends II* if you wish. Refer to the section entitled "TRANSFERRING YOUR *Legends* PARTY INTO *Legends II*". If you have not played *Legends* a pre-made party has been furnished for your use.

Loading Legends II

IMPORTANT: DO NOT REMOVE THE PROGRAM DISK FROM THE DRIVE WHEN PLAYING *Legends II*.

1)If you do not wish to transfer your party from *Legends* into *Legends II* then turn on the computer, insert "DISK 1" in drive #1 and select Extended Basic from the menu. *Legends II* will automatically load and run.

2)If you want to transfer your *Legends* party into *Legends II* please refer now to the following section.

Transferring your Legends party into Legends II

1)Insert "DISK 3" into drive #1 and select Extended Basic from the menu. The conversion program will automatically load and run.

2)When loaded the conversion program will prompt you to: "INSERT YOUR *Legends* DISK INTO DRIVE (1)". NOTE: This can also be any disk which contains your *Legends* 1.1 party file.

3)After you have inserted "DISK 1" then press any key to proceed with the conversion process.

After your party file has been loaded, characters will be converted automatically. As each character enters *Legends II* his name will be displayed on the right side of the screen.

When all characters have been converted *Legends II* will display: "YOUR PARTY HAS ARRIVED".

4)You will now be asked to Insert "DISK 3" into drive #1. When ready, press any key and a copy of your party will be made on "DISK 3".

5)When this process is finished, you will be asked to Insert "DISK 1" into drive #1. Your party will then be saved to "DISK 1".

6)After saving your party to "DISK 1", you will be asked if you wish to begin *Legends II*. Press Y if you wish to start or N if you wish to exit the program.

NOTES ON THE CONVERSION PROCESS: Everyone enters *Legends II* as a third level character regardless of the level achieved in *Legends*. However, higher level characters from *Legends* will arrive in *Legends II* with significant advantages over lesser characters. They will start *Legends II* with better skills, more hit points, and larger starting amounts of gold and potions.

Grumble Village

This is the only town in this area of *Legends*. Geographically it is located somewhat to the east of the town of Wizards Rock which was the central town in *Legends*. Points of interest in Grumble are detailed below:

THE GRUMBLE VILLAGE MAIN SCREEN

GOTO:

- 1)INN
- 2)POTIONS
- 3)TEMPLE
- 4)TRAINING

VIEW:

- 5)PARTY ASSETS
- 6)MEMBERS
- 7)UTILITY
- 8)LEAVE

Press the number next to the name to visit that area.

THE INN:.....

1)*REST YOUR PARTY*, this is a great place to rest after a hard day of adventuring. Characters will have all hit and magic points fully restored after resting. However, this will not help dead characters.

Legends II: The Sequel - Asgard Software - Page 5

2)**HEAD FOR THE TAVERN**, this is the primary social area of Grumble. Your party should pay careful attention to the conversations that you overhear. Some may be true and others might be total nonsense, you will have to find out for yourself.

3)**EXIT**, returns to the main screen

POTIONS:.....

As you enter this shop you will be greeted by a very old creature. He asks if you wish to see his wares. If you do press Y or N if you wish to leave. If you wish to buy a potion, The list of available items will be displayed along with the price and the amount of gold your party has available.

You can continue to buy potions, providing you have enough gold, or can leave at any time. If you try to buy a potion which costs more than the gold you carry you will be politely evicted by the proprietor.

TEMPLE:.....

Nevis Fred is the Mercenary Temples only priest. His concerns rest solely with reviving the dead. Unless one of your party is dead he will show little interest in talking with you as he is generally kept quite busy in this game.

He charges 500 Gold per resurrection cash only. BLUE CROSS, PHP, GROUP HEALTH and credit cards not accepted.

TRAINING:.....

Big Arnie runs the Grumble Adventurer Training Center. He acquired considerable experience in this area by starring in a series of mostly forgettable but violent films.

Upon entering the training center, you must select the character who wishes to train. Select character 1 to 4 or press 5 if you decide to leave.

Whether or not a character can be trained is dependent upon experience gained. If a player has not gained enough experience, you will be informed as to how much more will be required to advance in level.

Assuming that your character has the required amount of experience, the training cost will be determined by Big Arnie. You can decide at this point if you wish to proceed.

VIEW PARTY ASSETS:.....

Displays your parties current holdings. You will be shown how much gold you possess, how many potions and what items you have found, if any.

VIEW PARTY MEMBERS:.....

Displays "VIEW WHOM 1-4, 5 EXITS". Press the number of the character you wish to examine or 5 to exit. Shows your characters current status.

UTILITIES:.....

- 1) **SAVE GAME.** Saves your party file to game disk (1)
- 2) **BACKUP PARTY.** Saves you party file to another disk.
- 3) **LOAD OLD PARTY.** Use only if you wish to replace your current party file with another Legends II party.
- 4) **RENAME PLAYER.** Allows you to rename any of your characters in your party. At the prompt "ENTER A NEW NAME" type in the new character name (no longer than 6 characters) and then press enter. The program will the display "GIVE TO WHOM? 1-4, 5 EXITS". At this enter the number of the character whose name you wish to change or press 5 to abort.
- 5) **EXIT UTILITIES.** Returns to main menu.
- 6) **EXIT LEGENDS II.** Does what it says.

LEAVE:.....

This command allows you to leave Grumble and venture into the world outside. You will be asked to confirm your choice, "REALLY WANT TO LEAVE? YN". Select "Y" to proceed or "N" to remain in Grumble.

DIFFICULTY LEVEL:.....

Assuming that you really are leaving you will be asked to "SELECT DIFFICULTY LEVEL 1-8". Level 1 is the least difficult and level 8 should not be attempted by any but the strongest, most experienced parties.

Difficulty level directly alters the strength, number, attack skills, and damage capacity of the monsters you will face. As your party advances you may wish to alter the difficulty level up as you also gain more experience and gold at the higher levels.

After confirmation of your choice of level you will be on your way out of town.

Legends II, The World Outside and the World Underground

The world outside Grumble is a hostile and dangerous place. But then you and your party have chosen a the adventurers path and as such must accept danger and adversity in your quest for knowledge, fame and fortune. More than a few obstacles will block your way and your enemies are many. But, during your quest you may also find some friends.

On and Around Femble Island

GEOGRAPHIC FEATURES. As you travel you will find yourselves traveling over plains and fields, into primeval forests, through dark swamps, and into the ruins of old fortresses and over old pathways.

ISLAND INHABITANTS. There are quite a few species of monsters known to reside in the area. The safest areas to travel over are the plains and fields which comprise the bulk of the territory. Lower level parties may wish to confine most of their initial explorations to these areas. Dragon sightings have been reported in the flower fields, some dragons are known to have a great love of flowers, and titans live in the swamps. Orc patrols have been seen in the forests and evil sorcerers travel the pathways.

Little is known about the ruins other than there seems to be a large amount of activity in their vicinity. Reports also indicate that unusual numbers of trolls have been sighted, mainly in the area of Troll bridge and nearby areas.

OTHER THINGS. Aside from monsters, your party may want to carefully look over the area. There are things of interest that may be quite hard to detect. Rumors hint of some secret passages located in the ruins. You may also find other useful information by listening carefully at the *GORFIL INN* located in beautiful downtown Grumble.

SAFE HAVENS. Rangers have special talents in the wilderness. Assuming that the parties ranger is alive he may be able to find safe areas where the party can rest for a time and heal wounds and restore spent magic points. If your ranger discovers such an area the program will display... "RANGER FINDS A SAFE HAVEN." At this point you may wish to press the "Q" key to enter camp. You may then select "REST" from the CAMP menu.

If you choose to rest, your will be prompted "REST HOW MANY HOURS?". The longest the party can rest at one time is 24 hours. Enter the time you wish to rest as 01-24 and press ENTER. Up to 24 hit points and 24 magic points will be restored as you rest.

After 24 hours there is a great probability that the area will no longer be safe to rest in. Assassins may attack your party in their sleep and you will find yourselves in battle unprepared. As such you will enter combat at a negative 6 to the parties armor class.

Once your ranger finds a "Safe Haven" you may wish to notes its Location for future use. To assist in relocating this or other things you may find, press the "A" key. When pressed the "A" key will show information regarding the parties current location. IE, WHICH SCREEN YOU ARE NOW ON, AND CURRENT ROW, AND COLUMN POSITIONS.

Legends II, In the Dungeons

As you explore you will encounter entrances to various areas located below ground. Some of these areas are monster-ridden and some are not. All hold great dangers. Some also contain great treasures. Here too, may lie the secret of your quest.

Explore these areas with great care. The dungeons do not suffer fools lightly. Every step may be your last.

(Editors note: "Gee whiz, is it necessary to be so dramatic, I thought you told me this game was supposed to be like WHEEL OF FORTUNE. Who will want to play a game where you have to think and might croak at any time. Good grief. what have you done?")

Any how, excuse the interruption but any one who thinks they will find Vanna White in a dungeon should consider another game. Besides that guys last great idea for a program was "Checkbook Parcheesi". Anyhow, maybe we can now move along without having to endure further nonsense from this guy.

OF MONSTERS AND DUNGEONS. Your valiant band of heroes will indeed have to survive many encounters with the local, and colorful, monster population. There are approximately twenty types that you may encounter during your explorations. Some monsters possess special capabilities, all are lethal to the careless or unprepared party. After winning a battle, you will not be in immediate danger of further confrontations until you start moving again. This would be a good time to use your store of potions to renew lost magic points and to heal wounds that your party may have suffered in combat.

At some points you will encounter guardian monsters who will demand that give them a specific password before allowing your party to proceed. The guardians are immensely powerful and are not terribly patient. They can destroy almost any party with little effort. Unless your goal is having your party totally destroyed, do not engage them in combat. They will not accept bribes to let you pass, and you cannot run away. If you don't know the passwords, you have missed finding the book that contains them and you may wish to consider going back to find it.

A FEW HINTS:

- 1) Do not confront undead type monsters until your cleric has advanced to fifth level and has learned the "TURN UNDEAD" spell.
- 2) Be aware that each monster has a different level of magic resistance. Note which monsters are difficult to cast spells upon so you will not waste valuable magic points. As your magic users gain experience and greater levels, their ability to successfully cast spells also improves.

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3) Keep enough gold in reserve so your party can surrender if it appears that you will be defeated. Most monsters will take bribes and will then leave. Generally it is useless to try to bribe guards. They tend to be very offended at this and will attack.

4) Explore the dungeons slowly. If you are nearly out of potions and your party is badly injured, consider leaving and resuming at another time.

5) All dungeons have four levels. Stairs going down can be located at any place on a dungeon level.

Legends II, Still in the Dungeons

TRAPS AND TREASURES. Useful items and gold can be found scattered around almost anywhere in the dungeons. Dungeons which are inhabited by monsters will seldom have any items of value lying around, other than bags of gold and you may stumble upon a potion or two. These items will be added to your inventory as you find them.

In the areas that do not contain monsters you may find chests which hold various types of treasure. As is often the case with great treasures, at least in this game, a trap may have been installed to deter adventurers, such as yourselves, from opening it.

If you come upon a chest, You will be presented with several options: The program will display "A CHEST IS FOUND, OPEN IT? YN". If you choose to open the chest, press "Y" to proceed or "N" to leave the chest without opening it. (You can leave a chest and return to it later if you wish.)

If you choose to open it, your party has the following options available:

1) OPEN THE CHEST 2) CHECK FOR TRAPS 3) LEAVE

1) This means opening the chest without checking for traps. If you wish to this, Legends II will respond "WHO WILL OPEN IT? (1-4)". At this point select the member of your party who you will open it. If the chest holds a trap this member will sustain some injury.

2) If you choose this option, you can have a member of your party check in advance to see if the chest is armed with a trap. If a trap is found, the program will display "A TRAP IS FOUND" , "ATTEMPT TO DISARM IT? YN".(Note that the character discovering the trap also will be responsible for the attempt to disarm it.) You may at this point choose to leave the chest alone or proceed with disarming it. If you fail to disarm the trap, the party member who tried to disarm it will be injured. Rangers generally have the best disarm trap skills.

3) The chest will be left alone and your party can continue on its way.

Traps aside, chests may contain many valuable items. A chest may hold up to five different items. Usually these items will be made up of gold, armor, shields, weapons and possibly a potion.

Gold and potions will be automatically added to your parties inventory as they are found. If you find a weapon, type of armor, or a shield, a description of the item will be shown along with its point value. This indicates the effectiveness of an item, either in terms of protection, as in the case of armor or shields. or its damage value, should you find a weapon. Items with higher point values are more effective. If you choose to keep an item, you will be prompted "GIVE TO WHOM? 1-4, 5 EXITS". Enter the number of the character you wish to receive it, 1-4, or press 5 to drop the item and examine other things which the chest may hold.

When all the contents of the chest have been examined, *Legends II* will display "THE CHEST IS EMPTY, YOUR EXPLORATIONS CONTINUE". Press any key to resume your journey.

Legends II, Movement and Options

WAITING...

At certain times, *Legends II* will pause so you can read information displayed on screen. This state is indicated by a small flickering block usually located to the right of the text. To proceed, press any key.

MOVEMENT...

Move your party using the E,S,D,X keys.

OPTIONS (ISLAND)...

While traveling over the island, pressing the "A" key will give you information regarding the screen your party is now on, and also your current row and column position.

Pressing the "Q" key will bring up the "CAMP" menu. When in camp you can use potions, and examine the current status of your party and its individual members. You can also receive information on the amount of experience your party has gained during this outing.

While in camp on the island, two other options are available, REST and SAVE GAME.

REST...

Allows your party to sleep for a time and will assist in healing injured characters and will restore some used magic points. Most areas of the island are not safe places to rest and you may find yourselves attacked in your sleep. Please refer to the section describing "SAFE HAVENS" before using this option.

SAVE GAME...

You can save your game on the island that you are not in combat. Please note that using this option will exit Legends II. When you restart the game you will begin again in Grumble Village.

OPTIONS (DUNGEONS)...

Same as above, except you cannot rest or save your game while in the dungeons. Any rest in the dungeons tends to be of a rather permanent nature. The "A" key is not active.

Acknowledgements

MY PERSONAL THANKS TO JIM REISS, CHARLES EARL, RUTH O'NEILL, CHRIS BOBBITT, AND JUSTIN HOWLAND FOR HELPING GREATLY WITH SUGGESTIONS AND BETA TESTING ON *Legends II*. ALSO TO MY FRIEND ED JOHNSON. ED WAS NOT DIRECTLY INVOLVED IN *Legends II* BUT THE PROGRAM INCORPORATES MANY ROUTINES THAT WE DEVELOPED FOR *Legends*. WITHOUT HIS EFFORT *Legends II* WOULD NOT EXIST.

Legends II ALSO USES THE SYSTEX LOADER DEVELOPED BY BARRY BOONE.

I WOULD ALSO LIKE TO CREDIT DON JONES AND MATT MULLEN OF THE CHICAGO TI USERS GROUP FOR THEIR SUPPORT AND ENCOURAGEMENT.

Legends II IS DEDICATED TO THE TI COMMUNITY. DAILY WE KEEP THE TI LEGACY ALIVE AND WITH EACH PASSING YEAR WE CREATE OUR OWN LEGENDS.

DONN GRANROS, 1989

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LEGENDS II COMBAT MODE

You will spend a good deal of your time in *Legends II* battling hostile monsters. Many times you will be given the option of attempting to run away before a battle begins, this may or may not work. Your party may also be ambushed by monsters during your travels.

If monsters ambush your party, they gain the advantage of attacking first, otherwise your party always attacks first in combat.

YOUR PARTY'S OPTIONS...

- | | | |
|----------|---------------|-------|
| 1) FIGHT | 4) INTIMIDATE | |
| 2) GREET | 5) SURRENDER | |
| 3) FLEE | 6) ORDER | 7)SPD |

FIGHT... You choose to attack the monsters.

GREET... You try to exchange pleasantries rather than blows.

FLEE... You try to run away from the scene of the battle.

INTIMIDATE... You attempt to threaten the monsters. If successful they will surrender, otherwise they will attack immediately.

SURRENDER... The monsters will let you leave in Exchange for a specific amount of gold. If you can meet their demand, they will take your gold and leave. Otherwise, they will attack.

ORDER... This alters the sequence in which your characters attack. The normal combat order is 1)fighter 2)ranger 3)wizard 4)cleric. EXAMPLE: By entering "4321" at the Prompt, the attack sequence would now become: 4)cleric 3)wizard 2)ranger 1)fighter.

SPD (SPEED)...Affects the time that messages remain on Screen during combat. The default setting is 50. To speed up action, enter a number less than this or enter a larger number to slow things down.

INDIVIDUAL COMBAT OPTIONS

1) HIT 2)LUNGE 3)PARRY 4)CAST

HIT...This means taking a normal swing at a monster.

LUNGE...This is a more reckless attack. If successful, you can do more damage to your opponent. However, you are less likely to score a hit.

PARRY...This puts your character in a defensive stance. He cannot attack, but monsters will not be as likely to score a hit against him.

CAST...This allows characters other than fighters to cast spells. Refer to the Magic Spell booklet for more information on available spells, magic points, etc.

As much as possible, try to keep your options open. Carry enough gold in reserve to allow you to surrender as a last resort. Make sure your spellcasters have enough magic points to cast spells. Use potions to heal injured characters after combat. You never know when you will find yourselves again in battle.



Legends II Spell Manual



Asgard Software

LEGENDS II

MAGIC SPELLS LIST

CLASS	NUM	SPELL NAME	LVL	TYPE	PTS
WIZARD	1	FIRESTORM1	1	A	6
	2	DISPEL MAGIC	2	A	7
	3	STRENGTH	3	P	8
	4	FIRESTORM2	4	A	9
	5	REDUCE ARMOR	5	A	10
	6	LIFESTEAL	6	A	11
	7	FIRESTORM3	7	A	12
	8	CURSE	8	A	13
	9	EXIT CASTING			
CLERIC	1	HEALING1	1	P	5
	2	PROTECTION	2	P	6
	3	CONFUSION	3	A	7
	4	DISPEL MAGIC	4	A	8
	5	TURN UNDEAD	5	A	9
	6	PRAYER	6	P	10
	7	HEALING3	7	P	11
	8	FIRESTORM2	8	A	12
	9	EXIT CASTING			
RANGER	1	HEALING1	1	P	5
	2	PROTECTION	2	P	6
	3	FIRESTORM1	3	A	7
	4	HEALING2	4	P	8
	5	SLOW	5	A	9
	6	FIRESTORM2	6	A	10
	7	EXIT CASTING			
FIGHTER	HAS NO ABILITY TO CAST SPELLS				

Notes on Casting Magic Spells

Passive Spells (Type P): Passive spells always work. these spells fall into those of a healing or protective nature.

Active Spells (Type A): Active spells generally cause damage, either of a direct or indirect nature, to the party's opponents. This spell takes into consideration the cast spell ability of the caster versus the monsters magic resistance level.

Magic Points Required: Each spell cast requires a certain amount of magic points to cast. Characters will be advised if they do not possess enough magic to cast a particular spell.

Learning Magic Spells

Characters start with three spells which they have already learned. New spells are learned automatically as characters advance in levels.

Magic Spells and their Effects

Proper use of magic spells in combat can often mean the Difference between victory and defeat. Each spell cast Extracts its toll on the caster in terms of lowered magic Points so it is unwise to cast spells unnecessarily. But it Can be een worse to suffer defeat when a well timed, and Well chosen, spell might have saved the day.

FIRESTORM SPELLS 1,2,3... These are the most powerful damage spells used in Legends. These spells cause a devastating fireball to be hurled at the casters adversary. The maximum damage possible varies with the level of the spell selected (1-3) and also with the "Cast Spell" skill of the character casting the spell.

HEALING SPELLS 1,2,3... These spells, as the name implies, are used to heal characters during combat. The spells can be cast upon any of the party's characters, including the caster. The degree of healing is determined

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by the spell chosen (1,2,3) and also by the “Cast Spell” skill of the caster.

DISPEL MAGIC...This spell is invaluable in that it can neutralize the effects of a monsters “SLOW” spell. Also, some monsters may have been magically endowed, probably by sorcerers, with superior combat skills. This spell will also negate these special abilities. Only trial and error will allow you to determine which monsters will be affected by this spell.

STRENGTH...This spell is used to increase the party’s damage capacity in combat. Affects all party members only for one battle or until a monster casts “DISPEL MAGIC.”

REDUCE ARMOR...This spell lowers the armor class of your opponents, increasing the party’s chances of hitting monsters.

LIFESTEAL...This wizard spell has a twofold effect. It robs hit points from the monsters you are facing and uses them to heal damage that your wizard may have suffered.

CURSE...This wizard spell causes the monsters to lose some of their damage capability and attack skills.

TURN UNDEAD...This clerical spell, if effective, totally destroys the undead creature it has been cast upon. The creature is reduced to a pile of smoldering ashes. NOTE: effective only on undead monsters!

CONFUSION...A clerical spell which causes monsters to lose part of their attack skills.

PRAYER...A clerical spell which increases your party’s armor class as it lowers the monsters ability to damage your party.

SLOW...A high level ranger spell which causes the monsters to lose one turn in combat per each casting of the spell.

Grestle,

*Maybe this might help you on your quest, but you must yet find the book.
Without it the list has no use and you and your band may die horribly. Good luck
my friend and may you yet live to see another morn.*

Clovus

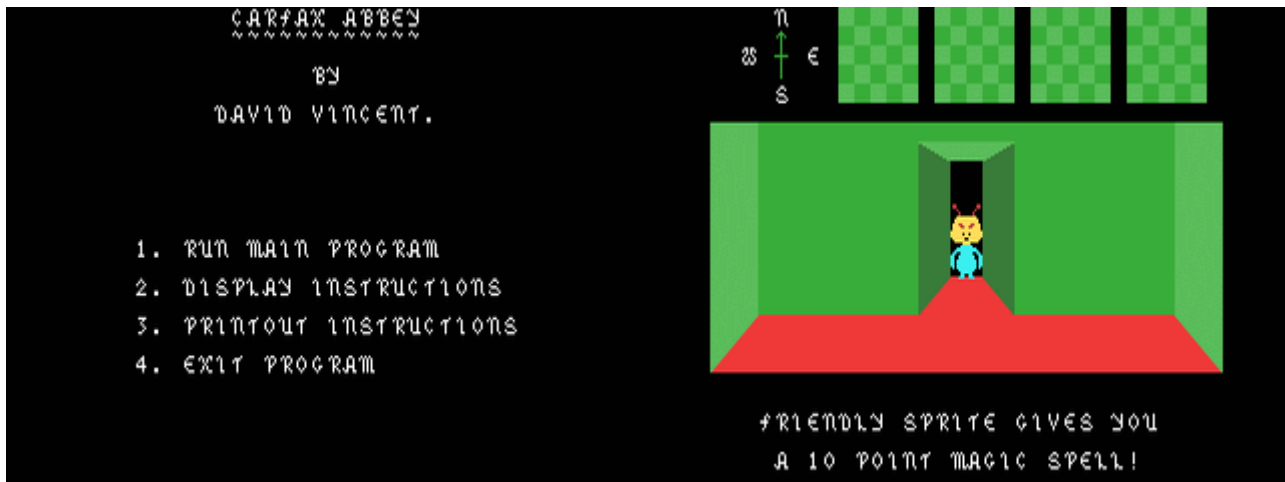
	KLASTUM	KICKTU	BARADA	GORDLE
1)	CARBOX	BUSTON	AMULET	SPASMS
2)	GEISHA	GALLOX	GROUDD	CLEATS
3)	WAFERS	PUNCE	MEJALS	FACTOR
4)	SLEAZE	OXDES	ARMAX	RAZORS
5)	GOPHER	ROLLER	COSME	LESTER
6)	AZMUTH	HOLDER	DRILLS	KILLER
7)	CLANKY	PIRATE	FOPPER	BLOOD
8)	GREASY	ROGUES	ANGELS	ROBOFS
9)	BEATER	COLORS	HEADER	DECIDE
10)	FWISST	CUTTER	REFORM	RESIST
11)	MELONS	CHUCKY	LADDER	DEFIED
12)	APPLES	JUDOR	MICRON	GRUCCPY
13)	LEGEND	SUPPLY	DEMONS	SPLATS
14)	FLOWER	MORONS	VERNON	HORROR
15)	DOZENS	BRAZEN	PAPERS	UNDEAD
16)	BULLETT	SWITCH	VENDOR	UNCOLA
17)	COPPER	BUSTON	SERGE	WEASEL
18)	NUMBER	PUNCHY	LOCKET	DANCES
19)	MEMORY	FLOPPY	INTEXT	EXTERS
20)	REPENT	TOWERS	FLOATS	LEGEND
21)	ORANGE	COLUMX	MISER	MASTER
22)	REWARD	RESIGN	DEADLY	HOWLER
23)	DRAGON	LIZARD	POWERS	BASTMAN
24)	ZIPPER	ZEROS	SCOPES	RIDDER
25)	STREAK	LIVING	QUESTS	NEITHER
26)	REDEEM	REDONE	REBATE	GRAVES
27)	UNDOXE	SEWERS	WANDER	DAMPYR
28)	WASTED	BLASTS	CENTER	WANDER
29)	MUZORK	CRAMPS	STYLES	TENTPS
01)	equals	sneaky	banana	fruits
02)	rotten	wasted	lethal	watchs
03)	fruits	female	avoids	deadly
04)	beware	undead	quests	hearty
05)	avoids	potion	killer	rabbit



I can say no further..

Carfax Abbey

G-7-S [Disk: 215-CARF] By David Vincent



An amazing first-person adventure game somewhat akin to Tunnels of Doom but less complicated and joystick controlled! Wander through the four floors of Dracula's estate in London looking for the necessary magic and tools needed to destroy the vampire forever. Goblin traders and skeletons await. High replay value as multiple configurations are available. Includes a very useful automapping feature and excellent graphics. Absolutely recommended!

Requirements: XB cartridge, 32K RAM, disk drive. Joysticks optional.

Executable to run: XB Autoload

Download Carfax Abbey:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – S

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard, Joystick 1

CARFAX ABBEY

This is a 3-dimensional maze game, set in Carfax Abbey. The Abbey has 4 floors or levels, each level having 25 rooms in a 5 x 5 room matrix. The rooms are numbered from left to right, beginning in the South-West corner, with room 25 being at the North-East corner. The game begins with the player entering at level 1 in room 3; that is the middle room on the South elevation. The only other exit from the Abbey, is in one of the rooms on the Northern elevation. It's exact location is unknown.

The object of the game is to locate and destroy Count Dracula. He is somewhere in the Abbey. In order to destroy the vampire, you will need to find the Crucifix, and to acquire spells to a minimum value of 200 magic points. The location of the Crucifix is unknown. Magic points or spells are either found whilst exploring, or may be purchased from Goblin traders. Meeting the Count before you have found the Crucifix will result in the loss of half your energy! Once the Crucifix has been located, the Count cannot harm you.

The screen display shows, at the top of the screen, small plans of each level, with your own location. The main display shows the view from your current position. You may turn to face North, South, East or West by using keys N, S, E or W, or using joystick No. 1 if joystick control has been selected. Moving to the next room, via the exit displayed, is achieved by pressing ENTER, or pressing FIRE if using joystick control.

NOTE: Where no other instruction is displayed, action is advanced by pressing any key or the joystick fire button. If no key is pressed, the game will advance automatically after a short delay.

Pressing "P" will during the delay will "freeze" the game, which will not then advance until any other key is pressed.

Views shown on the main display will include:

- A DOOR
- A LOCKED DOOR
- STAIRS LEADING UP
- STAIRS LEADING DOWN
- A CORRIDOR
- A LIFT (ELEVATOR)
- A WALL

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The last of these MAY be misleading, as there are secret panels...

Secret panels will often allow entry into an adjacent room to which no easy access is obvious. However, it is easy to lose your way in the dark passages...

Using a secret passage depletes your energy total by 25 points.

You begin the game with an energy rating of 100%. The first visit to any room increases your energy by 10 points. Subsequent visits to the same room result in an energy LOSS of 5 points. The game ends if your energy rating reaches 0%.

Whilst exploring, you may find a Skeleton Key. This may be used at any time to unlock a locked door. Each use of the key depletes your energy by 25 points. Once unlocked, the door remains unlocked until the game ends. If you have enough gold, you may be able to purchase a key from a Goblin.

Corridors, like doors, lead to adjacent rooms. However, the corridors are frequented by various creatures including Ghosts, Goblins, Spiders, Blobs and Skeletons! Some are friendly...

On your first passage through any Corridor, you may meet a Goblin. These are harmless creatures who are prepared to exchange spells or energy for gold. Goblins are usually honest...

If you find the Lift (Elevator), you may use it to transfer to any floor. Use of the lift is free of charge.

As you explore the abbey, in order to assist you, maps are drawn of all known areas. The maps are freely available from the STATUS screen, which is accessible from the main display. Whilst exploring, you may find a complete map of the floor on which you are located. Explored areas are marked with an E, and your current position marked with "*". Secret panels are only shown as such AFTER they have been discovered.

If you locate and destroy Count Dracula, a Magic Bonus of 500 points is awarded. To gain a further bonus of 500 gold pieces, you must move to

TI-99/4A – Game Shelf Extended Basic Games

one of the 2 exits and leave the abbey BEFORE your energy is exhausted. Once the Count has been destroyed, no further energy gains are made for exploring rooms. EVERY move, at this stage, uses 10 points. You may exit from the STATUS screen, but no bonus will be awarded.

To load and run the program, you MUST use the LOAD program.

Character definitions and colors are set up and machine code graphics routines are loaded by the LOAD program. The main program will not run correctly if not loaded by the LOAD program!

The LOAD program will give instructions, if desired.

When the main program is run, you are prompted to select a game number.

This can be any number from 1 to 999, each number creating a different layout for the Abbey. The layout procedure lasts for several minutes.

Progress may be monitored on screen.

After the layout has been completed, you must select keyboard or joystick control. You are also asked whether or not the game is new, or if a previously saved game is to be re-loaded.

NOTE: Games are saved using the layout number for reference. Only one game for any particular layout may be stored on the same disk at any time. Saving a game will overwrite any disk information for that particular layout number.

Both CARF/LOAD and CARF (main program) have been extensively tested and are believed to be Bug-Free. However, there are no guarantees!

If you do have any problems, please let me know.

The current version of the main program is just over 18k, leaving very little room for additions. In spite of that, any ideas, suggestions, comments, checks, Yankee dollars, moans, groans, magic spells, gold or spare energy will be gratefully received! I hope you enjoy the game!

David Vincent
Wycroft
Foxhole Lane
Four Throws
Hawkhurst
Kent
TN18 5DT
England.

January 1988

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CARFAX ABBEY HELPLINE

If you are determined to beat the Count without any assistance at all then stop reading NOW. The following notes are offered to make the game a little easier to complete, although they will probably still leave you with quite a task!

Certain aspects of the game follow a particular pattern, and being aware of those patterns may give you a slight "edge".

The Abbey itself has a total of 100 rooms for you to explore. In spite of appearances to the contrary, EVERY room has at least 2 entrances. If a particular room appears to have only 1 way in, then at least one of the other walls MUST have a secret panel!

The three main items for you to find are the Crucifix, the Skeleton Key and the Count himself. They will be found only on levels 2, 3 and 4, and will ALWAYS be on different floors. No two will ever be found on the same floor.

If you have a Skeleton Key, there is a good chance that it will "escape" if you use a secret panel. If your key "escapes", it will always return to the room where it was originally found. If you purchased your key from a Goblin, it will still return to it's allocated room and level. If you have no key, but have at least 100 Gold Pieces, there is a very good chance that a Goblin will offer to sell you a key if you meet. Goblins can only appear on your first passage through any particular corridor.

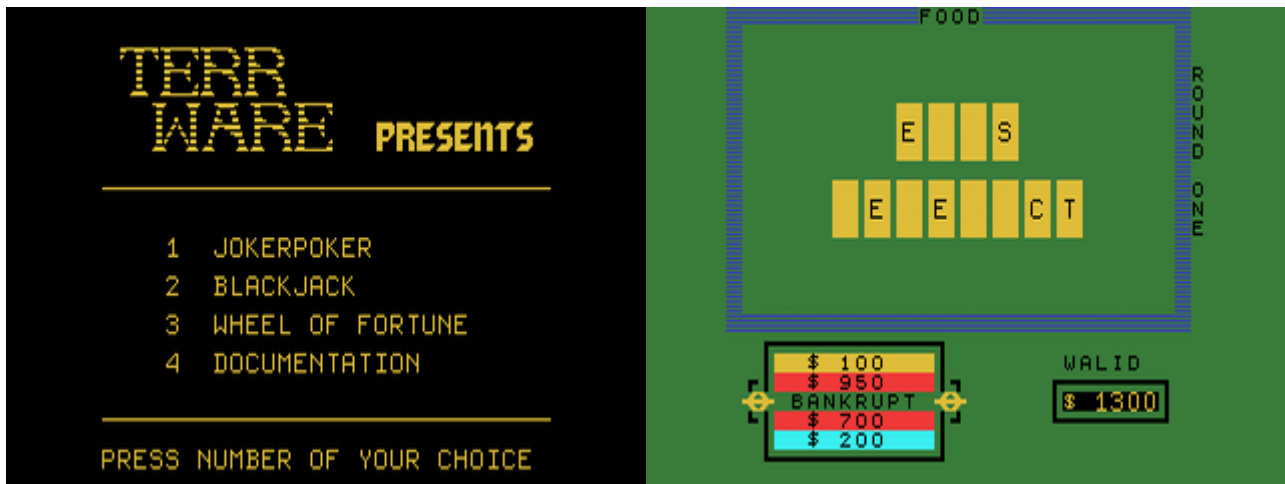
Apart from the Goblin there are 8 different corridor creatures to meet. Three are friendly, five are not! The game is designed to ensure that, for every 16 "encounters", you will see each creature twice. Once the Count has been defeated, EVERY time you pass through a corridor, you will experience a "Close Encounter"! This may be helpful if you wish to meet or avoid a particular creature.

I hope the information above helps you to enjoy and complete the game.

David Vincent December 1987

Jokerpoker, Blackjack, Wheel of Fortune

G-7-T [Disk: 216-JOKE] By Terry Staph



Although nothing new, these games are extremely well executed with my personal favorite being Wheel of Fortune. Great graphics and convincing sound effects enhance gameplay quite a bit. This package is the perfect quick entertainment during those work breaks...

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Jokerpoker, Blackjack, Wheel of Fortune:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

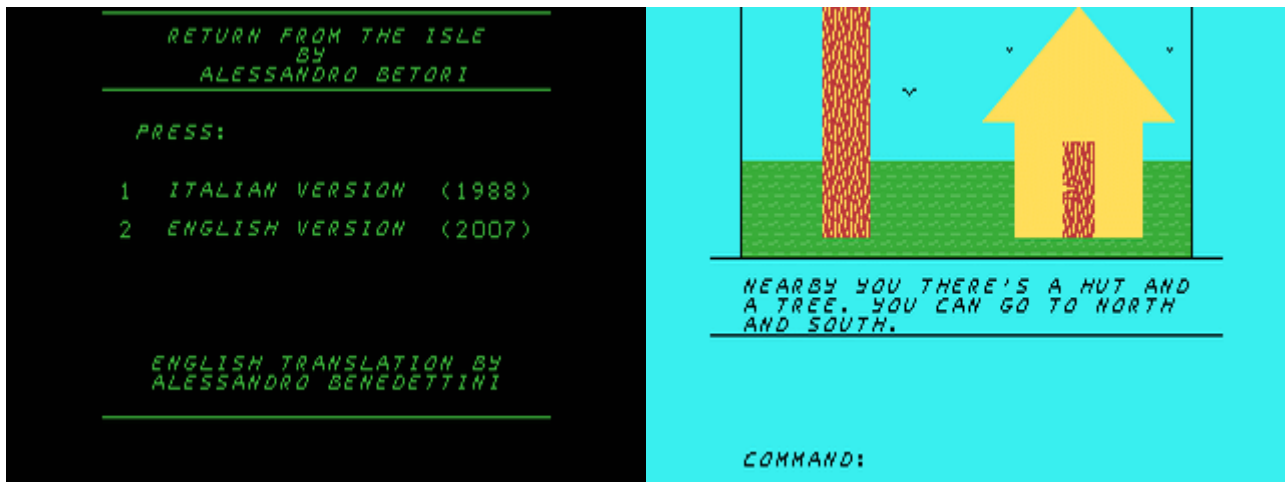
Start from mega menu: G – 7 – T

Features: Title Screen, XB, AL, One Player, Sound

Controls: Keyboard

Return From The Isle

G-7-U [Disk: 217-REFI] By Alessandro Betori



If you feel like taking a break from arcade games and instead exercising some grey matter, then this challenging graphic adventure puzzler is for you. You have been shipwrecked on an apparently deserted island (or is it?), and have to somehow find your way back to civilization. How of course is up to you, but be prepared for a lot of head scratching as you decipher cryptic messages and search for needed items. Solutions and hints are included to be consulted as a last resort. Good luck, you will need it...

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Return From The Isle:

[\[zipped TIFILES format\]](#)

[\[zipped V9T9 .DSK Format\]](#)

Start from mega menu: G – 7 – U

Features: Title Screen, XB, AL, One Player, Sound, Speech

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

Welcome to

~~~~~  
- Return from The Isle Adventure -  
~~~~~

written by Alessandro Betori and translated from Italian to English by Alessandro Benedettini.

This is a graphic adventure for the TI99 with Extended Basic, 32K memory expansion, disk drive and (optional) speech synthesizer.

The parser is quite rich and accepts all the following words and verbs:

SEEWEEED, KNIFE, SHOVEL, DIARY, STRONGBOX, KEY, GRASS, RESIN, CREAM, GUN, SLING, STONE, HUT, WELL, TREE, PINE, DITCH, RAVINE, LAKE, POOL, AIR, BREATH, SAND, EARTH, DOWN, UP, NORTH, SOUTH, etc.
GO, CLIMB, ENTER, SWIM, TAKE, GRAB, GET, PICK, DROP, LOSE, PUT, REMOVE, LEAVE, EXAMINE, LOOK, LOAD, JUMP, DIG, PULL, THROW, READ, BLEND, MIX, OPEN, SPREAD, SMEAR, CUT, CHOP, CARVE, SHOOT, FIRE, BREAK, DESTROY, SMASH, HIT, TALK, ASK, SCREAM, etc.

I(NVENTORY), N(ORTH), S(OUTH), W(EST), E(AST), HELP, U(P), D(OWN), LOAD GAME, SAVE GAME, QUIT.

To save/load the progress you need to use a disk labelled "ADVSAVEDSK" (place it in any of the drives). For your convenience, I included a blank V9T9 disk with the correct label in this package. Remember to insert the save disk before using the commands, otherwise you'll get an error trying to save/load the adventure!

I have translated and adapted to English the original program (provided to me by Ermanno Betori) in order to allow US TI friends to play this nice adventure. I hope to have done a good translation, since there were some language ambiguities. So, please, let me know if something is wrong.

The program is provided in a V9T9 SSSD disk to use with emulators. It autoloads in Extended Basic and it was tested with the following emulators:

- MESS (V1.06) with TI99/4A US, Europe, EVPC (nice look!), TI, SNUG and Myarc disk controllers;
- Win994a V3.008R4 (just rename to .TIDISK);
- TI994W v3.1a.

Not tested with a real TI99 (but it should work, why not?), with V9T9, Classic99, TI99Sim and with PC99 (why pay 94\$ for a DOS emulator...?). Please, let me know if you have tested it with one of these emulators.

This adventure is not so easy to solve. If you are totally blocked, check the "Solution & Hints: directory.

Please, send your comments (and bugs!) on the translation to:

Alessandro Benedettini
alexone69@yahoo.it

If you want to contact the author:

Alessandro Betori
alekin_72@yahoo.it

TI-99/4A – Game Shelf Extended Basic Games

Return from The Isle: Adventure's Hidden Secrets & Backstage

Prologue

You are a programmer that, after a year of hard work, decided to take a vacation. You choose a cruise in the Mediterranean Sea.

Unfortunately, after 2 days, there was terrible storm... but you were lucky and you shipwrecked on The Isle! Unfortunately, the beautiful blonde girl you just meet in the cruise wasn't shipwrecked with you... you are alone on The Isle! So, sadly, you decided that you have to return to civilization!

And here begins your Adventure...

Backstage

The original title of the adventure was simply "Adventure". Then it was renamed into "Pacific Isle", but had to be changed, since in the story there is a pinewood, that you cannot find on isles in Pacific's Ocean.

It was created in 1988 (the author was sixteen years old). After 18 years from the creation, Alessandro returned back to work on it for the 2007 English version.

Although The Isle is at present uninhabited, it wasn't in the past. You can find a hut, a knife and others manufactured goods.

The strongbox was lost by your ship, so this is the reason why the gun is working perfectly.

Epilogue

You were lucky, since you were found by one of the ships from rescue operations for the shipwreck. But they notice you casually... they are returning back at the harbor!

Hidden Secrets

If the strongbox was lost by your ship, why you have found the key in The Isle? Maybe you were not the only shipwrecked!!! What about the blonde girl...? Are you sure to have made the best decision to return to civilization?

Who was living in The Isle? Was he returned back or not? Have you searched for bones?

Some of the unreadable pages from the diary:

"...year 1890, I have finally completed the hut, but I lost my knife somewhere! Damn it!"

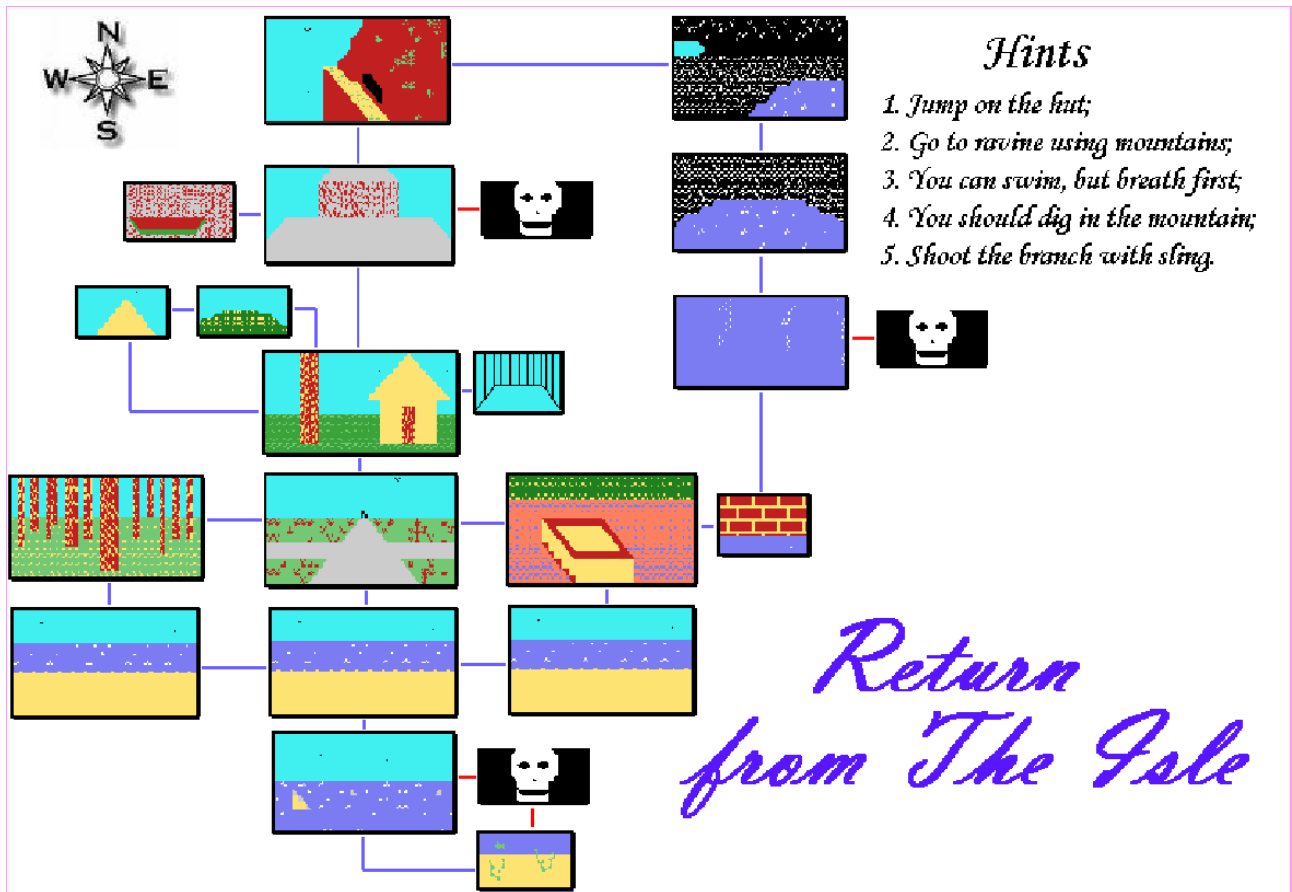
"...year 1891, I'm able to fish using seaweed, resin and herbs from this isle."

"...year 1892, I build a basic sling. I'll be able to hunt some animal..."

"...year 1893? I'm not sure I'm in 1893. Maybe it's 1903. I feel confused..."

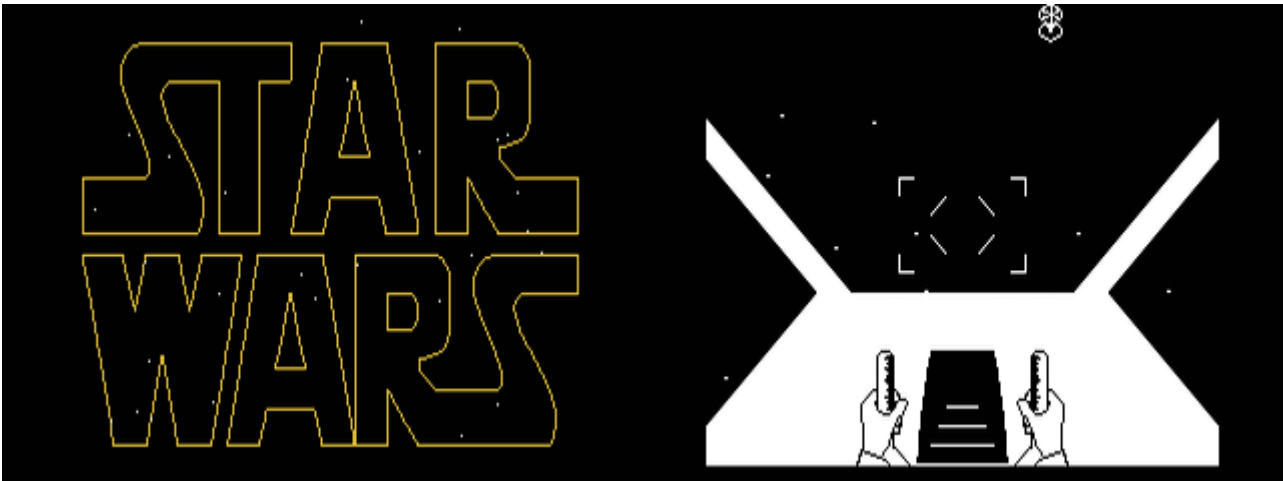
"..."

".. ahahahaha uagh uagh uagh..."



Star Wars

G-8-1 [Disk: 218-SWAR] By Alessandro Betori



This is a very well done mixed XB and assembly arcade game on the theme of Star Wars. You are the pilot of a rebel starfighter out to destroy wave after wave of Empire fighters. Use the joysticks to maneuver your ship and fire laser beams at the enemy ships which are rendered in 3D and can fire back at you. If you succeed in clearing the fighters, then you have to tackle the death star trench run, avoiding obstacles on the way. Take enough damage and you blow up, and there are 3 levels of difficulty. Smooth high resolution graphics and sharp sound effects along with a great intro make this game an instant classic. Two thumbs way up!!!

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: XB Autoload

Download Star Wars:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – 1

Features: Title Screen, XB, AL, One Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf Extended Basic Games

***** Starwars *****

Configurazione necessaria per poter giocare a Starwars:TI-99/4A,PERIPHERAL BOX,32 Kbyte EXP.MEMORY,CONTROLLER + DISK DRIVE,JOYSTICK #1,

Nel gioco impersonificate un pilota ribelle(Luke Skywalker se preferite)....

Lo scopo del gioco e' cercare di distruggere il maggior numero di volte la Morte Nera,ossia la stazione di battaglia del malvagio Impero del male..

Nella prima sezione di gioco dovrete avvicinarvi alla Morte Nera con il vostro caccia stellare.Vi sbarreranno la via numerosi fighter nemici con i quali

dovrete ingaggiare un duello spaziale.Usate il joystick #1 (NON QUELLI DELLA TEXAS INSTRUMENTS MA JOYSTICK CON I MICRO-SWITCH!)per spostarvi(IL JOYSTICK

FUNZIONA COME UNA CLOCHE DI UN'AEREO)e il tasto di fuoco per sparare(TASTO ALPHA LOCK ALZATO).Purtroppo i vostri laser possono fare fuoco in ragione di 65

volte al minuto secondo circa,dovrete percio'essere piuttosto precisi nei

vostri tiri.Il fighter nemico invece vi colpira' a due condizioni:la prima e'

che sia in posizione d'attacco(posizione frontale),e la seconda e' che sia nel quadrante del vostro mirino.

In questa fase di gioco avete a disposizione 3 scudi;ogni colpo portato a segno dal nemico vi togliera'uno scudo.

Nella seconda sezione di gioco avete raggiunto la Morte Nera e avete cominciato la corsa d'attacco che consiste nell'arrivare alla fine del tunnel.

con lo scopo di sparare due colpi precisi nello scarico radiattivo del pianeta metallico.Manovrando ancora il Joystick #1 tenterete di evitare le

barriere elettroniche che sfrecciano contro la vostra astronave a grande velocita',passando negli spazi che lasciano vuoti.In questa sezione gli scudi

sono cinque ma e' molto facile perderli di seguito;occorre una grande

coordinazione di movimento.Infatti NON POTETE FUGGIRE DAL TUNNEL E OGNI

TENTATIVO E' PUNITO CON L'ARRESTO DELLA VOSTRA ASTRONAVE NELLA DIREZIONE IN CUI LA STAVATE DIRIGENDO.

Superate le barriere elettroniche potrete finalmente sparare i due colpi,ma

solo QUANDO I DUE INDICATORI CHE CONVERGONO VERSO IL CENTRO DELLO SCHERMO COINCIDERANNO.Qui avete un'unica possibilita',se sbagliate il colpo vi

schianterete contro il fondo del tunnel.

Se invece il colpo e'andato a segno ,vedrete il vostro caccia allontanarsi dalla Morte Nera e l'esplosione di quest'ultima.

Il gioco a questo punto ricomincera'dall'inizio,ma con una difficolta'via via maggiore;i fighters nemici vi attaccheranno piu'frequentemente e le barriere saranno piu'difficili da evitare,perche' piu' numerose.

TI-99/4A – Game Shelf Extended Basic Games

Dopo che immancabilmente avrete perso l'ultimo scudo, SE AVRETE REALIZZATO UN PUNTEGGIO SODDISFACENTE, IL COMPUTER VE LO FARA' REGISTRARE SU DISCO: potrete infatti inserire il vostro nome tra i primi dieci piloti ribelli della galassia, altrimenti vi fara' vedere il vostro punteggio e vi spronerà a fare meglio la prossima volta.

CONSIGLI PER VINCERE:

- 1) STUDIARE LE EVOLUZIONI DEL FIGHTER SENZA SPARARE.
- 2) RENDERSI CONTO CHE LA MAGGIOR PARTE DELLE EVOLUZIONI SONO TRAIETTORIE ELLITTICHE.
- 3) NON SPARARE A CASO PERCHE' IL FIGHTER REAGISCE AUMENTANDO LA SUA VELOCITA'.
- 4) SE LE TRAIETTORIE SONO ELLITTICHE IL FIGHTER RIPASSERA' SUL SUO PERCORSO.
- 5) ATTENDERE IL FIGHTER NEL PUNTO IN CUI VIRA PER COMPLETARE LA SUA TRAIETTORIA E QUINDI FARE FUOCO.
- 6) USARE LE DIREZIONI DIAGONALI DEL JOYSTICK, NELLA SEZIONE COMBATTIMENTO E SOPRATTUTTO NEL TUNNEL!
- 7) NEL TUNNEL METTERE IL CACCIA RIBELLE AL CENTRO DEL VIDEO PRIMA ANCORA DI ESSERSI RESI BENE CONTO DI COME SONO DISPOSTE LE BARRIERE CHE CI ARRIVANO ADDOSSO (PERCHE' DAL CENTRO ABBIAMO QUALCHE Istante IN PIU' PER RAGGIUNGERE UNA QUALUNQUE POSIZIONE).
- 8) FAR GIOCARE QUALCUNO DAI RIFLESSI RAPIDI.
- 9) INVIARE I 10\$ AL MIO INDIRIZZO (QUESTO E' IL TRUCCO PIU' IMPORTANTE!)

Betori Alessandro.

Via Erasmo Gattamelata n.112.

C.A.P. 00176 ROMA.(ITALIA)

Goblins

G-8-2 [Disk: 219-GOBL] By Alessandro Betori



In this hybrid XB and assembly arcade game, you are a fearless adventurer facing relentless and deadly floating ghosts through five very detailed scrolling screens with a boss battle at the end with a monster. Use the arrow keys to move around the screen and press the spacebar to fire a lightning arrow. This game is the first example I have seen of including sampled music and speech in a program, to great dramatic effect. It is however very tough as I can barely make it past the first screen... Definitely worth a try!

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: XB Autoload

Download Goblins:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – 2

Features: Title Screen, XB, AL, One Player, Sound, Speech

Controls: Keyboard

Spring Heeled Jack

G-8-3 [Disk: 220-HEJA] By Graham Marshall



In this platform game, you are a well trained jumper who has to navigate through nasty corridors with migrating holes and falling objects and try to get to the top of the building. Unfortunately, this is easier said than done because you will likely meet an untimely death unless you have perfect timing. Tough game, yet surprisingly addictive and well executed.

Requirements: XB cartridge, 32K RAM.

Executable to run: SPHLDJK

Download Spring Heeled Jack:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – 3

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard

Patscram

G-8-4 [Disk: 221-PATS] By P. Strassen



This is a very entertaining and original space game where you pilot a spaceship and have to maneuver it through many obstacles to reach your destination, including aliens and asteroids. Great demonstration of the power of sprites and color on the TI, requiring exacting control from the player. Nicely done.

Requirements: XB cartridge, 32K RAM. Joysticks optional

Executable to run: PATSCRAM

Download Patscram:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – 4

Features: Title Screen, XB, One Player, Sound, Demo

Controls: Keyboard, Joystick 1

TI-99/4A – Game Shelf Extended Basic Games

INSTRUCTIONS FOR PATSCRAM MISSION

SCREEN ONE, TAKE OFF

Guide the ship to the top of the screen using arrow keys, avoiding collisions, score is time left

SCREEN TWO, ARROWITES

Try to collide with the aliens using arrow keys screen ends when timer=zero top and bottom of screen are Zones of Uncertainty!

SCREEN THREE, ASTEROID BELT

Just avoid the asteroids until timer reaches zero

SCREEN FOUR, THE CUBE

Avoid the small cubes and hit the large cube then fly off the top of the screen

SCREEN FIVE, HOME

Fly from top left to bottom right

Screen 5 Place your ship EXACTLY between the small horizontal lines to win and go on to, screen one again but harder

CONTROLS:

KEYS E S D X or JOYSTICK ONE

USE KEYS 1,2,3 & 4 to set SPEED of ship

Game starts with speed=0!

If you are using the, joystick press fire to halt quickly If you press FIRE with the joystick not centered then you will move at MAXIMUM speed!!!

If damage reaches 100 thats it!

Asteroid Belt

G-8-5 [Disk: 222-ASBE] By JB Freeware



As the pilot of a spaceship trapped in a tunnel full of roaming asteroids, your mission is to skillfully maneuver your ship to avoid collision and collect fuel dumps. There are up to 9 levels with a variety of ship speed and asteroid density, and your score depends on the amount of fuel collected. Fast reflexes a must!

Requirements: XB cartridge, 32K RAM.

Executable to run: ASTEROID

Download Asteroid Belt:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

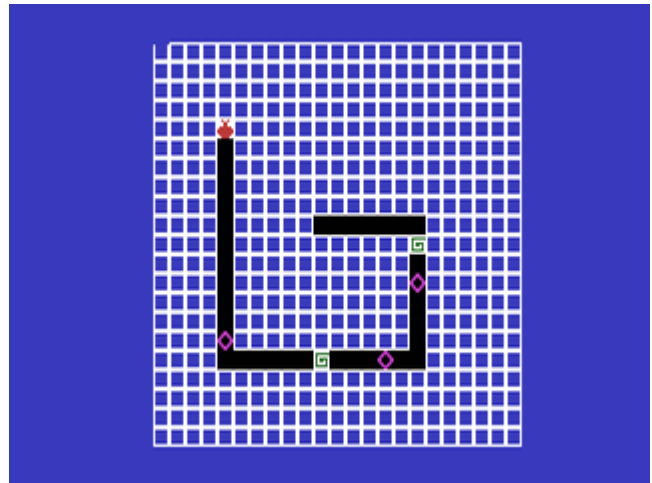
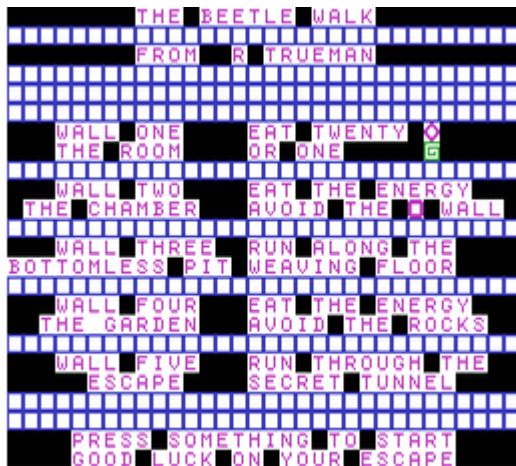
Start from mega menu: G – 8 – 5

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

The Beetle Walk

G-8-6 [Disk: 223-BEWA] By R. Trueman



Walking beetles do not usually generate vivid images of fun, but this game certainly does as you guide a bright red beetle through 5 different screens full of dangers. Each screen has a different objective, making for varied and non-repetitive play using the arrow keys. Original and entertaining.

Requirements: XB cartridge, 32K RAM.

Executable to run: BEETLE

Download The Beetle Walk:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – 6

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Ice Cream Van

G-8-7 [Disk: 224-ICEC] By Jacques GrosLouis

ICE CREAM VAN

You have bought a 79 Ford van for \$2000 and have 21 days to pay it off. You have 2 refrigerated boxes and can buy up to 7 more.

You have to manage vehicle fuel and repairs and you should advertise to become better known. The bank also pays interest on your account.

The amount of Sales from each box is a random percentage of its contents.

PRESS ANY KEY TO START

WALID Refreshment Service,
Day 1
1 Assets report
2 Navigate
3 Visit Johnson Wholesaler
4 Visit Sentry Bank
5 Automobile Report
6 Take Van Inventory
7 Work Your Route

Select Option? █

If you have a strong entrepreneurial spirit and would like to test your skills, then this is the game for you. In a nutshell, you are starting an Ice Cream business and have to remain solvent by the end of 21 days of business. This requires a multitude of decisions such as which ice cream types to buy, expansion, advertising, fuel consumption, repairs etc... While the program presentation is minimalist, the game itself is one mother of a challenge. Give it a try and it will permanently humble you.

Requirements: XB cartridge, 32K RAM.

Executable to run: ICECREAM

Download Ice Cream Van:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

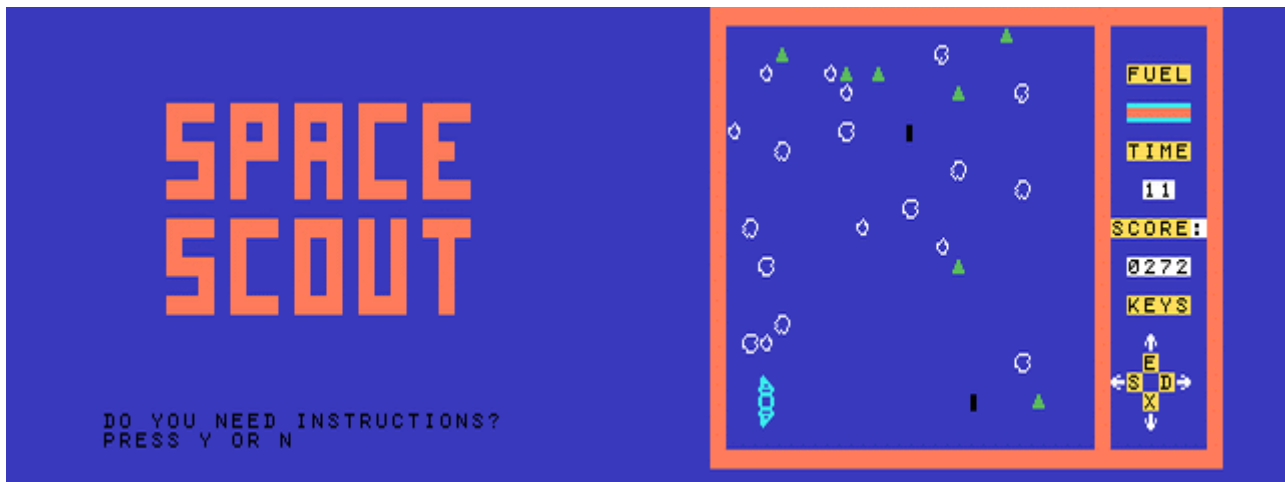
Start from mega menu: G – 8 – 7

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Space Scout

G-8-8 [Disk: 225-SPSC] By G. Raben



In this game, you are the pilot of a scout spacecraft with the mission to collect cargo modules while avoiding asteroids on your way. You have limited amounts of fuel but can replenish your supplies each time you collect a module. There are random and invisible wormholes scattered around that instantly teleport you to a different part of the field. Requires good dexterity with the arrow keys and a good sense of timing. Gameplay is spiced up with good sound effects and speech. Definitely enjoyable but oddly frustrating...

Requirements: XB cartridge, 32K RAM. Speech Synthesizer optional.

Executable to run: SPCSCOUT

Download Space Scout:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – 8

Features: Title Screen, XB, One Player, Sound, Speech

Controls: Keyboard

TI Sudoku

G-8-9 [Disk: 226-TISU] By Jacques GrosLouis

```

TI - S U D O K U
By Jacques GrosLouis
~~~~~
A program to aid in the
solving of SUDOKU puzzles by
showing unused numbers in
rows, columns and boxes.
Any numbers which have been
used more than once are
highlighted.

The available command
choices are first RQSLN and
secondly C, used as follows:
R accepts a row choice A-I
Q to Quit
S to SAVE current puzzle
L to LOAD a saved puzzle
N to iNput a New puzzle
C accepts column choice 1-9
Default drive is DSK1.

-123-456-789-
 219 000 570
 345 060 008
 108 005 306

 004 673 000
 000 418 000
 000 529 100

 903 100 800
 700 040 000
 061 000 730

TI SUDOKU
Unused in ROW
A 03468
B 01279
C 012479
D 012589
E 0235679
F 034678
G 024567
H 01235689
I 024589
Unused in BOX
1 067
2 014568
3 01234789
4 01249
5 0
6 023456789
7 02458
8 02356789
9 0124569
RQSLN?:C C?:1

Unused in COL
1 067
2 01234789
3 01249
4 012356789
5 0
6 023456789
7 02458
8 02356789
9 0124569

```

With all the craze about the game of Sudoku, it was only a matter of time before a Sudoku program appeared on the TI, courtesy of Jacques. This great piece of software does not solve the Sudoku puzzle (where is the challenge in that?) but rather organizes the unused numbers in rows, columns and boxes, thus tremendously simplifying the solving process. The interface is very intuitive and the puzzle display clean and sharp. Puzzles can be saved, loaded and typed in using the device of your choice and the program comes with three ready to play puzzles. It certainly made a fan out of me.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: TISUDOKU

Download TI Sudoku:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – 9

Features: Title Screen, XB, One Player

Controls: Keyboard

Fireball

G-8-A [Disk: 227-FIBA] By JB Freeware



This is an excellent pinball game that offers complete control of the design of the pinball layout through the use of an editor. Many different building blocks are available allowing you almost infinite variations. Save and load your designs to and from disk, and then play them, complete with sound effects. Another showcase of the power of XB in the right hands.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: PINBSET

Download Fireball:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

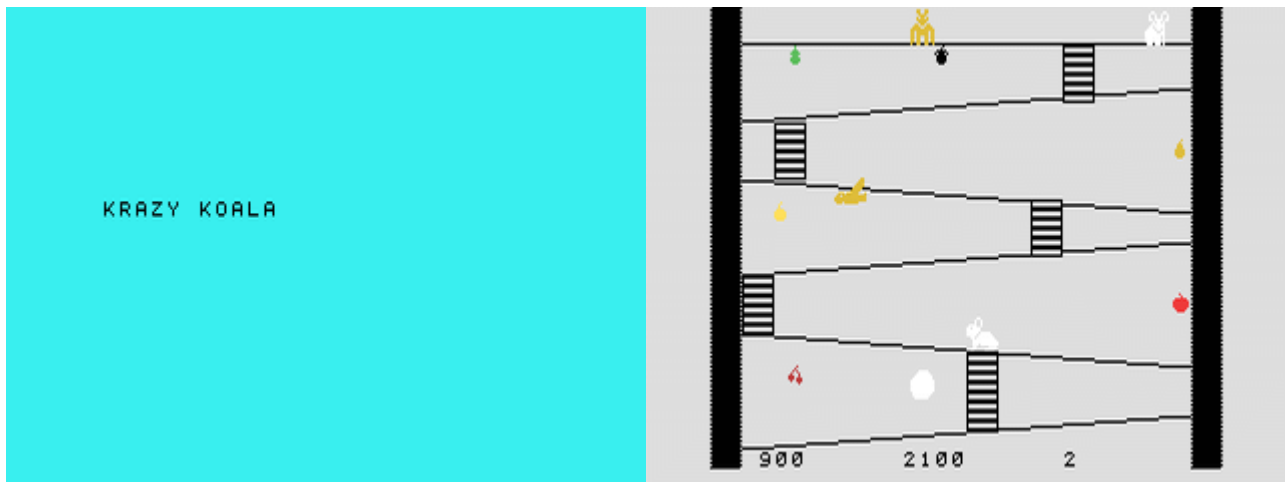
Start from mega menu: G – 8 – A

Features: Title Screen, XB, One Player, Sound, Music

Controls: Keyboard

Krazy Koala

G-8-B [Disk: 228-KKOA] By Mark and Matt Smetana



This game runs in the spirit of Donkey Kong, but much cuter since you control a Koala with the arrow keys trying to save a baby koala from a nasty monkey. That monkey is making your task much more difficult by throwing rocks at you, and there is also a hungry hawk roaming the field looking for a good meal. You can score additional points by eating the fruits scattered around, and you must reach the baby before the countdown timer runs out. The faster you are, the higher your score. Excellent graphics. Have you hugged a koala today?.

Requirements: XB cartridge, 32K RAM.

Executable to run: KOALA

Download Krazy Koala:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – B

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Sky Rescue

G-8-C [Disk: 229-SKYR] By John Behnke



In a rather original game, you are the pilot of a plane on a highly perilous mission to rescue people kidnapped by terrorists. The prisoners are held in a walled fortress and you have to shoot down the walls in order to create an opening and swoop down and pick up the hostages. If that was not hard enough, the terrorists have surface to air missiles that come at you intermittently. Excellent sound effects and addictive play.

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: RESCUE

Download Sky Rescue:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

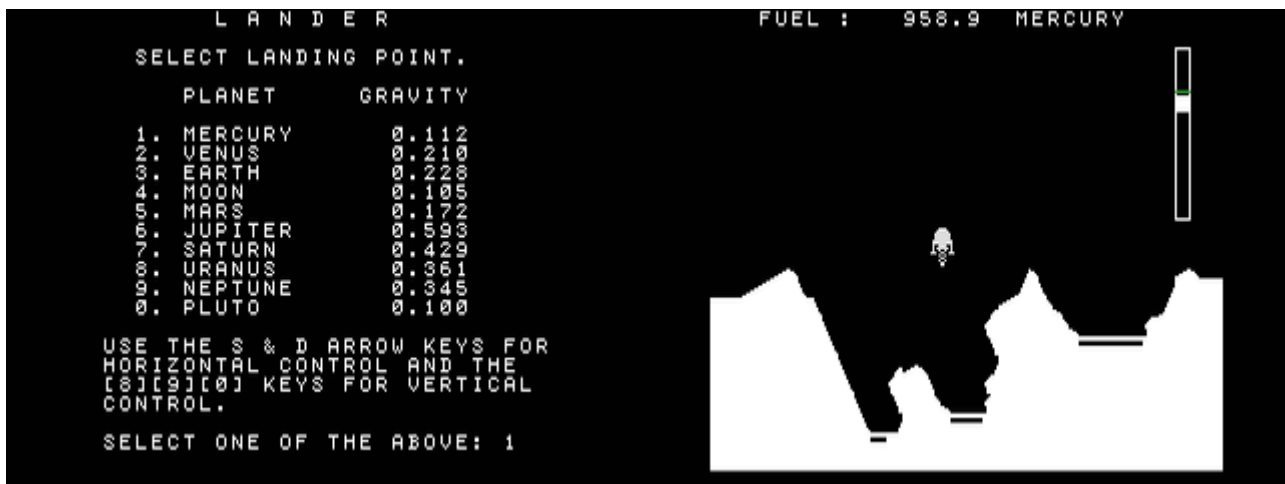
Start from mega menu: G – 8 – C

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Galaxy Lander

G-8-D [Disk: 230-GALL] By John Behnke



This is a very well done XB version of the ever popular Lunar Lander game. You command a lander and your mission is to land on a variety of solar system moons and planets each with a different gravitational field. You have limited amounts of fuel, so every engine firing counts. Instead of numeric velocity representations, you have a simple but elegant graphical gauge that helps you get down within landing velocity specs. Each time you crash, you lose a third of your fuel. The graphics are crisp and smooth, making for addictive play helped by good sound effects.

Requirements: XB cartridge, 32K RAM.

Executable to run: GALAXY

Download Galaxy Lander:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

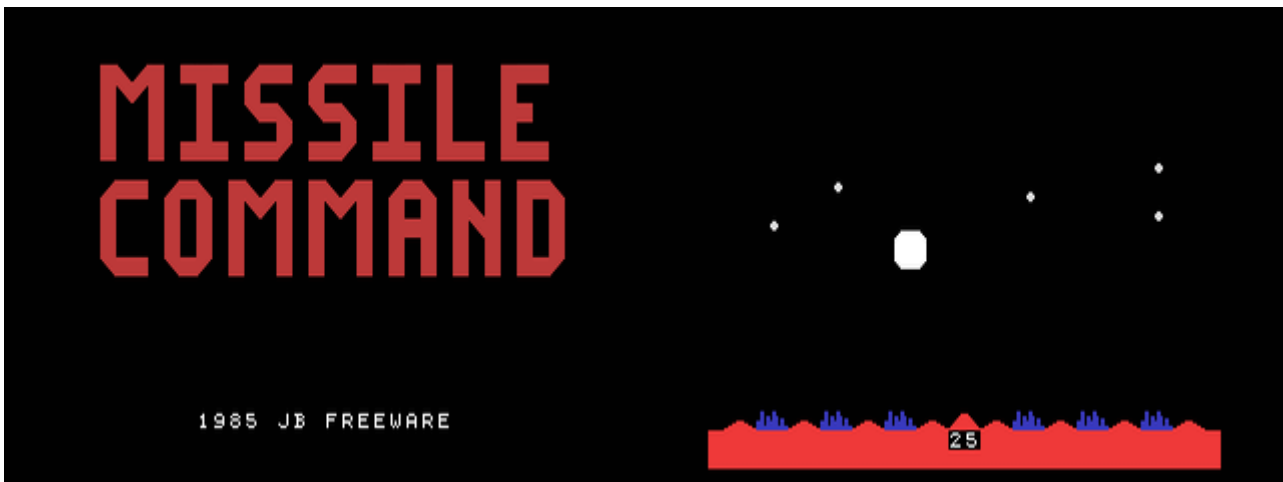
Start from mega menu: G – 8 – D

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard (S, D, 8, 9, 0)

Missile Command

G-8-E [Disk: 231-MICO] By JB Freeware



When I first played this game, I had a hard time believing that it was coded in XB. It is a really faithful port of the classic Missile Command down to the sound effects and the ominous end screen, with only a few minor allowances for the TI limitations. Your objective is simple: shoot down the incoming missiles before they destroy all your cities. Your score depends on the amount of counter missiles and intact cities you have left after each wave. Good luck soldier!

Requirements: XB cartridge, 32K RAM, joysticks.

Executable to run: MISSILE

Download Missile Command:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 8 – E

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Spider Bop

G-8-F [Disk: 232-SPIB] By John Behnke



The very simple premise of this game is to punch falling spiders in order to push them back up. Unfortunately, there are many of them and they have the nasty habit of always wanting to get back down. The longer you can keep them off the bottom of the screen, the higher your score. This is a tough exercise in concentration made even more challenging by three levels of difficulty which vary the strength of the punch.

Requirements: XB cartridge, 32K RAM.

Executable to run: SPIDER

Download Spider Bop:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

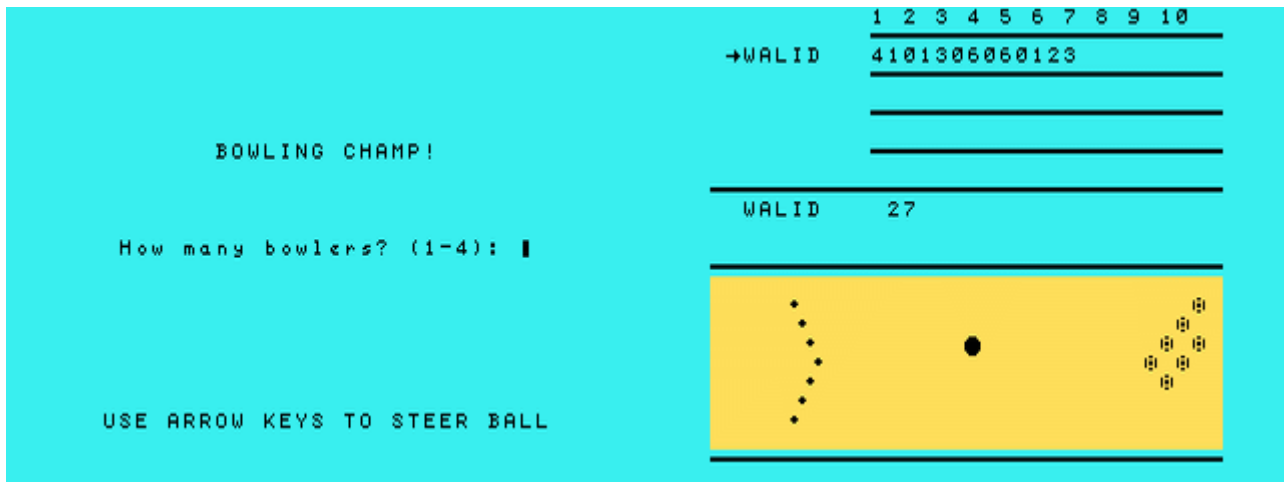
Start from mega menu: G – 8 – F

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Bowling Champ

G-8-G [Disk: 233-BOWL] By Unknown Author



Bowling simulations are tough to create, but this version is very well done within the graphic limitations of the TI. You basically have a top down view of a bowling lane with a bowling ball cycling top to bottom and randomly varying speeds. You have to hit the spacebar at the right moment in order to launch the ball down the lane from its present location. You also have the option of slightly curving the travel path by using the arrow keys. Scoring is accurately calculated and depicted. Basic sound effects spice up the game. Overall a nice entertaining game that relies a lot on your sense of timing. *Note: If you know the author of this program, please let me know so I can give due credit.*

Requirements: XB cartridge, 32K RAM.

Executable to run: BOWLING

Download Bowling Champ:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

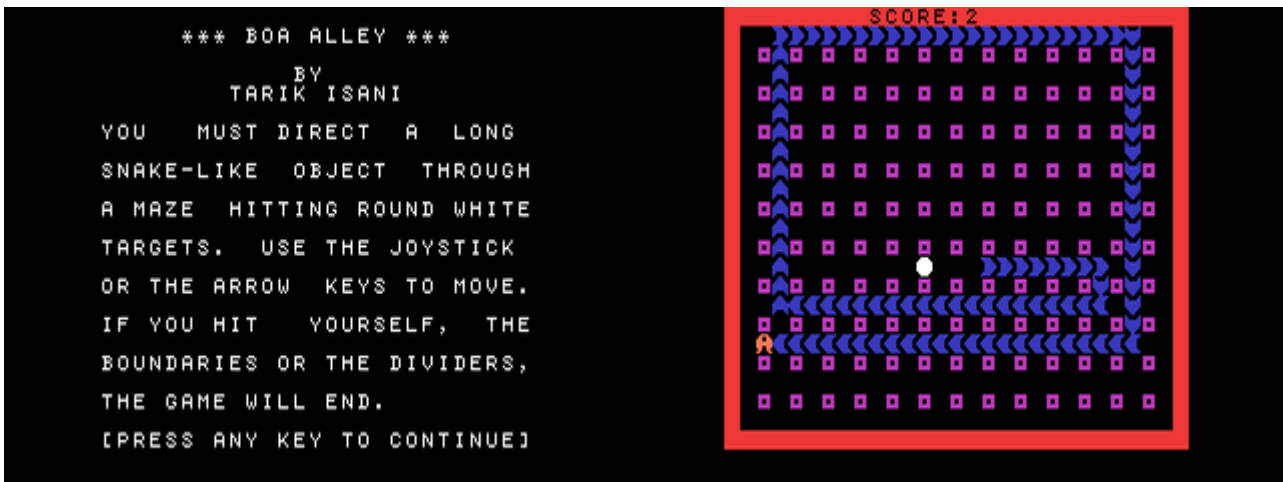
Start from mega menu: G – 8 – G

Features: Title Screen, XB, 1-4 Player, Sound

Controls: Keyboard

Boa Alley

G-8-H [Disk: 234-BOAL] By Tarik Isani



Definitely a very original game! You are the next incarnation of a boa constrictor (you must have been really bad in a previous life...) and you need to eat white blobs which appear at random while avoiding entangling yourself in your own tail. Easier said than done because the snake keeps moving and you can only control its direction, hence requiring quick thinking and path planning. Guaranteed entertainment!

Requirements: XB cartridge, tape or disk drive. Joysticks optional.

Executable to run: BOA

[Download Boa Alley \[TIFILES format\]](#)

Start from mega menu: G – 8 – H

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 1

Asteroids

G-8-I [Disk: 235-AST2] By Unknown Author



Excellent recreation of the venerable Asteroids arcade game where you have to maneuver your spaceship through asteroid fields and blast away everything around you. Puts the TI graphics and sounds to good use and manages to grab your full attention. Well done. *Note: If you know the author of this program, please let me know so I can give due credit.*

Requirements: XB cartridge, tape or disk drive.

Executable to run: ASTEROIDS

[Download Asteroids \[TIFILES format\]](#)

Start from mega menu: G – 8 – I

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Romeo

G-8-J [Disk: 236-ROME] By Greg Kean



From the creator of Bouncer we have this action platformer in the spirit of Jungle Jim. As Romeo, you are trying to obtain a reward (I don't know what it is because I have not been able yet to finish the game...) by completing several dangerous treks consisting of desert dune hopping, crocodiles and sharks killing, as well as cavern crossing. The controls are simple but require very precise timing. The graphics and animations are above par. In summary, I hate sharks!

Requirements: XB cartridge, joysticks, tape or disk drive.

Executable to run: ROMEO

[Download Romeo \[TIFILES format\]](#)

Start from mega menu: G – 8 – J

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1, Joystick 2

TI-99/4A – Game Shelf Extended Basic Games

ROMEO Instructions:

Romeo is an adventurer stuck on desert sand dunes looking for a reward. He must jump and hold on to passing balloon in order to jump from one dune to another by pressing the fire button. Romeo fill flash red if he overheats and will eventually die.

Eventually, after five screens of dunes, he will come upon a stream infested by alligators and sharks. Romeo must attempt to get to the right edge of the screen without being eaten or hit by passing logs. The fire button will produce a knife which will kill the attackers.

Finally, Romeo must run through a cavern, jumping over stalagmites, but avoiding bumping on stalactites. His just reward lies at the end of the cavern.

Good Luck! (You will need it...)

TI-Tris Version 3

G-8-K [Disk: 237-TRIS] By Program Innovators



Finally, a great game of classic Tetris on the TI! Use the joystick to maneuver differently shaped falling bricks into place in order to create one or more solid lines that disappear and add to your score. See how many points you can rake up before the bricks stack up to the top. The graphics and presentation give this well-designed game a distinctly Russian flavor. If you like the original Tetris, then you will love this version.

Requirements: XB cartridge, joysticks, disk drive.

Executable to run: TITRIS

[Download TI-Tris \[TIFILES format\]](#)

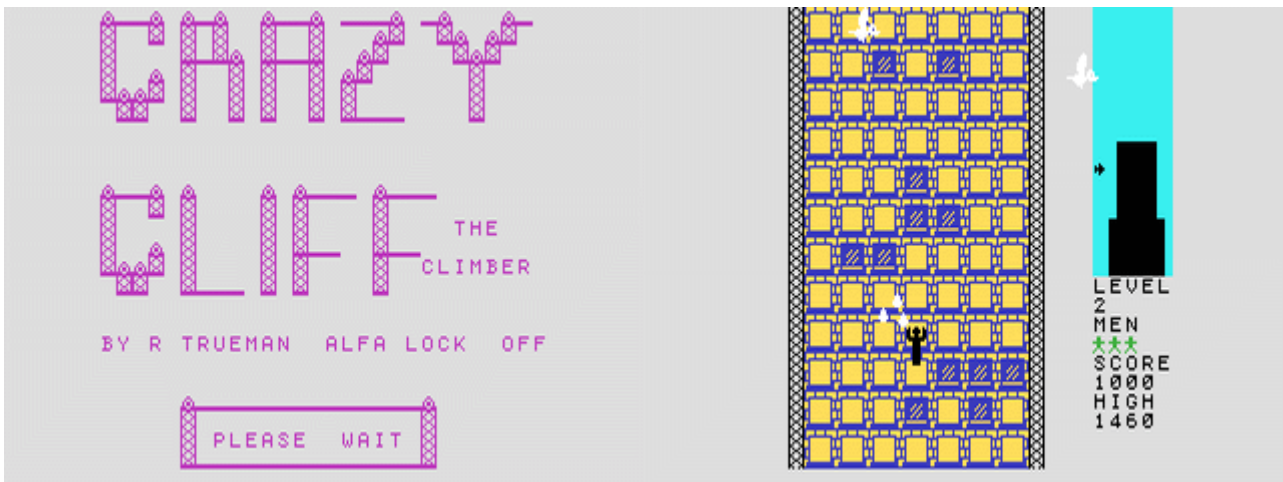
Start from mega menu: G – 8 – K

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Crazy Cliff

G-8-L [Disk: 238-CLIF] By R. Trueman



Strangely addictive but also frustrating, this program borrows from the spirit of Alpiner and substitutes a towering skyscraper. As Crazy Cliff, and you have to be crazy to attempt this, you are dead set on scaling all the skyscrapers in your town while dodging flower pot throwing pranksters, low flying jets and bird poop among other things. To make matters worse, windows open at random leading to a deadly fall if you happen to be on one. The difficulty level is incremental and the graphics are well done. One of my personal favorites.

Requirements: XB cartridge, joysticks, tape or disk drive.

Executable to run: CLIFF

[Download Crazy Cliff \[TIFILES format\]](#)

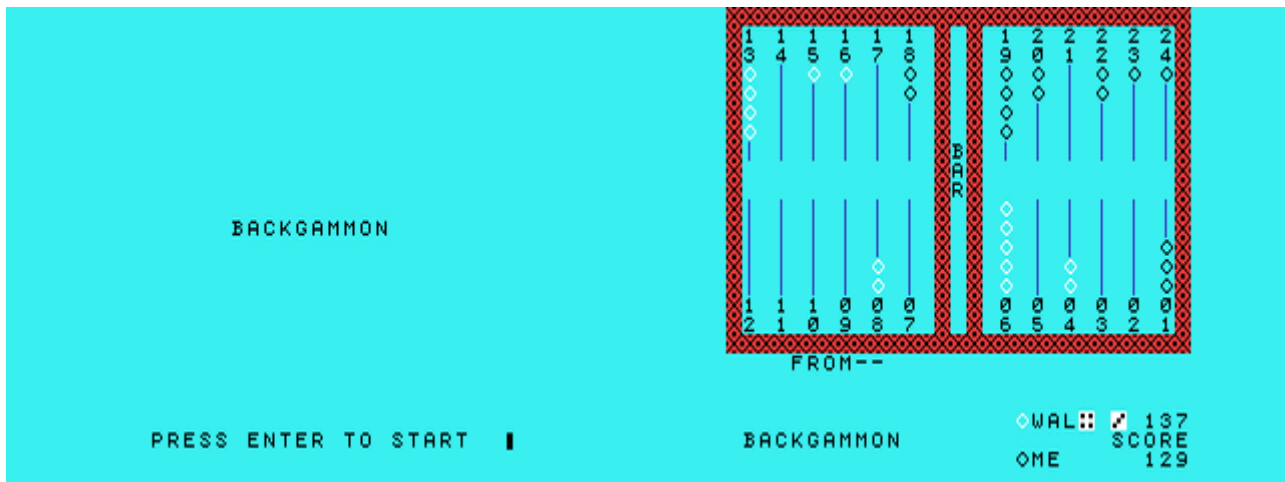
Start from mega menu: G – 8 – L

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Backgammon

G-8-M [Disk: 239-BAGA] By Dennis Webber



This is the best XB backgammon game I have seen so far, with excellent and speedy AI as well as good clear graphics. Play mechanics are very simple, allowing you to concentrate on the game proper. Highly recommended for the backgammon fans among you.

Requirements: XB cartridge, tape or disk drive.

Executable to run: GAMMON

[Download Backgammon \[TIFILES format\]](#)

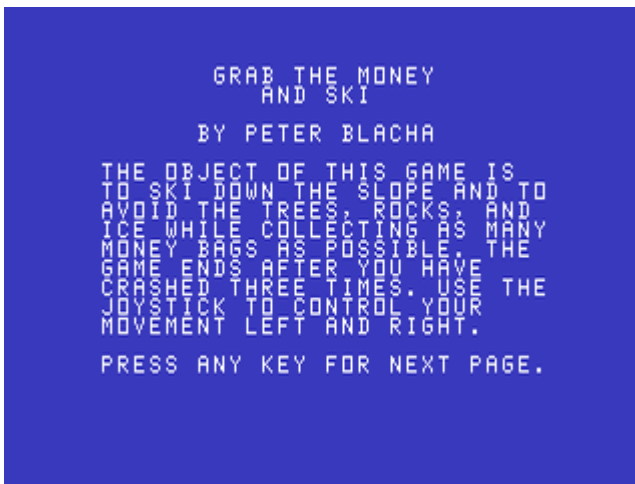
Start from mega menu: G – 8 – M

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Grab The Money And Ski

G-8-N [Disk: 240-MSKI] By Peter Blacha



There are numerous skiing simulations for the TI available, but the interesting concept in this one is that you have to grab scattered money bags as you whiz down the slope and avoid obstacles. Your score is determined by the amount of money you collect, not by how far you go, and the difficulty level rises with each completed level. The animations are excellent and control is well balanced. A fun game.

Requirements: XB cartridge, joysticks, tape or disk drive.

Executable to run: SKIING

[Download Grab The Money And Ski \[TIFILES format\]](#)

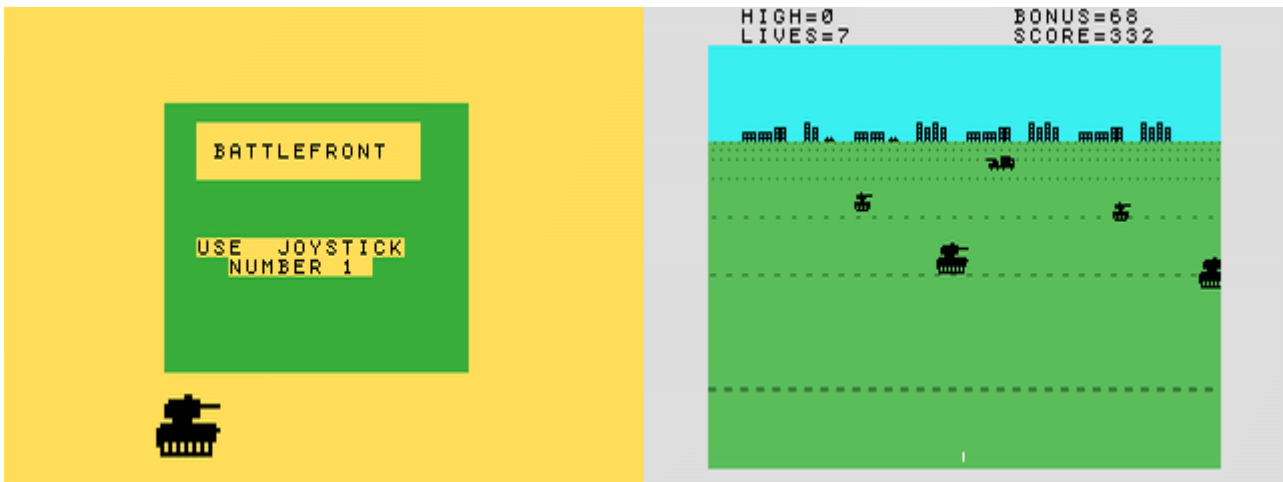
Start from mega menu: G – 8 – N

Features: Title Screen, XB, One Player, Sound, Speech

Controls: Joystick 2

Battlefront

G-8-O [Disk: 241-BATF] By unknown author



You are the sole attacker in this shoot-em-up game taking on an entire mechanized division. You are equipped with a guided rocket and you have to take down rolling tanks and other support vehicles as they rumble by, as well as trying to shoot down enemy missiles homing down on you intermittently. Requires good timing and cool nerves. Well executed.

Requirements: XB cartridge, tape or disk drive. Joysticks optional.

Executable to run: BATTLE

[Download Battlefront \[TIFILES format\]](#)

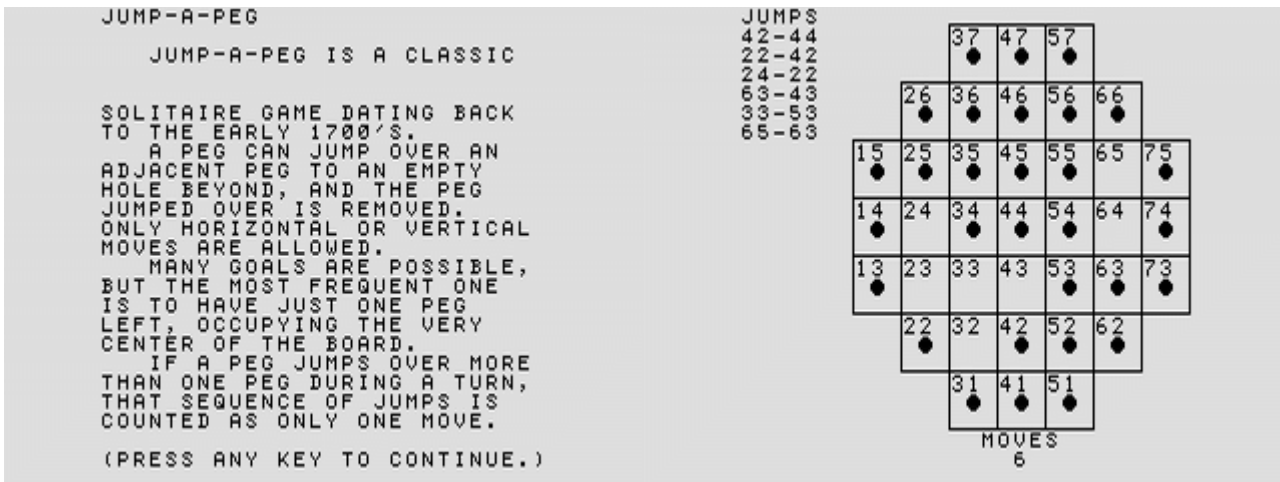
Start from mega menu: G – 8 – O

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 1

Jump-A-Peg

G-8-P [Disk: 242-JPEG] By Barry Traver



This program has got to be the last word in this timeless solitaire game, at least on the TI platform. You have a choice a no less than 15 variations with many sub-variations as well, making for endless play hours. The basic premise is to hop over adjacent pegs one at a time, eliminating the jumped peg in the process, and trying to end up with a final pre-determined pattern. My brain must not be wired for this kind of play because I have found it to be extremely challenging. Luckily, there is an option to let the computer calculate then demonstrate a solution for you, resulting in the invariable a-ha! and the slap on the forehead. If you are into this kind of entertainment, then this has got to be Nirvana...

Requirements: XB cartridge, tape or disk drive.

Executable to run: JUMP-A-PEG

Download Jump-A-Peg:

[\[TIFILES format\]](#)

[\[Disk image\]](#)

Start from mega menu: G – 8 – P

Features: Title Screen, XB, AL, One Player

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

JUMP-A-PEG DOCS

(C) COPYRIGHT 1990
by Barry A. Traver

Here is indeed one of the classic games of the world! "Peg solitaire" has been popular in many countries since its creation sometime in the early 18th century or even earlier.

The board itself was invented in the Middle Ages, quite possibly in Scandinavia. "Fox and Geese" has been popular throughout Europe and Asia. Gameboards dating from about 1300 have been found in England and Italy, and the earliest reference seems to be in the Icelandic GRETTIS SAGA of the same time.

Queen Victoria enjoyed playing "fox and geese" with Prince Albert during their courtship, and the game was very popular during the Victorian Age. The gameboard itself, however, has found another equally popular use: the board invented for the two-player "fox and geese" game is now even more commonly used for "peg solitaire."

Legend has it that sometime in the 18th century, an unfortunate French nobleman sentenced to solitary confinement in the Bastille developed "peg solitaire," using an improvised "fox and geese" board. It is likely, however, that the game existed before that, because the philosopher and mathematical Leibniz referred to the solitaire game in a letter, he wrote in 1716.

Whenever and wherever it was invented, "peg solitaire" is finding new life today. You may find, for example, finely crafted sets in the offices of executives, and new books have been published on the game in recent years (although not as many as were published during the late 19th century in France!).

There are two slightly different versions of the gameboard. The 33-cell version is the one commonly used in England, the United States, and the U.S.S.R. The 37-cell version is more popular in France. But both forms are found throughout the world, and there is no reason not to enjoy both varieties.

JUMP-A-PEG on this disk has some advantages over non-computer versions. First of all, you can't lose the pegs! Second, you can use either the English or the French board. Third, you have a number of built-in specific puzzles (and their solutions!).

There is no standard way of numbering the board (each book seems to do it differently), but I've made use of the format used by Martin Gardner in his chapter on "Peg Solitaire" in his book THE UNEXPECTED HANGING AND OTHER MATHEMATICAL DIVERSIONS (New York: Simon and Schuster, 1969), pp. 122-135.

Three other books I've benefited from are these: CREATIVE PUZZLES OF THE WORLD by Pieter van Delft and Jack Botermans (New York: Harry N. Abrams, 1978); GAMES OF THE WORLD edited by Frederic V. Grunfeld (New York: Holt, Rinehart and Winston, 1975); THE WAY TO PLAY: THE ILLUSTRATED ENCYCLOPEDIA OF THE GAMES OF THE WORLD by the Diagram Group (New York: Bantam Books, 1977).

Some of the puzzles may be known by various names. For example, what some call the "Fireplace," others call the "Football Team." Likewise, what I call "Corner to Corner," some others call the "Corsair." The specific puzzles included in my computer version of JUMP-A-PEG are, I think, the most popular puzzles, but you can probably find many others if you check with your local public library.

At any rate, something's included for all here, from the simple "Latin Cross" to the 15-move "Davis Jump." Note that some puzzles may have hundreds of solutions: the solution I provide is just one sample (and not necessarily the best!). Be creative: see if you can provide a solution that has fewer moves (not always possible) or that has more "elegance." Whatever you do, enjoy!

By the way, although it is not always announced, FCTN-9 is active at most times while the game is running. It will return you to the main menu (unless you're already at the main menu, in which case it allows you to exit the program).

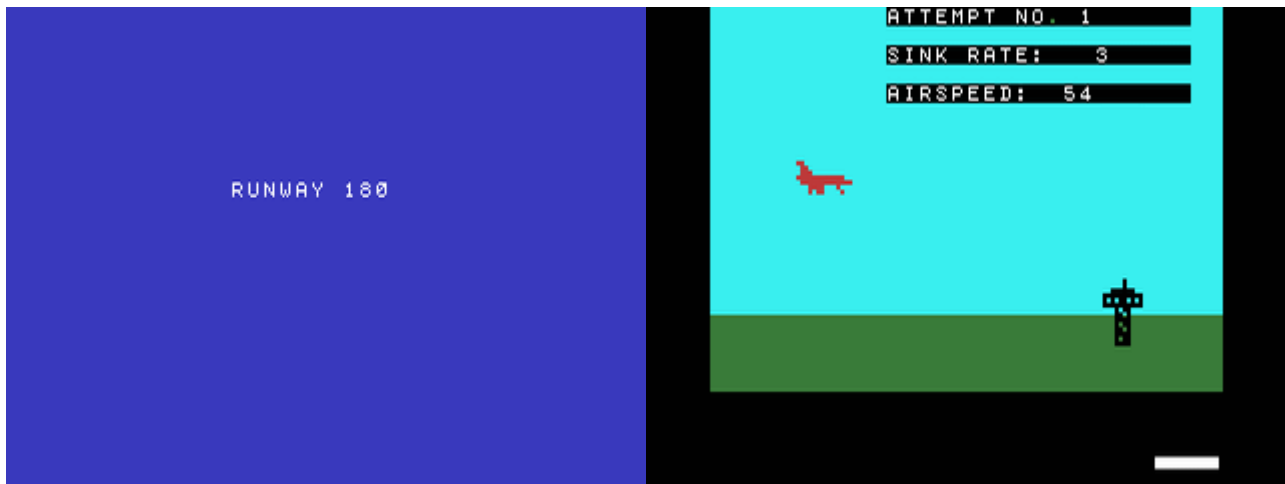
TI-99/4A – Game Shelf Extended Basic Games

JUMP-A-PEG is an Extended BASIC program containing half a dozen or so embedded assembly routines, using Todd Kaplan's ALSAVE program. It would not have been possible to write the game entirely in XB, but it would have been v-e-r-y s-l-o-w in operation, whereas the assembly routines speed things up so that screen changes take place incautiously (except for the actual movements of the pieces, which I deliberately left slower so as to make them easier to follow when watching the computer show a solution).

As usual, my intent in writing this game is your enjoyment, so it's time to stop reading about JUMP-A-PEG and time to start playing the game!

Runway 180

G-8-Q [Disk: 243-R180] By James Dunn



Deceptively simple but devilishly difficult, this game hinges on your ability to land a jet that is on final approach. You control the rate of descent, the speed and the landing gear and you need to land the plane without forming a crater as well as bring it to a full stop before reaching the end of the runway. That last part in particular will leave permanent dents on your joystick and quite possibly a sore jaw as you watch with clenched teeth the remaining yards on the runway shrink at an alarming rate while your hand is slamming on the brakes. My absolute best was a score of 880 with 83 yards left. If you can do better, I'd like to hear from you :)

Requirements: XB cartridge, joysticks, tape or disk drive.

Executable to run: RUNWAY

[Download Runway 180 \[TIFILES format\]](#)

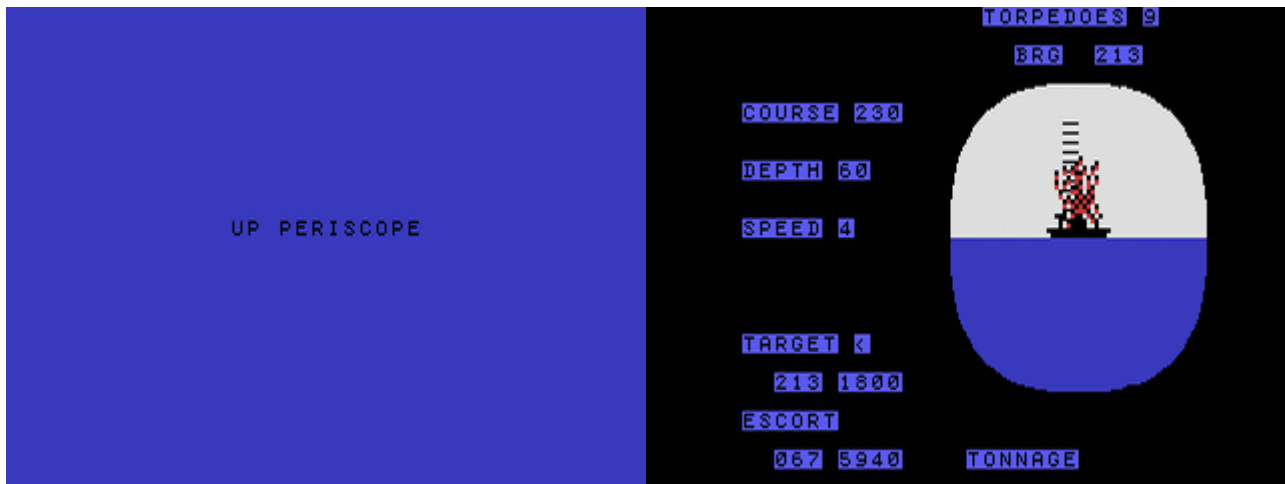
Start from mega menu: G – 8 – Q

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Up Periscope

G-8-R [Disk: 244-PERI] By Pewterware



For you aspiring submariners out there, this game is right up your alley. Designed by a 20-year submarine veteran, your objective is to hunt and sink enemy ships while avoiding being destroyed by anti-submarine destroyers. Use your sonar to intercept convoys then employ cunning and strategy to sink the target ships and avoid the escorts. Your survival depends on it... You control your course, depth and speed, and can fire up to three torpedoes simultaneously. Good screen layout and graphics manage to capture the tension of real submarine warfare.

Requirements: XB cartridge, tape or disk drive.

Executable to run: PERISCOPE (Enter CALL FILES(1) before loading from disk)

[Download Up Periscope \[TIFILES format\]](#)

Start from mega menu: G – 8 – R

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Extended Basic Games

UP PERISCOPE:

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You are the commander of a submarine and your objective is to sink as many enemy ships as possible with 12 or 24 torpedoes.

Your screen will initially show a sonar scope with enemy contacts visible, as well as your course, depth, and speed. The true bearing and range of enemy contacts will also be shown. At a depth of 60 feet, your periscope will automatically come up, and will also be retracted once you go below that depth. The sonar display will then be replaced by a periscope view of the surface and the periscope will automatically track either the target or the escort.

Your commands are:

C: change course from 0 to 359 degrees.

D: change depth from 60 to 500 feet in 10 foot increments.

S: change speed from 0 to 8 knots. Your speed will be reduced if flooding occurs.

P: raise or lower periscope when at 60 feet depth.

T: track target when at periscope depth.

E: track the escort when at periscope depth.

1,2,3: fire 1,2 or 3 torpedoes. After firing, the chance of sinking the enemy ship is briefly displayed below the periscope view. You must be at periscope depth to fire the torpedoes.

Hints: Do not exceed 4 knots when the periscope is raised and when within 4000 yards of the enemy to avoid detection. After firing, the escort will hunt you down and release depth charges. You cannot outrun the escort, so your best bet is to quickly dive. The escort's sonar cannot detect you below 150, 200 and 250 feet for the Normal, Difficult and Impossible game respectively.

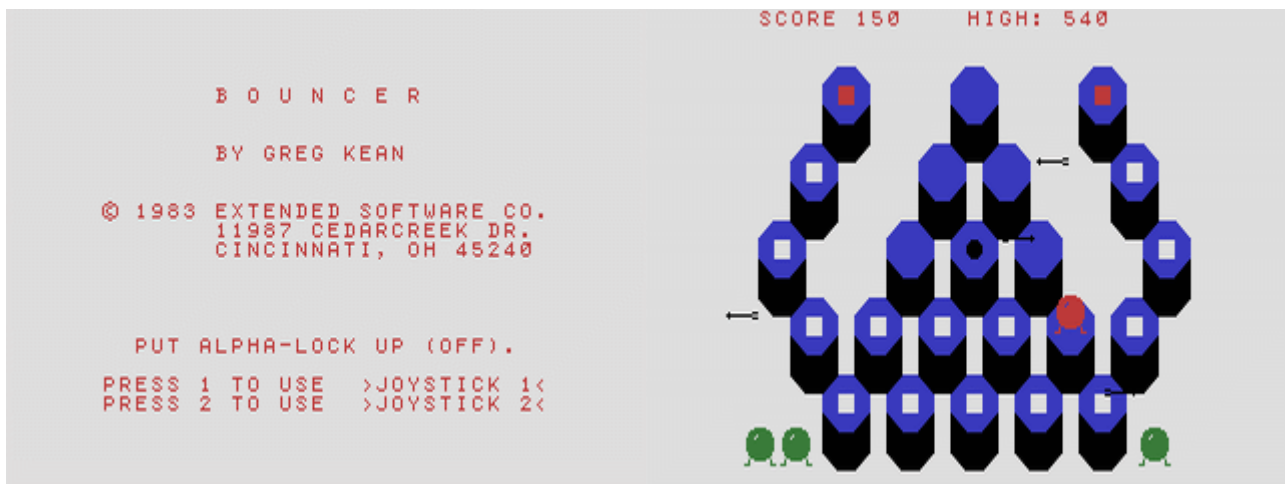
.

Note: you must type CALL FILES(1) and NEW before loading the game if a disk drive is attached.

Good luck Commander!

Bouncer

G-8-S [Disk: 245-BCER] By Greg Kean



Somewhat reminiscent of Q-Bert, this incredibly addictive game will keep you up for hours! You are Bouncer, a balloon like creature trying to gobble squares while desperately avoiding streaming arrows. The main thing is not to panic, and plan your movements around the arrows using the joysticks to hop around. Animations are smooth and you get a different layout with each challenging level. You have to try this game!

Requirements: XB cartridge, joysticks, tape or disk drive.

Executable to run: BOUNCER

[Download Bouncer \[TIFILES format\]](#)

Start from mega menu: G – 8 – S

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1, Joystick 2

TI-99/4A – Game Shelf Extended Basic Games

BOUNCER:

BOUNCER bounds from one trampoline to another, scoring points for clearing off the squares. He must avoid the arrows which will burst him. Clearing all the squares will present you with another trampoline arrangement. You have a total of 5 BOUNCERS, and extra ones are awarded for each 3000 points, up to a maximum of 5.

Move the joystick in the direction you want BOUNCER to jump.

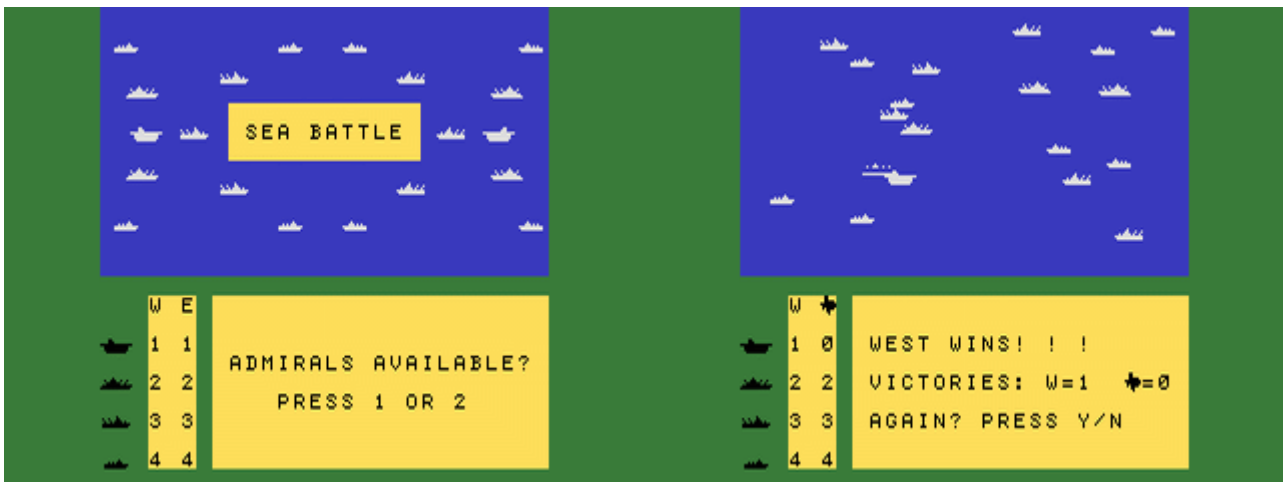
Each white square is 10 points, and the center dot is initially 100 points.

Landing on a red square resets the center dot and increases its value by 100.

Have fun!

Sea Battle

G-8-T [Disk: 246-SBAT] By unknown author



This is not your run of the mill Battleship game. Instead of a boring grid, you can place 10 ships randomly over your half of the screen (or you can let the computer do it for you) and the computer or second player does the same. Then, a pesky smoke screen descends on the battlefield, blanketing all the ships. Each opponent subsequently takes turn firing a number of volleys based on how many ships are still at his/her disposition, placing each shot on a specific area. If an enemy ship is hit, then it sinks immediately. In the end, whoever is left standing wins, but you can also lose if your carrier is sunk. Good graphics and sound effects make for a fun and on occasion tense game. *Note: If you know the author of this program, please let me know so I can give due credit.*

Requirements: XB cartridge, tape or disk drive.

Executable to run: SEABAT

[Download Sea Battle \[TIFILES format\]](#)

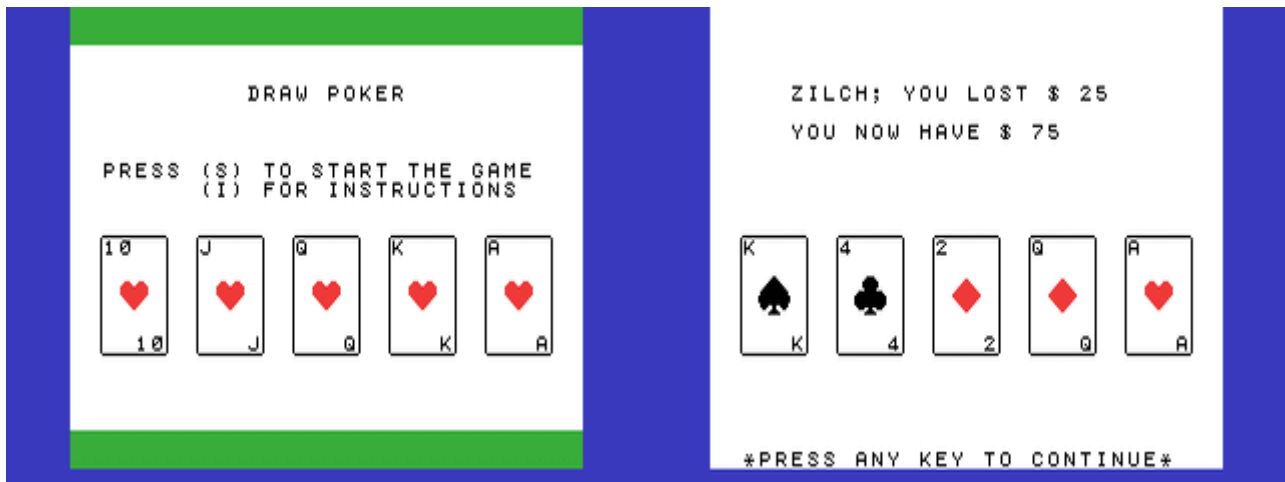
Start from mega menu: G – 8 – T

Features: Title Screen, XB, One or Two Player, Sound

Controls: Keyboard

Draw Poker

G-8-U [Disk: 247-DPOK] By Dave Brzuchalski



What's a game collection without a good game of poker? Well, here it is, and a nice one at that. The play is straightforward, the graphics are crisp and clear, and the instructions are included. Great practice before heading to Las Vegas

Requirements: XB cartridge, tape or disk drive.

Executable to run: POKER

[Download Draw Poker \[TIFILES format\]](#)

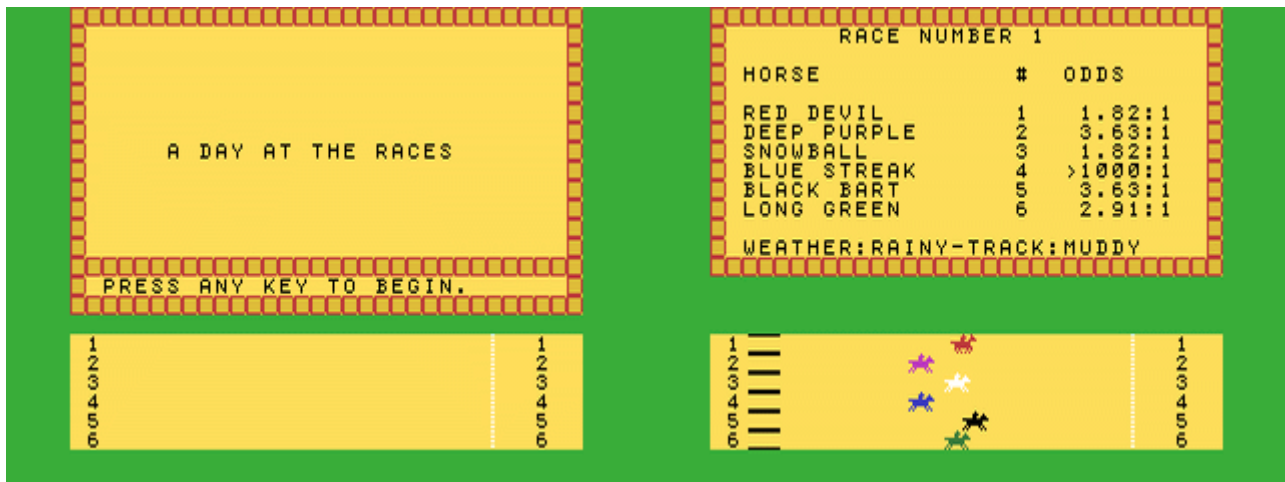
Start from mega menu: G – 8 – U

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

A Day At The Races

G-9-1 [Disk: 248-RACE] By John Morris



This program manages to capture the excitement of horse race betting quite nicely with excellent presentation and nice animations. Although it can be played solo, it is much more fun to have multiple players as up to 8 can participate at a time and each one can influence the odds. You can even allow a big Texan conglomerate to participate, further changing those odds. Whether you bet with peanuts or greenbacks, lots of fun will be had

Requirements: XB cartridge, tape or disk drive.

Executable to run: HORSE

[Download A Day At The Races \[TIFILES format\]](#)

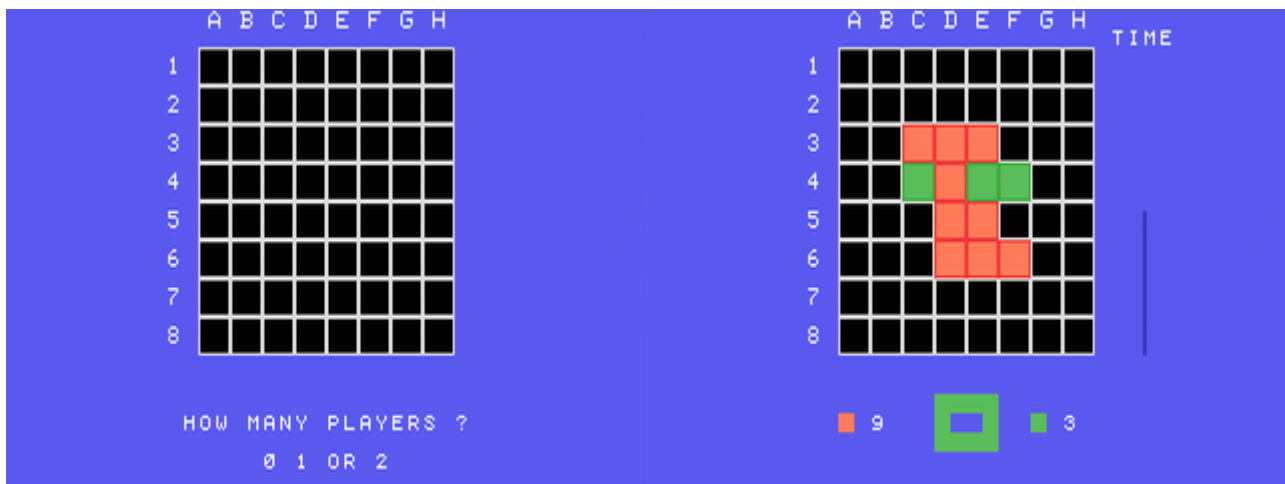
Start from mega menu: G – 9 – 1

Features: Title Screen, XB, 1-8 Player, Sound

Controls: Keyboard

Othello

G-9-2 [Disk: 249-OTHO] By Richard J. Mirus



Classic recreation of the game of Othello, with very nice presentation and features, especially the time constraint on your thinking. The strong AI will keep your brain cells working and the computer can even play itself! Definitely as good as the cartridge based game from CBS. Classic entertainment.

Requirements: XB cartridge, 32K RAM, tape or disk drive.

Executable to run: OTHELLO

[Download Othello \[TIFILES format\]](#)

Start from mega menu: G – 9 – 2

Features: Title Screen, XB, One or Two Player, Sound

Controls: Keyboard

Eliza

G-9-3 [Disk: 250-ELIZ] By unknown author

```

Please shift-down to lowercase

Hello.
The Doctor is out today.
I'm Eliza his computer.

What's your problem?
(Use 'stop' to stop)
>

Did you come to me because
you are depressed?
>of course
I think you need my help.
>i think so too
How do you do.
Please state your problem.
>i just said it
What does that suggest to
you?
>you are nuts
What makes you think I am nu
ts?
>
    
```

The doctor here is always in. Eliza is a brilliant and humorous computer incarnation of a psychotherapist who converses with you in plain English, trying to solve your most twisted mental problems. The answers are frequently obtuse, essentially drawing you into spilling more of your guts. This program was originally designed as a serious analytical tool, but fortunately for us it turns out to be highly entertaining. You will come back to it time and again. *Note: If you know the author of this program, please let me know so I can give due credit.*

Requirements: XB cartridge, 32K RAM, tape or disk drive.

Executable to run: ELIZA

[Download Eliza \[TIFILES format\]](#)

Start from mega menu: G – 9 – 3

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Lost Ruins

G-9-4 [Disk: 251-LORU] By B.J. Bruns



This program initially appeared in 99'er magazine. You are a distant descendant of earthlings in search for the original Earth. You have just landed on a planet and you need to dig around collecting artifacts. You have initially 10 blast charges per life, and you will die in the tunnels if you run out of charges. You need to bring the artifacts to the awaiting surface spaceship to score, and if a member of the expedition dies, then the artifacts stay with him/her unless you can retrieve them. This is quite an original game, and you need good planning in order to maximize your score.

Requirements: XB cartridge, 32K RAM, tape or disk drive.

Executable to run: LOST

[Download Lost Ruins \[TIFILES format\]](#)

Start from mega menu: G – 9 – 4

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard, Joystick 2

Alien Landing

G-9-5 [Disk: 252-ALLA] By Willi Doeltsch



In this space based shooter, your objective is to prevent alien vessels from landing on your home planet's surface. You command a very powerful cannon which you use to shoot down the aliens. Your score will depend on how long it takes you to finish off each invading wave as well as the number of shells fired. This game is visually brilliant, making full use of Extended Basic's capabilities and has excellent sound effects. Play is relatively easy until you reach the higher levels, but it keeps you coming for more. Two thumbs up!

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: ALIENLAND (From DSK1)

[Download Alien Landing \[TIFILES format\]](#)

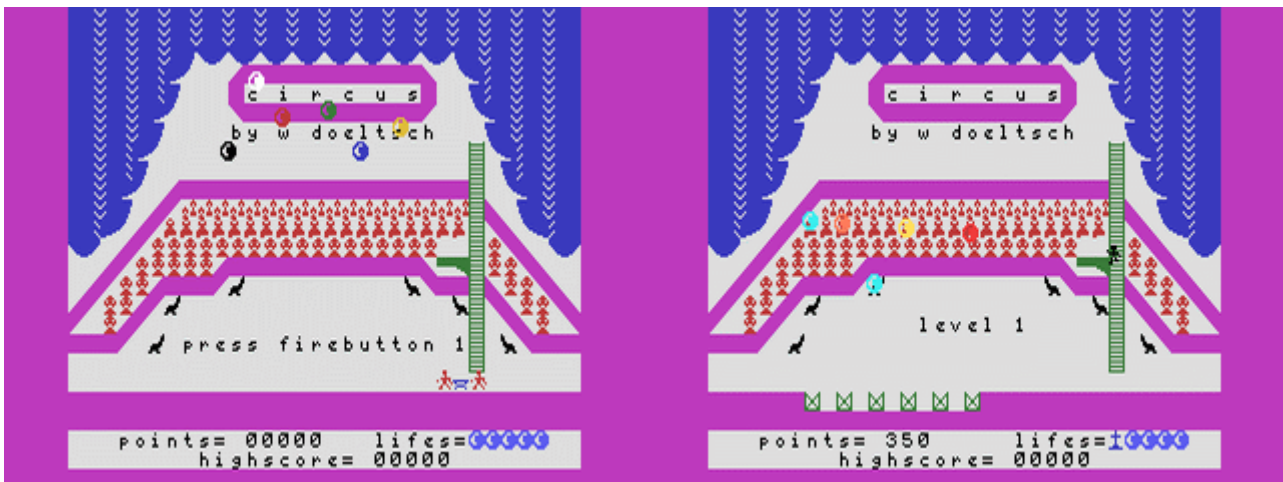
Start from mega menu: G – 9 – 5

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Circus

G-9-6 [Disk: 253-CIRC] By Willi Doeltsch



Of all Doeltsch's games, this is my favorite. You are a (hopefully) very talented circus performer, having a great show in front of a large audience. You get to perform many acts, including trampoline jumping, arrow shooting, and seal training among other things. This requires pinpoint precision and great reflexes, otherwise the remains of your broken body are literally dusted off the stage. Masterfully executed, it is definitely a game you want to try.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: CIRCUS

[Download Circus \[TIFILES format\]](#)

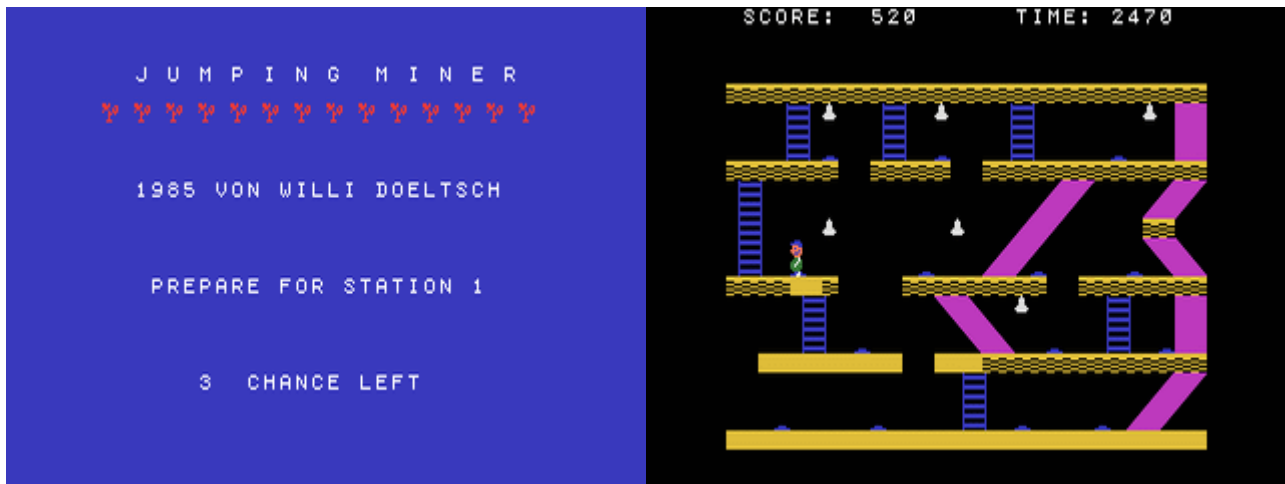
Start from mega menu: G – 9 – 6

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Jump Miner

G-9-7 [Disk: 254-JUMI] By Willi Doeltsch



A nicely rendered platform game somewhat inspired by Mario where you are a strong hearted miner trying to explore a mine before time runs out. You can jump over gaping voids, grab scattered hammers for extra points, and avoid slippery slides that hinder your progress. Requires logic and planning as well as good reflexes, which is a rare combination in this type of game.

Requirements: XB cartridge, tape or disk drive, joysticks.

Executable to run: JUMPMINE (CALL FILES(1) required to run from disk)

[Download Jump Miner \[TIFILES format\]](#)

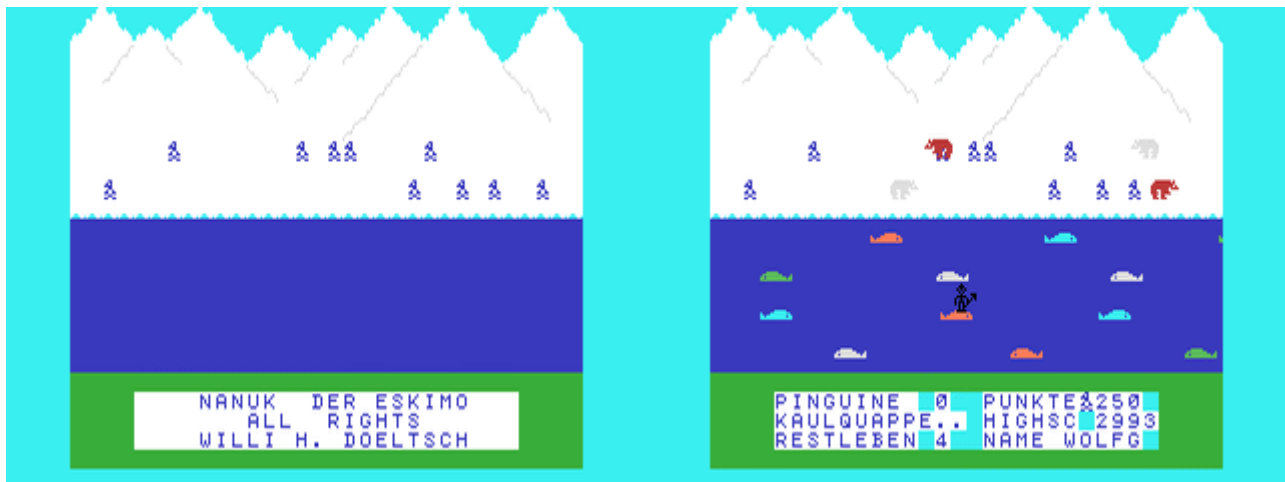
Start from mega menu: G – 9 – 7

Features: Title Screen, XB, One Player, Sound, Music

Controls: Joystick 1

Nanuk

G-9-8 [Disk: 255-NANU] By Willi Doeltsch



A twisted version of Frogger having you as an Eskimo hunter going after hapless penguins while trying to avoid roaming bears. You have to cross a pesky river by jumping on top of passing whales, not a small endeavor since they are very slippery. This is a very addictive game with smooth gameplay that will require every ounce of concentration you can muster. After all, the man has got to eat...

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: NANUK (From DSK1)

[Download Nanuk \[TIFILES format\]](#)

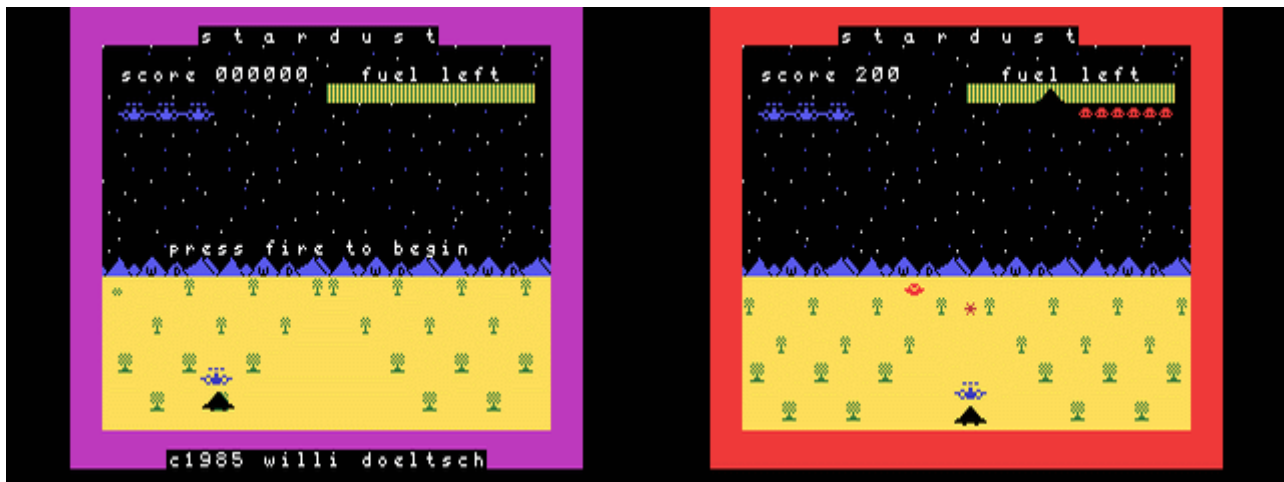
Start from mega menu: G – 9 – 8

Features: Title Screen, XB, One Player, Sound, Music

Controls: Joystick 1

Stardust

G-9-9 [Disk: 256-DUST] By Willi Doeltsch



Another space shooter from the talented Doeltsch. You are the pilot of a space fighter defending your planet from invading alien hordes through multiple screens. Requires precision shooting and fast maneuvering. Great graphics and sound effects, a virtual showcase of XB programming.

Requirements: XB cartridge, 32K RAM, disk drive, joysticks.

Executable to run: STARDUST (From DSK1)

[Download Stardust \[TIFILES format\]](#)

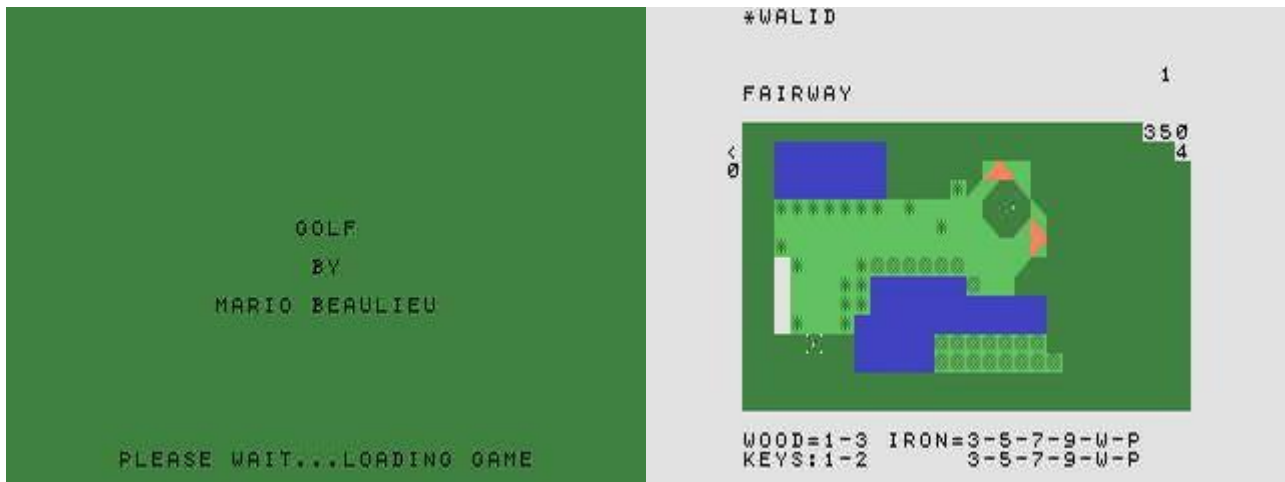
Start from mega menu: G – 9 – 9

Features: Title Screen, XB, One Player, Sound

Controls: Joystick 1

Golf

G-9-A [Disk: 257-GOLF] By Mario Beaulieu



A nicely done golf program from a top down perspective. You get to decide how many holes you want to play, and have a choice of two locations, namely Capri and Iles Bizards. Up to nine players can play simultaneously. Only the ball is animated and the player is represented by a cursor. You get the full range of clubs and there is a wind factor to account for. The game and terrain physics appear to be quite realistic, although the play can be a little slow at times. It is especially fun for multiplayer tournaments. Overall a very well designed game for the golf enthusiast.

Requirements: XB cartridge, 32K RAM, tape or disk drive. Joysticks optional.

Executable to run: GOLFLOADER

[Download Golf \[TIFILES format\]](#)

Start from mega menu: G – 9 – A

Features: Title Screen, XB, 1-9 Player, Sound

Controls: Keyboard, Joystick 1

TI-99/4A – Game Shelf Extended Basic Games

GOLF

Version 1.0

Copyright (c) 1988
Alain & Mario Beaulieu

Sometimes, you don't really feel like driving for hours, but you wish you were right there, on the course enjoying your favorite sport, **GOLF...**

Well it's now possible to simulate a game on your favorite golf course. This user-supported software comes with 2 courses which are scale replicas of real courses. You can have your own golf course if you follow the next two conditions.

1- You have to be a registered owner. To do that, we ask that you send us \$20.00/cdn. Being registered also allows you to more...

2- To get your OWN golf course, you must send us a map or plan of it including: DISTANCES, SHAPES, LAKES, RIVERS, SAND TRAPS, TREES, PARS, and as much if not all specifications about the course. Of course, if you want to add something to it, make sure you write it clearly, and you will get it. The best way to get all this info. is to ask for a map next time you visit your favorite golf club.

It means that all registered owners of the GOLF program, will receive a new course every time they send a real plan of a golf course and a disk, and it will only cost you the price of 2 stamps. Registered owners, AND ONLY THEM, will also be notified directly every time there is a new golf course ready. And they will be able to get them by sending a disk and \$1.00 to cover postage.

So, you can consider this program like having no end to it. When you are tired of playing on a certain course, you move to another (without driving a car). And on top of that, I am already working on 2 more courses; one being called 'The 18 hardest holes around Montreal'. 18 holes from different golf courses put together on the SAME course. Where else could you see that?

And it's all done to scale, with everything you can find on a golf course: Lakes, creeks, sand traps, trees, groves, winds, etc....

All golf courses are made with 18 holes but you don't have to play all of them as you will see later.

Four (4) people can play in one game.

You can either play with a joystick (2) or the keyboard.

THE GAME

First, load the game loader: OLD DSK1.GOLFLOAD.

You will have to wait around 15 seconds for the graphics and the game to load.

Then you are asked 'HOW MANY HOLES' to which question you can answer anything from 1 to 18. Next, 'WHICH COURSE?' followed by the list of the available courses. So far there are two.

'JOYSTICKS?' follows. You answer (Y)es or (N)o.

You are then asked 'HOW MANY PLAYERS'. Enter a number from 1 to 4 and enter their names. When you play the game, the name with the asterisk on its left is the one to play. The name on top of the list always drives first. After, the player farthest from the hole plays first.

At that point, the program loads the first hole. You hear a beep when it's loaded and ready to play. You will notice as you play more and more games that the holes are never at the same location on the

TI-99/4A – Game Shelf Extended Basic Games

green. Just like real life. Really, the only thing you will have to get yourself is that 'cooler' when you reach the ninth hole....

OK. Now you have in front of you the playing screen. You can see:

```
NAME OF PLAYER 1  TOTAL SHOTS
" " " 2  SHOTS ON
" " " 3    HOLE
" " " 4
```

```
BALL POSITION          HOLE NUMBER
```

```
WIND -----DISTANCE/PAR.
```

```
-----
WOOD 1 - 3  IRON 3 - 5 - 7 - 9 - W - P.
KEYS 1 - 2   3 - 5 - 7 - 9 - W - P.
```

To choose a club, press the appropriate key.

If you want to know the average distance for a club, press the key 'CTRL' and the number of the key corresponding to the club you want to know about BEFORE you choose a club. .EX: IRON 3, press CTRL 3..

Once you have chosen a club, you are asked to choose from 3 strengths SHORT(1) NORMAL(2) HARD(3).

After you have made your selections BUT BEFORE YOU PRESS EITHER THE FIRE BUTTON OR THE 'Y' KEY, if you decide that you want to change your choice, press CTRL 9. Don't press too long because you will find yourself reading the distance for a iron 9. If you do press too long, it does not matter because you will be at the beginning of the selections anyway.

Depending if you have chosen the joystick 2 or the keyboard, here is how you aim to hit the ball. The pointer is ALWAYS situated to the left of the ball when your turn comes up to play. You can move the pointer as follows.

KEYBOARD:	JOYSTICK:

E - UP	UP
X - DOWN	DOWN
S - LEFT	LEFT
D - RIGHT	RIGHT
Y -HIT	FIRE BUTTON TO HIT

When you tee off, the ball is always placed in the middle of the box with 4 dots in the corners.

You can move the pointer closer or away from your ball. At the maximum distance from your ball, you will get the strongest swing and the least of a swing when you are nearer to the ball. This means that in addition to the 3 choices of strength that you have as you begin a new hole, you can control even more your swing by adjusting the distance separating your ball and the pointer.

TI-99/4A – Game Shelf Extended Basic Games

When it's your turn to play, the other balls disappear to give you a better sight.

If you only want to peek at the holes of a course, or if you only want to play some of the holes, press CTRL 'Y' after a hole has been loaded and the next hole will load right away.

If you happen to drive the ball in a grove or in the water where it's impossible to play, you are penalized 1 or 2 shots depending where you are and asked to move your ball WITHOUT getting closer to the hole. Move the ball with the arrow keys.

Also, if your ball is in a bad position but playable and you want to move it to a better place WITHOUT getting closer to the hole, press CTRL 'M' and use the arrow keys to move it.

***** Remember that this game is as close as possible to the real thing. So you have to play just as if you were on a real golf course. Don't try to use a club where you would not on a real golf course. You will get the same result. EX: Don't try to use a WOOD 1 in a sad trap instead of a WEDGE.

You might not find the game very fast. But remember when you go out to play a nice, relaxing 18 holes in the sun, you are not going there to race through the golf course. You have to think your shots and who can think straight being rushed???

Don't look for the shadow of your ball as it flies in the air... Have you ever seen the shadow of your ball on a real golf course...??? And if you did, it was probably by accident...and it must have scared the heck out of you....

Altogether, I am sure you will be very satisfied with game.

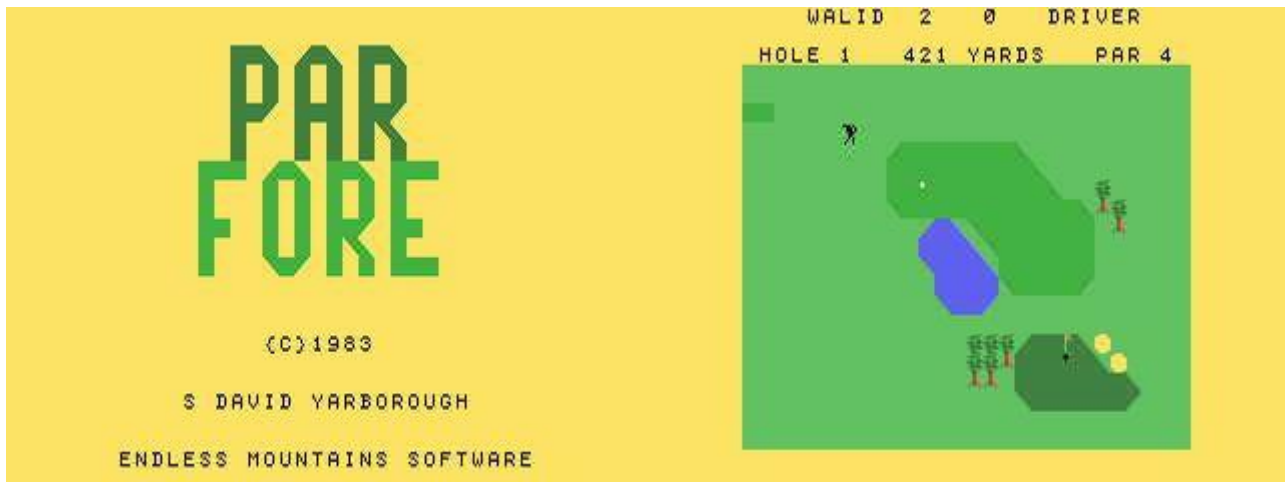
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Par Fore

G-9-B [Disk: 258-PAFO] By David Yarborough



Yet another golfing simulation with better graphics than the previous one as well as animation and speech highlights. Very smooth and entertaining play. Program options are however more limited with only one 18 hole course available and a maximum of 2 golfers. Wind is not taken into account. A nifty feature allows you to magnify the ball direction pointer as well as the hole by pressing the spacebar, thereby enhancing your hit accuracy on the green. Nicely done.

Requirements: XB cartridge, 32K RAM, tape or disk drive. Joysticks and speech synthesizer optional.

Executable to run: XB Autoload

[Download Par Fore \[TIFILES format\]](#)

Start from mega menu: G – 9 – B

Features: Title Screen, XB, One or Two Player, Sound, Speech

Controls: Joystick 1

Part III - TI Basic Games

TI-99/4A Game Shelf

TI Basic Games

Escape

G-9-D [Disk: 259-ESCA] By Bleepbit



This game is a brilliant demonstration of what can be done in TI BASIC, with colors, sounds and animation combining to create a fun and interesting, albeit unforgiving, platformer. You are trying to escape from an underground cavern and you get to collect seeds along the way while shooting down deadly skulls blocking your path. There are slowly dissolving platforms that need to be carefully crossed lest you fall to your death into the dark pits below. But don't waffle around too much because the clock is ticking and if you run out of time then you die a very lonely death. There is a challenge stage between each level where you try to collect more seeds while avoiding getting crushed by falling blocks. The controls are very simple yet effective, and it's easy to get sucked into the action, the hallmark of a well crafted game. Well done indeed!

Requirements: None

Executable to run: ESCAPE

Download Escape:

[Disk Image](#)

Start from mega menu: G – 9 – D (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound, Music

Controls: Keyboard

Skier 99

G-9-E [Disk: 260-SKIE] By TIBASIC



While the theme of this game is as classic as the platform itself, the execution however is masterful, fully leveraging the strengths of TI BASIC to create a colorful, smooth game with responsive controls and interesting challenges. The premise is simple: you are engaged in a downhill ski competition and you have to complete the course in the shortest time possible, with many things thrown in your way to slow you down or stop you in your tracks. Your performance is then compared to the other slew of contestants, which can either be soul crushing or exhilarating depending on your skill and reflexes. The opening and end splash screens are the best I have seen in a TI BASIC game, and really elevated the quality of the program. Very nicely done!

Requirements: None

Executable to run: SKI99

Download Skier 99:

[Disk Image](#)

Start from mega menu: G – 9 – E

Features: Title Screen, TI-Basic, One Player

Controls: Keyboard

Captain Scram

G-9-F [Disk: 261-CAPS] By TIBASIC



Inspired by Scramble, you are at the commands of a fighter filing its way through a canyon defended by variety of not so friendly aliens and your mission is to destroy as many of them as possible. As you advance further the canyon's walls become progressively narrower, making your task that much more difficult. The controls are responsive and the graphics are crisp and well animated, particularly for a game programmed in TI Basic. Simple to pick up and a lot of fun to play. Well done!

Requirements: None

Executable to run: CAPTSCRAM

Download Captain Scram:

[Disk Image](#)

Start from mega menu: G – 9 – F (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player

Controls: Keyboard (E=up, X=down,space=fire)

Bertie The Friendly Alien

G-9-G [Disk: 262-BERT] By TIBASIC



Running against the popular concept of aliens abducting humans, this odd alien is actually trying to save them from space monsters. He runs from house to house, breaks down the walls and recovers the poor humans hiding inside, all while trying to avoid the roaming fierce monsters. While only 2 different screens are available, the level of difficulty does increase with each level as the monsters and humans multiply and get spread around. Well designed graphics and entertaining gameplay although key response can be a bit touchy when things get frantic.

Requirements: None

Executable to run: BERT_GAME

Download Bertie The Friendly Alien:

[Disk Image](#)

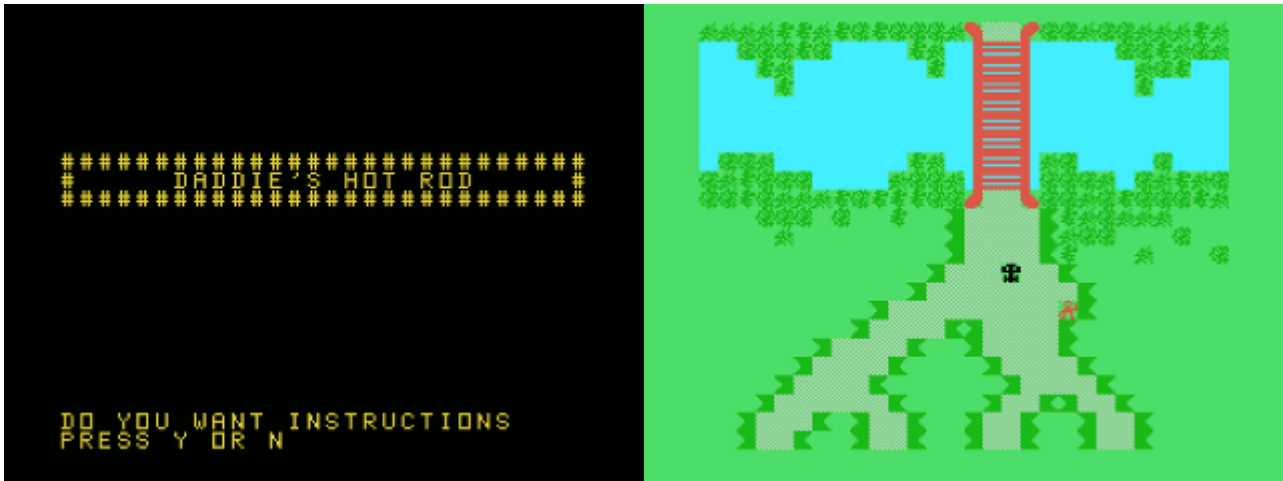
Start from mega menu: G – 9 – G (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player

Controls: Keyboard

Daddie's Hot Rod

G-9-H [Disk: 263-HORO] By Lantern Software



While vertical line by line scrolling racers have existed since the early days of the personal computer, this version really brings a very original twist to it. You are a kid who "borrows" his daddy's Hot Rod for a quick tour of the neighborhood, trying to avoid running off the twisty back roads and the various obstacles strewn along the way such as cars, walls and pesky trees. There are multiple path to take each with a different level of difficulty, but it's all a circular course with each completion counting as a mile towards your score. What I love about this game is that it adds an element of kindness by giving you happiness points every time you pick up hitch-hikers and drop them off at the garage, although doing so makes it riskier for you. So it's up to you: you can just take the safe path and run around the circuit collecting miles or you can try to go for happiness as well at a greater risk of crashing. I have not seen this kind of premise before, and it does indeed warm my heart. If you do crash, you are treated to a kind of redneck comment that will put a smile to your face. The graphics are very well done and the game does captivate you despite its simplicity. One of my favorites.

Requirements: None

Executable to run: HOTROD

Download Daddie's Hot Rod:

[Disk Image](#)

Start from mega menu: G – 9 – H (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Fros-TI Snowman

G-9-I [Disk: 264-FROS] By Francesco Ugga



A fun lighthearted matching puzzle game in a Christmas setting. You need to find all the missing pieces and appendages of Frosti the Snowman by matching each pair in the grid, each labelled by a letter. You have a pretty short amount of time to do so, but if you succeed you are rewarded by a genuine popular little Holiday tune. Great graphics.

Requirements: None

Executable to run: FROSTI

Download Fros-TI Snowman:

[Disk Image](#)

Start from mega menu: G – 9 – I (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Lone Star Invaders

G-9-J [Disk: 265-STIN] By TIBASIC



Another interesting take on the venerable Space Invaders theme, with the variations aiming at circumventing the inherent limitations of TI Basic language. The game leverages on the fly character redefinitions to create the monsters motion to excellent effect, and an element of randomization is introduced where not every shot actually reaches its target. There is no real time score in order not to slow down the game, but you do get a final score at the end. The graphics are truly excellent, and the game is very playable and engaging. My only gripe would be that the hit percentage continues to be randomized even when the monsters are right above and adjacent to your fire station, which can add unnecessary frustration. Another very well done game by TI BASIC!

Requirements: None

Executable to run: STAR_INV

Download Lone Star Invaders:

[Disk Image](#)

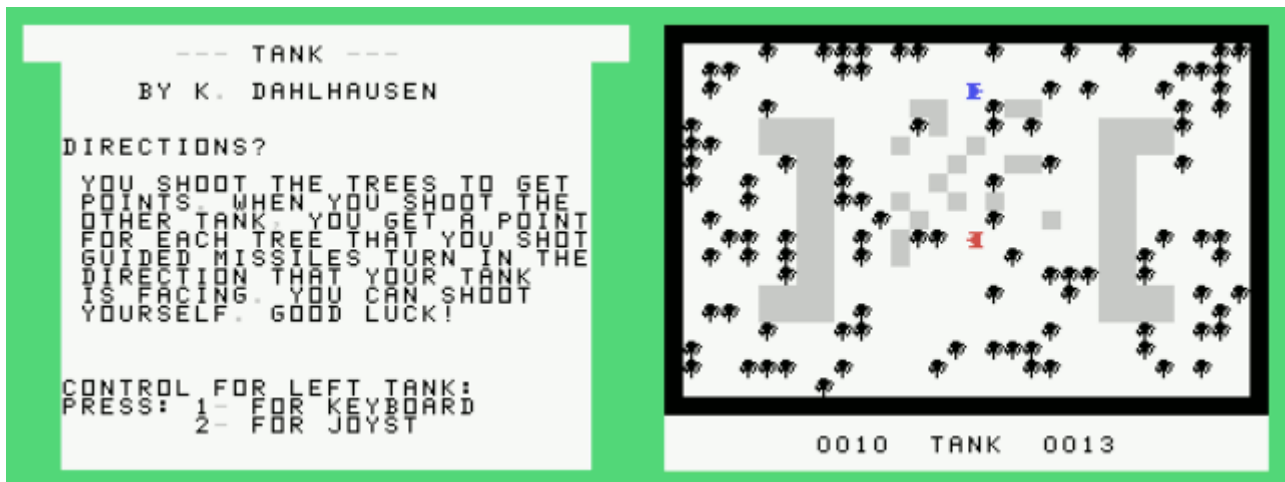
Start from mega menu: G – 9 – J (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Tank

G-9-L [Disk: 267-TANK] By Kevin Dahlhausen



Inspired by the classic Tank game on the Atari 2600, two players are pitted against each other armed with a tank each in a battle to the death. There are trees in the way which you must clear in order to create a path for the tank, and the number of trees removed becomes your score but only after you shoot the enemy tank, which is an interesting twist. The gameplay is very responsive and the presentation is clean and crisp, although the background noise representing the tank engines could get tiring after a while. On the other hand, you may not even notice in the heat of battle! Should be a fun game to play with your kids. Controls: Left tank W,Z,A,S and Q Right tank O,comma,L,K and P.

Requirements: Joysticks optional

Executable to run: TANK

Download TANK:

[\[V9T9 .DSK Format\]](#)

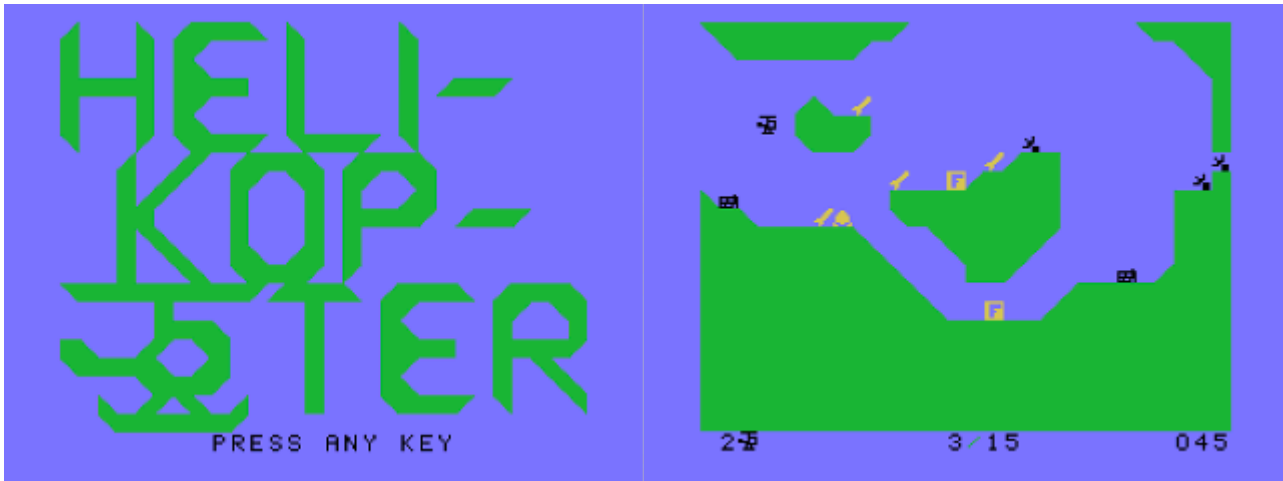
Start from mega menu: G – 9 – L (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard, Joystick 1, Joystick 2

Helikopter

G-9-M [Disk: 268-HELI] By Fredrik Ohrstrom & Martin Florin



In a mix of reflexes and quick planning, this game manages to be very addictive to play as a helicopter pilot winding your way through ever increasingly hostile areas with various obstacles, cannons, and homing missiles. Not only do you have to be fast, but you also need to be quick witted in order to find the best route to get through each of the 15 levels. Each level is meticulously designed, with graduated difficulty, and the game mechanics are extremely well done. Highly recommended.

Requirements: None

Executable to run: HELI

Download Helikopter:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

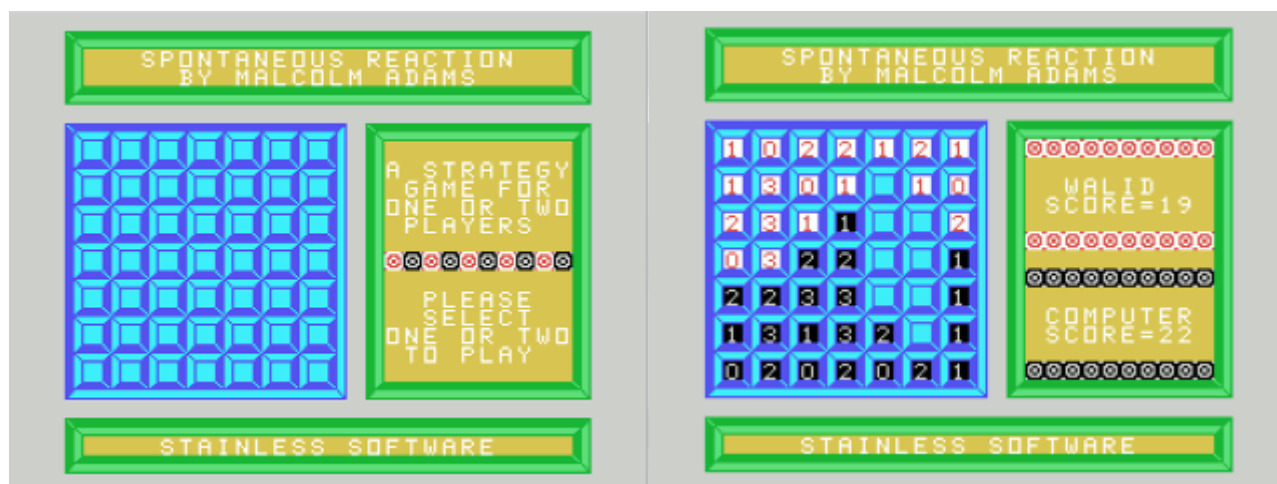
Start from mega menu: G – 9 – M (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound, Music

Controls: Keyboard

Spontaneous Reaction

G-9-N [Disk: 269-SPON] By Malcolm Adams



As puzzle games go, this one definitely wins high marks. In a nutshell, you play against the computer or a human opponent with the objective being to completely fill the board with your own pieces. Each square has a maximum number it can hold depending on its position on the grid, and if it exceeds that then it will explode, adding its contents to the surrounding squares, which could trigger a chain reaction. Not only is this game extremely elegant visually, but it is also very challenging and original. Speech is a nice touch. A masterpiece in my view.

Requirements: None. Joysticks and speech synthesizer optional

Executable to run: REACTION

Download Spontaneous Reaction:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[\[Instructions\]](#)

Start from mega menu: G – 9 – N (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound, Speech

Controls: Keyboard

OVERVIEW

An addictive and exciting modern strategy game.

A battle of logical concentration between you and your opponent, with the final aim being to take complete possession of the board, but the game can be completely reversed on the last move of the game!

Written in console Basic, the game will also run in Extended Basic (Faster response). Keyboard or Joysticks can be selected and a black-&-white TV can be used. The game is for one or two players, and an option to use speech is incorporated.

MOVING THE CURSOR

Joysticks...

Player 1 -- Joystick 1

Player 2 -- Joystick 2

All eight directions are active and when in position press the fire button.

Keyboard... (TI split keyboard)

Player 1 --(E X S D W R Z C)

Q when in position

Player 2 --(I M J K U O N ,)

Y when in position

RULES

The game is played on a 7 * 7 rectangular board. Half of the outer edges occupied by one player, the other half being occupied by the opponent. The board must be completely covered by one players pieces before the game is won. A changing colour bar will randomly choose who moves first.

Each of the squares of the board has a reaction value associated with it. The number is derived from the number of adjacent squares touching it.

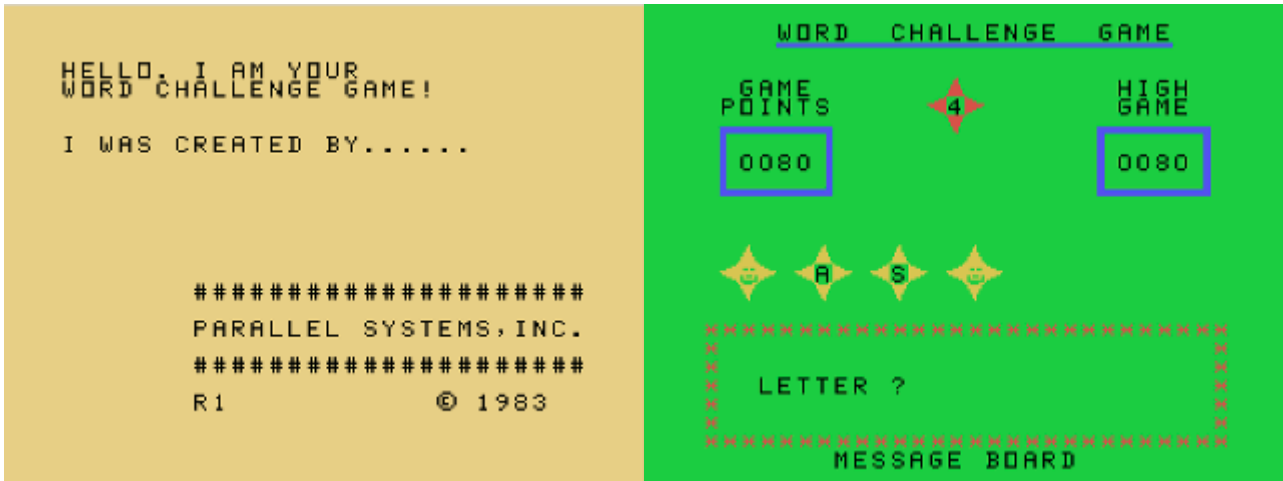
For example, the corner squares have a value of 2, the sides a value of 3, and all the inner squares have a reaction value of 4. The player to go moves by moving his colour-coded cursor around the board, when in his selected position another piece is added to the board.

A new piece can be added only to an empty square or to a square occupied by the moving player.

The number of pieces on each square is indicated by the number shown. When a square has reached its reactive value, all of its pieces are shifted onto its adjacent squares and therefore adding to the value of those squares, also capturing them if they belong to the opponent. The square that has 'reacted' now has a value of '0' but retains the players possession. The adjacent squares may now be at 'reaction' point, so these will also react and a spontaneous chain reaction may be set up.

Word Challenge

G-9-O [Disk: 270-WOCH] By Brian



This game is in the same vein as the venerable Hangman game, but it differs in the fact that not only you have a limited amount of tries to guess a word, but also a limited amount of time to make each guess, adding a substantial amount of pressure on the player. You can either choose to play the included vocabulary or enter your own words. A fun game to play alone or as a group. Very well executed.

Requirements: None

Executable to run: WC-GAME (enter CALL FILES(1) before running the game)

Download Word Challenge Game:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 9 – O (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Bomber

G-9-P [Disk: 271-BOMB] By Roland Schlosser



While this is a fairly common game type where you attempt to bomb all the buildings in a city as your plane makes repeated passes overhead, the twist here is that your bombs have only a limited range before they become ineffective, so you must get close to the buildings in order to successfully bomb them. With each pass, your plane gets lower, and obviously you do not want to run into a building. The good news here is that you do have the ability to rise up again, at the expense of fuel expenditure which is limited. In other words, be accurate or die a horrible death... Serves you right for bombing cities in the first place.

Requirements: None

Executable to run: BOMBER

Download Bomber:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 9 – P (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Meteor

G-9-Q [Disk: 272-METE] By Roland Schlosser



This is a nice variant of the tunnel run genre, as you try to navigate your spaceship through an asteroid field using the E and X keys to go up/down. It gets hairy very quickly, and I can barely make it past the first level. I found it to be quite entertaining, albeit a bit frustrating after a while.

Requirements: None

Executable to run: METEOR

Download Meteor:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – 9 – Q (in RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Samecolors

G-9-R [Disk: 273-SACO] By Harry Wilhelm



In this game, your goal is to clear the screen of all the multicolored balls by selecting groups of adjacent same colored ones which then disappear. You have a choice of 3 to 6 color combinations, with more colors meaning increasing difficulty. Simple but very effective and addictive gameplay. This is another example of using embedded machine language code within TI BASIC which clearly demonstrates the power and potential of that technique.

Requirements: None

Executable to run: SCOLORSBX

Download Samecolors:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Documentation zip file](#)

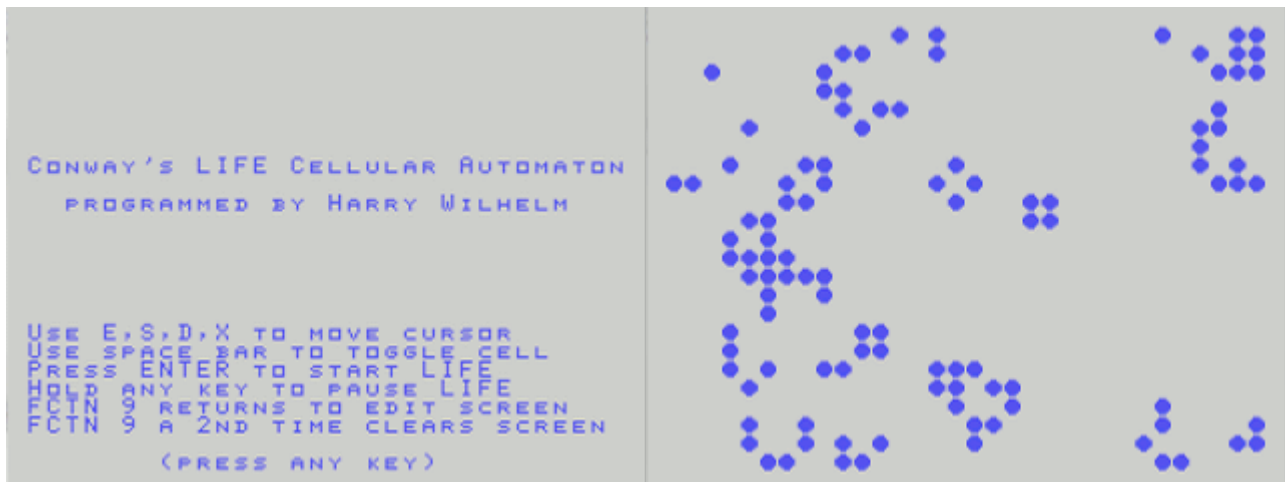
Start from mega menu: G – 9 – R

Features: Title Screen, TI-Basic, RXB, XB, One Player, Sound

Controls: Keyboard

Life

G-9-S [Disk: 274-LIFE] By Harry Wilhelm



Yes indeed, this is another version of Conway's Life. What really makes this one special however is that it is coded in assembly from WITHIN TI BASIC! Harry has managed to break through the reportedly unbreachable confines of TI BASIC to allow the embedding of machine language code and thus opening up an entirely new dimension to Basic programming...

Requirements: None

Executable to run: LIFE

Download Life:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Documentation zip file](#)

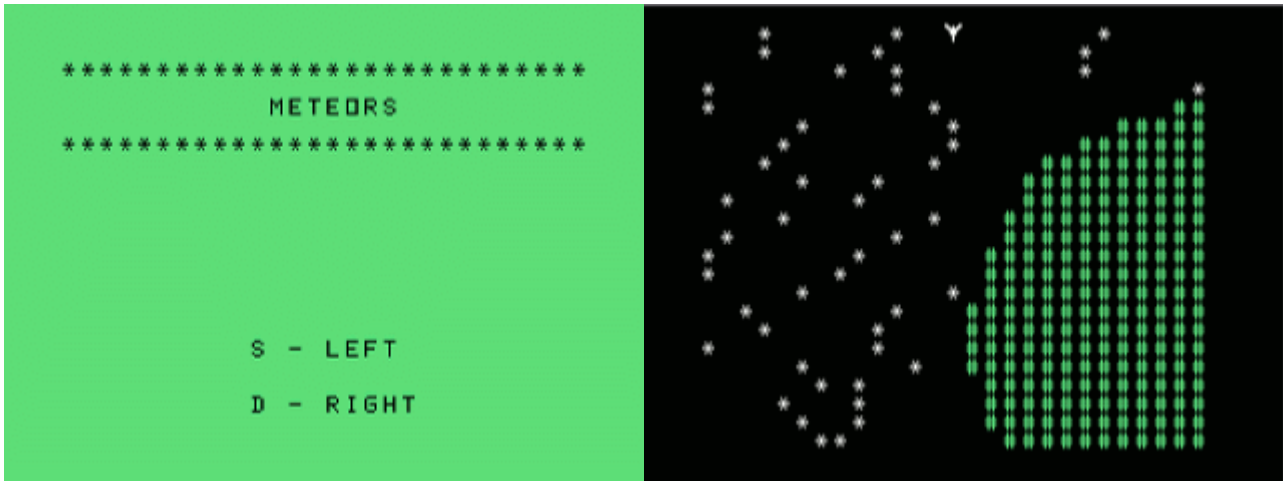
Start from mega menu: G – 9 – S

Features: Title Screen, TI-Basic, RXB, XB, One Player, Sound

Controls: Keyboard

Meteors

G-9-T [Disk: 275-METS] By Manic1975



Simple concept: navigate a meteorite field as long as you can and rack up as high a score as possible. And yet, you find yourself surprisingly entertained by this game which actually is much harder than it looks, and is further complicated by the appearance of giant green space blobs intent on your destruction... A pleasant surprise of a game.

Requirements: None

Executable to run: METEORS

Download Meteors:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

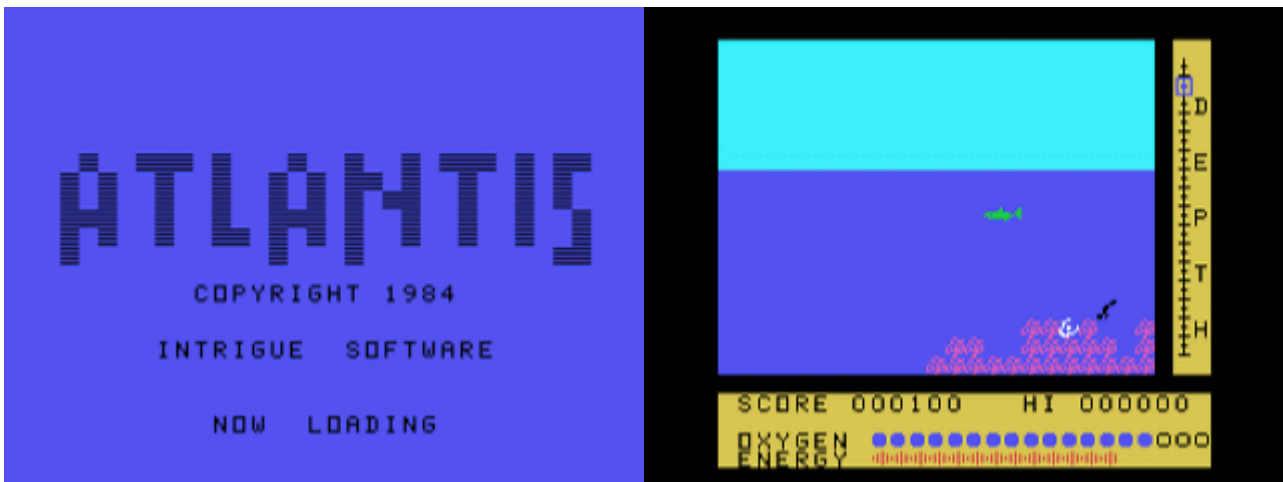
Start from mega menu: G – 9 – T

Features: Title Screen, TI-Basic, One Player, Sound

Controls: Keyboard

Atlantis

G-9-U [Disk: 276-ATIS] By Intrigue Software



Pearl diving tends to be a rather hazardous profession, and this game manages to capture the difficulties of this type of activity. Dive, locate the pearls and try to avoid the sharks or running out of oxygen. You can always come up for air if needed as long as you are not too deep and too low on air. All this exertion understandably depletes your energy, so you need to be as efficient as possible. Quite challenging and fun. Note: this game was initially distributed on cassette and used nearly all available memory on the TI. This version is disk based and requires special loading instructions as detailed in the Instructions file below.

Requirements: Mini Memory cartridge, 32K Ram, disk drive. Joysticks optional

Executable to run: ATLDISK

Download Atlantis:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Instructions](#)

Start from mega menu: G – 9 – U (Mini Memory Module)

Features: Title Screen, TI-Basic, One Player, Sound

Controls: Keyboard, Joystick 1

Atlantis loading instructions:

Classic99 emulator:

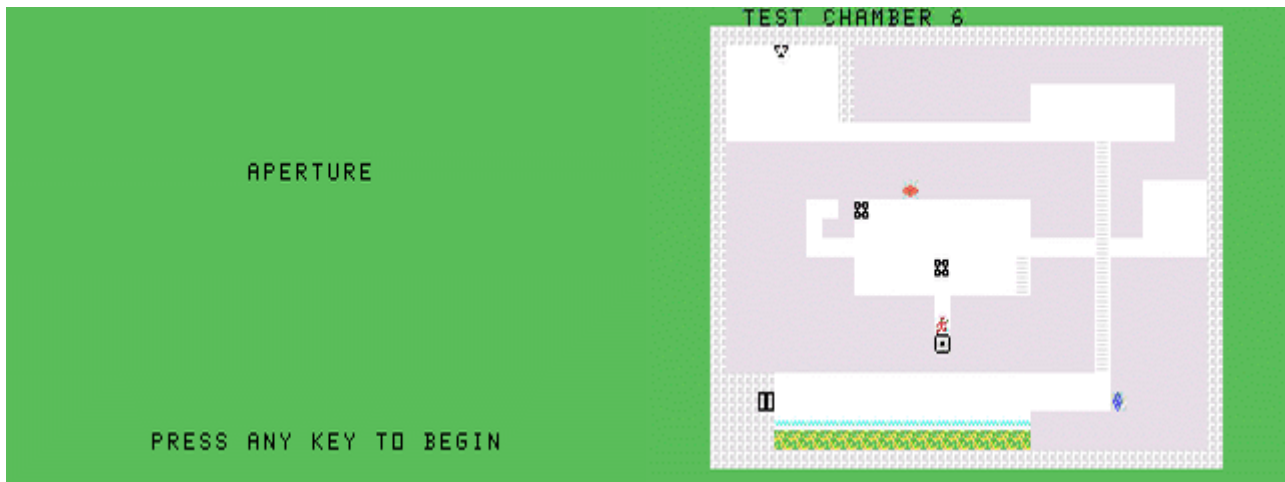
Use Mini Memory cartridge image
Select TI BASIC
CALL FILES(0)
OLD DSK1.ATLDISK
RUN

Using real hardware:

Use Mini Memory module
Select TI BASIC
CALL INIT
CALL FILES(1)
OLD DSK1.ATLDISK
SAVE EXPMEM2
CALL LOAD(-31888,63,255)
NEW
OLD EXPMEM2
RUN

Aperture

G-A-1 [Disk: 277-APER] By Adam Haase



Have you ever wished you could play Portal on the venerable TI? Well now you can! This port has managed to maintain the essence of the original game as well as all of its playability with great graphics and excellent animation. In brief, you are trapped in a testing facility armed with a special gun that distorts the fabric of space and creates portals that you can use to teleport instantly to different locations. You need to get to the central core and disable a computer that has malfunctioned. Along the way you will need to figure out how to exit each testing chamber using logic, wit and dexterity. A gorgeous and incredibly addictive game!

Requirements: Joysticks. Disk drive optional.

Executable to run: APERTURE

Download Aperture:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Instructions](#)

Start from mega menu: G – A – 1 (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Joystick 1

TI-99/4A – Game Shelf TI Basic Games

=====

Aperture for TI BASIC
(copyright 2010 Adam Haase/Quixotic Software)

=====

REQUIREMENTS

TI-99/4 or TI-99/4a home computer
Wired remote controllers
Cassette player

OPTIONAL

Disk memory system

LOADING (CASSETTE)

Make sure you have your cassette player in place and connected to the computer
Insert the provided cassette tape into the cassette player
Play the tape until you hear the start tone, then press stop.

Turn on your TI-99/4 or TI-99/4a home computer
At the Master Title screen, press any key
Press the 1 key to select TI Basic
Type the following command and press ENTER:

OLD CS1

Follow the on-screen instructions to load the program from cassette
After returning to the prompt, type the following:

RUN

LOADING (DISK)

Make sure you have the TI disk memory system in place and connected

Insert the provided diskette into the first drive
Turn on your TI-99/4 or TI-99/4a home computer
At the Master Title screen, press any key
Press the 1 key to select TI Basic
Type the following command and press ENTER:

OLD DSK1.APERTURE_D

After returning to the prompt, type the following:

RUN

TI-99/4A – Game Shelf TI Basic Games

Note: The game will periodically load new levels during play. Do not remove the diskette from the disk drive

LOADING (EMULATION)

Place the APERTURE file in the DSK1 folder of your Classic99 emulator
Launch Classic 99
Press any key
Press the 1 key to select TI Basic
Type the following command and press ENTER:

```
OLD "DSK1.APERTURE"  
RUN
```

GAMEPLAY

You are test subject #99, working in a secret laboratory facility being run by a clandestine company. Your job is to test new experimental equipment that is both innovative and dangerous. One day, you get the latest special project, the Aperture gun. This amazing weapon creates a rib in the fabric of reality, allowing you to traverse to a different location instantly! Absolutely amazing...

To properly test it, the facility coordinators have set up a number of test chambers for you to traverse. That way the gun gets a thorough testing. At any point you can end the test by signaling to the controllers. You're about to get started, when the lights flicker and your radio goes to static... what's wrong? Then the radio comes alive with voices, screams, gunfire, and panicked pleas for help. Some kind of power surge has disrupted the control computer... and it's suddenly gone into security lockdown. All access routes to the computer core are sealed, and nobody can get to it to shut it down. Nobody, except you. By coincidence, the test chambers end at the computer core, so that it could do a direct analysis of the gun following the experiment. Realizing you may be the facility's only hope, you grimly finger the gun, and start forward...

OBJECTIVE

Your mission is to traverse 15 test chambers and reach the computer core. Once there, you must shut down the computer.

CONTROLS

Use the wired remote controllers to move around

You can jump by pushing up, and either up, left or right to control the direction

Press the fire button and push up, down, left or right to open a portal in that direction

- Portals can only be opened on certain walls
- There are two portals, orange and blue
- The portals alternate between the two colors

You can press R at any time to restart a level

OBJECTS

Walls - There are two kinds, one can have portals on them and the other cannot

Ladders - You can climb these, or jump onto them, they will prevent you from falling

Cubes - These can be pushed around. If they are pushed out over empty air or a ladder, they fall. If you push against a wall or other object, you will swap places with the cube and head the other direction. Cubes are used to activate buttons

Button - These are activated by cubes, which are consumed in the process. They will open areas that were not accessible before

Emitter - These fire off energy balls or electrical bolts periodically. They fire them in whatever direction they're facing. Energy balls can be aimed to strike an inactive emitter and power it up, so that it fires from that emitter instead

Ball - These glowing balls of energy are emitted and fly across until they hit an object. They can be blocked by cubes and also redirected through portals. Don't get hit by one!

Bolt - These energy bolts fire, destroying everything in their path. Even cubes are destroyed, so be careful!

Node - These are special buttons activated only by energy balls. New objects can appear when they are activated. They also deactivate the power emitters

Platforms - These travel along special cable lines, carrying you elsewhere. They can go up or down, left or right

Doors - These lead out of the test chamber into the next one. Sometimes they are not easy to get to!

Bloxo-TI-Z

G-A-2 [Disk: 278-BLOX] By Unhuman



This game is an odd breed of puzzle, a very addictive one at that, where you have a block that you have to move to a target square. As you move the block, it will expand a number of blocks as indicated on the initial block, and it will alternate between an unexpanded and an expanded form as you go along. In order to complete a level, and there are 31 of them by the way (!), you need to place the unexpanded block over the destination square. Needless to say that this is by far no easy task, and it will task your mental abilities to the max. Extremely well executed. There is also a compiled version that you can run from XB which I felt was too sensitive to keypresses, and I personally preferred the Basic version.

Requirements: Joysticks. XB cartridge and 32K RAM optional (needed to run the compiled version).

Executable to run: BLOXOTIZ (Basic version) or BLOXXB (compiled version)

Download Bloxotiz:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – 2

Features: Title Screen, TI-Basic, RXB, XB, One Player, Sound

Controls: Joystick 1

Dedalus

G-A-3 [Disk: 279-DEDA] By Walid Maalouli



Not to dwell on the classic Greek myth of Dedalus and the Minotaur, suffice it to say that you have been thrown by the Gods into a dark labyrinth roamed by a blood thirsty and ferocious Minotaur, and you only have a feeble torch to light up the way. Your task is simple enough: find the exit to the labyrinth before you die of exhaustion or are eaten by the Minotaur. Since the game will draw the labyrinth in full view at the start of the game, if you happen to have photographic memory then you will do well. If not, well, good luck...

Requirements: None.

Executable to run: DEDALUS

Download Dedalus:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

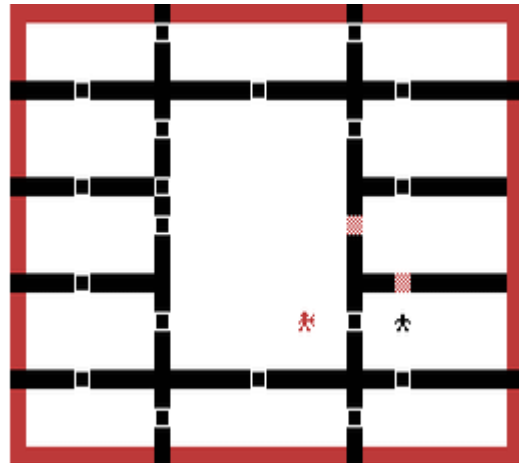
Start from mega menu: G – A – 3 (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Nightmare On Elm Street

G-A-4 [Disk: 280-NEST] By Mike Ward



You are Nancy, and Freddy is after you. Run around the house closing doors to slow down Freddy. If you manage to stay alive until the alarm sounds, then you move on to the next level. Brilliant concept and addictive gameplay. Definitely an under-appreciated gem of a game.

Requirements: None.

Executable to run: NIGHTMAR

Download Nightmare On Elm Street:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

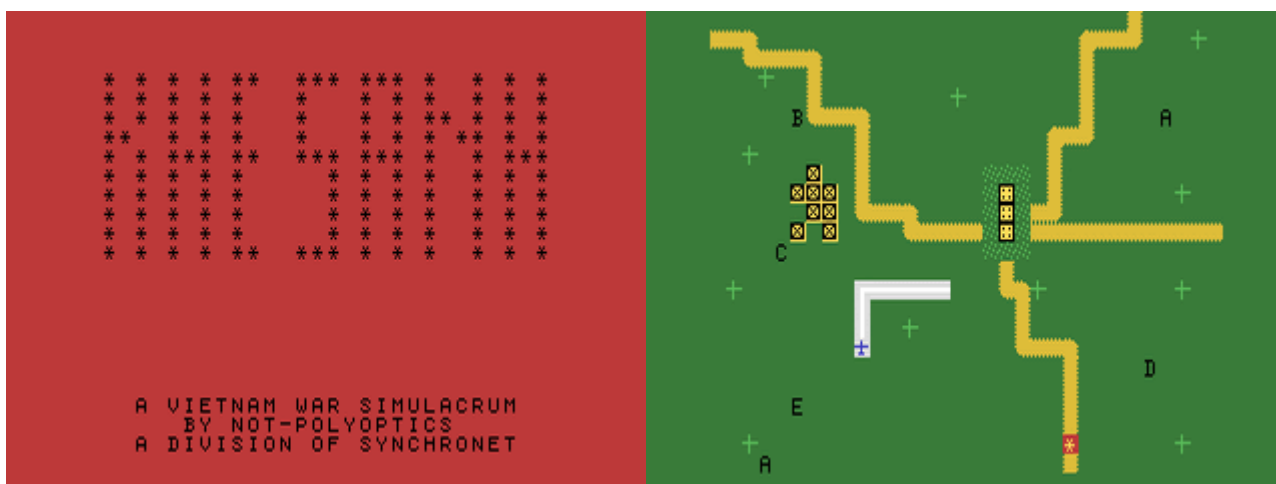
Start from mega menu: G – A – 4 (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Khe Sanh

G-A-5 [Disk: 281-KHES] By Not Polyoptics



Themed after guerilla warfare in South Vietnam during the Tet offensive of 1968, your mission as the commander of five Marines platoons is to protect your supply roads and base while attempting to uncover and hunt down the elusive North Vietnamese regulars. The NVA were notoriously difficult to nail down, as you will quickly find out, and you will have to use cunning as well as systematic deployments in order to win the day. As usual, luck always favors the well prepared. Surprisingly interesting.

Requirements: None.

Executable to run: KHESANH

Download Khe Sanh:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Manual](#)

Start from mega menu: G – A – 5 (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound, Music

Controls: Keyboard

KHE SANH Instructions:

KHE SANH is a game about guerilla warfare in South Vietnam during the Tet offensive in 1968. The elusive North Vietnamese and Viet Cong units, unencumbered by the need to defend military bases, could remain hidden in the jungle until the time to attack was right. The American forces, on the other hand, could only conduct an often futile search for the guerillas to hopefully preempt these attacks. This giant lion baiting game ended in 1972 when the American forces withdrew.

In this game the player is given five platoons of troops and four helicopters to search and destroy two companies of North Vietnamese regulars, controlled by the computer. The MVA are invisible. To win the player must accumulate more points than the computer.

1. Setting Up

1a. The player is asked how many weeks he wants to play. Five is the standard number. Every week two new Vietnamese units begin at the edge of the screen.

1b. The screen shows a map board with a military base, four roads leading to it, an airbase, and nearby Vietnamese village. The American platoons are shown as A through E. Helicopters don't appear until it is their turn to move (they are given a turn every random number of platoon turns). The Vietnamese are there also, but they are invisible. They are placed randomly on a random side of the board, and throughout the game will travel straight across to the other side of the screen. They will move every time the American platoons move a random number of times from between eight and thirteen. They do not move during helicopter moves.

1c. The letter of the American unit whose turn it is appears on the screen: that unit is ready to move.

2. Terrain

2a. Every once in a while a truck convoy travels down a road to the base. If the road is clear the convoy is successful. If a part of the road is destroyed the convoy will wreck, giving points to the NVA. Thus it is important to fix the roads as soon as possible (see 4e).

2b. If part of the airbase is destroyed some helicopters will not appear, so fixing this is also important.

2c. The roads, village, airbase, and military base may be blown up by the Vietnamese.

3. American Platoons

3a. The A,B,C letters for the platoons stand for the standard military designations Alpha, Charlie, etc. To move a platoon, press E for north, S for west, D for east, X for south, W for northwest, R for northeast, Z for southwest, or C for southeast. Press space to not move.

3b. When a platoon moves on an NVA unit a machine gun sounds and that NVA unit is destroyed.

3c. Platoons aid in repairing destroyed road and airbase sections.

3d. An NVA unit landing on a platoon will cause it to become invisible.

4. Helicopters

4a. Every once in a while the computer will beep and a helicopter will appear on the airbase. The helicopters are used to destroy NVA units, to defoliate the jungle so that NVA may be spotted, and to repair the roads and the airbase.

4b. To move a helicopter input the coordinates where you want it to go. Do not press enter. The board is 24 spaces vertically and 32 horizontally. The player must input '0' before one digit coordinates; thus input 0101 for the upper left corner, 0132 for the upper right.

TI-99/4A – Game Shelf TI Basic Games

4c. If there is no enemy where the helicopter has gone it defoliates the jungle there and a new helicopter appears (or it is time for the platoons to move again). NVA moving over a marker will cause it to disappear.

4d. If the helicopter has gone to a place where there are Vietnamese, there is a one in seven chance that it will be shot down. Otherwise, the enemy will be destroyed.

4e. To repair the road or the airbase requires a cooperation of arms. First, a platoon lands on an explosion marker, then moves away, leaving a space. Then a helicopter goes to the space and leaves a defoliation marker. The road or base is then repaired. (Exception: if a truck has crashed on an explosion marker before the Americans have had time to repair the road it leaves a wreckage marker. The only way to repair this is to leave a platoon on the marker for the rest of the game.)

4f. It is good strategy to deploy the defoliation markers in a pattern to give the Americans early warning of the Vietnamese locations.

5. Vietnamese Units

5a. The Vietnamese explode everything in their path. When a unit has exploded something it is generated to a random place from zero to three spaces away, down and to the left. The unit continues from there in a straight line.

5b. Remember, since the Vietnamese are invisible and move at a random rate they are sometimes diabolically unpredictable.

5c. The game ends when both Vietnamese companies are destroyed, or both escape off the screen, or a combination of these.

6. Calculation of Points

6a. Americans receive points for destroying NVA units and for successful convoys.

6b. Vietnamese receive points for exploding things, for wrecked convoys, for destroying helicopters, and for escaping off the edge of the screen.

Morphy

G-A-6 [Disk: 282-MORP] By Riccardo Tesio



No sprites allowed in TI Basic you say? Well think again! This very well executed platformer incorporates a single sprite from within TI Basic by using a special loader that modifies the VDP space of the TI. The game itself is quite challenging with the aim of roaming a danger infested subterranean world in search of treasure. The game needs to run from the console only with no peripherals, but the use of the Mini Memory cartridge will obviate the need for the loader. Instructions included, and the program runs quite well within the Win994a emulator and the emulated tape recorder.

Requirements: Tape recorder. Mini Memory cartridge optional.

Executable to run: SPECIAL LOADER (CS1)

Download Morphy:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – 6
(Mini Memory Module and CS1, without any other peripherals)

Features: Title Screen, TI-Basic, One Player, Sound

Controls: Keyboard (S, D, E, Q, P)

Morphy Loading Instructions:

Morphy is a challenging platform game written in TI Basic with the special characteristic of including a sprite through the use of a clever loader that modifies the VDP.

The program can be loaded in one of two ways, either with a stock TI without any cartridge or using a Mini Memory cartridge. A cassette player is required either way.

A) Mini Memory loading.

- 1- Save the program MORPHY-MM from disk to cassette tape.
- 2- Turn off your console and all peripherals.
- 3- Insert the Mini Memory module.
- 4- Turn on the console ONLY!
- 5- Load the program from CS1.
- 6- Run and enjoy!

B) Loading without a cartridge.

- 1- Make sure that your cassette recorder is connected to the TI.
- 2- Run the LOADER program from disk.
- 3- It will ask you for a register number and a data value. Enter 5,15 and press ENTER
- 4- The loader will then write to CS1 a short machine language loader.
- 5- Save the MORPHY program from disk to CS1 after the loader program just written.
- 6- Turn off your console and all peripherals, then turn on the console ONLY!
- 7- Load the loader program from CS1. It will run itself and you will see some erratic screen changes which will settle into a black background with vertical white lines. At this point, press any alphabetic key and press Enter. The error message "MEMORY FULL" will appear.
- 8- Type NEW and press ENTER.
- 9- Load and run the MORPHY program from CS1.
- 10- Enjoy!

The Witching Hour

G-A-7 [Disk: 283-WIHO] By Brian Flynn / TI conversion by Patrick Parritten



Clearly inspired from the game of checkers, your goal here is to capture all of your opponent's pieces by jumping over them. Capture is mandatory, but if that is not possible, then you can move one of you pieces to an adjacent vacant space as long as it is connected. You can play against a human opponent or let the computer play any move by pressing ENTER. My only complaint here is that the computer opponent is quite weak...

Attractive graphics.

Requirements: None.

Executable to run: WITCH1

Download The Witching Hour:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – 7 (RXB)

Features: Title Screen, TI-Basic, RXB, One or Two Player, Sound

Controls: Keyboard

Capture A Romulan

G-A-8 [Disk: 284-CARO] By Ken Tracton



In a cross between Star Trek and Battleship, you, as commander of the starship Enterprise, have to trap a cloaked Romulan vessel by blasting the space around it. This is further complicated by the fact that you have a limited number of photon torpedoes which are further depleted when the Romulan enemy randomly fires at you and drains your shields. Be careful! If you accidentally hit the Romulan vessel, then you automatically lose the game. Surprisingly addictive. Note: In the game, the X and Y coordinates are reversed.

Requirements: None.

Executable to run: ROMULAN

Download Capture A Romulan:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

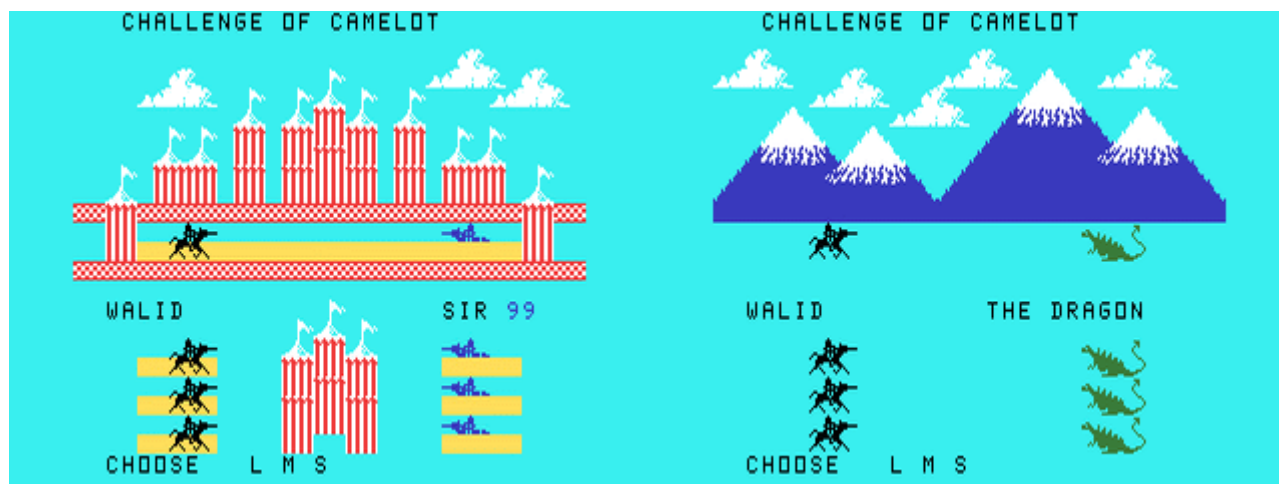
Start from mega menu: G – A – 8 (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Camelot

G-A-9 [Disk: 285-CAME] By Gary Garrett



This is a very creative angle on the timeless Rock Paper Scissors game we've all played as kids. As a valiant knight, you have to defeat an opposing knight in a joust tournament, then face a fearsome dragon. Choose between a lance, mace or sword for each fight, but choose carefully: depending on what your opponent uses, you may lose more than just your ego... Nice graphics and oddly addictive.

Requirements: Tape or disk drive.

Executable to run: CAMELOT

Download Camelot:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – 9 (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Robotfindskitten

G-A-A [Disk: 286-ROBO] By Walid Maalouli



This is the TI 99/4A version of the famous (or infamous according to some) Zen simulation robotfindskitten. You are a robot in search of kitten, and on the way you encounter a variety of items which are not kitten. Plain silliness ensues. Use the arrow keys to maneuver robot. Find out more about the game on robotfindskitten.org.

Requirements: Tape or disk drive.

Executable to run: RFK

Download Robotfindskitten:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – A (RXB)

Features: Title Screen, TI-Basic, RXB, One Player

Controls: Keyboard (FCTN+ESDX,Q)

Greedy Green Grabbers

G-A-B [Disk: 287-GRAB] By P.W. Dickinson



Vaguely reminiscent of the Pac Man theme, you have to navigate ever more difficult mazes, trying to collect scattered dots and attempting to reach the doorway to the next level while avoiding blue hungry furballs. Well executed with decent sound effects.

Requirements: Tape or disk drive.

Executable to run: GRABBER

Download Greedy Green Grabbers:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

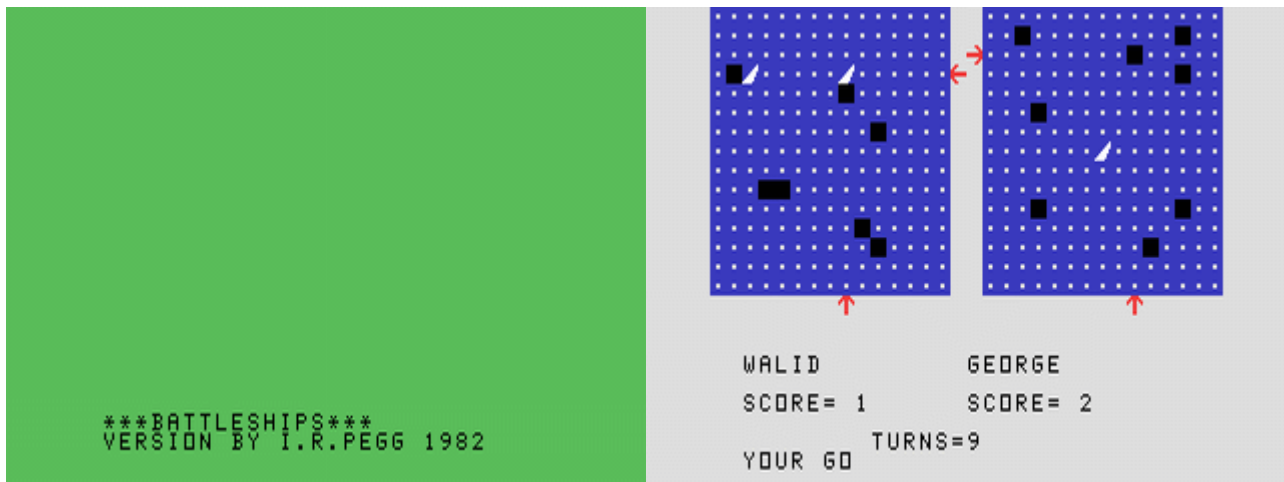
Start from mega menu: G – A – B (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard (ESDX,Space)

Battleships

G-A-C [Disk: 288-BATS] By I. R. Pegg



Well made variation on the venerable Battleship game, with 20 ships on each side each occupying a single square. There is a 1/2 player option as well as the possibility of limiting the game to a specified number of turns. This is advisable because the unlimited turns option can make for a lengthy game in view of the large number of ships involved. Well executed and does not require coordinate typing.

Requirements: Tape or disk drive.

Executable to run: BATSHIPS

Download Battleships:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – C (RXB)

Features: Title Screen, TI-Basic, RXB, One or Two Player, Sound

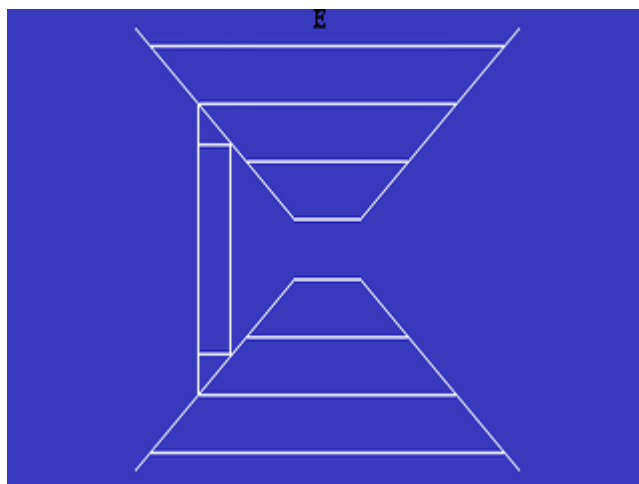
Controls: Keyboard (ESDX,Space)

3D-Labyrinth

G-A-D [Disk: 289-3DLA] By Marc Bruening & Wolfgang Bertsch/English modification by Matthew Hagerty

```
*****
*          *
*  3D-LABYRINTH  *
*          *
*****
```

```
© BY MARC BRUENING 1983
© VERSION 1.2 BY
WOLFGANG BERTSCH 1984
```



This is a timeless maze game with the simple objective of finding the exit in as few moves as possible. Problem is, the maze is very nicely rendered in 3D, making it difficult to figure out your location. Luckily, there is an option to view an overhead map of the entire maze at any time, as well as have your current location pointed out to you. Even then, it takes a serious effort to translate that information into a 3D visualization. The graphics render very quickly, a great feat for TI BASIC, and Matthew has kindly provided a compass to help you along. A great piece of programming that has been overlooked for far too long.

Requirements: Tape or disk drive.

Executable to run: 3D-LABY

Download 3D-Labyrinth:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – D (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Racing

G-A-E [Disk: 290-RACI] By Kemp Software



This is a classic example a BASIC racing game with vertical upward scrolling. What makes it special are the challenges of the course where you have to navigate a winding track and go through gates in order to maximize your score. Requires intense concentration and path planning, augmented by excellent graphics and sound effects. There is even an option to change the background color.

Requirements: Tape or disk drive.

Executable to run: RACING

Download Bonkers:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – E (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Bonkers

G-A F [Disk: 291-BONK] By Gene Hitz



A simple yet strangely addictive game where you aim at catching a variety of falling symbols randomly distributed on the screen. The paddle is controlled with up to 10 keys (!), each moving it in a certain way. You are allowed only two misses. The play starts off easy but then rapidly becomes very challenging. The key is to keep your cool and remember your key functions. Decent graphics and basic sounds. Could have benefited from in-game music however.

Requirements: Tape or disk drive.

Executable to run: BONKERS

Download Bonkers:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

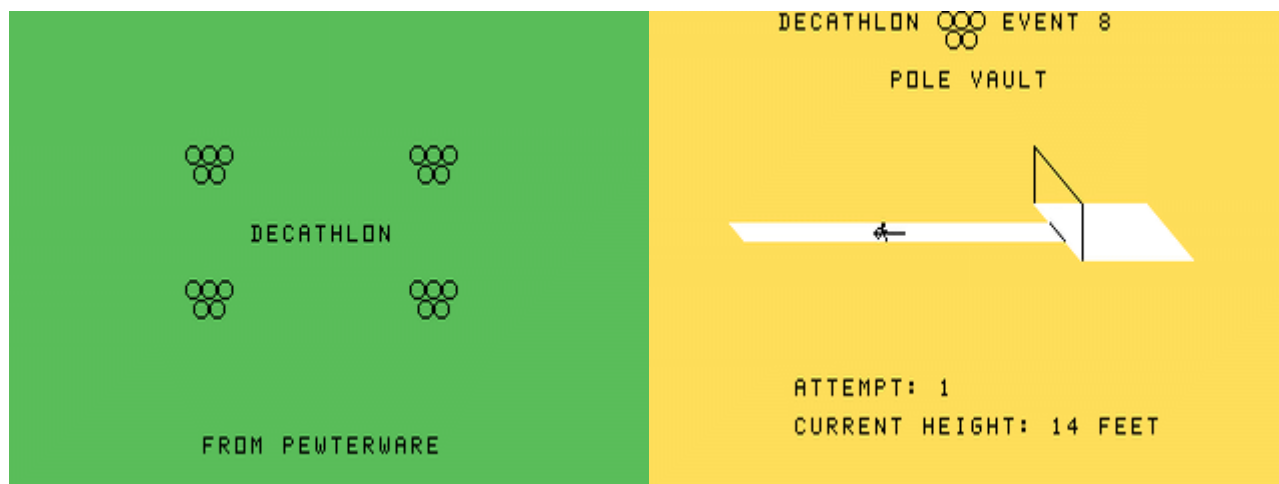
Start from mega menu: G – A – F (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

Decathlon

G-A-G [Disk: 292-DECA] By Pewterware



As a Decathlon athlete, you need to compete in ten different events such as the 100 Meter Run and Pole Vault among others. Up to eight players can participate simultaneously, making for some potentially rowdy meets. Game mechanics are based on your activating the keyboard or joystick a certain number of seconds after the start of the event to achieve maximal performance. Well drawn graphics and animation. Now if I can get rid of that @#!* foot fault...

Requirements: Tape or disk drive. Joysticks optional.

Executable to run: DECATHLON (Enter CALL FILES(1) before loading from disk)

[Download Decathlon \[TIFILES format\]](#)

Start from mega menu: G – A – G (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard

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DECATHLON:

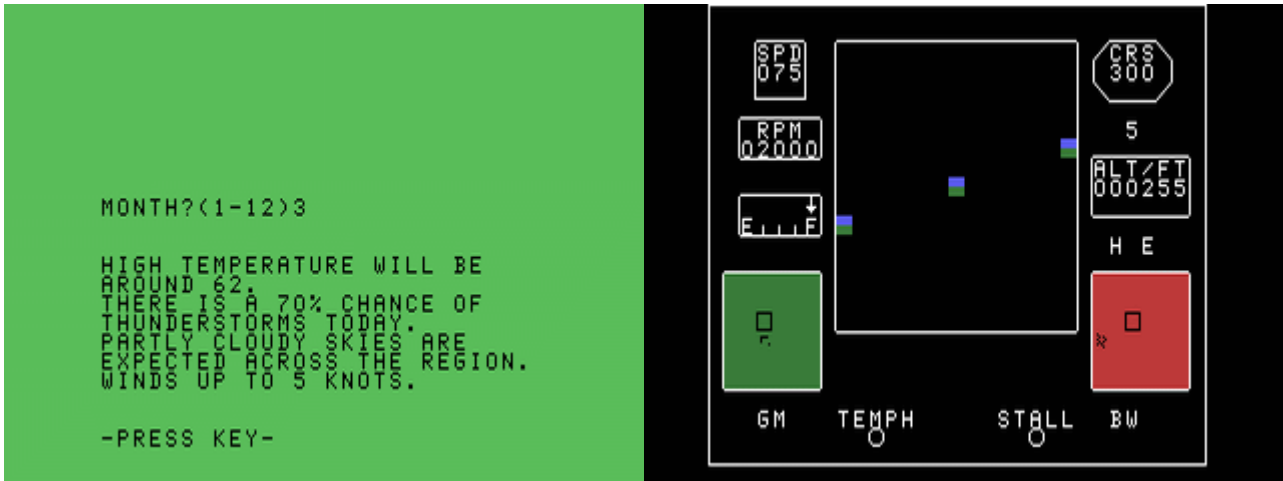
The object of this game is to accumulate the most points by competing in ten Olympic Decathlon Events. Up to 8 players can compete. For each of the 10 events, the players must make an input to the keyboard or joystick at a precise time following a tone, from 1 to 10 seconds depending on the event. A maximum of 1200 points can be earned in each event.

Good luck!

Note: if a disk drive is connected, then a CALL FILES(1) must be entered followed by NEW before loading and running the game.

Winging It

G-A-H [Disk: 293-WING] By Not Polyoptics



This is a fairly sophisticated flight simulator of an Arrow monoplane with basic instrumentation as well as weather and ground maps. You can either choose free flight or 3 different games which test your navigation and piloting skills. There is no active scenery, and you have to rely on your instruments and maps to fly. This being a BASIC program, control and plane response are sluggish, but surprisingly this does not dampen the enjoyment of this game. You will definitely need the [manual \(PDF Format\)](#) to be able to play as it is very challenging.

Requirements: Tape or disk drive.

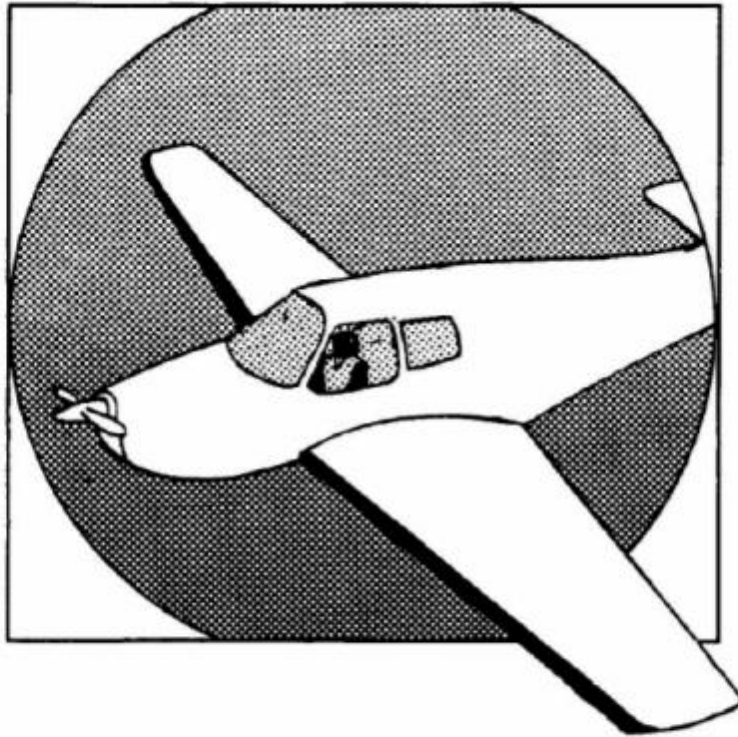
Executable to run: WINGING

[Download Winging It \[TIFILES format\]](#)

Start from mega menu: G – A – H (RXB)

Features: Title Screen, TI-Basic, RXB, One Player, Sound

Controls: Keyboard



WINGING IT

Flight Simulator

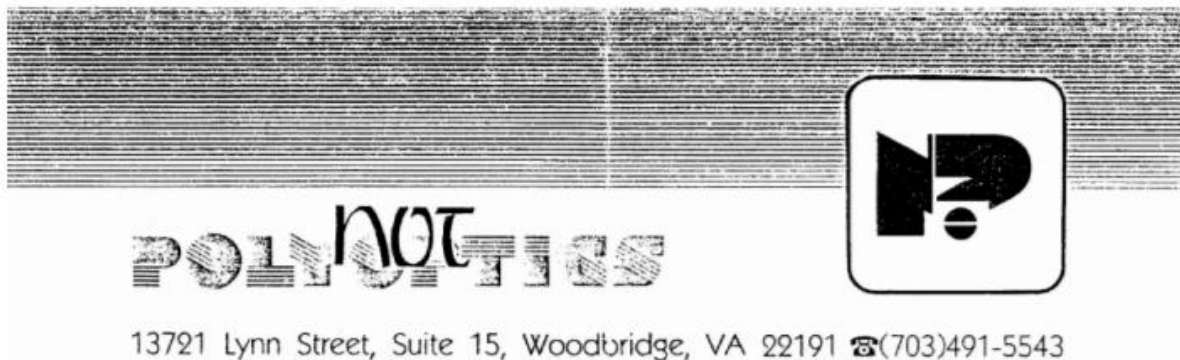
Fly your own private plane in this excellently visualized simulator. But aftered you've mastered flying, the excitement isn't over - three different games test your skill. Ground map and weather indicator chart your position on a randomized earth simulacrum. For 1 player.

TI BASIC - NO PERIPHERALS



NOT-POLYOPTICS // 13721 Lynn St., Woodbridge, VA 22191

GAMES FOR // TI 99/4(A)



'Winging It' is an inexpensive flight simulator written in Basic to make it available to owners of the unexpanded TI 99/4A computer system. As such, its commands may appear to be slow; however, the instrument display has been calculated to advance in segments of three or four seconds each, thus preserving the 'real time' feel of more expensive flight simulators.

If you find that you are always crashing right after taking off, thus preventing you from getting any practice at the feel of the controls, next time press the 4-key to top the RPM's, then just wait until the plane takes itself off and reaches an altitude of at least 200 feet, to give you some room to maneuver in. If you get tired of waiting, press the K key for one cycle to raise the nose a little bit (note that the little square in the middle is going down; this means the nose is going up). Once you have gotten a little altitude try some slow turns, never letting the wing-tip squares get past the corners of the big square.

To counter a tendency for the nose to raise up, lower the throttle with the 2 key or lower the trim tabs with the S key lower than 5.

To counter the nose dropping raise the throttle with the 3 key or raise the trim tabs with the D key above 5.

To counter the plane rolling to the left use the V full right rudder (use the P full right aileron only in emergencies); if the plane is rolling too much to the right use Z full left rudder (U full right aileron in emergencies).

If for some reason you cannot successfully load the program (always 'NO DATA FOUND, or 'ERROR IN DATA'), please return the cassette and a copy of your invoice from Triton to NotPolyoptics and we will cheerfully send you another copy on cassette (on disk for \$1 more).



MORE HINTS

1. Don't forget: the horizon indicator blocks show the opposite of the real position of the plane. Thus if the left block is up and the right block down, you are in a left turn (unless you are upside down, in which case you're in a right turns If the nose block is in the upper part of the horizon indicator you are diving (again, unless you are upside down, when you would be climbing).



2. If the green (land) half of the horizon indicator blocks are above the blue (sky) half, you are upside down.

3. You may use two keys at the same time, one from the right (stick) side and one from the left side.

4. Press the key or keys you want until the desired effect appears on the instrument panel. It takes 3 or 4 seconds for information to be processed.



5. You are suffering turbulence and/or icing if you see bad weather on the bad weather map. You don't have to be on it to be in the bad weather.

weather on the

6. Beginners should fly without weather to get the feel of things first.

7. All controls have the opposite effect when you are upside down.

8. When you go slower your controls react more sluggishly.

Flying

1. To take off press 4 until you hear the engine, or see the engine RPM's are up to 2000. When the speed gets to about 30 MPH pull back on the K key and take off. Watch out for cross winds, but don't overreact.
2. Make small aileron adjustments with the rudder. Experiment with combinations of aileron and rudder controls to get a feel for how the plane makes turns.
3. Trim tabs are small adjustments on the rudder. At a more than 5 position your lift is increased; at less than 5 your drag is increased. This is valuable at high speeds so that you don't climb too quickly into a stall, or at low speeds use the trim tabs to increase lift to keep the nose up.
4. To land: put trim tabs to 5, reduce throttle to about 600 RPM, put nose down slightly (11 way between middle and top) until altitude gets to 100 feet, then pull up until nose marker is in the middle. Keep your wings level. Try to land at 70 MPH or less.

TI-99/4A – Game Shelf TI Basic Games

Aerobatic Maneuvers

1. Loop: throttle to 2000, build up speed by dropping the nose a little. When you get to about 100 MPH pull back on the K key until you've gone all the way around.
2. Roll: as in above, work up speed to 100 MPH, put your nose up a little, and press the extreme left or right aileron controls to roll.
3. Spin: if you find yourself in a spin, go to full throttle and pull back on the extreme left or right (M or period) opposite the spin of the plane, until you have pulled up, or crashed.
4. Using these basic maneuvers, you can create maneuvers of your own. Do a victory roll for every maneuver you come up with.

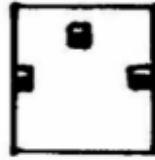
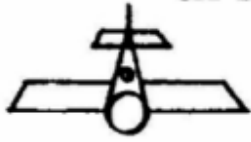
Game Hints

1. Game 1: There are two indicators, underneath the compass, that tell you how far away and in what direction the meteor is; the first is the difference in latitude between you and the meteor, the second the difference in longitude. If you are north of the meteor, the first will be a letter less than the letter O; if you are west of the meteor the second will be a letter less than O. North and west are negative directions; south and east are positive. The closer to two letters on the indicators you get, the closer to the meteor you are.
2. Game 2: The flying saucer moves randomly; you must follow it and land on it.
3. Game 3: The best strategy is to head west immediately and gain altitude, so that when the enemy plane shoots your gas tank you can glide across the river.

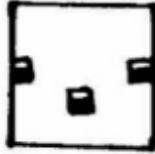
TI-99/4A – Game Shelf TI Basic Games

Earth
↓

You are in the plane



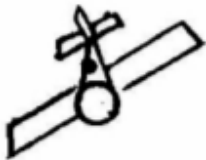
nose down



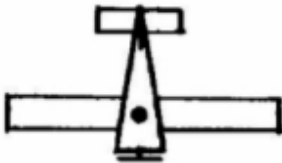
nose up



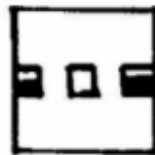
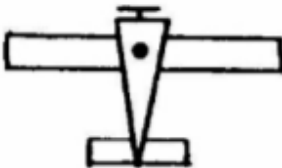
roll clockwise



nose down/roll clockwise



nose straight down



nose straight up



inverted



90°roll clockwise

TI-99/4A – Game Shelf TI Basic Games

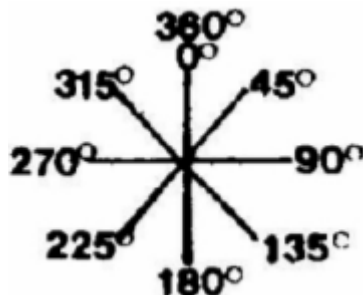
You gun the 95 hp Manasco and your Arrow rolls slowly down the runway, then faster and faster. Your airspeed increases: 30 knots, 60 knots, 90 knots. Slowly you pull back on the stick, eyes on the horizon indicator. Suddenly the horizon marker drops, the altitude shows ten feet. You're flying!

WINGING IT is a Not-Polyoptics simulation of flight in a 1932 Manasco Arrow monoplane.

1 - Cockpit Instruments

There are eight instruments to help you fly the plane:

1. Fuel
2. Altitude- in feet
3. Speed- in knots
4. GM- ground map. This is a bird's eye view of the terrain around where the airplane is. The plane takes off from airport 1.
5. BW- bad weather. This shows bad weather around the plane's location. Bad weather will cause icing on the wings or buffeting of the plane; it is best avoided.
6. Trim tab- This shows the tab's position, from 1 to 9. The tab is a device on the elevator which is used to dampen the effect of the elevator. Thus the tab should be down (less than 5) when climbing, up 3800 when diving.
7. Course in degrees- This is read clockwise with respect to the ground map (see illus.)



8. Horizon indicator- This is a simulation of a ball horizon, showing the plane's relative pitch (nose up or down) and roll (wing position). When the middle marker is going down, the plane's nose is going up; when it goes up the nose is pointing down. When the outer two markers are turning clockwise the plane's wings are turning counter-clockwise, and vice-versa. Note: this is a correct simulation. When looking at a ball horizon you aren't looking at what the plane is doing, you're looking at what the plane is doing to the ball horizon.

2 – Controls

2a. There are five console controls:

- 1-trim tab,
- 2-throttle,
- 3-brake,
- 4-rudder, and
- 5-weapons.

These are found on the left side of the keyboard.

2b. There are twelve stick positions:

- 1-forward left,
- 2-forward,
- 3-forward right;
- 4-full left,
- 5-left,
- 6-right,
- 7-full right,
- 8-back left,
- 9-back,
- 10-back right,
- 11-full back left, and
- 12-full back right.

These keys are found on the right side of the keyboard.

2c. Due to the unique ability of the TI 99/4 of split keyboard, one command from the left side and one command from the right side of the keyboard can be made simultaneously.

2d. See the included template for the key commands.

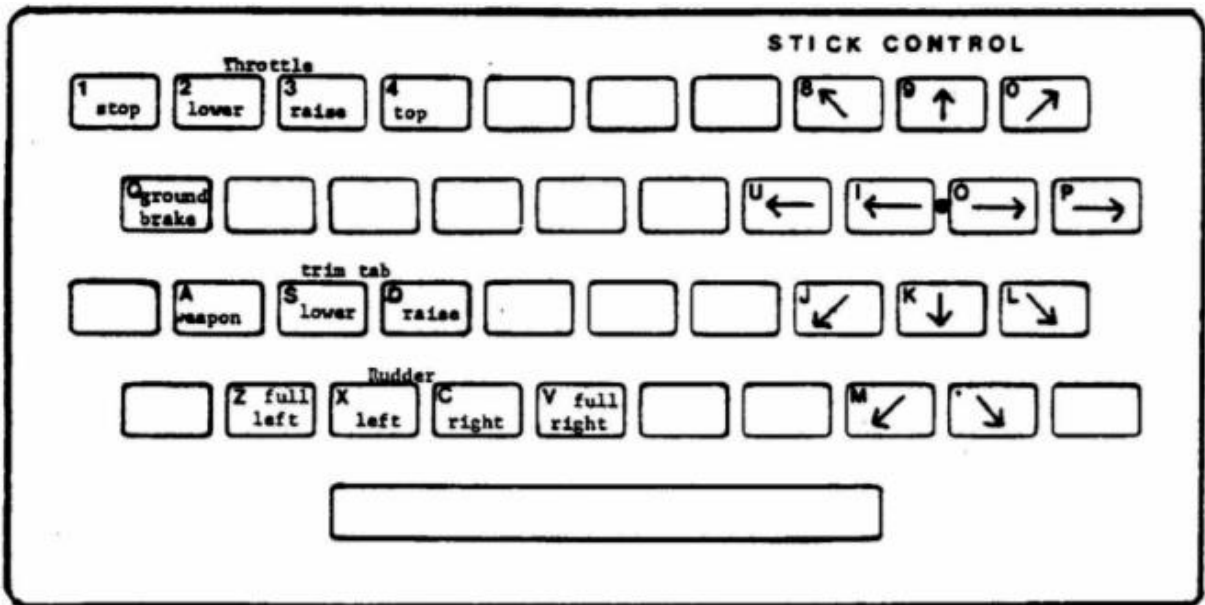
2e. This is a list of the effects of the key controls:

1 - stops the engine.	9 - elevator down.
2 - lowers the throttle.	0 - elevator down, ailerons clockwise. (Zero)
3 - raises the throttle.	U - full ailerons counterclockwise.
4 - tops the throttle.	I - ailerons counterclockwise.
Q - ground brake.	O - ailerons clockwise. (Ooh)
S - lowers trim tab setting.	P - full ailerons clockwise.
D - raises trim tab setting.	J - elevator up, ailerons counterclockwise.
Z - full left rudder.	K - elevator up.
X - half left rudder.	L - elevator up, ailerons clockwise.
C - half right rudder.	M - full elevator up, ailerons counterclockwise.
V- full right rudder.	. - full elevator up, ailerons clockwise. (period)
8 - elevator down, ailerons counterclockwise.	

TI-99/4A – Game Shelf TI Basic Games

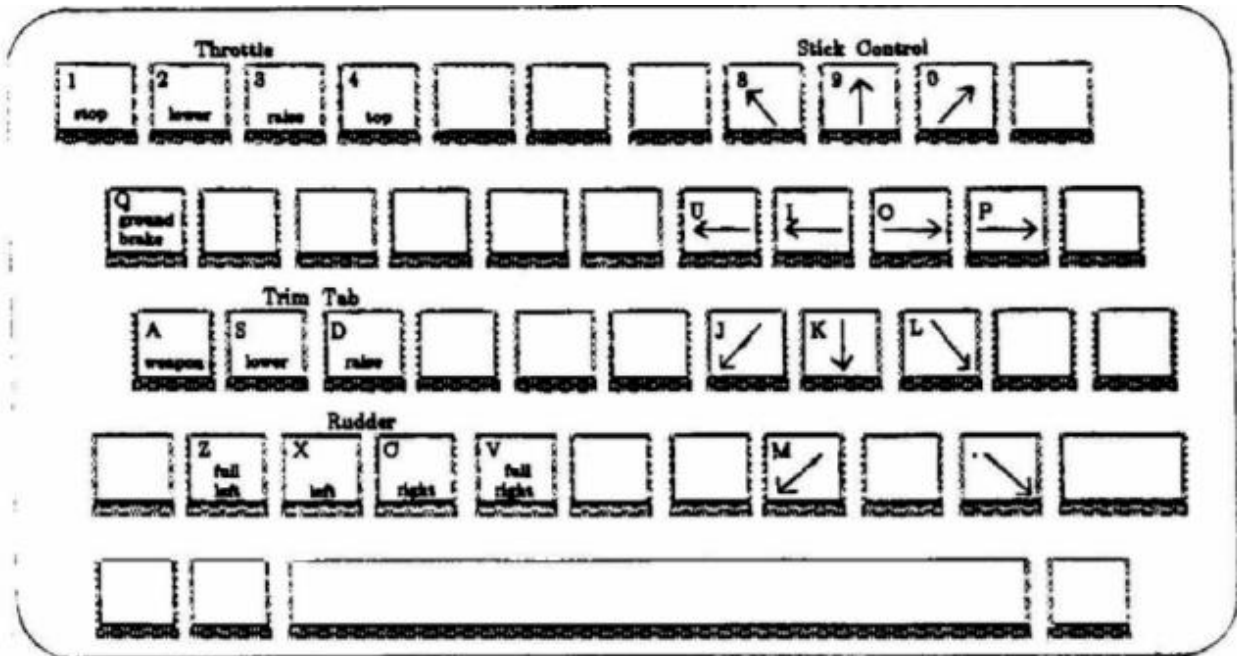
Two different views of the keyboard

WINGING IT

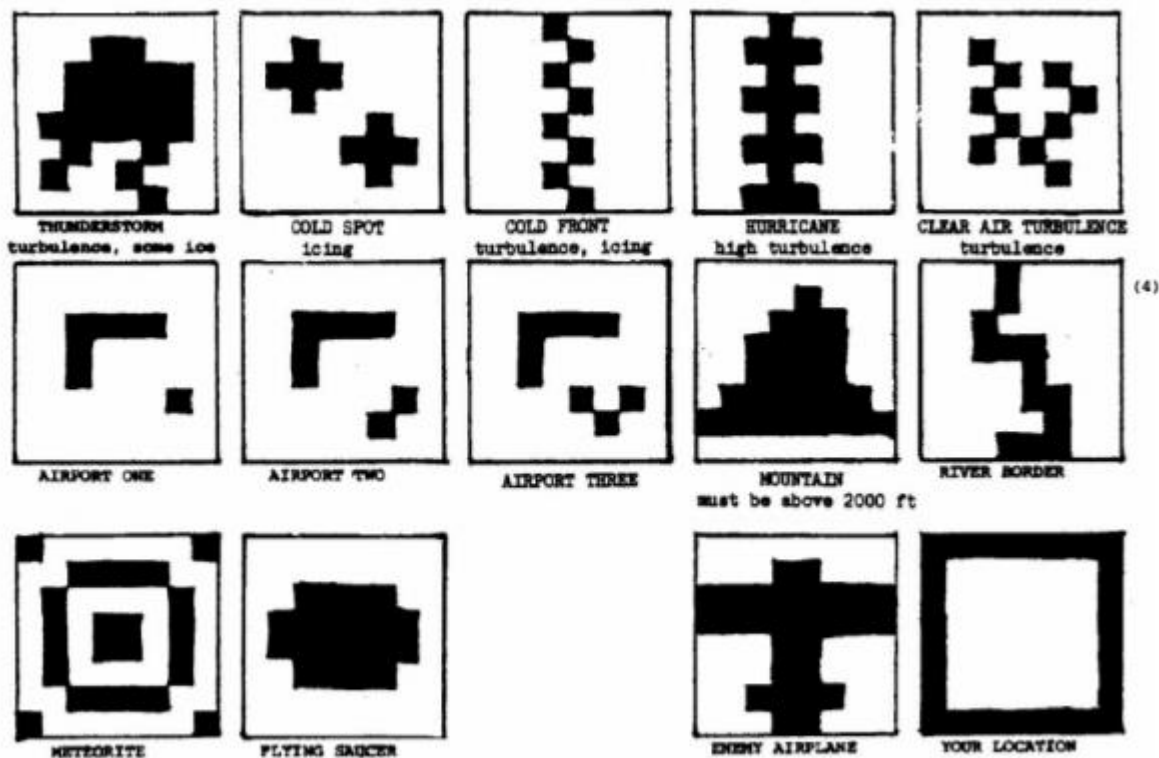


For 99/4 A OWNERS use alpha lock setting when playing this game

WINGING IT



Alpha Lock key must be down to play this game



3. Games

3a. If you wish to fly without playing a game press 0 (zero) when asked.

3b. Game 1 is an aerial search for a fallen magnetic meteorite. The object is to find the meteorite and fly over it. The number displayed below the trim tab is a geiger counter; it is the product of the latitude of the plane minus the latitude of the meteorite, plus the longitude of the plane minus the longitude of the meteorite. After finding the meteorite you must then land.

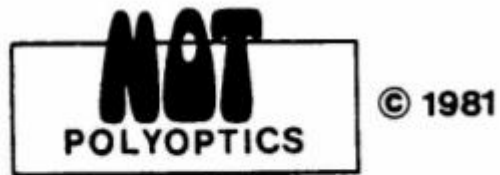
3c. Game 2 shows a flying saucer on the ground map, moving in a random pattern. The pilot must fly over the flying saucer and re -lease his weapons. If the saucer flies out of sight of the ground map the pilot must rely on dead reckoning to find it again.

3d. Game 3 challenges the pilot to cross the river border shown on the ground map before an enemy plane can catch up to him. The river border is to the west. When the plane catches up to him the pilot must dive, climb, or turn to avoid getting shot. Watch out for gas tank hits

4. For the Beginner

WINGING IT is a simulation of flying an airplane with instruments only; the beginner will have difficulties.

The number one rule is to keep your plane right side up and don't roll onto your back because you may go into a violent dive. The second but not less important rule is to keep your nose near the horizon. Also, extreme dives or climbs should be avoided.



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GAMES FOR // TI 99/4 AND 99/4A
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TI Puck

G-A-I [Disk: 294-PUCK] By Walid Maalouli



This is my first programming effort back in 1982. It is obviously inspired by Pac Man, as you have to guide your yellow friend around the maze eating white dots while trying to avoid mean chasing monsters. Obstacles show up as levels increase to hinder your way. Good sound effects and graphics, but unfortunately play is very slow. Running it under XB speeds things up a bit. Even then, the monster AI is strong enough to trap you if you are not careful. **There is a *much* faster compiled version in the Assembly section. Check it out!**

Requirements: Joysticks, tape or disk drive.

Executable to run: TIPUCK

[Download TI Puck \[TIFILES format\]](#)

Start from mega menu: G – A – I

Features: Title Screen, TI-Basic, RXB, XB, One Player, Sound

Controls: Joystick 1

TI-Trek

G-A-J [Disk: 295-TITR] By Texas Instruments



Classic game of Star Trek popular in the seventies, but enhanced with colorful graphics and excellent sound effects, with speech synthesis as the icing on the cake. You are the captain of the starship Enterprise and your mission is to destroy all the Klingon warships threatening the known galaxy. Can you do it before being destroyed or running out of fuel? Space is your battleground, and remember that in space, no one can hear you scream... Gameplay is smooth and bug free, and can get surprisingly addictive! Well done!

Requirements: Tape or disk drive. Speech synthesizer optional.

Executable to run: TI-TREK

[Download TI-Trek \[TIFILES format\]](#)

Start from mega menu: G – A – J

PGR: * * * * *

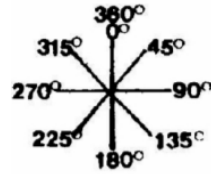
Features: Title Screen, TI-Basic, XB, One Player, Sound, Speech

Controls: Keyboard

TI Trek

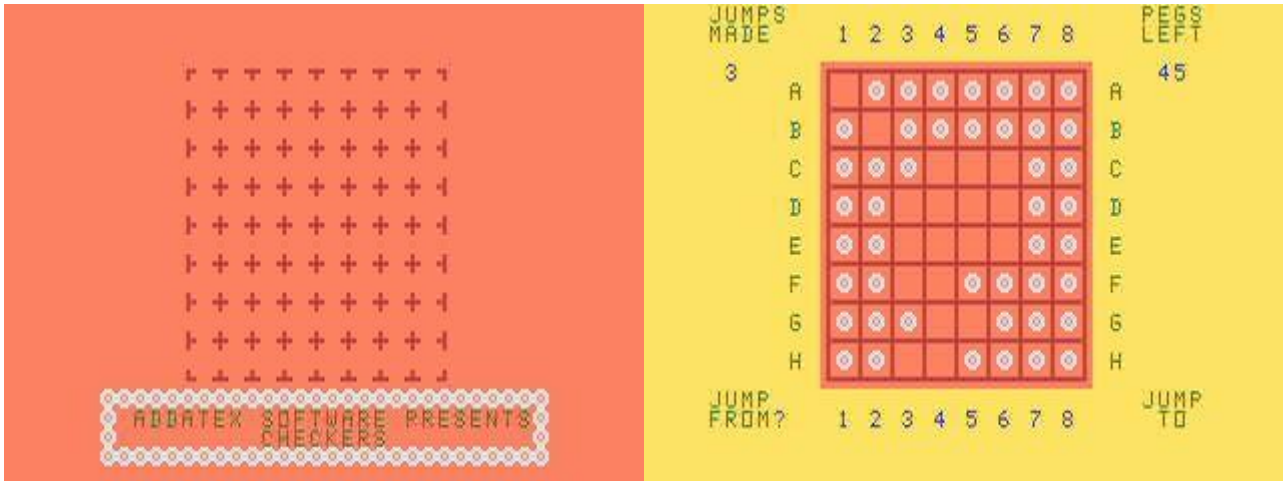
Commands:

- M = Move**
 How Far? 1-19
 Angel in Degrees? 0-360
- F = Fire**
 How much Power 1-PWR
- T = Torpedo**
 Angel in Degrees? 0-360
- D = Starbase**
 Recover Power and Torpedos
- V = Three Torpedoes in various angels**
 Angel in Degrees? 0-360
 Inc. angel? 0-360
- W = WARP**
 Dest Row? 1-8
 Dest. Col? 1-5
- L = Long Range Scan**
- S = Shields on**
- C = Scan?**
- Q = Quit the game**



Checkers

G-A-K [Disk: 296-CHEC] Malcolm & Elaine Adams



A very well executed simulation of solitaire Chinese checkers, with an attractive layout and nifty presentation. Gameplay is very simple, but beating the game will require hours of thinking. The objective is to clear the board of all the pegs. I'm still working on it :)

Requirements: Tape or disk drive.

Executable to run: CHECKERS

[Download Checkers \[TIFILES format\]](#)

Start from mega menu: G – A – K (RXB)

PGR: * * *

Features: Title Screen, TI-Basic, RXB, One Player

Controls: Keyboard

Part IV – Game Shelf Edutainment

TI-99/4A Game Shelf

Edutainment

Orbital Rendez-Vous

G-A-M [Disk: 298-ORBI] By Walid Maalouli / Original concept by Frederic Neuville



For the orbital mechanics enthusiasts among you, this simulation puts you at the helm of a rocket ship attempting to reach a space station orbiting a solar system planetary body. Your objective is to get within 10km of the station without running out of fuel or oxygen. You get a choice of several planetary bodies each with its own gravitational pull, and your rocket is randomly placed somewhere in the vicinity of that body. You will need to enter your initial velocity components, at which point the orbit of the space station (in magenta) and your rocket's projected orbit (in red) will be displayed. You will be able to see the movements of your rocket and the space station along their selected orbital tracks as well as the distance separating them in kilometers along with your velocity and remaining fuel and oxygen. At any point along your rocket's orbit, press and hold the space key, and you will be prompted to enter velocity changes (not absolute velocities!) to each velocity component, which will alter your orbit. The orbits will then be redrawn. The timing of your velocity change as well as its magnitude can dramatically affect your rocket's trajectory, sometimes leading to unrecoverable orbits. Hint: it is best to start with velocities under 10. Good luck! **Note: This simulation was programmed using Harry Wilhelm's The Missing Link which provides a set of bitmap graphics tools under Extended Basic.**
Requirements: Extended Basic, 32K RAM, disk drive
Executable to run: ORBIT

Orbital Rendez-Vous:

[Disk Image](#)

[Watch Orbital Rendez-Vous demo on YouTube](#)

Start from mega menu: G – A – M

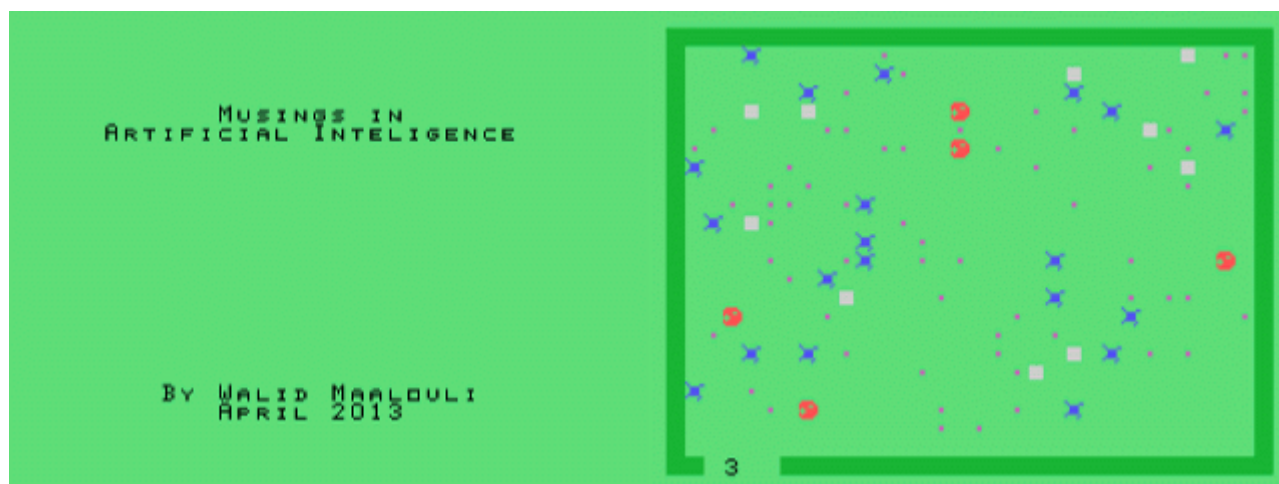
PGR: **

Features: Title Screen, XB, TML, One Player, Sound

Controls: Keyboard

Musings in Artificial Intelligence

G-A-N [Disk: 299-MUAI] By Walid Maalouli



This is a simulation of a bug colony, where we have a dynamic environment with food cycles and predators. The bugs have 3 genetically transmittable traits, namely speed (1-3), vigilance (1-5 - i.e. ability to spot food, other bugs or predators at a distance), and social tendency to flock to other bugs (1-10), and they asexually reproduce at regular cycles if conditions are favorable. The predators on the other hand have fixed attributes of speed and vigilance, and thus allow for a steady environmental pressure on the bugs. Both bugs and predators can die if they run out of energy, which is replenished by eating food or prey. Food for the bugs regenerates at regular cycles (magenta dots). Neither bugs nor predators can cross obstacles (gray squares). A word about vigilance: both bugs and predators can see with a 100% accuracy anything directly adjoining them. However, the farther out a target or object is, the lower the accuracy because bugs and predators only see along the 8 cardinal direction points. Furthermore, line of sight is implemented, so vision can be further reduced by obstacles or other creatures. The simulation ends when all the bugs die. The simulation revolves around life cycles, where each cycle consists of one pass through each of the bugs and predators. The current cycle is indicated at the bottom left of the simulation area. Asynchronous multitasking is also implemented, and therefore each creature may be in one of 3 possible phases, thus attempting to simulate simultaneous activity. There are 19 simulation variables which allow you to control all aspects of the simulation. There are also 3 commands available to you at any time:

S: Stop the program R: Restart a fresh simulation G: Display a graph of the current genetic composition of the bugs, which will give you an idea of the dominant genes at any stage of the simulation. The relative number of bugs for each genetic trait is shown by a star. Press any key to return to the simulation. There are really infinite possibilities to play with here, each with an unpredictable outcome. Try the simulation with no predators at all, then add predators to see how this affects the balance and the genetic composition of the bugs. I have not yet been able to find the right combination of factors that yields a stable ecosystem between bugs and predators, and I would be very interested to hear from anybody who does. Given that the simulation runs very slowly, it is best to run it using the Classic 99 in overdrive mode for speed. Alternatively, you can always let it run all night and see what happens in the morning :)

Requirements: Extended Basic, 32K RAM.

Executable to run: AI

Download Musings in Artificial Life:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – N

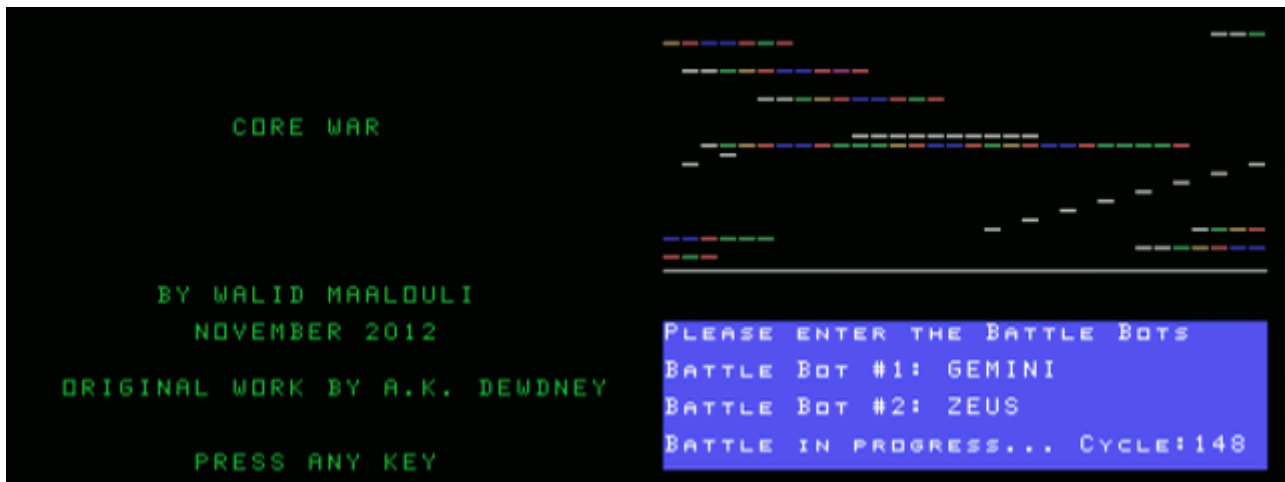
PGR: * * * *

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Core War

G-A-O [Disk: 300-COWA] By Walid Maalouli / Original concept by A.K. Dewdney



This "game" was first devised by A.K. Dewdney within the pages of Scientific American magazine back in 1984. It is essentially a simulation of 2 programs in memory battling each other through the use of pseudo-assembly code, with the objective of corrupting the opposing program's code and thus killing it. You design and enter your programs, then pit them against each other within the confines of the computer's memory. The screen displays that memory field as well as a representation of the programs' instructions within it. Programs frequently spawn copies of themselves as a backup, shoot code disrupting projectiles around them, and try to survive as long as possible. The possibilities are endless, and this concept has spawned international interest that is still alive and well today. **Note: This program was programmed in TI Forth.**

Requirements: Editor/Assembler cartridge, 32K RAM, 2 disk drives

Executable to run: Please see instructions

Download Core War:

[\[Program disk\]](#)

[\[TI Forth disk\]](#)

[Core War Manual \(PDF\)](#)

[Watch Core War demo on YouTube](#)

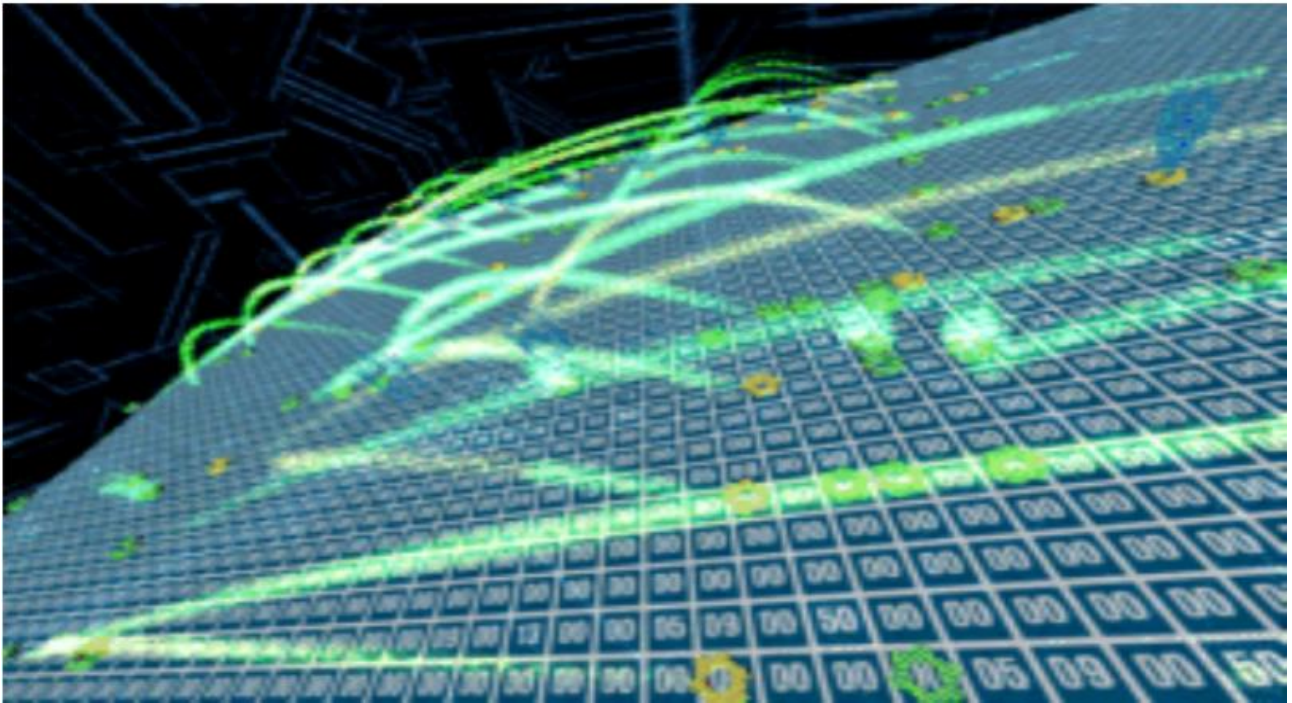
Start from mega menu: G – A – O

PGR:

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Core



War

By Walid Maalouli - November 2012

Based on the original concept by A. K. Dewdney

TI 99/4A Computer

TI-99/4A – Game Shelf Edutainment

Introduction

Core War is the brainchild of A. K. Dewdney who first described it in an issue of Scientific American in 1984.

“Two computer programs in their native habitat – the memory chips of digital computer – stalk each other from address to address. Sometimes they go scouting for the enemy; sometimes they lay down a barrage of numeric bombs; sometimes they copy themselves out of danger or stop to repair damage. This is the game I call Core War. It is unlike almost all other computer games in that people do not play at all! The contending programs are written by people, of course, but once a battle is under way the creator of a program can do nothing but watch helplessly as the product of hours spent in design and implementation either lives or dies on the screen. The outcome depends entirely on which program is hit first in a vulnerable area. “

There have been many enhancements made to this game over the decade following its introduction, primarily by adding novel instructions and modifiers, which have made it quite challenging for the non-programmer. This version is based on the original 1984 version which should be accessible to most anyone with an interest in this kind of game.

It has been programmed using TI FORTH.

I hope you will find it enjoyable.

Walid Maalouli
November 2012

Loading and Running Core War

The game will run either on a real TI 99/4A with 32K RAM, Editor/Assembler cartridge, and 2 disk drives, or using the following emulators:

- Win994A
- V9t9
- MESS
- PC99

While it can be played on the Classic99 emulator, you will not however be able to save your battle programs.

You will need to place the TI FORTH disk in drive #1, and the Core War disk in drive #2.

Select LOAD AND RUN option from the Editor/Assembler menu and type DSK1.FORTH followed by a carriage return. TI FORTH will load and you will be returned to the command prompt.

Type 91 LOAD followed by a carriage return, and Core War will load. Please note that it will take a couple of minutes for the loading to be completed, and then the command prompt will come back. To run Core War at this point, simply type COREWAR followed by a carriage return. **But before doing so, I suggest you read the original Scientific American article in Appendix A at the end of the manual then get familiarized with the battle program editor in the next section.**

TI-99/4A – Game Shelf Edutainment

Battle Program Editor

Core War utilizes the TI FORTH 64 integrated editor for programming the battle programs. It is a very capable full screen editor.

TI FORTH is based on so-called SCREENS, each containing up to 1024 characters. Only SCREENS 119 to 179 are available for your use, which should prove more than sufficient. The lower SCREENS contain the system and program files, and tampering with them will likely lead to either a system crash or program malfunction.

SCREEN 117 contains two sample battle programs, namely the IMP and the DWARF which you are free to study and modify at will.

SCREEN 118 has a program called GEMINI, which is a more advanced battle robot.

To start the editor, type the SCREEN number you wish to edit, a space, then EDIT followed by a carriage return. For example:

119 EDIT

If that SCREEN appears to be full of garbage characters, it means that it has not been edited before. Press FCTN-9 to access the command prompt, type the SCREEN number, a space, then CLEAR followed by a carriage return. For example:

119 CLEAR

You can at that point return to the editor by typing ED@ followed by a carriage return at which point the SCREEN would have been cleared.

Editor commands:

- Use the FCTN-S, FCTN-D, FCTN-E and FCTN-X (arrow) keys to move the cursor around the screen
- FCTN-1: delete character under cursor and shift line left
- FCTN-2: insert a space under the cursor and shift line right
- FCTN-3: delete entire line and scroll screen up. The deleted line is copied to the clipboard
- CTRL-8: insert a new line at the cursor position and shift the screen down
- FCTN-8: paste the content of the clipboard at the cursor location and scroll the screen down
- CTRL-V: tab forward by word
- FCTN-V: tab backwards by word
- FCTN-4: move to the next SCREEN
- FCTN-6: move to the previous SCREEN
- FCTN-5 scrolls the screen to the left

Once done editing a SCREEN, press FCTN-9 to exit to the command prompt. Again, you can return to the editor by typing ED@.

Battle Program Instruction Set

Core War has 8 executable instructions and a single non-executable one. The battleground consists of a core memory with 832 addresses from 0 to 831. This memory is circular, meaning that address 832 becomes address 0. The battle programs can never know their absolute location within the core memory, and all the instructions refer only to memory locations relative to the current program's instruction pointer. For example, if an instruction refers to address 2, this means it is targeting an address two memory addresses ahead of its current instruction location.

This version of Core War works exactly the same as described in the original article although the program entry syntax differs a bit as noted below. Program length cannot exceed 100 instructions.

TI-99/4A – Game Shelf Edutainment

The battle programs need to be entered using the editor in a specific format so they can be properly interpreted by the game engine.

- Every program needs to start with a **:**, a space, followed by the program name which cannot exceed 15 characters. For example,
:TEST
- This should be followed by the word INIT to indicate the beginning of the battle program.
- ORG should be used immediately prior to the first executable opcode in your program. This is frequently the first opcode, but not necessarily.
- All instructions consist of 5 fields, each field separated by at least one space. The fields are:
 - Opcode
 - A field addressing mode
 - A field operand
 - B field addressing mode
 - B field operand

Please note that all the fields should be present even when an opcode uses only one the fields. The valid opcodes are:

- MOV
- ADD
- SUB
- JMP
- JMZ
- JMG
- DJZ
- CMP
- DAT
- The addressing modes are:
 - **.#** immediate
 - **.!** direct
 - **.@** indirect
- All programs should end with a **;**
- A space should separate every element of a program
- Comments can be added by using a **(** followed by a space, the comment text, and a closing **)**
- If a program requires more than one SCREEN, place a **-->** at the bottom of the SCREEN and continue program entry with the subsequent SCREEN. You may repeatedly do so as needed.
- Only capital letters are recognized by the interpreter.

TI-99/4A – Game Shelf Edutainment

Program examples:

```
: IMP
```

```
INIT
```

```
ORG
```

```
MOV ! 0 ! 1 ; ( COPIES ITS INSTRUCTION AHEAD ONE ADDRESS)
```

```
: DWARF
```

```
INIT
```

```
ORG
```

```
ADD .# 4 ! 3
```

```
MOV ! 2 .@ 2
```

```
JMP ! -2 .# 0 ( NOTE A .# 0 IS PLACED IN FIELD B BUT NOT USED)
```

```
DAT .# 0 .# 0 ;
```

IMPORTANT HINTS:

- Remember that every instruction needs all 5 fields regardless of whether all the field are used by that instruction. It is good practice to place a **.# 0** in the unused fields. Every field needs to be separated by at least a space
- Unused fields can be used as handy storage areas
- All instructions target the B Fields ONLY! This is a common source of error.
- All addresses are relative to the address of the current instruction being executed.
- With indirect addressing (**.@**), the contents of the target address are added to the current instruction pointer to create a new target address, which contents will in turn be added to the latter to come up with the final target address. This can be tricky, so make sure you pay particular attention to this fact.
- Do not forget to place an ORG just before the first instruction that will be executed when your battle program launches.

Saving and Loading Battle Programs

Once you have finished typing in your program, press FCTN-9 to exit the editor and return to the command prompt. At this time, it is best to save your program to disk by typing FLUSH followed by a carriage return. The battle program will be saved on the same disk as the Core War one and will essentially become part of the program.

But before you can test your program in battle, you need to compile it by typing the SCREEN number where it resides followed by LOAD. For example:

```
118 LOAD
```

If there are no syntax errors, the command prompt will come back with **ok:0**. Otherwise, a **?** will be displayed to indicate that an error has occurred and that you should check your program.

TI-99/4A – Game Shelf Edutainment

Important: in order not to have multiple copies of your program in memory when you edit it and load it several times, it is good practice to do a FORGET followed by your program name before loading the program SCREEN again. For example:

FORGET TEST

Hint: If you wish for your battle programs to load when the Core War program is loaded, simply chain link their associated screens with --> then execute a FLUSH operation at the command line. Core War is already linked to SCREEN 118 by default.

Running a Battle

Once you have a completed and loaded a battle program, type at the command prompt COREWAR followed by a carriage return. A splash screen will be displayed, and you can press any key to move on.

You will then be prompted for the names of the two battle programs that will be competing against each other. Type in the appropriate names followed by a carriage return, and then the program will initialize the core memory prior to the battle and will prompt you to press a key when it's ready.

At that point, the locations of the battle programs will be displayed in the core memory. Each instruction in the battle programs occupies a single core memory location, and is color coded as follows:

- MOV : Light Green
- ADD : Dark Blue
- SUB : Light Blue
- JMP : Light Red
- JMZ : Medium Red
- JMG : Dark Red
- DJZ : Dark Yellow
- CMP : Light Yellow
- DAT : White
- Current instruction for Battle Program #1 : Magenta
- Current instruction for Battle Program #2 : Cyan

Once you are ready to start the battle, press a key, and you will note that the corresponding instruction pointer for each battle program will move from instruction to instruction per the program's design. Any changes to the core memory will be displayed as well. You will therefore be able to watch the execution of the programs and their effect on core memory in real time. The battle program that goes first is chosen randomly at the beginning of the battle, and will subsequently alternate between the two battle programs. A battle cycle consists of one instruction execution by each of the battle programs.

Battle Outcome

If one of the battle programs attempts to execute a DAT statement, it will automatically lose the battle. If at the end of 1000 cycles there is no winner, then the battle is considered a draw. Obviously, your program's objective is to try to corrupt your opponent's program and get it to execute a DAT statement. Easier said than done...

Good Luck!

TI-99/4A – Game Shelf Edutainment

Appendix A

COMPUTER RECREATIONS

In the game called Core War hostile programs engage in a battle of bits.

by A. K. Dewdney

Two computer programs in their native habitat -- the memory chips of a digital computer -- stalk each other from address to address. Sometimes they go scouting for the enemy; sometimes they lay down a barrage of numeric bombs; sometimes they copy themselves out of danger or stop to repair damage. This is the game I call Core War. It is unlike almost all other computer games in that people do not play at all! The contending programs are written by people, of course, but once a battle is under way the creator of a program can do nothing but watch helplessly as the product of hours spent in design and implementation either lives or dies on the screen. The outcome depends entirely on which program is hit first in a vulnerable area.

The term Core War originates in an outmoded memory technology. In the 1950's and 1960's the memory system of a computer was built out of thousands of ferromagnetic cores, or rings, strung on a meshwork of fine wires. Each core could retain the value of one bit, or binary digit, the fundamental unit of information. Nowadays memory elements are fabricated on semiconductor chips, but the active part of the memory system where a program is kept while it is being executed, is still often referred to as core memory, or simply core.

Battle programs in Core War are written in a specialized language I have named Redcode, closely related to the class of programming languages called assembly languages. Most computer programs today are written in a high-level language such as Pascal, Fortran or BASIC; in these languages a single statement can specify an entire sequence of machine instructions. Moreover, the statements are easy for the programmer to read and to understand. For a program to be executed, however, it must first be translated into "machine language," where each instruction is represented by a long string of binary digits. Writing a program in this form is tedious at best.

Assembly languages occupy an intermediate position between high-level languages and machine code. In an assembly-language program each statement generally corresponds to a single instruction and hence to a particular string of binary digits. Rather than writing the binary numbers, however, the programmer represents them by short words or abbreviations called mnemonics (because they are easier to remember than numbers). The translation into machine code is done by a program called an assembler.

Comparatively little programming is done in assembly languages because the resulting programs are longer and harder to understand or modify than their high-level counterparts. There are some tasks, however, for which an assembly language is ideal. When a program must occupy as little space as possible or be made to run as fast as possible, it is generally written in assembly language. Furthermore, some things can be done in an assembly language that are all but impossible in a high-level language. For example, an assembly-language program can be made to modify its own instructions or to move itself to a new position in memory.

Core War was inspired by a story I heard some years ago about a mischievous programmer at a large corporate research laboratory I shall designate X. The programmer wrote an assembly-language program called Creeper that would duplicate itself every time it was run. It could also spread from one computer to another in the network of the X corporation. The program had no function other than to perpetuate itself. Before long there were so many copies of Creeper that more

TI-99/4A – Game Shelf Edutainment

useful programs and data were being crowded out. The growing infestation was not brought under control until someone thought of fighting fire with fire. A second self-duplicating program called Reaper was written. Its purpose was to destroy copies of Creeper until it could find no more and then to destroy itself. Reaper did its job, and things were soon back to normal at the X lab.

In spite of fairly obvious holes in the story, I believed it, perhaps because I wanted to. It took some time to track down the real events that lay behind this item of folklore. (I shall give an account of them below.) For now it is sufficient to note that my desire to believe rested squarely on the intriguing idea of two programs doing battle in the dark and noiseless corridors of core.

Last year I decided that even if the story turned out not to be true, something like it could be made to happen. I set up an initial version of Core War and, assisted by David Jones, a student in my department at the University of Western Ontario, got it working. Since then we have developed the game to a fairly interesting level.

Core War has four main components: a memory array of 8,000 addresses, the assembly language Redcode, an executive program called MARS (an acronym for Memory Array Redcode Simulator) and the set of contending battle programs. Two battle programs are entered into the memory array at randomly chosen positions; neither program knows where the other one is. MARS executes the programs in a simple version of time-sharing, a technique for allocation the resources of a computer among numerous users. The two programs take turns: a single instruction of the first program is executed, then a single instruction of the second, and so on.

What a battle program does during the execution cycles allotted to it is entirely up to the programmer. The aim, of course, is to destroy the other program by ruining its instructions. A defensive strategy is also possible: a program might undertake to repair any damage it has received or to move out of the way when it comes under attack. The battle ends when MARS comes to an instruction in one of the programs that cannot be executed. The program with the faulty instruction -- which presumably is a casualty of war -- is declared the loser.

Much can be learned about a battle program merely by analyzing its actions mentally or with pencil and paper. To put the program to the test of experience, however, one needs access to a computer and a version of MARS. The programs could be made to operate on a personal computer, and Jones and I have prepared brief guidelines for those who would like to set up a Core War battlefield of their own. (For a copy of the guidelines send your name and address and \$2 for postage and handling to Core War, Scientific American, 415 Madison Avenue, New York, N.Y., 10017. Delivery may take a few weeks.)

Before describing Redcode and introducing some simple battle programs, I should say more about the memory array. Although I have noted that it consists of 8,000 addresses, there is nothing magical about this number; a smaller array would work quite well. The memory array differs from most computer memories in its circular configuration; it is a sequence of addresses numbered from 0 to 7999 but it thereupon rejoins itself, so that address 8000 is equivalent to address 0. MARS always reduces an address greater than 7999 by taking the remainder after division by 8000. Thus if a battle program orders a hit at address 9378, MARS interprets the address as 1378.

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Redcode is a simplified, special-purpose assembly-style language. It has instructions to move the contents of one address in memory to another address, to alter the contents arithmetically and to transfer control forward or backward within a program. Whereas the output of a real assembler consists of binary codes, the mnemonic form of a Redcode instruction is translated by MARS into a large decimal integer, which is then stored in the memory array; each address in the array can hold one such integer. It is also MARS that interprets the integers as instructions and carries out the indicated operations.

A list of the elementary Redcode instructions is given in the top illustration on [page 814](#). With each instruction the programmer is required to supply at least one argument, or value, and most of the instructions take two arguments. For example, in the instruction `JMP -7` the mnemonic `JMP` (for "jump") is followed by the single argument `-7`. The instruction tells MARS to transfer control to the memory address seven places before the current one, that is, seven places before the `JMP -7` instruction itself. If the instruction happened to be at address 3715, execution of the program would jump back to address 3708.

This method of calculating a position in memory is called relative addressing, and it is the only method employed in Redcode. There is no way for a battle program to know its own absolute position in the memory array.

The instruction `MOV 3 100` tells MARS to go forward three addresses, copy what it finds there and deliver it 100 addresses beyond the `MOV` instruction, overwriting whatever was there. The arguments in this instruction are given in "direct" mode, meaning they are to be interpreted as addresses to be acted on directly. Two other modes are allowed. Preceding an argument with an `@` sign makes it "indirect." In the instruction `MOV @3 100` the integer to be delivered to relative address 100 is not the one found at relative address 3 but rather the one found at the address specified by the contents of relative address 3. (The bottom illustration on [page 814](#) gives more detail on the process of indirect addressing.) A `#` sign makes an argument "immediate," so that it is treated not as an address but as an integer. The instruction `MOV #3 100` causes the integer 3 to be moved to relative address 100.

Most of the other instructions need no further explanation, but the data statement (`DAT`) requires some comment. It can serve as a work space to hold information a program may need to refer to. Strictly speaking, however, it is not an instruction; indeed, any memory location with a zero in its first decimal position can be regarded as a `DAT` statement and as such is not executable. If MARS should be asked to execute such an "instruction," it will not be able to and will declare that program the loser.

The decimal integer that encodes a Redcode instruction has several fields, or functional areas [see middle illustration on [page 814](#)]. The first digit represents the mnemonic itself, and two more digits identify the addressing mode (direct, indirect or immediate). In addition four digits are set aside for each argument. Negative arguments are stored in complement form: `-1` would be represented as `7999`, since in the circular memory array adding `7999` has the same effect as subtracting `1`.

The instructions making up a simple battle program called `Dwarf` are listed in the illustration on [page 815](#). `Dwarf` is a very stupid but very dangerous program that works its way through the memory array bombarding every fifth address with a zero. Zero is the integer signifying a nonexecutable data statement, and so a zero dropped into an enemy program can bring it to a halt.

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Assume that Dwarf occupies absolute addresses 1 through 4. Address 1 initially contains DAT -1, but execution begins with the next instruction. ADD #5 -1. The effect of the instruction is to add 5 to the contents of the preceding address, namely the DAT -1 statement, thereby transforming it into DAT 4. Next Dwarf executes the instruction at absolute address 3, MOV #0 @-2. Here the integer to be moved is 0, specified as an immediate value. The target address is calculated indirectly in the following way. First MARS counts back two addresses from address 3, arriving at address 1. It then examines the data value there, namely 4, and interprets it as an address relative to the current position; in other words, it counts four places forward from address 1 and hence deposits a 0 at address 5.

The final instruction in Dwarf, JMP -2, creates an endless loop. It directs execution back to absolute address 2, which again increments the DAT statement by 5, making its new value DAT 9. In the next execution cycle a 0 is therefore delivered to absolute address 10. Subsequent 0 bombs will fall on addresses 15, 20, 25 and so on. The program itself is immobile but its artillery threatens the entire array. Eventually Dwarf works its way around to addresses 7990, 7995 and then 8000. As far as MARS is concerned, 8000 is equal to 0, and so Dwarf has narrowly avoided committing suicide. Its next missile again lands on address 5.

It is sobering to realize that no stationary battle program that has more than four instructions can avoid taking a hit from Dwarf. The opposing program has only three options: to move about and thereby elude the bombardment, to absorb hits and repair the damage or to get Dwarf first. To succeed through the last strategy the program may have to be lucky: it can have no idea where Dwarf is in the memory array, and on the average it has about 1,600 execution cycles before a hit is received. If the second program is also a Dwarf, each program wins 30 percent of the time; in 40 percent of the contests neither program scores a fatal hit.

Before taking up the other two strategies, I should like to introduce a curious one-line battle program we call Imp. Here it is:

```
MOV 0 1
```

Imp is the simplest example of a Redcode program that is able to relocate itself in the memory array. It copies the contents of relative address 0 (namely MOV 0 1) to relative address 1, the next address. As the program is executed it moves through the array at a speed of one address per cycle, leaving behind a trail of MOV 0 1 instructions.

What happens if we pit [Imp against Dwarf?](#) The barrage of zeros laid down by Dwarf moves through the memory array faster than Imp moves, but it does not necessarily follow that Dwarf has the advantage. The question is: Will Dwarf hit Imp even if the barrage does catch up?

If Imp reaches Dwarf first, Imp will in all probability plow right through Dwarf's code. When Dwarf's JMP -2 instruction transfers execution back two steps, the instruction found there will be Imp's MOV 0 1. As a result Dwarf will be subverted and become a second Imp endlessly chasing the first one around the array. Under the rules of Core War the battle is a draw. (Note that this is the outcome to be expected "in all probability." Readers are invited to analyze other possibilities and perhaps discover the bizarre result of one of them.)

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Both Imp and Dwarf represent a class of programs that can be characterized as small and aggressive but not intelligent. At the next level are programs that are larger and somewhat less aggressive but smart enough to deal with programs in the lower class. The smarter programs have the ability to dodge an attack by copying themselves out of trouble. Each such program includes a segment of code somewhat like the one named Gemini, shown in the lower illustration on [page 813](#). Gemini is not intended to be a complete battle program. Its only function is to make a copy of itself 100 addresses beyond its present position and then transfer execution to the new copy.

The Gemini program has three main parts. Two data statements at the beginning serve as pointers; they indicate the next instruction to be copied and its destination. A loop in the middle of the program does the actual copying, moving each instruction in turn to an address 100 places beyond its current position. On each transit through the loop both pointers are incremented by 1, thereby designating a new source and destination address. A compare instruction (CMP) within the loop tests the value of the first data statement; when it has been incremented nine times, the entire program has been copied, and so an exit from the loop is taken. One final adjustment remains to be made. The destination address is the second statement in the program and it has an initial value of DAT 99; by the time it is copied, however, it has already been incremented once, so that in the new version of the program it reads DAT 100. This transcription error is corrected (by the instruction MOV #99 93) and then execution is transferred to the new copy.

By modifying Gemini it is possible to create an entire class of battle programs. One of these, Juggernaut, copies itself 10 locations ahead instead of 100. Like Imp, it tries to roll through all its opposition. It wins far more often than Imp, however, and leads to fewer draws, because an overwritten program is less likely to be able to execute fragments of Juggernaut's code. Bigfoot, another program employing the Gemini mechanism, makes the interval between copies a large prime number. Bigfoot is hard to catch and has the same devastating effect on enemy code as Juggernaut does.

Neither Bigfoot nor Juggernaut is very intelligent. So far we have written only two battle programs that qualify for the second level of sophistication. They are too long to reproduce here. One of them, which we call Raidar, maintains two "pickets" surrounding the program itself [see illustration on [page 815](#)]. Each picket consists of 100 consecutive addresses filled with 1's and is separated from the program by a buffer zone of 100 empty addresses. Raidar divides its time between systematically attacking distant areas of the memory array and checking its picket addresses. If one of the pickets is found to be altered, Raidar interprets the change as evidence of an attack by Dwarf, Imp or some other unintelligent program. Raidar then copies itself to the other side of the damaged picket, restores it, constructs a new picket on its unprotected side and resumes normal operation.

In addition to copying itself a battle program can be given the ability to repair itself. Jones has written a self-repairing program that can survive some attacks, although not all of them. Called Scanner, it maintains two copies of itself but ordinarily executes only one of them. The copy that is currently running periodically scans the other copy to see if any of its instructions have been altered by an attack. Changes are detected by comparing the two copies, always assuming that the executing copy is correct. If any bad instructions are found, they are replaced and control is transferred to the other copy, which then begins to scan the first one.

So far Scanner remains a purely defensive program. It is able to survive attacks by Dwarf, Imp, Juggernaut and similar slow-moving aggressors -- at least if the attack comes from the right direction. Jones is currently working on a self-repair program that keeps three copies of itself.

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I am curious to see whether readers can design other kinds of self-repairing programs. For example, one might think about maintain two or more copies of a program even though only one copy is ever executed. The program might include a repair section that would refer to an extra copy when restoring damaged instructions. The repair section could even repair itself, but it might still be vulnerable to damage at some positions. One measure of vulnerability assumes that a single instruction has been hit; on the average, how many such instruction, if they are hit, ultimately cause the program to die? By this measure, what is the least vulnerable self-repairing program that can be written?

Only if reasonably robust programs can be developed will Core War reach the level of an exciting game, where the emphasis is shifted from defense to offense. Battle programs will then have to seek out and identify enemy code and mount an intensive attack wherever it is found.

I may have given the impression that Redcode and the entire MARS system are fixed. They are not. In spare moments we have been experimenting with new ideas and are certainly open to suggestions. Indeed, we have been experimenting so much with new programs and new features that some battles remain to be fought in our own system.

One idea we have been playing with is to include an extra instruction that would make self-repair or self-protection a little easier. The instruction PCT A would protect the instruction at address A from alteration until it is next executed. How much could the vulnerability of a program be reduced by exploiting an instruction of this kind?

In the guidelines offered above we describe not only the rules of Core War but also how to set up a memory array and write a MARS system in various high-level languages. We also suggest how to display the results of a Core War battle. For now the following rules define the game with enough precision to enable pencil-and-paper players to begin designing programs:

1. The two battle programs are loaded into the memory array at random positions but initially are no closer than 1,000 addresses.
2. MARS alternates in executing one instruction from each program until it reaches an instruction that cannot be executed. The program with the erroneous instruction loses.
3. Programs can be attacked with any available weapon. A "bomb" can be a 0 or any other integer, including a valid Redcode instruction.
4. A time limit is put on each contest, determined by the speed of the computer. If the limit is reached and both programs are still running, the contest is a draw.

The story of Creeper and Reaper seems to be based on a compounding of two actual programs. One program was a computer game called Darwin, invented by M. Douglas McIlroy of AT&T Bell Laboratories. The other was called Worm and was written by John F. Shoch of the Xerox Palo Alto Research Center. Both programs are some years old, allowing ample time for rumors to blossom. (Darwin was described in *Software: Practice and Experience*, Volume 2, pages 93-96, 1972. A vague description of what appears to be the same game is also given in the 1978 edition of *Computer Lib*.)

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In Darwin each player submits a number of assembly-language programs called organisms, which inhabit core memory along with the organisms of other players. The organisms created by one player (and thus belonging to the same "species") attempt to kill those of other species and occupy their space. The winner of the game is the player whose organisms are most abundant when time is called. McIlroy invented an unkillable organism, although it won only "a few games." It was immortal but apparently not very aggressive.

Worm was an experimental program designed to make the fullest use possible of minicomputers linked in a network at Xerox. Worm was loaded into quiescent machines by a supervisory program. Its purpose was to take control of the machine and, in coordination with Worms inhabiting other quiescent machines, run large applications programs in the resulting multiprocessor system. Worm was designed so that anyone who wanted to use one of the occupied machines could readily reclaim it without interfering with the larger job.

One can see elements of both Darwin and Worm in the story of Creeper and Reaper. In Core War, Reaper has become reality.

ADDRESS	CYCLE 1	CYCLE 2	CYCLE 9
0			
1	DAT -1	DAT 4	DAT 14
2	MOV #3 @-2	ADD #5 -1	ADD #5 -1
3	MOV #0 @-2	MOV #0 @-2	MOV #0 @-2
4	JMP -2	JMP -2	JMP -2
5		0	0
6			
7			
8			
9			0
10			
11			
12			
13			
14			0
15			
16			
17			

Dwarf, a battle program, lay's down a barrage of "zero bombs"

DAT		0	/pointer to source address
DAT		99	/pointer to destination address
MOV	9i -2	9i -1	/copy source to destination
CMP	-3	#9	/if all 10 lines have been copied . . .
JMP	4		/ . . . then leave the loop;
ADD	#1	-5	/otherwise, increment the source address . . .
ADD	#1	-5	/ . . . and the destination address . . .
JMP	-5		/ . . . and return to the loop
MOV	#99	93	/restore the starting destination address
JMP	93		/jump to the new copy

Gemini, a program that copies itself to a new position in the memory array

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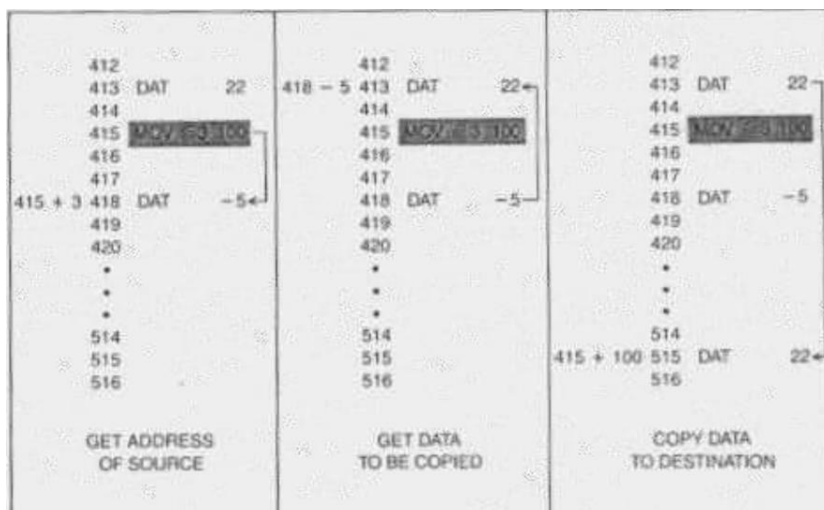
INSTRUCTION	MNEMONIC	CODE	ARGUMENTS	EXPLANATION
Move	MOV	1	A B	Move contents of address A to address B.
Add	ADD	2	A B	Add contents of address A to address B.
Subtract	SUB	3	A B	Subtract contents of address A from address B.
Jump	JMP	4	A	Transfer control to address A.
Jump if zero	JMZ	5	A B	Transfer control to address A if contents of address B are zero.
Jump if greater	JMG	6	A B	Transfer control to address A if contents of B are greater than zero.
Decrement, jump if zero	DJZ	7	A B	Subtract 1 from contents of address B and transfer control to address A if contents of address B are then zero.
Compare	CMP	8	A B	Compare contents of addresses A and B; if they are unequal, skip the next instruction.
Data statement	DAT	0	B	A nonexecutable statement. B is the data value.

The instruction id of Redcode, an assembly language for Core War

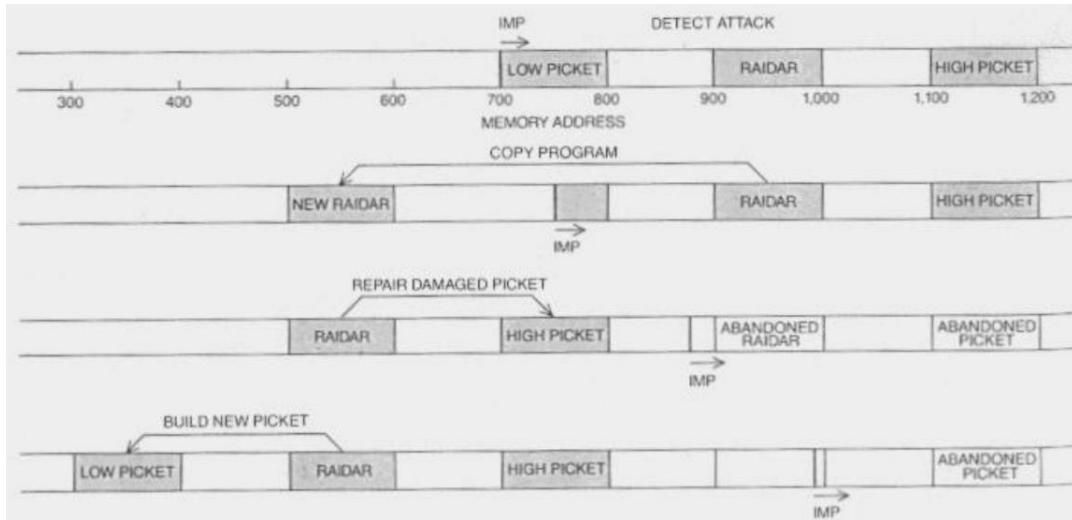
MNEMONIC	ARGUMENT A	ARGUMENT B	OPERATION CODE	MODE DIGIT ARGUMENT A	MODE DIGIT ARGUMENT B	ARGUMENT A	ARGUMENT B
DAT		-1	0	0	0	0000	7999
ADD	#5	-1	2	0	1	0005	7999
MOV	#0	ii-2	1	0	2	0000	7996
JMP	-2		4	1	0	7998	0000

ADDRESSING MODES: IMMEDIATE # 0
 DIRECT 1
 INDIRECT ii 2

The encoding of Redcode instructions as decimal integers



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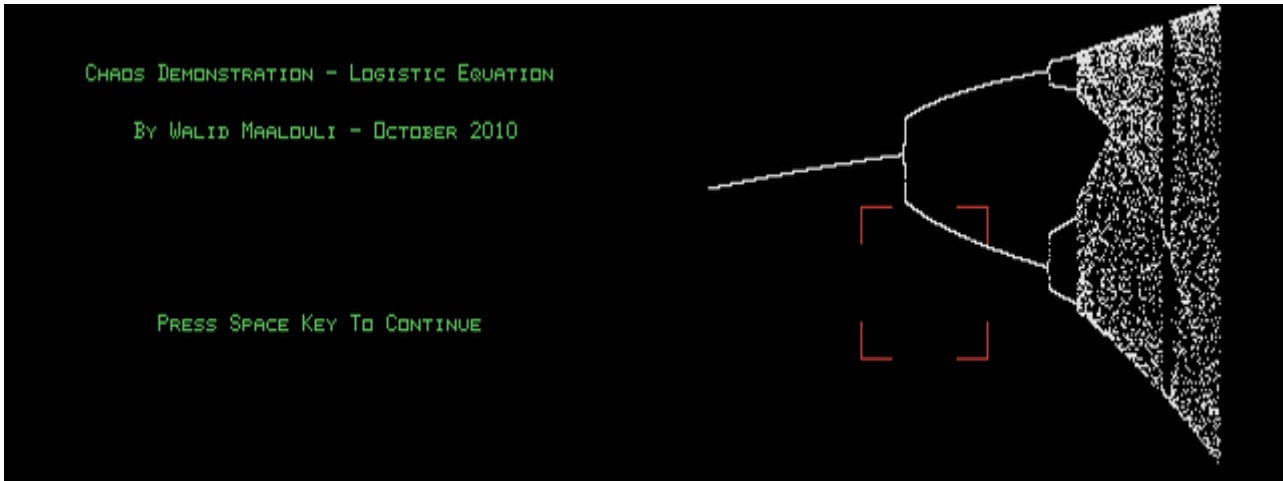
Raidar, a sophisticated battle program, eludes the simpler Imp in the memory array of Core War

7978	MOV	0	1	
7979	MOV	0	1	
7980	—	0		
7981	MOV	0	1	
7982	MOV	0	1	
7983	MOV	0	1	
7984	MOV	0	1	
7985	—	0		
7986	MOV	0	1	
7987	MOV	0	1	
7988	MOV	0	1	
7989	MOV	0	1	
7990	—	0		
7991	MOV	0	1	
7992	MOV	0	1	
7993	MOV	0	1	
7994	MOV	0	1	} IMP
7995				
7996				
7997				
7998				
7999				
0				
1	DAT		7994	} DWARF
2	ADD	#5	-1	
3	MOV	#0	@-2	
4	JMP	-2		
5	—	0		
6				
7				
8				
9				
10	—	0		
11				

Imp v. Dwarf: Who wins?

Chaos Musings

G-A-P [Disk: 301-CHAM] By Walid Maalouli



In my constant strive to stress my TI 99/4A computer to the limit, I decided to explore the realms of Chaos. And no, this is not Warhammer, but a mathematical exploration of chaos visualization. This is a collection of 3 separate programs that create graphical representations of various chaotic equations, which also happen to be fractal. Be forewarned that it can take hours or even days of computations to come up with an image depending on the zoom level requested. The first program looks at the logistic equation, the second investigates the Henon equation, and the last explores Lyapunov space. Not for the faint of heart, but interesting nonetheless if you are into that sort of thing.

Requirements: Editor/Assembler cartridge, 32K RAM, Disk Drive

Executable to run: LOGISTIC, HENON or LYAPUNOV (E/A Option 3 - Program name is START)

Download Chaos Musings:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Manual \(PDF\)](#)

Start from mega menu: G – A – P

PGR:

Features: Title Screen, EA3, One Player, Sound

Controls: Keyboard

**Runs from Mega Menu with AutoStart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.LOGISTI

or

DSK1.HENON

or

DSK1.LYAPUNOV

PROGRAM NAME?

“START”

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Chaos Musings



By Walid Maalouli

October 2010

For the TI 99/4A computer

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Introduction

Ever since Edward Lorenz started dabbling in climate modeling in the 1960's and stumbled upon the apparent anarchy of weather, the field of chaos has been growing by leaps and bounds. But with the advent of computers, it became possible to take endless strings of numerical results and turn them into intriguing and frequently fascinating images.

This collection of three programs will attempt to demonstrate the capabilities of the TI 99/4A computer at modeling chaos. Be forewarned however that on a stock machine, these explorations will frequently require hours and even days of calculations before a final image is produced on the screen. While I have run all of them on a real TI, I have found that using an emulated environment on a fast modern computer works better from a time perspective.

System Requirements

All the programs were written in 100% assembly language in order to maximize performance as well as access the high resolution bitmap screen. Therefore, you will need the following:

- Editor/Assembler cartridge
- 32K RAM expansion
- One disk drive
- Lots of patience

Use

There are no restrictions on the use of these programs. Feel free to play with them and modify them at will. I would appreciate it however if you could send me any enhancements you make.

Enjoy and may the chaos be with you...

Walid Maaloui
wmaalouli@comcast.net

TI-99/4A – Game Shelf Edutainment

The Logistic Equation

How to run:

1. Choose Option #3 LOAD AND RUN from the E/A menu
2. At the FILE NAME? prompt, enter DSKx.LOGISTIC (DSKx can be any storage device you want)
3. At the PROGRAM NAME? prompt, enter START

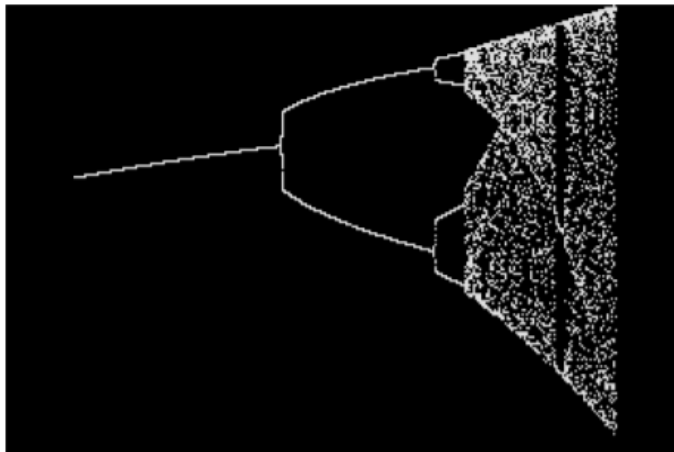
How to use:

The logistic equation represents a very simplified model of population growth and is written as

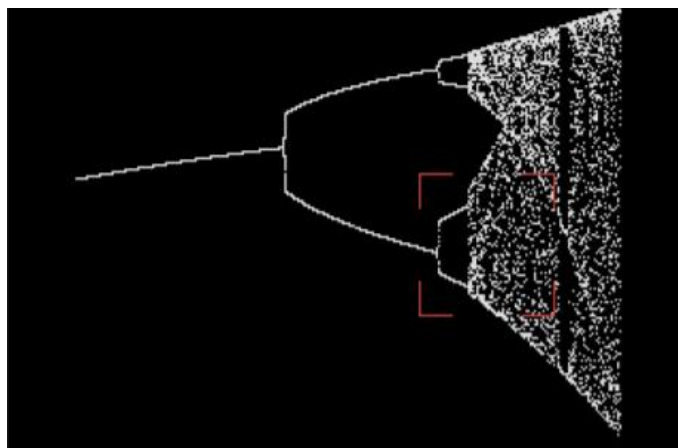
$$P = PR(1-P)$$

where P represents population number and R is the fecundity coefficient which varies from 0 to 4. This relatively benign looking equation start off simply enough and seems very linear, but then starts exhibiting an increasing number of bifurcations with 2 or more stable values for P as R increases, until a threshold is reached where chaos suddenly appears and it becomes impossible to predict where P will fall. Furthermore, the resulting image is actually a fractal, where increasing magnifications will reveal mirror images of the whole.

It takes about 6 minutes for a stock TI to draw the first image with R on the x-axis and P on the y-axis.



If you would like to magnify a section of the image, press W and a red window will appear which you can move around using the arrow key (E/S/D/X).



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Once you are satisfied with the location of the window, press **ENTER** and the computer will start the calculations again, displaying its progress until it reaches the area of interest, at which point that area is displayed. You can continue to zoom in in that manner as much as you want, but please keep in mind that each zoom level increases the calculation time by a factor of 10. Therefore, on zoom level 1, it will take the computer 60 minutes to calculate and draw the image, 10 hours of zoom level 2, and so on and so forth.

The computer will store in memory the first 3 images produced, namely zoom levels 0, 1 and 2, and you can page back and forth between them by pressing the **B** and **F** keys respectively and you can select different zoom areas in each if desired, which allows for a great deal of exploration. If you go beyond zoom level 3 however, you will not be able to go back and view the earlier images.

The Hénon Equations

How to run:

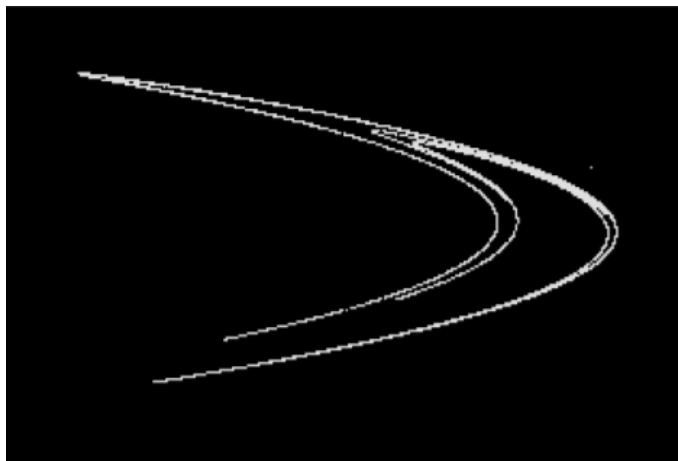
4. Choose Option #3 LOAD AND RUN from the E/A menu
5. At the FILE NAME? prompt, enter DSKx.HENON (DSKx can be any storage device you want)
6. At the PROGRAM NAME? prompt, enter START

How to use:

The Hénon equations represent a simple combination of folding and stretching of mathematical space to produce an image (attractor) that is easy to compute but still poorly understood by mathematicians. The equations are written as

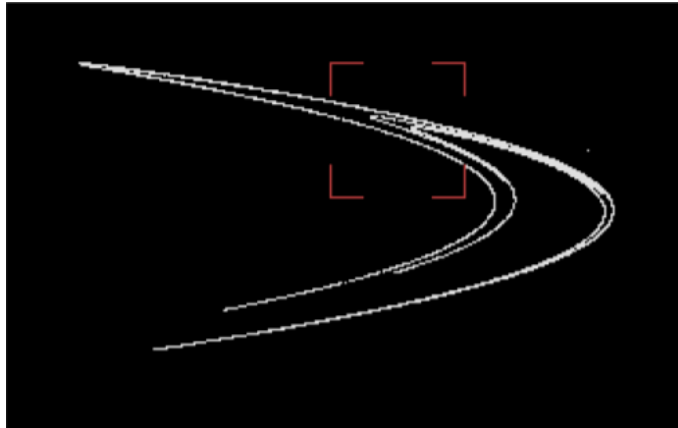
$$\begin{aligned}x_{\text{new}} &= y + 1 - 1.4x^2 \\ y_{\text{new}} &= 0.3x\end{aligned}$$

In contrast to the logistic equation, these equations produce chaotic behavior from the get-go, and it is impossible to predict where the next point will appear on the screen. Slowly, a ghostly image will start to materialize and will progressively sharpen and become more defined the longer the calculations are allowed to go.



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Therefore, there is no defined end-point to the calculations, which will stop only when you press the SPACEBAR. At that point, you may again open a selection window by pressing W and move it around with the arrow keys (E/S/D/X).



Press ENTER when you are satisfied with the location of the window, and the calculations will restart, but this time only showing the zoomed area. Here again, the deeper the zoom level, the longer it will take to compute the image, and the first 3 images are stored in memory and can be accessed back and forth by pressing the B and F keys respectively. If you wish, you can select another zoom area and explore again. You will not be able to go back and view earlier images if you go beyond zoom level 3. What do you notice as you increase magnification? Yes, it is a fractal!

Lyapunov Space

How to run:

7. Choose Option #3 LOAD AND RUN from the E/A menu
8. At the FILE NAME? prompt, enter DSKx.LYAPUNOV (DSKx can be any storage device you want)
9. At the PROGRAM NAME? prompt, enter START

How to use:

Lyapunov spaces are based on the logistic equation mentioned previously [$P=PR(1-P)$], except that for each pixel on the screen the calculations are repeated a large number of times while alternating R between 2 fixed values in a specific pattern. Each calculated P is used to create a running total for each repetition cycle using the formula below

$$\text{Total} = \text{Total} + ((\log|R-2RP|)/\log 2)$$

and then the resulting total is divided by the number of repetitions. This gives you what is called the Lyapunov exponent. If the exponent is negative, then chaos is not present, otherwise it is. Here, chaos is represented as black, and everything else as white.



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This particular image is produced using the pattern 222222111111, with 1 representing the value of R along the x-axis and 2 the one along the y-axis and 200 calculation cycles for each pixel. Other patterns will produce widely different images and it will be up to you to experiment. In order to change the repetition pattern, you will need to edit the program source code by loading it into a text editor and modifying the data at the label PATTRN then saving and recompiling using the E/A assembler.

Each image will take about 36 days on a stock TI to calculate! This is a good opportunity to use an emulator instead... The computer will display a progress bar as it toils on, and the image will be displayed once the calculations are done.

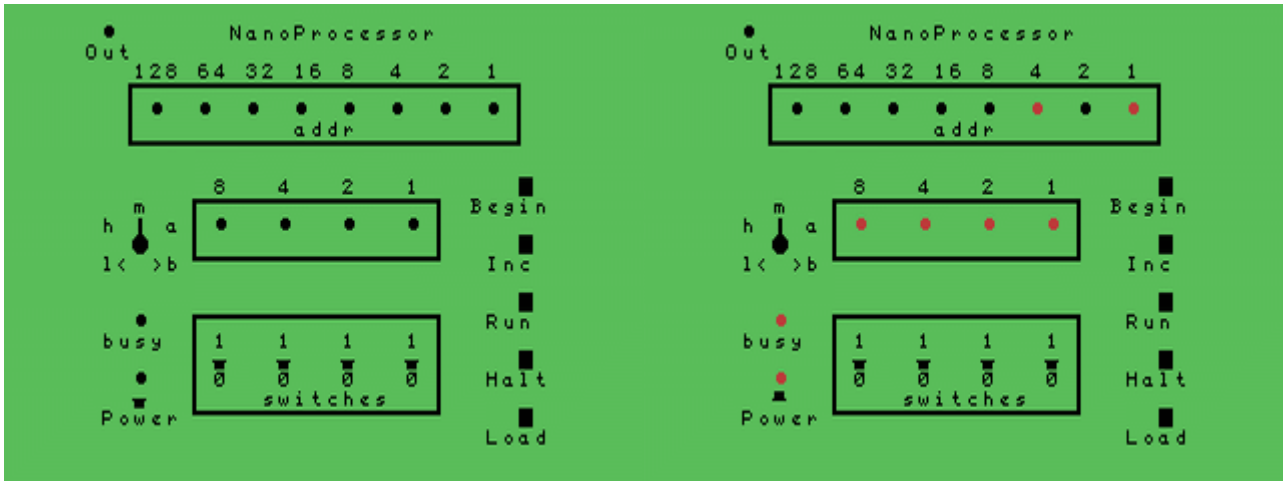
Final Words

If these programs have picked your interest in chaos, the references below will help you advance and explore further. I personally take great pleasure in pushing the TI 99/4A to the limit and prove that it is capable of more than just playing games and that it can be a serious scientific tool.

1. Chaos. Making a New Science. James Gleick 1987
2. The Tinkertoy Computer. A.K. Dewdney 1993

Nano Processor

G-A-Q [Disk: 302-NPRO] By Roger Wood & Wayne Koberstein



With this ingenious simulation of an 8 bit processor, you can discover how easy and fun it is to learn machine language programming while gleaning an insight into the inner workings of computers. The mode of operation of this simulation is very similar to the first microcomputer, the ALTAIR, thus transporting you to the dawn of personal computing. Absolutely fascinating!

Requirements: XB cartridge, 32K RAM, Disk Drive

Executable to run: NANOPROC

Download Nano Processor:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Manual \(PDF\)](#)

Start from mega menu: G – A – Q

PGR: * * * * *

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Edutainment

Instructions example 1:

- | | | | | |
|----|-------|-----------|---|--|
| 1. | Press | P | = | Power On |
| 2. | Press | B | = | Begin at address 0000 |
| 3. | Press | FCTN+ 8 | = | Load Program |
| 4. | Enter | File-name | = | DSK1.NANO-01 |
| 5. | Press | R | = | RUN program (busy LED = red) |
| | | | | The program adds 7 and 3 |
| | | | | The result is in register A |
| 6. | Press | H | = | HALT processor (busy LED = black) |
| 7. | Press | > | = | rotary switch to "a" |
| 8. | | | | The LED in the middle shows the result 1010 = 10 |

Instructions example 2:

- | | | | | |
|-----|-------|-----------|---|---|
| 1. | Press | P | = | Power On (power LED is red) |
| 2. | Press | B | = | Begin at address 0000 |
| 3. | Press | FCTN+ 8 | = | Load Program |
| 4. | Enter | File-name | = | DSK1.NANO-02 |
| 5. | Press | R | = | RUN program till address 24 (busy LED = red) |
| | | | | The program adds 11 and 12 stored at address 240 and 241 |
| | | | | The result is in address 248 (high nibble) and 249 (low nibble) |
| 6. | Press | H | = | HALT processor |
| 7. | Press | < | = | rotary switch to "h" |
| 8. | Input | switches | = | 1111 and press L for LOAD |
| 9. | Press | < | = | rotary switch to "L" |
| 10. | Input | switches | = | 0000 and press L for LOAD |
| 11. | Press | >> | = | rotary switch to "m" |
| | | | | The LED in the middle shows 1011 for 11 |
| 12. | Press | I | = | Increment the address to 241 |
| 13. | | | | The LED in the middle shows 1100 for 12 |
| 14. | Press | << | = | rotary switch to "L" |
| 15. | Input | switches | = | 1000 and press L for LOAD (address=248) |
| 16. | Press | >> | = | rotary switch to "m" |
| | | | | The LED in the middle shows 0111 = 7 for result low nibble |
| 17. | Press | I | = | Increment the address to 249 |
| | | | | The LED in the middle shows 0001 = 1 for result high nibble |
| | | | | 0001 0111 = 16+7=23, the result of the addition 11 and 12 = 23 |

Instructions example 3:

- | | | | | |
|----|---------------|-----------|---|--|
| 1. | Press | P | = | Power On (power LED is red) |
| 2. | Press | B | = | Begin at address 0000 |
| 3. | Press | FCTN+ 8 | = | Load Program |
| 4. | Enter | File-name | = | DSK1.NANO-03 |
| 5. | Press | R | = | RUN program till address 38 (busy LED = red) |
| | | | | The program plays a small melody of 8 tones |
| | To play again | | | |
| 6. | Press | H | = | HALT Nano processor (busy LED = black) |
| 7. | Press | B | = | Set address to zero again |
| 8. | Press | R | = | RUN program |



The NanoProcessor

by Roger Wood
and
Wayne Koberstein
HCM Staff

With this simple simulation of the machine's inner workings, you can discover how easy (and fun!) it is to communicate with computers in their own language.

Since the premiere of the movie *Tron*—in which the hero has to fight his way out of a computer's microcircuits—many people have held a fascination for the inner workings of this "thinking machine." Are you one of them? Perhaps your interest has always been there, but you have not yet "taken the plunge" into machine-level programming. Or perhaps you know a great deal about this subject already, but would appreciate a very clear and simple demonstration of how computers "think." If so, you're ready for *NanoProcessor*—a program that emulates the computer at its most fundamental level.

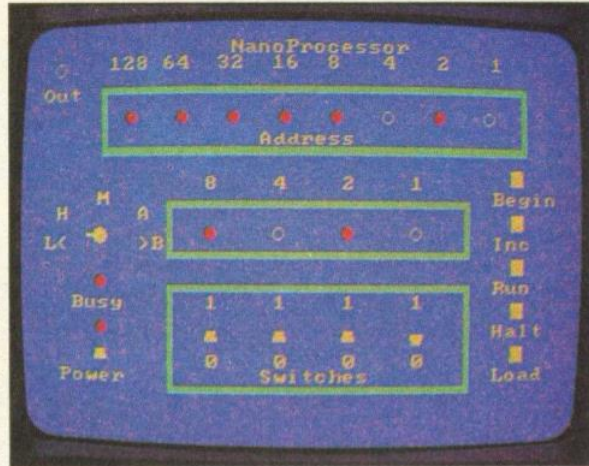
At the heart of a computer, there is nothing but an immense set of on and off switches. But how can such a simple foundation foster such a complex information-handling system? In short, how are all these switches organized? A "real" computer, such as the one you have at home, is such a large system that it would be difficult to see the forest for the trees. But, with *NanoProcessor*, you have a chance to operate and see a much-simplified model of how a computer performs its tasks.

Brain Central

All computers—including the *NanoProcessor*—have a central "brain." It's called the CPU (Central Processing Unit). This brain recognizes and responds to different sets of numbers as instructions. These instructions direct the CPU to carry out certain operations—much as our brains store, handle, and act on information encoded in switch-like neurons. In a computer, information travels along parallel paths of wires and printed circuits called "buses."

As humans, we may think in English, Spanish, or any other language—some subtle, some exact. Computers also "think" in languages—such as BASIC and LOGO. CPU's like our own brains, must translate these high-level languages into encoded information. In computers, this information takes the form of machine language—a set of codes and numerical values expressed as binary numbers. Binary means "two," and implies two choices: on or off; or, in purely numerical terms, 1 or 0.

People tend to think in terms of a ten-based number system because they have ten fingers—but a switch has only two "fingers." (For a detailed look at converting between these number systems see the sidebar "Numbers To Bits And Back.") When you RUN *NanoProcessor* you will notice the row of switches at the bottom of the screen—your only means of shuttling information through this simulated computer (See Photos 1, 2, 3). Each switch only has two positions—up for on (1), or down for off (0). A switch is therefore the perfect means for conveying binary information.



Banking on Memory

Every computer has a memory area, called "Random Access Memory" (RAM), and a Central Processing Unit (CPU). Memory is the computer's capacity to store information, and is measured in terms of "bytes." A byte generally consists of 8 bits of information—where a bit is one binary (on or off) condition.

A CPU performs all the arithmetic that manipulates the numerically-encoded data—the ones and zeros—stored in a computer's RAM. This memory is made up of discrete "locations" in the machine, each of which has an "address." It helps to think of each memory location as a mailbox that not only has an address attached to it, but also a place to put the mail. This mail is the data stored at that location. Each "mailbox" has a limited amount of space that depends on the machine design. Because each of *NanoProcessor*'s memory locations can only store 4 bits, (one nibble), we say it is "nibble-addressable." By simply requesting a particular address, the CPU can immediately find what is contained at that address. This direct addressability of memory by the CPU is what gives a computer the power of *random access*.

The CPU and RAM are connected by three buses: the address bus (8 parallel wires), the data bus (4 parallel wires), and the control bus (See Figure 2). The first provides access to each memory location; the second simply moves data to and from each location; and the third carries control signals which control the flow of data between the CPU and memory. Furthermore, the CPU is organized into a system of discrete "registers" that serve as temporary stations for storing and shuffling data.

Look at the *NanoProcessor* front panel. On the middle-left side of the screen is a "rotary switch" with various letters positioned around it. The letters on the right-hand side of this switch—A and B—stand for the A and B registers in the CPU. It is between these two registers that the actual "arithmetic" and logic operations take place. The A register is also called the Accumulator because this is where the answers to many of the commands end up—or *accumulate*.

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SOFTWARE INSTRUCTIONS

NUMBERS TO BITS AND BACK

One of the most important aspects of machine language programming (but sometimes most confusing for the novice) is converting digital numbers to binary and vice versa. To make this as easy as possible, we have employed two aids: 1) Whenever we list a binary number, we precede it with a percent (%) sign; and 2) *NanoProcessor* displays the decimal equivalent of each bit above the address and data windows of the front panel (see diagram below). We refer to these decimal equivalents as the "weight" of the bits.

To quickly convert a binary number to a decimal number, simply add up the weights of the "1" (on) bits. For example, to convert %1111 1010, refer to the following diagram:

128	64	32	16	8	4	2	1
*	*	*	*	*	*	*	*
%	1	1	1	1	0	1	0

Then add 128+64+32+16+8+2 and you can easily arrive at the correct decimal equivalent: 250. (Also, see Figure 1 for converting the numbers 0—15 to binary.)

Figure 1

Decimal	Binary
0	%0000
1	%0001
2	%0010
3	%0011
4	%0100
5	%0101
6	%0110
7	%0111
8	%1000
9	%1001
10	%1010
11	%1011
12	%1100
13	%1101
14	%1110
15	%1111

Turning On

First, press **P** to turn on the Power to your *NanoProcessor*. Make sure the rotary switch is pointing to the letter **M**, for Memory. You move this switch left (counter-clockwise) with the < (less than) key, and right (clockwise) with the > (greater than) key.

At the top of the screen, you should see an address box containing a long row of "lights" with numbers across the top. This is the "location counter" shown inside the CPU of Figure 2. It displays the 8-bit address of the location currently being interrogated by the CPU. Notice the vertical row of buttons at the right side of the screen. These buttons represent *NanoProcessor's* functions. Press the **B** (for **B**egin) key on your keyboard. This effectively turns off all the lights in the address box, indicating that you have returned to the first address in memory: the 0 (zero) location. Now press the **I** key, for **I**ncrement. This moves you to the next address: location 1. If you repeatedly press **I**, you will continue to step through successive locations.

Notice that, as you step through each location, the row of 8 lights in the address box changes. These lights display the address of the "mailbox." To view the contents of this mailbox, look at the row of 4 lights directly above the toggle switches. This shows the value stored at the current location. If you were to move the rotary switch pointer to **A**, you would see the contents of the **A** register. To examine the **B** register, point the switch to the letter **B**. Now, move the pointer to the letters **H** or **L** at left. These access the "high nibble" (the first or left-most 4 bits) and the "low nibble" (the last or right-most 4 bits) in the 8-bit address.

Entering Data

The next step is to "fill" these locations so that the processor has something to process. With the rotary switch in the **M** position, try toggling the switches in the switch box. Nothing happens? Don't worry; turn some of these switches "up" and then press **L**, for **L**oad. Now you have something. Any switch that is on has a corresponding light glowing just above it.

You have just entered your first "data" into the *NanoProcessor*. Now move the rotary switch to the **H** position and try the same exercise. This time, when you press **L**, lights not only come on in the "contents" box, but the same pattern of lights appears in the high (left-most) nibble of the address box. Moving the rotary switch to **L** (for **L**ow nibble) and loading a value affects the low nibble (right-most) half of the 8-bit address in the same way. Once you have thus designated a full 8-bit address, move the pointer to the **M** position again to view the contents of that same address. By doing this, you have, in effect, moved to this address location, and can enter data there.

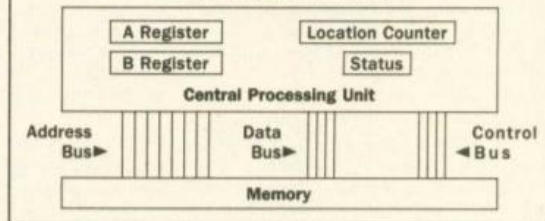
If you next move the rotary switch pointer to the **A** or **B** position and try to enter data, you will not be able to—because whatever goes in or out of these registers has to do so while the *NanoProcessor* is running instructions encoded into memory. You will also notice a small Output light (labeled "Out") at the upper left of the screen. We will explain the use of this in the *NanoAssembler* program next issue.

Your next job is to enter your first machine-language program on the *NanoProcessor*.

Programming The Machine

A CPU executes commands *sequentially*. As it runs a program, it steps through this sequence in much the same way you "incremented" through each memory location. However, the program may instruct the CPU to take other paths—"branching" to many different locations before completing its task. You are able to program this processor by entering three different kinds of data: 1) encoded commands; 2) pure numbers; and 3) addresses. As with any program, it is the *logic* of this sequence that determines what the processor will do.

Figure 2
Simplified Block Diagram of the NanoProcessor



NanoProcessor understands 16 different commands—its "instruction set." Although initially expressed in one nibble, some commands require additional memory locations to hold the data necessary to execute the command. Figure 3 lists these 16 commands, showing each corresponding binary code; how many nibbles in a program the instruction requires; its "mnemonic"; which (if any) flags in the status register the instruction affects; and a brief explanation of the command function. As you develop more complicated programs, you will have to understand and use more of these commands. But, for now, try a very short routine—one that simply adds two small numbers together.

Figure 3: Instructions Set

Dec.	Binary	Nibbles per instr.	Mnemonic	Flags* affected C Z	Function
0	%0000	1	ADD	Y Y	Add the contents of B register to the contents of A register—result in A.
1	%0001	2	LDA #	N Y	Load A with number following instruction.
2	%0010	3	LDA addr	N Y	Load A with number at location specified by addr.
3	%0011	3	STA addr	N N	Store the contents of A at location specified by addr.
4	%0100	1	TAB	N N	Transfer contents of A to B.
5	%0101	1	TBA	N Y	Transfer contents of B to A.
6	%0110	1	ERC	Y Y	Rotate A right one bit through carry.
7	%0111	1	RLC	Y Y	Rotate A left one bit through carry.
8	%1000	1	AND	Y Y	Logically AND A and B—Result in A.
9	%1001	1	OR	Y Y	Logically OR A and B—Result in A.
10	%1010	1	XOR	Y Y	Logically XOR A and B—Result in A.
11	%1011	3	BZ addr	N N	Branch to addr if Zero flag is set.
12	%1100	3	BNZ addr	N N	Branch to addr if Zero flag is not set.
13	%1101	3	BCS addr	N N	Branch to addr if Carry flag is set.
14	%1110	3	BCC addr	N N	Branch to addr if Carry flag is not set.
15	%1111	3	JMP addr	N N	Branch to addr unconditionally.

*Flags affected refers to whether or not the instruction has any effect on the flags in the status register. The C column stands for the Carry flag (did the operation result in a carry being generated?), and the Z stands for the Zero flag (did the operation result in a zero?). A Y appears in the column if the flag is affected by the instruction. An N indicates the flag is not changed by the instruction.

Sample Program 1

Addr	Code	Mnemonic	Remark
0	%0001	LDA #3	:Get first number
1	%0011		
2	%0100	TAB	:Move to B
3	%0001	LDA #7	:Get second number
4	%0111		
5	%0000	ADD	:Figure sum
6	%1111	JMP 6	:Jump self to stop
7	%0110		
8	%0000		

Sample Program 2

Addr	Code	Mnemonic	Remark
0	%0010	LDA 240	:Get first number
1	%0000		
2	%1111		
3	%0100	TAB	:Move to B
4	%0010	LDA 241	:Get second number
5	%0001		
6	%1111		
7	%0000	ADD	:Figure sum
8	%0011	STA 248	:Put low nibble in memory
9	%1000		
10	%1111		
11	%1110	BCC 19	:Only one nibble answer
12	%0011		
13	%0001		
14	%0001	LDA #1	
15	%0001		
16	%1111		
17	%0101	JMP 21	:All done
18	%0001		
19	%0001	LDA #0	:Zero A
20	%0000		
21	%0011	STA 249	:Put high nibble in memory
22	%1001		
23	%1111		
24	%1111		
25	%1000		
26	%0001	JMP 24	:Jump self to terminate

Sample Program 3

Addr	Code	Mnemonic
0	%0001	LDA #2
1	%0010	
2	%0100	TAB
3	%1000	AND
4	%0110	ERC
5	%0011	STA 254
6	%1110	
7	%1111	
8	%0000	ADD
9	%0011	STA 254
10	%1110	
11	%1111	
12	%0000	ADD
13	%0011	STA 254
14	%1110	
15	%1111	
16	%0001	LDA #6
17	%0110	
18	%0011	STA 254
19	%1110	
20	%1111	
21	%0000	ADD
22	%0011	STA 254
23	%1110	
24	%1111	
25	%0000	ADD
26	%0011	STA 254
27	%1110	
28	%1111	
29	%0000	ADD
30	%0011	STA 254
31	%1110	
32	%1111	
33	%0001	LDA #13
34	%1101	
35	%0011	STA 254
36	%1110	
37	%1111	
38	%1111	JMP 38
39	%0110	
40	%0010	

Roundabout Addition

Sample Program 1 will add the numbers 7 and 3, and the answer will end up in the Accumulator. If you haven't already, turn on the power by pressing P. Now, press B for Begin, and confirm that the rotary is pointing at M (Memory). Now "key-in" this program with the following procedure:

1. Toggle the switches to the on and off positions corresponding to the bits of the number identified as Code in the program—up (or on) for 1, and down (or off) for 0. Notice that each binary code is preceded by a % (percent) sign to make it easy to distinguish binary numbers from decimal quantities (See "Numbers To Bits And Back" for details).
2. Check that the address indicated by the location counter is the correct one for that Code, and then Press L for Load.
3. Press I for Increment. This will take you to the next address.
4. Repeat steps 1 through 3, loading the correct nibble into each address, and move on to the next set until you've loaded all the nibbles in the proper order.
5. Once you have completed loading the program, press B again to return to address 0. Then step through each memory location with the I key to be certain the program is entered properly.
6. Now press B for Begin once more, then R for Run. Note that you may Halt the program at any time (by pressing H) and continue again by pressing R.

Let's go over Sample Program 1 step-by-step to see exactly what it does when Loaded and Run. First it uses the "Load Accumulator immediate" instruction (abbreviated LDA #) to load the number stored at the address immediately following the instruction code (address 1) into the Accumulator. This number (in this case a %0011 or decimal 3) is one of the two to be added. At address 2 is an instruction to Transfer to register B (TAB). Address

Photo 1: This shows the contents of the A register in the initial step of Sample Program 1. First, the program moves one number (3 or %0011) of an addition problem into A.

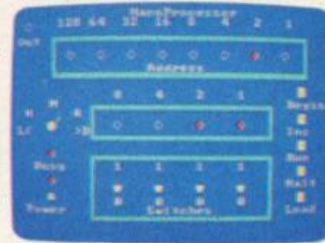


Photo 2: Next, after the first number moves to the B register, the second number (7 or %0111) is loaded in A.

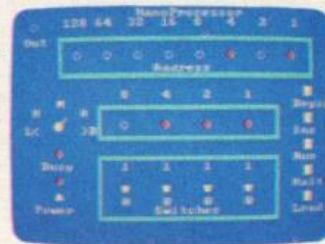
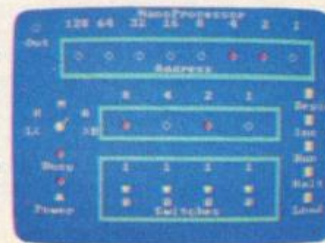


Photo 3: The A register now shows the result (10 or %1010) after the contents of A and B have been added together.



SOFTWARE INSTRUCTIONS

3 contains another LDA# instruction to Load a %0111 (7 decimal) from address 4 into register A. The instruction at address 5 actually ADDs the number in register B to the number in A, and places the answer in A. Address 6 contains a JuMP instruction (JMP *addr*), that tells the machine to jump to the address specified at the next two memory locations—7 and 8. All addresses are two nibbles, and the *NanoProcessor* follows a procedure standard to many microprocessors where the low nibble of the address is in the next location (7 in this case) and the high nibble in the following one (8). We call this a "jump self" because we specify address 6 (%0000 0110) as the place to jump to.

When you Run this program, the "busy light" remains on and both rows of lights flash different patterns as the CPU steps through the program. The *NanoProcessor* has been made to Run slowly so that you can track each instruction as it is executing. When the program "hangs-up" at location 6, press H (for Halt) to make the busy light go off. Now turn the rotary switch to point at A. Here you find the answer to the addition problem: %1010 or 10 decimal. Keep the pointer in this position and run the program again, after pressing Begin. Watch the A register change values—first 3 (%0011), then 7 (%0111), then the answer, 10 (%1010). Photos 1 through 3 show this sequence.

Moving On

In Sample Program 1, the machine added two numbers and got an answer that it could express in one 4-bit nibble. But, what if this answer had been larger than one 4-bit nibble—say, a number like 23 (%0001 0111)? Fifteen (%1111) is the largest number that one nibble can express. When a processor adds two numbers together whose answer is bigger than its registers can hold, the answer "overflows" the register. When this happens in *NanoProcessor*, a "carry flag" is set to 1 in a special Status register of the CPU. (This register is not directly accessible to the user.) The program has to contain commands that recognize the condition of this flag (either 1 when an overflow has occurred, or 0 when there is no overflow) and take appropriate action. You can determine which instructions cause changes in the carry flag by studying the C column (under "Flags affected") of Figure 3. If there is a Y in the C column, the instruction will affect the carry flag —i.e., set it to 1 if an overflow occurs, or reset it to 0 if no overflow occurs.

Sample Program 2 adds the numbers 11 (%1011) and 12 (%1100) to arrive at 23 (%0001 0111). Not only does the program have to check the carry flag, but because the answer doesn't fit in one register, it has to place the answer someplace else. The solution is to designate certain memory locations as data areas—two for input and two for output. Program 2 fetches the two numbers to be added from memory locations 240 (%1111 0000) and 241 (%1111 0001). These addresses are input areas. This means that before you Run the program, you must manually Load the numbers to be added at these locations—place 11 at address 240, and 12 at address 241.

Similarly, the output areas are at locations 248 (%1111 1000) and 249 (%1111 1001). The low nibble of the

answer (%0111 in our example above) appears at 248, and the high nibble (%0001) at address 249.

This program also handles the overflow condition described above. If the answer does overflow a nibble, the program places a 1 in the accumulator and stores it as the answer's high nibble. If, however, the answer is less than 15 (and fits into one nibble), the program branches to another address, where it loads a 0 into A and stores that instead. This introduces one of 4 "conditional jump commands," which we will explore more fully in next issue's companion "utility," *NanoAssembler*.

Program 3 is a "mystery program" that actually accesses the "sound chip" we've built into the *NanoProcessor*. Watch next issue for an explanation of how this program works. Or perhaps, in the meantime, you will learn enough by playing with *NanoProcessor* to figure this one out yourself. The best way to learn the details of operating the *NanoProcessor* is to use it and experiment by creating your own machine-language programs.

Saving and Loading

With *NanoProcessor*, you can Save and Load the entire 256 memory locations (%0000 0000 through %1111 1111) to disk (and/or tape on The C-64, Atari, and TI-99/4A). Use the Save command listed in your Control Capsule and type in a file name in response to the prompt. To Load, use the Load command and type in the name of the file you wish to load.

HCM Glossary terms: CPU, bus, machine language, binary numbers, Random Access Memory (RAM), byte, address, nibble, location counter, accumulator, register, instruction set, mnemonic, branch, jump, conditional jump, status register, zero flag, carry flag, overflow, weight (of bits).

HCM

For your key-in listings, see HCM PROGRAM LISTINGS Contents.

CONTROL CAPSULE
NanoProcessor

Key	Function
B	Set address to zero.
I	Increment address by 1.
R	Run program.
H	Halt program.
L	Load location.
<	Move rotary switch counter-clockwise.
>	Move rotary switch clockwise.
P	Toggle Power switch.
E	End program (only when Power is off)
1-4	Toggle panel switch 1 = left-most bit, 4 = right-most bit.

CONTROL CAPSULE

NanoProcessor

Key	Function
OPTION	Save file.
SELECT	Load file.

CONTROL CAPSULE

NanoProcessor

Key	Function
F1	Save file.
F3	Load file.

CONTROL CAPSULE

NanoProcessor

Key	Function
CONTROL W	Save file.
CONTROL Q	Load file.

CONTROL CAPSULE

NanoProcessor

Key	Function
FN 6	Save file.
FN 7	Load file.

CONTROL CAPSULE

NanoProcessor

Key	Function
FCTN 6	Save file.
FCTN 8	Load file.

NANOPROCESSOR *Continued*

IBM PC/PCjr, TANDY 1000

```

3070 FOR IT=44 TO 260 STEP 30:PUT (IT,32
.OFFLIT,PSET:NEXT IT
Y 3080 PUT(25,120),OFFLIT,PSET:PUT(25,160)
.DN,PSET:PUT(25,145),OFFLIT,PSET:PU
T(2,6),OFFLIT,PSET:AD%(253)=0:RETRU
N
A 3090 DATA "0000","0001","0010","0011","0100","0101","0110","0111","1000","1001","1010","1011"
N 3100 DATA "01L2B","02L2C","02L2C#","02L2C#","02L2
D","02L2D","02L2E","02L2F","02L2F#","02L2A#
"02L2G","02L2G#","02L2A","02L2A#","02L2B#
"02L2B#","03L2C","03L2C#","03L2D","03L2D#
"03L2E","03L2E#","03L2F","03L2F#","03L
2G","04L2C","04L2C#","04L2D","04L2D#
"04L2E","04L2E#","04L2F","04L2F#
K 3120 DATA "BL3D4R7U8L7D5R","BL2D3R5U6L5D
7"
I 3130 DATA "BE3ESDG5","BR3R6UL7"
L 3140 DATA "UL3D2RD3R5U3RU2L6","BD2R3U2LU
3LSD3LD2RA"
X 3150 DATA "BL3D4R7U8L7D5R","BL2D3R5U6L5D
5"
Y 3160 LOCATE 5,1:PRINT "INPUT FILE NAME:"
"ROW=5:COL=18:MAXLEN=8:SELECTS="A
BCDEFGHIJKLMNPQRSTU VWXYZabcde fghi
klmnopqrstu vwxyz012345678901#@%&*(
)!"-:IN$="":GOSUB 3190:IF IN$=""
THEN RETURN ELSE FL$=IN$
B 3170 LOCATE 7,1:PRINT "WHICH DRIVE? A":R
OW=7:COL=14:MAXLEN=1:SELECTS="AaBb
":IN$="A":GOSUB 3190:IF IN$="" THEN
FL$="A":+FL$:RETURN ELSE FL$=IN$+:
+FL$:RETURN
F 3180 PT=1
X 3190 INPUT SUBROUTINE *****
F 3200 LOCATE ROW,COL:PRINT IN$:SPACES(M
AXLEN-LEN(IN$)):LOCATE ROW,COL+(PT
-1),1:K$="":WHILE K$="":K$=INKEYS:W
END
C 3210 IF K$=CHR$(15) THEN RETURN
    
```

```

X 3220 IF INSTR(SELECTS,K$) THEN IN$=LEFT$
(IN$,PT-1)+K$+MID$(IN$,PT):PT=PT+
1:IF PT>MAXLEN THEN PT=MAXLEN:GOTO
3200
K 3230 IF K$=CHR$(8) AND PT>1 THEN IN$=LEF
T$(IN$,PT-2)+MID$(IN$,PT):PT=PT-1:G
OTO 3200
I 3240 IF K$=CHR$(0)+CHR$(83) THEN IN$=LEF
T$(IN$,PT-1)+MID$(IN$,PT+1):GOTO 32
00
J 3250 IF K$=CHR$(0)+CHR$(82) AND LEN(IN$)
<MAXLEN THEN IN$=LEFT$(IN$,PT-1)+
"+MID$(IN$,PT):GOTO 3200
H 3260 IF K$=CHR$(0)+CHR$(77) AND LEN(IN$)
>PT THEN PT=PT+1:IF PT>MAXLEN THEN
PT=MAXLEN:BEF:GOTO 3200
I 3270 IF K$=CHR$(0)+CHR$(75) AND LEN(IN$)
>1 THEN PT=PT-1:IF PT<1 THEN PT=1:
GOTO 3200
N 3280 GOTO 3200
M 3290 DIM ERCD(14),ERMS(14):RESTORE 3550:
FOR I=1 TO 14:READ ERCD(I):READ ERM
$(I):NEXT:RETURN
E 3300 ERROR ROUTINES *****
U 3310 CLOSE:LOCATE 24,1:0:R=ERR:L=ERL:FOR
I=1 TO 14:IF ERCD(I)=R THEN 3330
O 3320 NEXT:PRINT "ERROR #":R:" IN LINE #":
L::GOTO 3340
N 3330 PRINT ERMS(Z):R:" :R:
N 3340 SOUND 110,20:FOR TD=1 TO 4000:NEXT:
LOCATE 24,1:PRINT SPACES(39):IF MD
1=1 THEN RESUME 660 ELSE RESUME 710
N 3350 DATA 64,BAD FILE NAME,69,COMMUNICAT
IONS BUFFER OVERFLOW,25,DEVICE FAUL
T,57,DEVICE I/O ERROR,24,DEVICE TIM
EOUT,68,DEVICE UNAVAILABLE,61,DISKE
TTE IS FULL,72,DISK MEDIA ERROR,71,
DISK NOT READY,70,THIS DISK IS WRIT
E PROTECTED
O 3360 DATA 53,FILE IS NOT ON THE DISK,14,
DATA STORAGE AREA FULL--START NEW F
ILE,67,TOO MANY FILES ON THIS DISK,
52,BAD FILE NUMBER OR NAME
    
```

TYPE-IN LISTINGS

NANOPROCESSOR

TI-99/4A

```

P 100 REM *****
Q 110 REM "NANOPROCESSOR"
M 120 REM *****
D 130 REM COPYRIGHT 1985
A 140 REM EMERALD VALLEY PUBLISHING CO.
G 150 REM BY ROGER WOOD
E 160 REM HOME COMPUTER MAGAZINE
B 170 REM VERSION 5.5.1
R 180 REM TI BASIC OR EXTENDED BASIC
T 190 DIM AD(255)
J 200 DIM DS(15)
K 210 DIM TN(31)
L 220 GOSUB 3940
X 230 SW=2
M 240 CALL SCREEN(4)
N 250 GOSUB 3880
B 260 ON SW+1 GOSUB 710,730,750,770,790
R 270 CALL KEY(0,K,S)
T 280 IF S<1 THEN 270
J 290 C=POS("EP<>1234",CHR$(K),1)
K 300 IF C=0 THEN 270
L 310 IF C=1 THEN 270
M 320 IF C=2 THEN 390
X 330 CALL SOUND(1,-5,0)
J 340 CALL HCHAR(20,5,128)
K 350 CALL HCHAR(21,5,92)
L 360 GOSUB 1260
M 370 GOSUB 1360
N 380 GOTO 430
B 390 IF C<7 THEN 410
R 400 CALL SOUND(1,-5,0)
T 410 ON C-2 GOSUB 2300,2380,2580,21
90,2190,2190,2190,2300,2380,2580,21
J 420 GOTO 260
K 430 GOSUB 810
L 440 IF C>1 THEN 490
M 450 CALL HCHAR(20,5,40)
X 460 CALL HCHAR(21,5,91)
J 470 GOSUB 1480
K 480 GOTO 250
L 490 ON C-1 GOSUB 1570,2130,2130,2150,21
90,2190,2190,2190,2190,1640,1820,18
B 500 IF RF=1 THEN 510 ELSE 430
R 510 CALL KEY(0,K,S)
T 520 IF S=0 THEN 650
J 530 IF K<>72 THEN 610
K 540 CALL SOUND(1,-5,0)
L 550 CALL HCHAR(19,29,94)
M 560 CALL HCHAR(17,5,40)
X 570 GOSUB 3850
J 580 CALL HCHAR(19,29,93)
K 590 RF=0
L 600 GOTO 430
M 610 IF K<>80 THEN 650
X 620 CALL HCHAR(17,5,40)
J 630 RF=0
K 640 GOTO 450
    
```

```

M 650 ON AD(CA)+1 GOSUB 2720,2790,2830,29
90,3040,3060,3080,3170,3270,3330,33
D,3450,3590,3590,3690,3650
D 660 ON SW+1 GOSUB 710,730,750,770,790
A 670 GOSUB 1260
G 680 GOSUB 1360
E 690 IF RF=0 THEN 560
B 700 GOTO 510
R 710 TEMP=16*(CA/16-INT(CA/16))
T 720 RETURN
J 730 TEMP=INT(CA/16)
K 740 RETURN
L 750 TEMP=AD(CA)
M 760 RETURN
N 770 TEMP=AR
B 780 RETURN
R 790 TEMP=BR
T 800 RETURN
J 810 CALL KEY(0,K,S)
K 820 IF S<1 THEN 810
L 830 C=POS("PBC>1234IRL",CHR$(K),1)
M 840 IF K=6+K=12 THEN 890
X 850 IF C=0 THEN 810
J 860 IF (C>2)*(C<7) THEN 880
K 870 CALL SOUND(1,-5,0)
L 880 RETURN
M 890 CALL CLEAR
N 900 CALL COLOR(13,2,4)
B 910 IF K=6 THEN 1020
R 920 PRINT TAB(8);"LOAD FILE":;:"DEV
ICE AND/OR FILE NAME:"
T 930 INPUT " :FLS":FLS
J 940 IF FL$="" THEN 1110
K 950 OPEN #1:FLS,INTERNAL,OUTPUT,FIXED 6
4
L 960 FOR IT=0 TO 245 STEP 7
M 970 PRINT #1:AD(IT);AD(IT+1);AD(IT+2);A
D(IT+3);AD(IT+4);AD(IT+5);AD(IT+6)
X 980 NEXT IT
J 990 PRINT #1:AD(252);AD(253);AD(254);AD
(255)
N 1000 CLOSE #1
B 1010 GOTO 1110
R 1020 PRINT TAB(8);"LOAD FILE":;:"DEVIC
E AND/OR FILE NAME:"
T 1030 INPUT " :FLS":FLS
J 1040 IF FL$="" THEN 1110
K 1050 OPEN #1:FLS,INTERNAL,INPUT,FIXED 6
4
L 1060 FOR IT=0 TO 245 STEP 7
M 1070 INPUT #1:AD(IT);AD(IT+1);AD(IT+2);A
D(IT+3);AD(IT+4);AD(IT+5);AD(IT+6)
X 1080 NEXT IT
J 1090 INPUT #1:AD(252);AD(253);AD(254);AD
(255)
N 1100 CLOSE #1
B 1110 CALL CLEAR
R 1120 CALL COLOR(13,2,2)
T 1130 GOSUB 4090
    
```

Continued

NANOPROCESSOR *Continued*

TI-99/4A

TYPE-IN LISTINGS

```

A1140 CALL HCHAR(13,4,32)
X1150 CALL HCHAR(12,5,32)
K1160 CALL HCHAR(13,6,32)
E1170 ON SW+1 GOSUB 710,730,750,770,790
G1180 GOSUB 2460
E1190 GOSUB 1260
I1200 CALL HCHAR(20,5,128)
I1210 CALL HCHAR(21,5,92)
X1220 GOSUB 1360
B1230 CALL COLOR(13,7,4)
G1240 CALL SCREEN(4)
U1250 GOTO 810
N1260 PLS=D$(TEMP)
Z1270 FOR IT=10 TO 22 STEP 4
I1280 CH=INT(IT/4)-1
Y1290 IF SEGS(PLS,CH,1)="1" THEN 1320
S1300 CH2=40
F1310 GOTO 1330
Z1320 CH2=128
J1330 CALL HCHAR(12,IT,CH2)
E1340 NEXT IT
B1350 RETURN
Z1360 ADS=D$(INT(CA/16))
Z1370 ADS=ADS&D$(CA-16-INT(CA/16))
B1380 REM WRITE ADDRESS TO SCREEN
I1390 FOR IT=6 TO 27 STEP 3
G1400 CH=INT(IT/3)-1
A1410 IF SEGS(ADS,CH,1)="1" THEN 1440
X1420 CH2=40
Y1430 GOTO 1450
G1440 CH2=128
D1450 CALL HCHAR(6,IT,CH2)
D1460 NEXT IT
U1470 RETURN
G1480 FOR IT=10 TO 22 STEP 4
L1490 CALL HCHAR(12,IT,40)
U1500 NEXT IT
H1510 FOR IT=6 TO 27 STEP 3
U1520 CALL HCHAR(6,IT,40)
M1530 NEXT IT
Y1540 CALL HCHAR(2,5,40)
E1550 AD(253)=0
RETURN
X1570 CALL HCHAR(10,29,94)
X1580 CA=9
Y1590 GOSUB 1360
B1600 ON SW+1 GOSUB 710,730,750,770,790
R1610 GOSUB 1260
A1620 CALL HCHAR(10,29,93)
M1630 RETURN
U1640 CALL HCHAR(13,29,94)
B1650 CA=CA+1
Y1660 GOSUB 1790
C1670 IF SW=2 THEN 1760
C1680 IF SW=2 THEN 1710
T1690 TEMP=AD(CA)
O1700 GOTO 1750
O1710 IF SW=0 THEN 1740
I1720 GOSUB 730
F1730 GOTO 1750
I1740 GOSUB 710
I1750 GOSUB 1260
S1760 GOSUB 1360
T1770 CALL HCHAR(13,29,93)
M1780 RETURN
G1790 IF CA<256 THEN 1810
S1800 CA=CA-256
G1810 RETURN
L1820 CALL HCHAR(16,29,94)
N1830 CALL HCHAR(17,5,128)
I1840 RF=1
Y1850 GOSUB 3850
Q1860 CALL HCHAR(16,29,93)
C1870 RETURN
S1880 CALL HCHAR(22,29,94)
S1890 CT=0
D1900 TEMP=0
S1910 PLS=""
U1920 FOR IT=22 TO 10 STEP -4
B1930 CALL GCHAR(19,IT,M)
Y1940 PLS=CHR$(M-43)&PLS
A1950 TEMP=TEMP+(M-91)*2^CT)
B1960 CT=CT+1
F1970 NEXT IT
G1980 ON SW+1 GOSUB 2010,2030,2070,2070,2
970
R1990 CALL HCHAR(22,29,93)
U2000 RETURN
I2010 CA=INT(CA/16)*16+TEMP
N2020 GOTO 2040
F2030 CA=(CA-(INT(CA/16)*16))+(TEMP+16)
F2040 GOSUB 1260
F2050 GOSUB 1360
G2060 RETURN
C2070 AD(CA)=TEMP
N2080 IF SW>2 THEN 2100
N2090 GOSUB 1270
O2100 IF CA<253 THEN 2120
Y2110 ON CA-252 GOSUB 2620,2680,2700
D2120 RETURN
N2130 GOSUB 2300
R2140 GOTO 2160
B2150 GOSUB 2380
O2160 ON SW+1 GOSUB 710,730,750,770,790
B2170 GOSUB 1260
R2180 RETURN
K2190 C=CL
V2200 CALL GCHAR(19,C*4+6,M)
V2210 IF M=91 THEN 2240
B2220 CALL HCHAR(19,C*4+6,91)
T2230 GOTO 2250
A2240 CALL HCHAR(19,C*4+6,92)
X2250 RETURN
P2260 ON SW+1 GOSUB 710,730,750,770,790
E2270 GOSUB 1260
E2280 GOSUB 1360
L2290 RETURN
W2300 IF SW=0 THEN 2370
F2310 SW=SW-1
C2320 CALL SOUND(1,-5,0)
G2330 GOSUB 2460
N2340 CALL KEY(0,K,S)
O2350 IF S=0 THEN 2370
F2360 GOTO 2300
W2370 RETURN
K2380 IF SW=4 THEN 2450
D2390 SW=SW+1
T2400 CALL SOUND(1,-5,0)
F2410 GOSUB 2460
A2420 CALL KEY(0,K,S)
I2430 IF S=0 THEN 2450
W2440 GOTO 2380
N2450 RETURN
A2460 ON SW+1 GOSUB 2480,2500,2530,2570,2
600
D2470 RETURN
Z2480 CALL HCHAR(13,4,123)
B2490 RETURN
N2500 CALL HCHAR(13,4,41)
G2510 CALL HCHAR(12,5,32)
F2520 RETURN
U2530 CALL HCHAR(13,4,32)
U2540 CALL HCHAR(12,5,124)
O2550 CALL HCHAR(13,6,32)
Z2560 RETURN
U2570 CALL HCHAR(12,5,32)
G2580 CALL HCHAR(13,6,42)
G2590 RETURN
Z2600 CALL HCHAR(13,6,125)
N2610 RETURN
G2620 IF AD(253)<1 THEN 2650
Y2630 CH2=128
J2640 GOTO 2660
Z2650 CH2=40
X2660 CALL HCHAR(2,3,CH2)
L2670 RETURN
F2680 CALL SOUND(500,TN(AD(254)),0)
J2690 RETURN
N2700 CALL SOUND(500,TN(AD(255))+16),0)
O2710 RETURN
D2720 AR=BR+AR
S2730 IF AR=16 THEN 2770
S2740 AR=AR-16
B2750 CF=1
N2760 GOTO 2780
O2770 CF=0
E2780 GOTO 3780
T2790 CA=CA+1
B2800 GOSUB 1790
F2810 AR=AD(CA)
W2820 GOTO 3780
W2830 CA=CA+1
F2840 GOSUB 1790
Y2850 TEMP=AD(CA)
L2860 CA=CA+1
W2870 GOSUB 1790
B2880 TEMP=TEMP+16*AD(CA)
N2890 AR=AD(TEMP)
A2900 GOTO 3780
T2910 CA=CA+1
A2920 GOSUB 1790
B2930 TEMP=AD(CA)
U2940 CA=CA+1
Y2950 GOSUB 1790
A2960 TEMP=TEMP+16*AD(CA)
W2970 AD(TEMP)=AR
N2980 AD(TEMP)=AR
E2990 IF TEMP<253 THEN 3010
H3000 ON TEMP-252 GOSUB 2620,2680,2700
B3010 CA=CA+1
M3020 GOSUB 1790
U3030 RETURN
H3040 BR=AR
B3050 GOTO 3780
L3060 AR=BR
X3070 GOTO 3780
U3080 TEMP=0
H3090 IF CF=0 THEN 3110
H3100 TEMP=8
C3110 IF INT(AR/2)=AR/2 THEN 3140
J3120 CF=1
H3130 GOTO 3150
U3140 CF=0
W3150 AR=INT(AR/2)+TEMP
F3160 GOTO 3780
M3170 TEMP=0
L3180 IF CF=0 THEN 3200
D3190 TEMP=1
N3200 IF AR<8 THEN 3240
B3210 CF=1
F3220 AR=AR*2-16+TEMP
A3230 GOTO 3260
L3240 CF=0
A3250 AR=AR*2+TEMP
K3260 GOTO 3780
J3270 GOSUB 3730
    
```

Continued

Nano Assembler

G-A-R [Disk: 303-NASS] By Roger Wood

```

The NanoAssembler

LOAD SOURCE FILE FROM:
  (1) DISK (DSK1)
  (2) CASSETTE (CS1)

YOUR CHOICE:

1. SCREEN
2. PRINTER
1
EXECUTING FIRST PASS
EXECUTING SECOND PASS
000 001 1 LDA# 3
001 003
2
E TO B TAB ;MOV
002 004
3 LDA# 7
003 001
004 007
4 ADD
005 000 5 HERE JMP HERE
006 015
007 006
008 000
PRESS ANY KEY TO CONTINUE

```

This companion to Nano Processor shows you how an assembler can provide easy access to machine language by translating simple instructions into the computer's native tongue. You first use the Editor to create you source code then run the Assembler in order to compile it into machine code. From there, it is only a short hop to learning assembly programming on the TI.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: NANOEDIT (Editor) and NANOASSM (Assembler)

Download Nano Assembler:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

[Manual \(PDF\)](#)

NOTE: Page 26 is missing from the PDF scan. In a nutshell, you can use LABELS up to 6 alphanumeric characters beginning with a letter which you can JuMP to. Nano Editor control capsule: FTCN 9= Escape, FTCN 1= Delete, FTCN 3= Erase line, FTCN 7= Tab, FTCN 5= Cursor left, FTCN D= Cursor right, RETURN= Enter line. The Editor will automatically append _S to source files.

Nano Editor

Start from mega menu: G – A – R

PGR: * * * * *

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

Nano Assembler

Start from mega menu: G – A – S

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

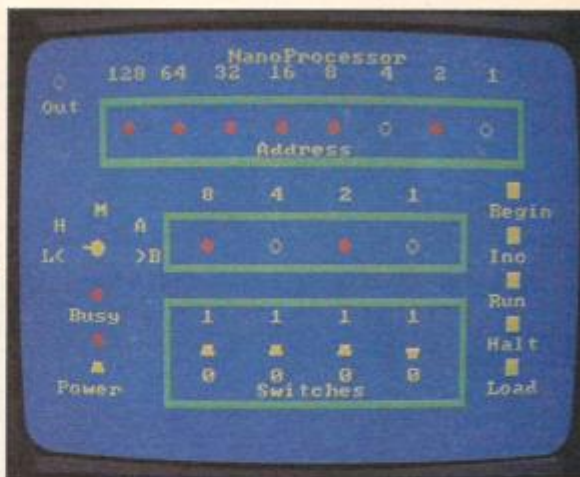


The NanoAssembler

by Roger Wood
HCM Staff

This companion to NanoProcessor shows you how an assembler can provide easy access to machine language—by translating simple instructions into the computer's native tongue.

In the last issue (HCM Vol. 5, No. 5), we presented *NanoProcessor*, a program that introduced the concepts of machine-language programming. This program demonstrated how a microprocessor works at its most fundamental level. Although entering and running simple programs on the *NanoProcessor* can be fun, longer and more complicated machine-language routines are another story. Even with short programs, you probably discovered what a time-consuming and error-prone process it can be to enter machine language one bit at a time.



Our *NanoAssembler* package consists of two BASIC programs: the *NanoEditor* and the *NanoAssembler*. The *NanoEditor* is a simple text editor that lets you enter your program as source code and save it to disk (or alternatively tape on the Atari, Commodore, and TI computers). *NanoAssembler* can then read and translate that file into a corresponding file of object code, which you can save to disk or tape. You can then load the object code into the *NanoProcessor* and run it.

Creating A Program

We will use Sample Program 1 to demonstrate how the *NanoEditor* and the *NanoAssembler* work. To start, Load and RUN The *NanoEditor*. You begin with this menu:

- 1) EDIT
- 2) FILES
- 3) PRINT
- 4) EXIT

Choose the Edit option, which allows you to create and modify files. The *Editor* now displays the command prompt: CMD. You may enter one of 5 single-letter commands:

Command	Function
A	Add a line of text
E	Edit a line of text
D	Delete a line of text
I	Insert a line of text
L	List

To begin creating a new file—in this case Sample Program 1—press A. In response, the *Editor* displays line 001, with a flashing cursor waiting for your input. For each line of source code, the *Editor* provides a line number ranging from 001 to 200. When you enter the Add-a-line mode, the program always displays the cursor on a new line of source code—one line past the last line in memory. You can automatically advance to the next line by pressing [ENTER] or [RETURN]. To exit the Add-a-line mode, press the [ESCAPE] key (see your computer's Control Capsule if your machine does not have an Escape key).

To alleviate the difficulties involved in working with machine language, early computer users created programs called "assemblers." An assembler is a human-to-machine translator. It operates from a "dictionary" of mnemonics (a combination of letters that humans can understand), translating these mnemonics into the numbers of machine code. Using assemblers, you can write a program with the more easily remembered mnemonics, and let the computer create the actual machine language (the ones and zeros).

Thus, we present the *NanoAssembler*; a program that will teach you how to use assemblers. With the *NanoAssembler*, you will be able to write long, complicated programs for the *NanoProcessor* much more easily than you would using machine language.

Source Code To Object Code

You may find that many people refer to "assembly-language programs" and "machine-language programs" interchangeably, as though they were the same thing. Actually, an assembly-language program is a text file—known as a "source file"—that the computer cannot execute directly. It is simply a series of text lines comprising mnemonics, numbers, and labels. Before the computer can run such a program, the source file must be "assembled" or translated into a machine-language file—also known as an "object file."

Take a look at Sample Program 1, which you can load and run on the *NanoProcessor*. You may recognize this program, as it is identical to Sample Program 1 in the last issue. The two left-most columns, entitled Addr and Code, contain the machine language, (object code), which makes up the program. You can enter this object code bit by bit, or you can enter the more easily read and (with some training) understood assembly language (source code), contained in the Line, Label, Mnemonic, and Remark columns. The Remark column is like a REM statement in BASIC. It makes the program much easier to read and understand.

SOFTWARE INSTRUCTIONS

Now enter the contents of the Label, Mnemonic, and Remark columns. Because our *Editor* is in BASIC, your text input will be slower than with a full-blown word processor. The Label column is empty in line 001 of our sample program, so press the proper key or key combination (see your Control Capsule) to tab into the Mnemonic field. (We will explain labels below.) Now type in the first instruction: LDA#3. You must enter the text *exactly* as it appears in the listing, or the *NanoAssembler* program will not interpret the code properly. Make sure there is no space between the A and the #. You must, however, place a space between the # and the 3.

This spacing is critical because the Mnemonic field actually consists of two sub-fields; and the space acts as a separator for these sub-fields. The left sub-field is the "op-code," or instruction field, which defines the actual instruction. In line 001, the op-code is LDA#. The right field contains the "operand." The operand is either a two-nibble address or a single-nibble quantity to be loaded or stored in a register or memory location. It defines the number that the op-code is to operate on. In line 001, the number 3 (%0011) is the operand.

After you have entered the first instruction, you may tab into the Remark field. On a program as short as this one, however, you may choose to save time by omitting the remarks. Continue entering lines 002, 003, and 004 in a similar fashion.

Once you've entered part or all of the program into memory using the Add command, you can use the other editing commands. Each of these commands prompts you for a particular line number. E lets you Edit an already-existing line in memory. D allows you to Delete a line, and I lets you Insert a line. The L command lets you List up to 10 lines of a program to inspect what is in memory. If the program extends more than 10 lines beyond the beginning line number that you specify, you have the option to either continue listing more lines or quit and return to the command line.

Labels As Labor Savers

In line 005 (HERE JMP HERE), you encounter an important assembly-language tool—the "label." In the *NanoAssembler*, we define a label as a group of up to 6 alpha-numeric characters, beginning with a letter—in our example, the word HERE. Assembler programs use labels in place of numeric quantities. In this case, HERE represents the address to be JuMPed to. One major advantage of labels is that you do not have to know the actual numeric addresses used in a program. Instead, the assembler uses the labels to assign the correct address to a particular instruction for you.

Before continuing, let's clear up an area that sometimes confuses a beginner at assembly language: the difference between line numbers of a source file and addresses of an object file. Each line in a source file contains only one op-code. But when you

assemble the source file into object code, the op-code may require as many as three addresses (see Figure 1 for the number of nibbles each instruction requires). Thus, a source file's line numbers and the actual addresses of the object code almost always differ. When the *Assembler* prints out its listing, the addresses and codes are located on the line just below the source code, representing the order of events during assembly.


By inspecting the two left-hand columns of Sample Program 1, you can see that the address to be JuMPed to is 6. You know this only because we have already assembled (or translated) the source code on the right into the object code on the left. If we hadn't provided the machine code, however, you would have to assemble all of the instructions to discover what address you wanted to JuMP to. The use of labels saves you from this tedious task and is one of the primary advantages of assemblers.

When you finish entering line 005 and press [RETURN] or [ENTER], a prompt tells you to enter line 6. This program has no line 006, so press the [ESCAPE] key for your machine (see your Control Capsule), and the program returns you to the command line. Now you can use the List command to see if you have entered everything correctly. If you find any errors, you can Edit the line or lines that they occur in. If you change a line, then decide that you don't want those changes, you can press the [ESCAPE] key instead of [RETURN] or [ENTER] to revert back to the original version of the line. This option is also available if you select Insert, but change your mind before finally entering the line.


From Editor To Assembler


After you are sure that you've correctly entered the program, save it to disk (or tape on Atari, C-64, or TI). To save your file, select option (2) Files. Then select the appropriate menu options, and enter the file name. If your operating system does not normally support extensions to file names (all but Atari and IBM), the name must be at least two characters shorter than a normal legal file name. The program will automatically append a .S (_S on the TI), for Source, so that you can use the same name for both source and object files without any confusion. If you have a printer, you may also wish to get a hardcopy of your program. This is helpful when you are tracking down errors during assembly. To use

CONTROL CAPSULE 	
NanoEditor	
KEY	FUNCTION
F1	Escape
Edit Mode:	
DEL	Backspace
F3	Erase line
F5	Tab
CRSR ←	Cursor left
CRSR →	Cursor right
RETURN	Enter line

CONTROL CAPSULE 	
NanoEditor	
KEY	FUNCTION
ESC	Escape
Edit Mode:	
BACKSPACE	Backspace
CONTROL D	Erase line
TAB	Tab
←	Cursor left
→	Cursor right
RETURN	Enter Line

CONTROL CAPSULE 	
NanoEditor	
KEY	FUNCTION
ESCAPE	Escape
Edit Mode:	
BACKSPACE	Backspace
DELETE	Delete character
TAB	Tab
←	Cursor left
→	Cursor right
ENTER	Enter line

CONTROL CAPSULE 	
NanoEditor	
KEY	FUNCTION
ESC	Escape
Edit Mode:	
DELETE	Backspace
SHIFT DELETE	Erase line
TAB	Tab
CONTROL ←	Cursor left
CONTROL →	Cursor right
RETURN	Enter Line

CONTROL CAPSULE 	
NanoEditor	
KEY	FUNCTION
FTCN 9	Escape
Edit Mode:	
FCTN 1	Delete
FCTN 3	Erase line
FCTN 7	Tab
FCTN 5	Cursor left
FCTN D	Cursor right
ENTER	Enter line

the Print option, just select it from the main menu (3). After you save (and print) the source file, select the Exit option from the main menu. The program gives you a chance to change your mind before ending, so you don't need to worry about losing the program in memory due to an erroneous keypress.

Now it is time to load and RUN the *NanoAssembler*. The program prompts you to load your source file for assembly. As the program translates your source code into machine code, it lists the source file, the addresses, and object code to either the screen or a printer (if you have one).

Passing Through

The actual assembly of the program occurs in two steps, or "passes." Thus, the *NanoAssembler* is a "two-pass" assembler. The first pass does most of the work, determining the correct machine-language instructions and the instruction addresses. However, sorting out labels requires a second pass because, until it identifies all address labels, the program may not know the exact address of each instruction.

Try assembling Sample Program 1. If you have entered it correctly, the *NanoAssembler* should output the assembled version, as shown in Figure 1, to the screen or printer. If you have made an error in entering the program into the *NanoEditor*, the *NanoAssembler* informs you of the line number in the source code that contains the error, and states the type of error. For example, if in line 1 you enter LDA #3 instead of LDA# 3, when you try to assemble the program the computer displays the error: ILLEGAL USE OF LABEL IN LINE 1. Here, the computer interprets the code as a Load A addr instruction (object code = 2). Instead of a Load A immediate instruction (object code = 1). Then, when the computer evaluates the "label" #3, it finds that the label is illegal because it does not begin with a letter.

Figure 1: Instruction Set

Dec.	Binary	Nibbles per instr.	Mnemonic	Flags* affected C Z	Function
0	%0000	1	ADD	Y Y	Add the contents of B register to the contents of A register—result in A.
1	%0001	2	LDA#	N Y	Load A with number following instruction.
2	%0010	3	LDA addr	N Y	Load A with number at location specified by addr.
3	%0011	3	STA addr	N N	Store the contents of A at location specified by addr.
4	%0100	1	TAB	N N	Transfer contents of A to B.
5	%0101	1	TBA	N Y	Transfer contents of B to A.
6	%0110	1	RRC	Y Y	Rotate A right one bit through carry.
7	%0111	1	RLC	Y Y	Rotate A left one bit through carry.
8	%1000	1	AND	Y Y	Logically AND A and B—Result in A.
9	%1001	1	OR	Y Y	Logically OR A and B—Result in A.
10	%1010	1	XOR	Y Y	Logically XOR A and B—Result in A.
11	%1011	3	BZ addr	N N	Branch to addr if Zero flag is set.
12	%1100	3	BNZ addr	N N	Branch to addr if Zero flag is not set.
13	%1101	3	BCS addr	N N	Branch to addr if Carry flag is set.
14	%1110	3	BCC addr	N N	Branch to addr if Carry flag is not set.
15	%1111	3	JMP addr	N N	Branch to addr unconditionally.
Assembler Directives:					
n/a	n/a	0	ORG	n/a	Use to specify a particular address (e.g., specify starting address of program).
n/a	n/a	0	EQU	n/a	Equate label with value—assigns the value to the right of the EQU statement to the label to the left.
n/a	n/a	1	DN	n/a	Define Nibble—assigns the value to the right of the DN statement to the label at the left.

*Flags affected refers to whether or not the instruction has any effect on the flags in the status register. The C column stands for the Carry flag (did the operation result in a carry being generated?), and the Z stands for the Zero flag (did the operation result in a zero?). A Y appears in the column if the flag is affected by the instruction. An N indicates the flag is not changed by the instruction.

After displaying the program, *NanoAssembler* prompts you to save the object file. The saved file is identical in format to the ones you loaded and saved with the *NanoProcessor* last issue; that is, the file contains the contents of all addresses from 0 through 255. To see that your program works properly, load and RUN the *NanoProcessor*. You can then load and run the program you've just created according to the instructions detailed in Vol. 5, No. 5.

For a short program such as Sample Program 1, this process may seem a bit time consuming. For longer and more complex programs, however, the ease of writing and debugging provided by an assembler more than makes up for the added steps.

Assembler Directives

Figure 1 displays the 16 instructions that we detailed in the *NanoProcessor*. You may specify any of these instructions when writing an assembly-language program with the *NanoEditor*. The *NanoAssembler*, in turn, converts these instructions into their machine codes. There are three additional commands, known as assembler directives, that the *Assembler* understands:

Directive	Purpose
ORG	Start object code here
DN	Define a nibble
EQU	Define a label

The ORG command directs the *NanoAssembler* to assemble the program at a specified address between 0 and 255. For an example of this instruction, see line 1 of Sample Program 2. This program is a slightly modified version of Sample Program 2 that we presented in last issue's *NanoProcessor*. It performs a two nibble addition of numbers located at addresses 240 and 241, placing the answer in addresses 248 and 249. The ORG statement makes the starting address %1010.

The DN instruction allows you to include a particular value at any address. Just specify the address using the ORG directive, and then define the value to be placed at that address with the DN directive. Lines 22 through 24 of Sample Program 2 define the two nibbles that the program adds.

Figure 2

Decimal	Binary	Hexadecimal
0	%0000	\$0
1	%0001	\$1
2	%0010	\$2
3	%0011	\$3
4	%0100	\$4
5	%0101	\$5
6	%0110	\$6
7	%0111	\$7
8	%1000	\$8
9	%1001	\$9
10	%1010	\$A
11	%1011	\$B
12	%1100	\$C
13	%1101	\$D
14	%1110	\$E
15	%1111	\$F

Sample Program 1

Addr	Code	Line	Label	Mnemonic	Remark
0	%0001			LDA# 3	:Get first number
1	%0011				
2	%0100	002		TAB	:Move to B
3	%0001			LDA# 7	:Get second number
4	%0111				
5	%0000	004		ADD	:figurs sum
6	%0000	005	HERE	JMP HERE	:Jump self to stop
7	%0110				
8	%0000				

The EQU command lets you identify any address with a particular label. Lines 2 through 6 of Sample Program 2 use this directive. These statements make Sample Program 2 more readable by assigning descriptive labels to the 5 data addresses: NIB1 and NIB2 for the two numbers to be added; LONIB and HINIB for the low and high nibbles of the answer; and OUT for the OUT light. (See last issue's *NanoProcessor* for a complete explanation of how Program 2 uses these 4 locations.)

The other change to Program 2 in this issue is in the use of the OUT light located at the upper-left of the *NanoProcessor* screen. When you assemble Sample Program 2 and run it, you will find that the OUT light is off when the program begins, but it turns on when the program is complete. Thus, you do not need to know what address the program will end on. Instead, the OUT light signals that the program is finished.

Sample Program 3 accesses the *NanoProcessor*'s "sound chip." Any time you store a number at either location 254 or 255, the *NanoProcessor* responds with a tone. With 16 different values possible at each of these locations, you can make a total of 32 different tones. Sample Program 3 plays a C scale.

We hope that you have found these *Nano* programs instructive and enjoyable. With what you have learned, you should be able to create your own "machine-language" routines. Feel free to let us know in "Letters to the Editor" of any programs you create, so we may share them with our readers.

HCM Glossary Terms: assembler, label, object code, op-code, operand, pass, source code.

For your type-in listings, see HCM PROGRAM LISTING CONTENTS. HCM

Three Number Systems Supported

Machine language on the *NanoProcessor* can be entered only in binary. The *NanoAssembler*, however, understands decimal and hexadecimal in addition to binary. Last issue we explained how to convert between decimal and binary—this issue we introduce you to hexadecimal.

As we explained in the previous issue, decimal is a base 10 system. It uses ten digits (0 through 9) to represent numbers. Similarly, binary is a base 2 system and uses two digits (0 and 1). Hexadecimal is a base 16 number system and uses 16 different digits—0 through 9 plus the letters A through F. (See Figure 2 for a conversion chart.) As the conversion chart shows, we can express the number 11 decimal as either the binary number %1010 or the hexadecimal number \$B. (Note that the % symbol denotes a binary number, and the \$ symbol a hexadecimal number.)

To convert a two-digit hexadecimal number (say \$C8) to decimal you simply find the decimal equivalent of the left-most digit (i.e., \$C = 12), and multiply it by 16. Then simply add the decimal equivalent of the right-most digit (12 * 16 + 8 = 200). Hexadecimal is a particularly useful system in assembly language because it can express any nibble as a single character or any byte as two characters.

Sample Program 2

Addr	Code	Line	Label	Mnemonic	Remark
		001		ORG 10	
		002	NIB1	EQU \$F0	
		003	NIB2	EQU \$F1	
		004	LONIB	EQU \$F8	
		005	HINIB	EQU \$F9	
		006	OUT	EQU \$FD	
		007		LDAB 0	:Turn OUT light off
10	%0001				
11	%0000				
		008		STA OUT	
12	%0011				
13	%1101				
14	%1111				
		009		LDA NIB1	:Get first number
15	%0010				
16	%0000				
17	%1111				
		010	TAB		:Move to B
18	%0100				
		011		LDA NIB2	:Get second number
19	%0010				
20	%0001				
21	%1111				
		012		ADD	:Figure sum
22	%0000				
		013		STA LONIB	:Low to memory
23	%0011				
24	%1000				
25	%1111				
		014	BCC NIB		:One nibble answer
26	%1110				
27	%0010				
28	%0010				
		015		LDAB 1	
29	%0001				
30	%0001				
		016		JMP STHI	:All done
31	%1111				
32	%0100				
33	%0010				
		017	NIB	LDAB 0	:Zero A
34	%0001				
35	%0000				
		018	STHI	STA HINIB	:High to memory
36	%0011				
37	%1001				
38	%1111				
		019		LDAB 0N	:Set OUT light
39	%0001				
40	%0001				
		020		STA OUT	
41	%0011				
42	%1101				
43	%1111				
		021	HERE	JMP HERE	:Jump self to end
44	%1111				
45	%1100				
46	%0010				
		022		ORG \$F0	
		023		DN \$A	
		024		DN \$C	

Sample Program 3

Addr	Code	Line	Label	Mnemonic	Remark
		001	SOUND	EQU 254	
		002		LDAB 2	
0	%0001				
1	%0010				
		003	TAB		
2	%0100				
		004	AND		
3	%1000				
		005		RRC	
4	%0110				
		006		STA SOUND	
5	%0011				
6	%1110				
7	%1111				
		007		ADD	
8	%0000				
		008		STA SOUND	
9	%0011				
10	%1110				
11	%1111				
		009		ADD	
12	%0000				
		010		STA SOUND	
13	%0011				
14	%1110				
15	%1111				
		011		LDAB 6	
16	%0001				
17	%0110				
		012		STA SOUND	
18	%0011				
19	%1110				
20	%1111				
		013		ADD	
21	%0000				
		014		STA SOUND	
22	%0011				
23	%1110				
24	%1111				
		015		ADD	
25	%0000				
		016		STA SOUND	
26	%0011				
27	%1110				
28	%1111				
		017		ADD	
29	%0000				
		018		STA SOUND	
30	%0011				
31	%1110				
32	%1111				
		019		LDAB \$0	
33	%0001				
34	%1101				
		020		STA SOUND	
35	%1101				
36	%1110				
37	%1111				
		021	HERE	JMP HERE	
38	%1111				
39	%0110				
40	%0010				

TYPE-IN LISTINGS

NANOEDITOR *Continued*

IBM PC/PCjr, TANDY 1000

```

900 GOSUB 580:IF K5=CHRS(27) THEN RETURN
N ELSE IF LIS(LN)="" THEN 900
910 Y1=X1-2:LN=LN+1:GOTO 890
920 "DELETE LINE
930 IF LN>NL THEN COLOR 2:PRINT:PRINT"N
O SUCH LINE":COLOR 15:GOSUB 740:RET
URN
940 COLOR 11:PRINT:PRINT" DELETING LI
NE":LN5:COLOR 15
950 FOR IT=LN TO NL:LIS(IT)=LIS(IT+1):N
EXT:LIS(NL)=SP5+SP5:NL=NL-1:GOSUB 7
40
960 RETURN
970 "INSERT
980 IF LN=NL OR NL=199 THEN COLOR 2:LOC
ATE 10,5:PRINT"LAST LINE IS"NL:"CAN
'T INSERT":COLOR 15:GOSUB 740:RETURN
N:ELSE X1=5
990 FOR IT=NL TO LN STEP -1:LIS(IT+1)=L
IS(IT):NEXT IT:NL=NL+1:LIS(LN)=SP5+
SP5
1000 GOSUB 580:IF K5=CHRS(27) THEN 950 E
LSE IF LIS(LN)="" THEN 1000
RETURN
1010 COLOR 5,0:CLS:LOCATE 5,5:PRINT"SOUS
CE CODE IS A MAXIMUM":LOCATE 6,5:PR
INT"299 LINES!":GOSUB 740:RETURN
"FILES
1030 COLOR 12,1:CLS:X=3:Y=10:W=20:H=13:G
OSUB 1120
1050 LOCATE 5,12:COLOR 5:PRINT" LOAD/SAV
E MENU"
1060 COLOR 15:LOCATE 8,15:PRINT"1) SAVE
":LOCATE 10,15:PRINT"2) LOAD":
1070 LOCATE 13,13,1:COLOR 14:PRINT"YOUR
CHOICE":LOCATE 16,13:K5=INPUT$(1
)
1080 PRINT K5:IF K5=CHRS(27) THEN RETURN
N ELSE IF K5 > "2" OR K5 < "1" THEN
1070
1090 ON ASC(K5)-48 GOTO 1770,1680
1100 "PRINT
1110 FOR LN = 1 TO NL:GOSUB 530:GOSUB 73
0:LPRINT LN5:TAB(5) AS:TAB(15) SS:T
AB(42) CS:NEXT:RETURN
"END PROGRAM
1120 LOCATE 20,1:COLOR 8,7:PRINT"ARE YOU
SURE YOU WANT TO END THIS":PRINT"S
ESSION 7 (Y/N)
1140 K5=INKEY$:IF K5="" THEN 1140 ELSE C
OLOR 14,1:PRINT K5:
1150 IF NOT(K5="Y" OR K5="Y") THEN RETURN
N 299
1160 CLS:ON ERROR GOTO 0:END
1170 H2=222:UR=221:LL=222:LR=221:H1=223:
M2=220:V2=221:V1=222:GOTO 1220
1180 "DISPLAY A SINGLE-SIDED BOX
1190 UL=218:UR=191:LL=192:LR=217:H1=196:
H2=H1:V1=179:V2=V1:GOTO 1220
1200 "DISPLAY A DOUBLE-SIDED BOX
1210 UL=201:UR=187:LL=200:LR=188:H1=205:
H2=H1:V1=186:V2=V1:GOTO 1220
1220 "DISPLAYS A BOX
1230 LOCATE X,Y:PRINT CHR$(UL):STRING$(
W-2,H1):CHR$(UR):
1240 LOCATE X+H-1,Y:PRINT CHR$(LL):S
TRING$(W-2,H2):CHR$(LR):
1250 FOR I=X+1 TO X+H-2:LOCATE I,Y:PRINT
CHR$(V1):
1260 LOCATE I,Y+W-1:PRINT CHR$(V2):NEXT
I:RETURN
"INPUT ROUTINE
1270 SP=1:INS=0:RT=0:IF SE=1 AND LEN(SS)
>0 THEN SP = LEN(SS):SE=0:ELSE SE=0
1280 LOCATE X,Y+SP-1,1
1300 K5 = INKEY$:IF K5="" THEN GOTO 13
00
1310 IF MCS=K5 AND XCS>=K5 THEN GOSUB 1
410:IF RT=1 THEN K5=CHRS(9):RETURN
ELSE GOTO 1290
1320 IF K5 = CHRS(0)+CHRS(77) THEN GOSUB
1480:IF RT=1 THEN RETURN ELSE 1290
1330 IF K5 = CHRS(0)+CHRS(75) THEN GOSUB
1490:IF RT=1 THEN RETURN ELSE 1290
1340 IF K5 = CHRS(0) + CHRS(82) THEN GOS
UB 1500:GOTO 1290
1350 IF K5 = CHRS(18) THEN GOSUB 1500:GO
TO 1300
    
```

```

1360 IF K5 = CHRS(8) THEN GOSUB 1510:IF
RT=1 THEN RETURN ELSE GOTO 1300
1370 IF K5 = CHRS(0) + CHRS(83) THEN GOS
UB 1540:GOTO 1290
1380 IF K5 = CHRS(127) THEN GOSUB 1540:G
OTO 1290
1390 IF K5 = CHRS(13) OR K5=CHRS(9) OR K
5=CHRS(27) THEN RETURN
1400 GOTO 1290
1410 CS = LEN(SS):IF INS = 0 THEN GOTO 1
450
1420 IF CS >= L THEN RETURN
1430 SS = LEFT$(SS,SP-1) + K5 + RIGHT
$(SS,CS-SP+1):LOCATE X,Y:PRINT
SS:
1440 SP=SP+1:IF SP=L+1 THEN SP=SP-1:LOCA
TE X,Y+SP-1:RETURN:ELSE RETURN
1450 IF CS=L AND SP=L+1 THEN RETURN ELSE
PRINT K5:
1460 IF SP < CS+1 THEN SS=LEFT$(SS,SP-1)
+K5+RIGHT$(SS,CS-SP):ELSE SS=SS+K5
1470 SP=SP+1:IF SP=L+1 THEN SP=SP-1:LOCA
TE X,Y+SP-1:RT=1:RETURN:ELSE RETURN
1480 IF SP<LEN(SS)+1 AND SP<L THEN SP=SP
+1:LOCATE X,Y+SP-1,1:RETURN:ELSE RT
=1:RETURN
1490 IF SP>1 THEN SP=SP-1:LOCATE X,Y+SP-
1,1:RETURN:ELSE RT=1:RETURN
1500 IF INS=1 THEN INS=0:RETURN:ELSE INS
=1:RETURN
1510 CS=LEN(SS):IF CS>0 AND SP<=CS+1 AND
SP>1 THEN SS=LEFT$(SS,SP-2)+RIGHT
$(SS,CS-SP+1):LOCATE X,Y:PRINT SS:
SP=SP-1:LOCATE X,Y+SP-1
1520 IF CS < 1 THEN RT=1
1530 RETURN
1540 CS=LEN(SS):IF CS>0 AND SP<=CS THEN
SS=LEFT$(SS,SP-1)+RIGHT$(SS,CS-SP):
LOCATE X,Y:PRINT SS:LOCATE X,Y
+SP-1:IF SP<CS+1 THEN SP=CS+1
RETURN
1550 "TRAP FILE NAME ERROR
1570 GOSUB 1590:RESUME 1500
RETURN 280
1580 "DISPLAY FILE ERROR MESSAGE
1590 COLOR 8,1:CLS:X=7:Y=5:W=30:H=5:GOSU
B 1210
1610 COLOR 8,5:LOCATE 9,9,0:PRINT " INV
ALID FILE NAME "
1620 FOR J = 1 TO 4000:NEXT:LOCATE ,,1:C
OLOR 15,0
RETURN
1630 "GET FILE NAME
1640 CLS:WIDTH 40:X=5:Y=5:W=30:H=5:COLOR
4,1:GOSUB 1210:COLOR 15:LOCATE X+2
,40-LEN(PS)/2:PRINT PS:
1660 X=11:Y=1:W=30:H=5:COLOR 15:GOSUB 11
80:LOCATE 13,3:PRINT"FILE NAME:"
1670 X=15:Y=14:MCS=1:XCS="2":COLOR 14:
SS="":L=29:GOSUB 1270:FS=SS:RETURN
1680 "LOAD FILE
1690 PS = "LOAD SOURCE FILE":GOSUB 1650:
ON ERROR GOTO 1560
1700 OPEN "I", 1, FS + ".S"
1710 INPUT #1,NL:FOR I = 1 TO NL
1720 INPUT #1, SS:QT = 1
1730 WHILE (QT>0):QT=INSTR(QT,SS,CHRS(2)
):IF QT>0 THEN MID$(SS,QT,1)=CHRS(3
4)
1740 WEND "REPLACE QUOTATION MARK
KS...
1750 LIS(I) = SS:NEXT:CLOSE:LN=1:FOR I=N
L+1 TO 299:LIS(I)=SP5+SP5:NEXT
RETURN
1760 "SAVE FILE
1770 "SAVE FILE
1780 CLS:WIDTH 40:PS = "SAVE SOURCE FILE
"
1790 GOSUB 1640:ON ERROR GOTO 1560
1800 OPEN "O", 1, FS + ".S"
1810 WRITE #1 NL
1820 FOR I = 1 TO NL:SS = LIS(I):QT = 1
1830 WHILE (QT>0):QT=INSTR(QT,SS,CHRS(3
4)):IF QT>0 THEN MID$(SS,QT,1)=CHRS
(2)
1840 WEND "REPLACE QUOTATION MARK
S WITH NON-VOLATILE CHARACTERS
1850 WRITE #1, SS:NEXT:CLOSE
1860 RETURN
    
```

HCM

NANOASSEMBLER

TI-99/4A

```

100 REM *****
110 REM * NANOASSEMBLER *
120 REM *****
130 REM COPYRIGHT 1985
140 REM EMERALD VALLEY PUBLISHING CO
150 REM BY ROGER WOOD
160 REM HOME COMPUTER MAGAZINE
170 REM VERSION 5.6.1
180 REM TI BASIC AND EXTENDED BASIC
190 REM
200 CALL CLEAR
210 PRINT TAB(7):"The NanoAssembler":
TAB(6):"PLACE ALPHA LOCK DOWN":
220 DIM OPS(18)
230 DIM NN(18)
    
```

```

240 DIM LIS(299)
250 DIM LSS(25)
260 DIM AD(255)
270 GOSUB 2990
280 RESTORE 2820
290 GOSUB 2740
300 GOSUB 2910
310 IF (X<49)+(X>50) THEN 300
320 GOSUB 1360
330 IF FL5="" THEN 280
340 GOSUB 1630
350 GOSUB 1860
360 GOSUB 470
370 RESTORE 2840
380 GOSUB 2740
390 GOSUB 2910
    
```

Continued

NANOASSEMBLER *Continued*

TI-99/4A

```

L 400 IF (K<49)+(K>50)THEN 370
C 410 GOSUB 1430
P 420 IF FL5=0 THEN 390
M 430 GOSUB 1700
M 440 GOTO 1970
M 450 STOP
M 460 REM ASSEMBLE
M 470 PRINT "EXECUTING FIRST PASS"
M 480 CA=0
M 490 LB=0
M 500 FOR LN=1 TO NL
M 510 LFLAG=0
M 520 GOSUB 1560
M 530 IF SEGS(TLS,1,6)="" THEN 750
M 540 IF LB=24 THEN 1230
M 550 LBS(LB)=SEGS(TLS,1,6)
M 560 X=POS(LBS(LB),".")
M 570 IF X=0 THEN 640
M 580 FOR IT=6 TO X STEP -1
M 590 IF SEGS(LBS(LB),IT,1)="" THEN 610
M 600 GOTO 1210
M 610 LBS(LB)=SEGS(LBS(LB),1,IT-1)
M 620 NEXT IT
M 630 IF LB=0 THEN 670
M 640 FOR IT=0 TO LB-1
M 650 IF LBS(LB)=SEGS(LBS(LB),IT,LEN(LBS(LB))) THEN 1250
M 660 NEXT IT
M 670 IF (ASC(LBS(LB))>64)+(ASC(LBS(LB))<91) THEN 690
M 680 GOTO 1210
M 690 FOR IT=1 TO LEN(LBS(LB))
M 700 X=ASC(SEGS(LBS(LB),IT,1))
M 710 IF ((X>64)+(X<92))+((X>47)+(X<58)) THEN 730
M 720 GOTO 1210
M 730 NEXT IT
M 740 LFLAG=1
M 750 IF SEGS(TLS,7,1)<>" THEN 1190
M 760 GOSUB 1780
M 770 IF CA+NN(OP)>256 THEN 1310
M 780 ON OP+1 GOTO 1990,2210,2120,2120,2120,1990,1990,2120,2120,2120,2120,2020,2060,2260
M 790 IF LFLAG=0 THEN 820
M 800 LBS(LB)=CHRS(CA)&LBS(LB)
M 810 LB=LB+1
M 820 CA=CA+NN(OP)
M 830 NEXT LN
M 840 PRINT "EXECUTING SECOND PASS"
M 850 CA=0
M 860 FOR LN=1 TO NL
M 870 GOSUB 1560
M 880 GOSUB 1780
M 890 EA=CA+NN(OP)
M 900 IF OP=17 THEN 1050
M 910 IF OP<>18 THEN 950
M 920 GOSUB 2420
M 930 EA=V
M 940 GOTO 1050
M 950 IF NN(OP)<3 THEN 1070
M 960 IF AD(CA+1)<>-1 THEN 1070
M 970 FOR IT=0 TO LB
M 980 IF SEGS(TLS,X+1,LL)=SEGS(LBS(IT),2,LEN(LBS(IT))) THEN 1010
M 990 NEXT IT
M 1000 GOTO 1290
M 1010 V=ASC(LBS(IT))
M 1020 AD(CA+1)=V-INT(V/16)*16
M 1030 AD(CA+2)=INT(V/16)
M 1040 GOTO 1070
M 1050 PRINT #PR: " ";LN:LIS(LN)
M 1060 GOTO 1120
M 1070 PRINT #PR: " ";LN:LIS(LN)
M 1080 FOR IT=0 TO NN(OP)-1
M 1090 GOSUB 1500
M 1100 PRINT #PR:OTS
M 1110 NEXT IT
M 1120 CA=EA
M 1130 NEXT LN
M 1140 PRINT "PRESS ANY KEY TO CONTINUE"
M 1150 GOSUB 2910
M 1160 IF PR=0 THEN 1180
M 1170 CLOSE #1
M 1180 RETURN
M 1190 PRINT #PR: "ILLEGAL CODE IN LINE":LN
M 1200 GOTO 1330
M 1210 PRINT #PR: "ILLEGAL LABEL IN LINE":LN
M 1220 GOTO 1330
M 1230 PRINT #PR: "TOO MANY LABELS—
M 25 MAXIMUM"
M 1240 GOTO 1330
M 1250 PRINT #PR: "DUPLICATE LABEL IN LINE":LN
M 1260 GOTO 1330
M 1270 PRINT #PR: "NUMBER OUT OF RANGE IN LINE":LN
M 1280 GOTO 1330
M 1290 PRINT #PR: "ILLEGAL USE OF LABEL IN LINE":LN
M 1300 GOTO 1330
M 1310 PRINT #PR: "ADDRESS OUT OF RANGE IN LINE":LN
M 1320 GOTO 1330
M 1330 GOSUB 2950
M 1340 GOTO 1970
M 1350 REM FILES
M 1360 ON X-48 GOTO 1370,1410
M 1370 PRINT "INPUT FILE NAME FOR DSK1"
M 1380 INPUT FL5
M 1390 FL5="DSK1."&SEGS(FL5,1,6)&"_S"
M 1400 GOTO 1420
M 1410 FL5="CS1"
M 1420 RETURN
M 1430 ON X-48 GOTO 1440,1480
M 1440 PRINT "INPUT FILE NAME FOR DSK1"
M 1450 INPUT FL5
M 1460 FL5="DSK1."&SEGS(FL5,1,10)
M 1470 GOTO 1490
M 1480 FL5="CS1"
M 1490 RETURN
M 1500 OTS=STR$(CA+IT)
M 1510 OTS=SEGS("000",1,3-LEN(OTS))&OTS
M 1520 OUS=STR$(AD(CA+IT))
M 1530 OUS=SEGS("000",1,3-LEN(OUS))&OUS
M 1540 OTS=OTS&" " & OUS
M 1550 RETURN
M 1560 TLS=SEGS(LIS(LN),1,24)
M 1570 FOR IT=LEN(TLS) TO 1 STEP -1
M 1580 IF SEGS(TLS,IT,1)<>" THEN 1610
M 1590 TLS=SEGS(TLS,1,LEN(TLS)-1)
M 1600 NEXT IT
M 1610 LL=IT
M 1620 RETURN
M 1630 OPEN #1:FL5,INTERNAL,INPUT,FIXED,6,4
M 1640 INPUT #1:NL
M 1650 FOR IT=1 TO NL
M 1660 INPUT #1:LIS(IT)
M 1670 NEXT IT
M 1680 CLOSE #1
M 1690 RETURN
M 1700 OPEN #1:FL5,INTERNAL,OUTPUT,FIXED,6,4
M 1710 PRINT "SAVING FILE..."
M 1720 FOR IT=0 TO 245 STEP 7
M 1730 PRINT #1:AD(IT):AD(IT+1):AD(IT+2):AD(IT+3):AD(IT+4):AD(IT+5):AD(IT+6):AD(IT+7)
M 1740 NEXT IT
M 1750 PRINT #1:AD(252):AD(253):AD(254):AD(255)
M 1760 CLOSE #1
M 1770 RETURN
M 1780 FOR IT=0 TO 18
M 1790 IF SEGS(TLS,B,LEN(OP$(IT)))=OP$(IT) THEN 1820
M 1800 NEXT IT
M 1810 GOTO 1190
M 1820 OP=IT
M 1830 X=8+LEN(OP$(OP))
M 1840 IF (OP=9)+(SEGS(TLS,X,1)="G") THEN 1890
M 1850 RETURN
M 1860 PRINT "SEND ASSEMBLY TO: ";":1. SCR
M 2: PRINTER"
M 1870 GOSUB 2860
M 1880 IF X=50 THEN 1910
M 1890 PR=0
M 1900 RETURN
M 1910 PRINT "ENTER PRINTER DEVICE: "
M 1920 INPUT PR5
M 1930 PR=1
M 1940 OPEN #PR:PR5
M 1950 RETURN
M 1960 REM END PROGRAM
M 1970 PRINT
M 1980 END
M 1990 IF X<>11 THEN 1190
M 2000 AD(CA)=OP
M 2010 GOTO 790
M 2020 GOSUB 2420
M 2030 IF V=-1 THEN 1290
M 2040 AD(CA)=V
M 2050 GOTO 790
M 2060 GOSUB 2420
M 2070 IF V=-1 THEN 1290
M 2080 IF LFLAG=0 THEN 1190
M 2090 LBS(LB)=CHRS(V)&LBS(LB)
M 2100 LB=LB+1
M 2110 GOTO 830
M 2120 GOSUB 2420
M 2130 AD(CA)=OP
M 2140 IF V<>-1 THEN 2180
M 2150 AD(CA+1)=-1
M 2160 AD(CA+2)=-1
M 2170 GOTO 790
M 2180 AD(CA+1)=V-INT(V/16)*16
M 2190 AD(CA+2)=INT(V/16)
M 2200 GOTO 790
M 2210 GOSUB 2420
M 2220 IF V=-1 THEN 1290
M 2230 AD(CA)=OP
M 2240 AD(CA+1)=V
M 2250 GOTO 790
M 2260 GOSUB 2420
M 2270 IF (V=-1)+(LFLAG=1) THEN 1290
M 2280 CA=V
M 2290 GOTO 830
M 2300 V=0
M 2310 FOR IT=0 TO LEN(TLS)-1
M 2320 V=V+VAL(SEGS(TLS,IT+1,1))*2*(LEN(TLS)-IT-1)
M 2330 NEXT IT
M 2340 IF ((OP=1)+(OP=16))*(V>15)+(V>255) THEN 1270
M 2350 RETURN

```

TYPE-IN LISTINGS

Continued

NANOASSEMBLER *Continued*

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```

L2350 V=0
L2370 FOR IT=0 TO LEN(TS)-1
L2380 V=V+16*(LEN(TS)-IT-1)+(POS(HXS,SEGS
(TS,IT+1,1),1)-1)
L2390 NEXT IT
L2400 IF ((OP=1)+(OP=16))*(V>15)+(V>255
)THEN 1270
L2410 RETURN
L2420 IF SEGS(TLS,X,1)<>" THEN 1270
L2430 IF SEGS(TLS,X+1,1)=" THEN 1190
L2440 Y=POS(HXS,SEGS(TLS,X+1,1),1)
L2450 IF Y<>0 THEN 2480
L2460 V=-1
L2470 RETURN
L2480 IF Y<=2 THEN 2500
L2490 Y=3
L2500 ON Y GOTO 2510,2580,2650
L2510 TS="
L2520 FOR IT=X+2 TO LL
L2530 NS=(SEGS(TLS,IT,1))
L2540 IF (NS<"0")+((NS>"1") THEN 1270
L2550 TS=TS&NS
L2560 NEXT IT
L2570 GOTO 2360
L2580 TS="
L2590 FOR IT=X+2 TO LL
L2600 NS=(SEGS(TLS,IT,1))
L2610 IF POS(HXS,NS,1)=0 THEN 1270
L2620 TS=TS&NS
L2630 NEXT IT
L2640 GOTO 2360
L2650 TS="
L2660 FOR IT=X+1 TO LL
L2670 NS=(SEGS(TLS,IT,1))
L2680 IF (NS<"0")+((NS>"9") THEN 1270
L2690 TS=TS&NS
L2700 NEXT IT
L2710 V=VAL(TS)
L2720 RETURN
L2730 REM PRINT MENU
L2740 CALL CLEAR
L2750 READ NI
L2760 FOR IT=1 TO NI
L2770 READ A,AS
L2780 PRINT TAB(A);AS
L2790 NEXT IT
L2800 PRINT : : : :
L2810 RETURN
L2820 DATA 7,5,The NanoAssembler,1,"",1,
LOAD SOURCE FILE FROM:
L2830 DATA 8,(1) DISK (DSK1),8,(2) CASSET
TE (CS1),1,"",5,YOUR CHOICE:
L2840 DATA 7,5,The NanoAssembler,1,"",7,
SAVE OBJECT FILE TO:
L2850 DATA 8,(1) DISK (DSK1),8,(2) CASSET
TE (CS1),1,"",5,YOUR CHOICE:
L2860 CALL KEY(0,K,S)
L2870 IF S=0 THEN 2860
L2880 IF (K<49)+(K>50) THEN 2870
L2890 PRINT CHR$(K)
L2900 RETURN
L2910 CALL KEY(0,K,S)
L2920 IF S=0 THEN 2910
L2930 CALL HCHAR(18,20,K)
L2940 RETURN
L2950 FOR IT=1 TO 1000
L2960 NEXT IT
L2970 RETURN
L2980 REM PROGRAM INIT
L2990 RESTORE 3060
L3000 FOR IT=0 TO 10
L3010 READ OP,(IT),NR(IT)
L3020 NEXT IT
L3030 HXS="0123456789ABCDEF"
L3040 HMS="%0123456789"
L3050 RETURN
L3060 DATA ADD,1, LDA, 2, LDA, 3, STA, 5, TAB, 1
,TBA, 1, RRC, 1, RLC, 1, AND, 1, OR, 1, XOR, 1
DATA BZ, 3, BNZ, 3, BCS, 3, BCC, 3, JMP, 3, D
N, 1, EQU, 0, ORG, 0
    
```

HCM

NANOEDITOR

TI-99/4A

```

100 REM *****
110 REM * NANOEDITOR *
120 REM *****
130 REM COPYRIGHT 1985
140 REM EMERALD VALLEY PUBLISHING CO
150 REM BY BOGER WOOD
160 REM HOME COMPUTER MAGAZINE
170 REM VERSION 5.6.1
180 REM TI BASIC AND EXTENDED BASIC
190 REM
200 CALL CLEAR
210 PRINT TAB(8);"The NanoEditor": :
:TAB(16);"PLACE ALPHA LOCK DOWN": :
:PLEASE WAIT WHILE I SET UP"
220 DIM LIS(200)
230 GOSUB 3450
240 RESTORE 3320
250 GOSUB 3120
260 GOSUB 3370
270 IF (K<49)+(K>52) THEN 260
280 ON K-48 GOSUB 310,1590,2030,2160
290 GOTO 240
300 REM EDIT
310 CALL CLEAR
320 LNS="CMD"
330 L=1
340 RW=1
350 E=ASC(SEGS(CMDS,1,1))
360 T=ASC(SEGS(CMDS,LEN(CMDS),1))
370 CMS=SEGS(CS,1,3)
380 S1=" "
390 E=0
400 GOSUB 2250
410 IF ESC=0 THEN 430
420 RETURN
430 OP=POS(CMDS,S1,1)
440 IF (S1="")+(OP=0) THEN 380
450 IF OP=1 THEN 610
460 CMS=SEGS(CS,1,6)
470 LN="L#1"
480 L=3
490 RW=2
500 E=ASC("0")
510 T=ASC("9")
520 S1=" "
530 GOSUB 2250
540 IF ESC=0 THEN 560
550 RETURN
560 IF LEN(S1)=0 THEN 520
570 LN=VAL(S1)
580 IF (LN>0)+(LN<201) THEN 600
590 GOTO 520
600 LNS=SEGS("000",1,3-LEN(S1))&S1
610 ON OP GOSUB 640,850,970,1160,1360
620 GOTO 310
630 REM ADD
640 IF NL=200 THEN 790
650 LN=NL+1
660 GOSUB 3250
670 FOR RW=3 TO 21 STEP 2
680 GOSUB 3200
690 S1=" "
700 GOSUB 2250
710 IF ESC=0 THEN 730
720 RETURN
730 IF LEN(S1)=0 THEN 690
740 LIS(LN)=S1
750 NL=LN
760 LN=LN+1
770 IF NL=200 THEN 810
780 NEXT RW
790 CALL CLEAR
800 GOTO 670
810 PRINT "SOURCE CODE IS A MAXIMUM OF
200 LINES!"
820 GOSUB 3410
830 RETURN
840 REM DELETE
850 IF LN<=NL THEN 890
860 PRINT "NO SUCH LINE"
870 GOSUB 3410
880 RETURN
890 PRINT "DELETING LINE":LN
900 FOR IT=LN TO NL
910 LIS(IT)=LIS(IT+1)
920 NEXT IT
930 NL=NL-1
940 LIS(NL+1)=" "
950 RETURN
960 REM EDIT
970 IF LN<=NL THEN 1010
980 PRINT "THERE IS NO LINE ":LNS
990 GOSUB 3410
1000 RETURN
1010 GOSUB 3250
1020 FOR RW=3 TO 21 STEP 2
1030 GOSUB 3200
1040 S1=LIS(LN)
1050 GOSUB 2250
1060 IF ESC=0 THEN 1080
1070 RETURN
1080 IF LEN(S1)=0 THEN 890
1090 LIS(LN)=S1
1100 IF NL=LN THEN 950
1110 LN=LN+1
1120 NEXT RW
1130 CALL CLEAR
1140 GOTO 1020
1150 REM INSERT
1160 IF (LN<=NL)*(NL<200) THEN 1200
1170 PRINT "LAST LINE IS":NL;"CAN'T INSE
RT"
1180 GOSUB 3410
1190 RETURN
1200 RW=3
1210 GOSUB 3250
1220 GOSUB 3200
1230 GOSUB 3280
1240 S1=" "
1250 GOSUB 2250
1260 IF ESC=0 THEN 1280
1270 RETURN
1280 IF LEN(S1)=0 THEN 1250
1290 FOR IT=NL TO LN STEP -1
1300 LIS(IT+1)=LIS(IT)
1310 NEXT IT
    
```

Continued

NANOEDITOR *Continued*

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1320 NL=NL+1
1330 LIS(LN)=S$
1340 RETURN
1350 REM LIST
1360 IF LN<=NL THEN 1380
1370 GOTO 980
1380 CALL CLEAR
1390 FOR RW=3 TO 21 STEP 2
1400 S$=LIS(LN)
1410 GOSUB 3200
1420 GOSUB 3280
1430 GOSUB 3000
1440 GOSUB 3060
1450 IF LN<NL THEN 1490
1460 PRINT " <PRESS ANY KEY TO CONTINUE>"
V1470 GOSUB 3370
1480 RETURN
1490 LN=LN+1
1500 NEXT RW
1510 PRINT " <PRESS FCTN 9 TO QUIT>"
V1520 GOSUB 3370
1530 KS=POS(CNS,CHRS(K),1)
1540 IF (KS<1)+(KS>2) THEN 1520
1550 IF KS=1 THEN 1380
1560 RETURN
1570 CA=0
1580 REM FILES
1590 RESTORE 3340
1600 GOSUB 1850
1610 IF K=51 THEN 1690
1620 DC=K-48
1630 RESTORE 3350
1640 GOSUB 1850
1650 IF K=51 THEN 1690
1660 SL=K-48
1670 ON DC GOSUB 1700,1750
1680 CLOSE #1
1690 RETURN "FILE NAME FOR DSK1"
1700 INPUT FL$
1710 IF FL$="" THEN 1720
1720 FL$="DSK1:"&SEGS(FL$,1,8)&"_S"
1730 GOTO 1760
1740 FL$="CS1"
1750 ON SL GOSUB 1780,1810
1760 RETURN
1770 OPEN #1:FL$,INTERNAL,OUTPUT,FIXED 6
1780 PRINT "SAVING FILE. . ."
1790 GOTO 1890
1810 OPEN #1:FL$,INTERNAL,INPUT,FIXED 6
1820 PRINT "LOADING FILE. . ."
1830 GOSUB 1940
1840 RETURN
1850 GOSUB 3120
1860 GOSUB 3370
1870 IF (K<49)+(K>51) THEN 1860
1880 RETURN
1890 PRINT #1:NL
1900 FOR IT=1 TO NL
1910 PRINT #1:LIS(IT)
1920 NEXT IT
1930 RETURN
1940 INPUT #1:NL
1950 FOR IT=1 TO NL
1960 INPUT #1:LIS(IT)
1970 NEXT IT
1980 RETURN
1990 FOR IT=1 TO 200
2000 LIS(IT)=" "
2010 NEXT IT
2020 REM PRINT
2030 RESTORE 3360
2040 GOSUB 3120
2050 INPUT PR$
2060 IF PR$<>" " THEN 2080
2070 RETURN
2080 OPEN #1:PR$
2090 FOR LN=1 TO NL
2100 GOSUB 3200
2110 PRINT #1:LNS:" ":LIS(LN)
2120 NEXT LN
2130 CLOSE #1
2140 RETURN
2150 REM END PROGRAM
2160 PRINT "ARE YOU SURE YOU WANT TO END
THIS SESSION? (Y/N) "
2170 CALL KEY(0,K,S)
2180 IF S=0 THEN 2170
2190 IF (K<>89)+(K<>78) THEN 2170
2200 PRINT CHRS(K)
2210 IF K=89 THEN 2230
2220 RETURN
2230 CALL CLEAR
2240 END
2250 ESC=0
2260 GOSUB 3280
2270 IF S$="" THEN 2290
2280 GOSUB 3040
2290 GOSUB 3000
2300 CALL GCHAR(R,C,G)
2310 CALL HCHAR(R,C,95)
2320 CALL KEY(0,K,S)
2330 CALL HCHAR(R,C,G)
2340 IF S=0 THEN 2310

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```

2350 IF (K<B)+(K>T) THEN 2410
2360 CALL HCHAR(R,C,X)
2370 CALL SOUND(10,440,0)
2380 GOSUB 2880
2390 E=(E*-(K-X))+(X-(K<X))
2400 GOTO 2300
2410 S=POS(CNS,CHRS(X),1)+1
2420 ON S GOTO 2300,2770,2730,2450,2380,
2430,2580,2640
2430 GOSUB 2940
2440 GOTO 2300
2450 Y=R
2460 Z=C
2470 FOR I=X TO E
2480 K=R
2490 S=C
2500 GOSUB 2900
2510 CALL GCHAR(R,C,G)
2520 CALL HCHAR(K,S,G)
2530 NEXT I
2540 E=E-1
2550 R=Y
2560 C=Z
2570 GOTO 2300
2580 NS=23
2590 IF R=RW THEN 2600
2600 NS=55
2610 GOSUB 3000
2620 CALL HCHAR(R,C,32,NS)
2630 GOTO 2300
2640 IF C>=14 THEN 2680
2650 C=14
2660 X=7-(R>RW)*24
2670 GOTO 2720
2680 IF R>RW THEN 2720
2690 C=7
2700 X=24
2710 R=R+1
2720 GOTO 2300
2730 ESC=1
2740 IF S$="" THEN 2760
2750 GOSUB 3040
2760 RETURN
2770 GOSUB 3000
2780 S$=""
2790 CALL GCHAR(R,C,G)
2800 S$=S$&CHRS(G)
2810 GOSUB 2890
2820 IF E+1<>X THEN 2790
2830 IF LEN(S$)=0 THEN 2870
2840 IF SEGS(S$,LEN(S$),1)<>" " THEN 287
0
2850 S$=SEGS(S$,1,LEN(S$)-1)
2860 GOTO 2830
2870 RETURN
2880 IF X=L-1 THEN 2930
2890 X=X+1
2900 C=C+1
2910 R=R+(C>30)
2920 C=C+(C>30)+24
2930 RETURN
2940 IF X=0 THEN 2990
2950 X=X-1
2960 C=C-1
2970 R=R+(C<7)
2980 C=C-(C<7)+24
2990 RETURN
3000 R=RW
3010 C=7
3020 X=0
3030 RETURN
3040 E=LEN(S$)
3050 GOSUB 3000
3060 IF X=LEN(S$) THEN 3100
3070 CALL HCHAR(R,C,ASC(SEGS(S$,X+1,1)))
3080 GOSUB 2880
3090 GOTO 3060
3100 RETURN
3110 REM PRINT MENU
3120 CALL CLEAR
3130 READ N1
3140 FOR IT=1 TO N1
3150 READ A,A$
3160 PRINT :TAB(A):A$
3170 NEXT IT
3180 PRINT : : : :
3190 RETURN
3200 LNS=STR$(LN)
3210 LNS=SEGS("000",1,3-LEN(LNS))&LNS
3220 RETURN
3230 L=48
3240 B=ASC(" ")
3250 T=ASC("2")
3260 CNS=C$
3270 RETURN
3280 FOR IT=3 TO 5
3290 CALL HCHAR(RW,IT,ASC(SEGS(LNS,IT-2,
1)))
3300 NEXT IT
3310 RETURN
3320 DATA 7,8,"The NanoEditor,10,(1) EDIT
,10,(2) FILES,10,(3) PRINT,10,(4) E
XIT
3330 DATA 1," ",5,"YOUR CHOICE: "
3340 DATA 6,5,"FILE DEVICE MENU,7,(1) DIS
K (DSK1),7,(2) CASSETTE (CS1),7,(3)
EXIT,1," ",5,"YOUR CHOICE: "

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Continued

TYPE-IN LISTINGS

NANOEDITOR *Continued*

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```

3350 DATA 6,7,LOAD,SAVE,MENU,10,(1)SA
VE,10,(2)LOAD,10,(3)EXIT,1,"",5,
"YOUR CHOICE:"
3360 DATA 4,10,PRINT,FILE,1,"",3,ENTER
PRINTER DEVICE,3,OR PRESS [ENTER] T
O EXIT.
3370 CALL KEY(0,K,S)
3380 IF S=0 THEN 3370
3390 CALL RCHAR(18,20,K)
    
```

```

3400 RETURN
3410 FOR IT=1 TO 1000
3420 NEXT IT
3430 RETURN
3440 REM PROGRAM INIT
3450 CS=CHR$(13)&CHR$(15)&CHR$(5)&CHR$(9)
&CHR$(8)&CHR$(7)&CHR$(1)
3460 CMD$="ADELL"
3470 RETURN
    
```

HCM

BASID'S BASIC LOADER

COMMODORE 64

TYPE-IN LISTINGS

```

100 REM *****
110 REM * BASID'S BASIC LOADER *
120 REM *****
130 REM COPYRIGHT 1985
140 REM EMERALD VALLEY PUBLISHING CO.
150 REM BY RANDY THOMPSON
160 REM HOME COMPUTER MAGAZINE
170 REM VERSION 5.6.1
180 REM C-64 BASIC
190 PRINT "SHIFT CLR INITIALIZING..."
200 FOR I=49152 TO 50461:READ D:C=C+D:P
OKE I,D:NEXT
210 IF C<>157106 THEN PRINT** ERROR IN
DATA STATEMENTS** :END
220 SYS 49152:PRINT** BASID'S BASIC LOADER
BY RANDY THOMPSON
230 DATA 169,51,141,4,3,169,192,141
240 DATA 5,3,169,246,141,6,3,169,9
250 DATA 192,141,7,3,169,43,141,8
260 DATA 3,169,193,141,9,3,169,82
270 DATA 141,19,3,169,193,141,11,3
280 DATA 169,132,3,169,9,3,169,193,141
290 DATA 15,189,9,2,167,169,8,132
300 DATA 249,62,232,208,244,201,32,240
310 DATA 55,133,8,201,34,249,85,36
320 DATA 15,112,45,201,63,249,4,169
330 DATA 153,208,57,201,48,144,4,201
340 DATA 60,144,29,132,113,160,0,132
350 DATA 11,136,134,132,202,200,232,189
360 DATA 0,1,56,249,158,169,240,245
370 DATA 201,128,208,47,5,11,184,113
380 DATA 252,200,153,251,1,201,0,240
390 DATA 56,56,233,58,240,4,201,73
400 DATA 208,2,133,15,56,233,85,208
410 DATA 160,133,8,189,0,2,240,224
420 DATA 197,8,249,200,193,251,1
430 DATA 252,208,240,166,12,230,11,200
440 DATA 185,157,160,16,250,185,158,160
450 DATA 208,181,240,15,189,0,2,16
460 DATA 189,153,253,1,198,123,169,255
470 DATA 133,122,96,169,0,185,153,193
480 DATA 208,2,200,232,189,0,2,56
490 DATA 249,153,193,240,245,201,128,20
500
510 DATA 4,5,11,208,153,186,122,230
520 DATA 11,208,185,152,193,16,250,185
530 DATA 153,193,208,224,248,186,15
540 DATA 30,15,48,11,201,255,240,7
550 DATA 201,204,178,6,76,35,167,76
560 DATA 243,166,56,255,203,179,132,73
570 DATA 169,255,202,240,8,200,185,153
580 DATA 193,16,250,48,245,200,185,153
590 DATA 193,48,5,32,71,171,208,245
600 DATA 76,239,166,32,113,0,32,52
610 DATA 193,76,174,167,201,204,144,4
620 DATA 201,223,144,6,32,121,0,76
630 DATA 237,167,56,233,204,10,179,189
640 DATA 226,193,72,189,225,193,72,76
650 DATA 115,0,169,0,133,13,32,115
660 DATA 0,201,204,144,4,201,221,144
670 DATA 8,32,121,0,76,141,1,4,56
680 DATA 233,204,19,72,32,115,0,32
690 DATA 241,174,194,168,185,7,194,133
700 DATA 85,185,8,194,133,86,32,84
710 DATA 0,76,141,173,224,11,208,14
720 DATA 201,76,144,18,201,95,176,6
730 DATA 56,233,76,76,69,183,75,139
740 DATA 227,86,79,204,78,82,208,67
750 DATA 65,86,197,83,84,84,83,67
760 DATA 203,68,69,67,65,217,83,85
770 DATA 211,82,69,204,83,79,85,78
780 DATA 196,70,73,76,84,69,219,76
790 DATA 207,66,65,206,72,201,82,73
800 DATA 78,199,83,89,78,195,82,69
810 DATA 211,67,85,212,80,85,76,83
820 DATA 197,76,83,212,73,78,73,212
830 DATA 0,178,194,195,194,209,194,13
840 DATA 195,38,185,250,194,19,195,44
850 DATA 195,65,193,106,195,110,195,114
860 DATA 195,149,195,170,195,151,195,21
7
870 DATA 195,252,195,18,196,46,196,58
880 DATA 196,67,196,86,196,113,196,128
890 DATA 196,121,196,140,196,152,196,16
4
900 DATA 196,184,196,188,196,192,196,20
5
910 DATA 196,221,196,237,196,243,196,11
920 DATA 197,137,8,212,157,183,194,9,6
930 DATA 32,235,183,76,66,194,32,247
940 DATA 183,201,0,240,3,76,72,178
950 DATA 166,20,138,202,240,16,202,240
    
```

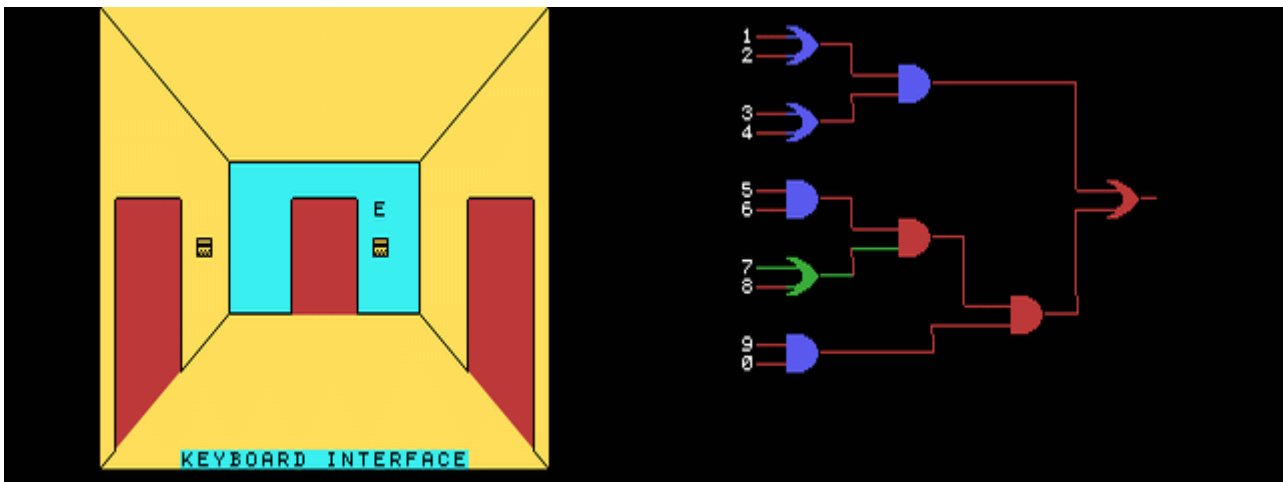
```

960 DATA 9,202,240,3,76,72,178,162
970 DATA 14,96,162,7,96,32,48,194
980 DATA 165,21,208,240,165,20,201,16
990 DATA 176,234,133,2,56,32,85,194,16
1000 DATA 10,10,10,10,133,2,96,189
1010 DATA 150,104,74,74,74,74,168,76
1020 DATA 162,179,32,48,194,165,21,240
1030 DATA 3,76,72,178,165,20,201,2
1040 DATA 176,247,232,252,232,232,201,0
1050 DATA 96,0,0,0,0,0,0,0
1060 DATA 0,0,0,0,0,0,0,0
1070 DATA 0,0,0,0,0,0,0,0
1080 DATA 0,0,0,32,158,183,224,16
1090 DATA 144,5,76,72,178,173,160,194
1100 DATA 41,240,133,2,138,5,2,162
1110 DATA 24,76,41,194,32,48,194,165
1120 DATA 20,32,41,194,32,165,21,76
1130 DATA 41,194,32,48,194,165,21,240
1140 DATA 3,76,72,178,165,20,240,249
1150 DATA 201,5,176,245,168,169,8,18
1160 DATA 136,208,252,194,2,232,232,332
1170 DATA 232,189,145,194,41,9,15,232
1180 DATA 232,232,232,232,189,168,194,41
1190 DATA 15,3,3,76,41,194,32,10
1200 DATA 194,76,255,194,32,85,194,232
1210 DATA 232,232,232,232,232,232,145,19
4
1220 DATA 41,240,5,2,76,41,194,32
1230 DATA 85,194,76,24,195,32,122,194
1240 DATA 240,8,189,145,194,9,1,76
1250 DATA 41,194,189,145,194,41,254,76
1260 DATA 41,194,32,48,194,201,3,208
1270 DATA 2,169,4,166,21,240,3,76
1280 DATA 72,178,166,20,224,2,176,247
1290 DATA 224,0,240,5,13,188,194,208
1300 DATA 5,73,255,45,168,194,162,23
1310 DATA 76,41,194,168,16,208,6,169
1320 DATA 32,208,2,169,64,133,2,32
1330 DATA 158,183,2,234,0,144,3,76,72
1340 DATA 178,185,2,24,0,240,5,13
1350 DATA 169,194,208,5,0,73,255,45,169
1360 DATA 194,162,24,76,41,194,32,122
1370 DATA 194,240,8,189,145,194,41,251
1380 DATA 76,41,194,32,122,76,41,240,8
1390 DATA 189,145,194,9,2,76,41,249,8
1400 DATA 189,145,194,41,253,76,41,194
1410 DATA 32,158,183,234,16,144,3,76
1420 DATA 72,178,158,32,104,194,173,168
1430 DATA 194,41,15,5,2,162,23,76
1440 DATA 41,194,32,138,173,32,247,183
1450 DATA 201,8,144,3,76,72,178,165
1460 DATA 20,162,21,32,41,194,160,3
1470 DATA 70,21,192,20,136,208,249,232
1480 DATA 165,20,76,41,194,32,48,194
1490 DATA 165,21,201,16,176,222,232,232
1500 DATA 165,20,32,41,194,252,163,21
1510 DATA 76,41,194,166,26,169,196,76
1520 DATA 30,171,42,42,32,82,65,78
1530 DATA 68,89,32,84,72,79,77,80
1540 DATA 83,79,78,32,42,42,0,169
1550 DATA 0,162,24,32,41,194,202,16
1560 DATA 250,96,173,159,194,41,15,168
1570 DATA 76,162,179,32,54,194,189,145
1580 DATA 194,133,99,189,146,194,133,98
1590 DATA 162,144,56,76,73,188,32,54
1600 DATA 194,160,0,1,85,149,8,168,1,240
1610 DATA 240,14,133,2,169,8,168,1,240
1620 DATA 19,34,2,208,3,208,208,248
1630 DATA 76,182,179,32,54,194,76,111
1640 DATA 194,32,54,194,232,76,111,194
1650 DATA 32,54,194,189,150,194,41,15
1660 DATA 168,76,162,178,32,54,194,189
1670 DATA 151,194,41,15,168,76,162,179
1680 DATA 32,54,194,189,149,194,41,1
1690 DATA 168,76,162,179,32,54,194,201
1700 DATA 3,208,2,169,4,45,168,194
1710 DATA 240,2,169,1,168,76,162,179
1720 DATA 169,16,208,6,169,32,208,2
1730 DATA 169,64,45,169,194,240,2,169
1740 DATA 1,168,76,162,179,32,54,194
1750 DATA 189,149,194,41,4,240,2,169
1760 DATA 1,168,76,162,179,173,168,194
1770 DATA 76,114,194,173,166,194,133,99
1780 DATA 169,0,169,3,14,167,194,42
1790 DATA 136,208,240,5,33,194,162,147,56
1800 DATA 194,73,182,3,24,194,183,147,56
1810 DATA 194,133,99,189,148,194,133,98
1820 DATA 162,144,56,76,73,188
    
```

HCM

Boolean Brain

G-A-T [Disk: 304-BOOB] By W. K. Balthrop



By some freakish accident, you have been sucked into your computer while playing a game and now you have to find a way out by navigating the different sections of the computer and try to get to the CPU in the hope of fixing the problem. Unfortunately, moving from one section to the other requires solving boolean puzzles using AND and OR gates. Each section is represented by a door, and you can choose your direction of travel by typing E, W, N or S. Solve the boolean puzzles by activating one or more input lines in order to turn on the output. Beware of fatal bad disk sectors however! This is an excellent exercise in boolean logic presented in a very original way.

Requirements: XB cartridge, 32K RAM.

Executable to run: BRAIN

Download Boolean Brain:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – T

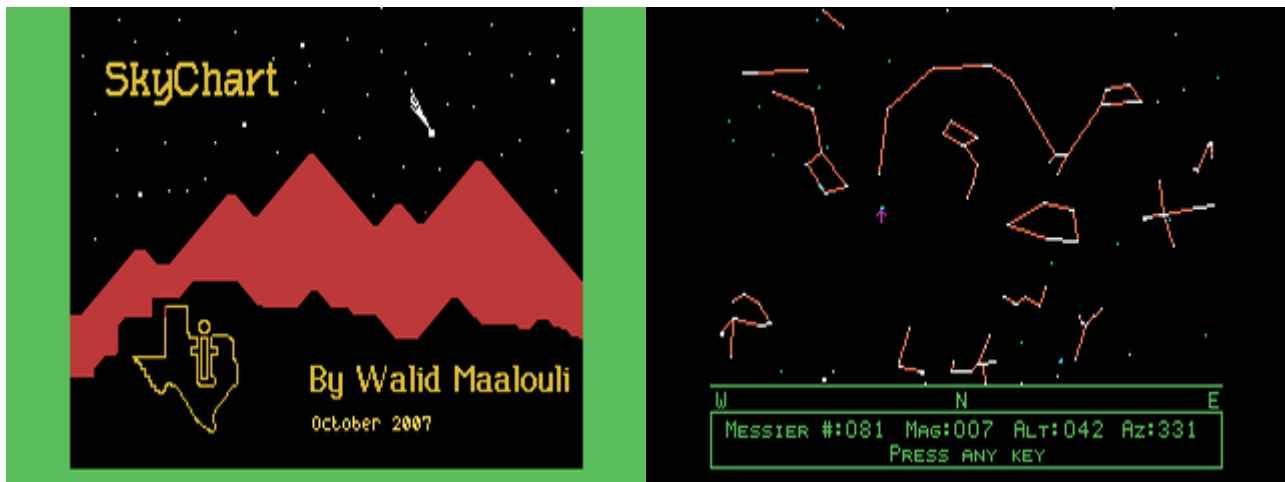
PGR:

Features: Title Screen, XB, One Player

Controls: Keyboard

SkyChart

G-A-U [Disk: 305-SKYC] By Walid Maalouli



SkyChart is a 100% assembly astronomy program that can calculate and display the position of the planets, about 375 stars and all Messier objects for any date and time from year 0 to 9999 AD. Constellation lines can be toggled off and on, and information can be requested on any object displayed. Accuracy is only limited by the TI screen resolution. For those with an interest in astronomy.

Requirements: E/A cartridge, 32K RAM, disk drive.

Executable to run: SKY (E/A option 3 - read instructions for startup procedure)

Download SkyChart:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – A – U

PGR: *****

Features: Title Screen, EA3, One Player

Controls: Keyboard

**Runs from Mega Menu with AutoStart the EA Module from tipi/disk
EDITOR/ASSEMBLER**

PRESS:

3

LOAD AND RUN

FILE NAME?

DSK1.SKY

PROGRAM NAME?

“START”

TI-99/4A – Game Shelf Edutainment

Introduction:

Skychart is an astronomy program that displays the visible stars, Messier objects, and planets for a certain date, time and location. It is capable of displaying constellation lines as well as identify any selected celestial object.

System Requirements:

Skychart requires the 32K RAM expansion, a disk drive and the Editor/Assembler cartridge.

While Skychart can be run from a DSSD (180K) disk, it is best to use at least a DSDD drive or a hard disk to avoid disk swapping.

For DSSD drives: You will need to create a blank work disk and copy the STARS ,MESSIER and LOCDEF files to it. Keep these files on the main program disk also.

For DSDD or higher drives: Skychart will run without disk swapping as long as your diskette has at least an extra 120K of free space for temporary files.

For IDE hard drives: Create a 360K disk partition and copy the contents of the program disk to it. Skychart will run directly from it. If you are using the IDEAL DSR, then you can name that partition DSK4 to DSKB. If you are using Fred Kaal's IDE DSR, then you can just place the program files in the root directory (IDE0 or IDE1), but you cannot use subdirectories. Fred also allows you to create a DSK1 partition which can also be used.

Running Skychart:

Skychart runs using option #3 (LOAD AND RUN) of the E/A cartridge main menu. Select that option and type in DSKx. SKY then hit ENTER. the x stands for any drive number or letter. Once the program is loaded in memory, the cursor will return on screen. Hit ENTER again and type START at the PROGRAM NAME prompt. Hit ENTER again and the Skychart introductory screen will appear on screen. Hit any key to enter the main program.

Skychart has boot tracking, which means that the support files will load from the same drive that the main program was loaded from. This works well with the IDE interface.

Data Entry:

Skychart needs some basic information in order to perform its calculations. This is entered from the first screen entitled "Calculations for what:". Enter the year (4 digits - range 0000 to 9999), month (2 digits), day (2 digits), hour (2 digits - 24 hour format), and minutes (2 digits). Press ENTER after each entry to move to the next field. The program will not let you enter

TI-99/4A – Game Shelf Edutainment

illegal values, and you may use the left or right arrow keys to move the cursor and make corrections. After entering the minutes and pressing ENTER, the cursor will disappear and you will have to decide whether you want to Use (press U) what you entered or Edit (press E) to go back and make corrections. Pressing U will take you back to the year field.

Press U when you are satisfied with your input values, and the location entry fields will appear on bottom half of the screen. Skychart includes a default location for Eagan, Minnesota, USA as a location. If you want to use that location, then just press U again to accept it and move on. Otherwise, press E for Edit to change the location data.

Location Name: free text entry.

Longitude: enter it in degrees (3 digits), minutes (2 digits) and seconds (2 digits). Finally enter E or W for East or West respectively. Make sure you press ENTER after each input to move to the next field.

Latitude: enter it in degrees (2 digits), minutes (2 digits), seconds (2 digits) and N or S for North or South respectively.

Time zone: this is compared to mean Greenwich time. First enter + or - followed by ENTER depending on where your local time zone lies, then input the actual time displacement from Greenwich followed by ENTER again. Daylight saving time is not taken into account.

At this point, you can press E again to edit your entries, press U to accept the data, or press S to save the entered location data to disk in the LOCDEF file. Once the data is saved, then it will become the default location for the program.

***** IMPORTANT ***:** If you are using a DSSD drive system, you must remove the program disk from the drive and replace it with your work disk BEFORE pressing U.

Main Program:

After pressing U, the WORKING screen will appear, and Skychart will start its calculation process. You will be informed of what the program is doing and of its progress via a progress bar. The program will first work on the stars database, then the Messier database, and finally on the planetary data. This process can take upwards of 22 minutes on a stock TI console, so please be patient. Remember that thousands of floating point calculations are being made during that time on 1979 hardware...

Once calculations are completed, the program will draw 8 different screens, each representing a separate view, and store them in temporary files on disk. During that process, the message "Generating Display. Please Wait..." will be displayed on screen. This requires about 11 minutes to complete.

In summary, it will take a total of about 33 minutes to perform all the necessary calculations and generate the display, so I suggest you grab a cup of coffee or do some errands while the program is chugging away. Of course on an

TI-99/4A – Game Shelf Edutainment

emulator such as v9t9 in accelerated mode, it takes less than a minute for the entire process on a Pentium II PC!

Eventually, the wait message will disappear and now you can actually start viewing the sky. The celestial views are divided into the four cardinal points, namely North, South, East and West. The starting view is facing North as indicated by the N in the status bar on the bottom of the screen. West (W) is to the left and East (E) is to the right. To switch views, simply press the first letter of the appropriate cardinal point.

Each field of view has a 180 degree azimuth span and a 90 degree altitude span with 90 at the top of the screen. Stars are displayed as white single pixel dots except for very bright stars (magnitude <1) which are represented as a square white block of 4 pixels. Messier objects a green single pixel dots. Planets are 4 pixel square blocks with a different color for each planet:

Mercury	-	Dark green
Venus	-	Light yellow
Mars	-	Dark red
Jupiter	-	Magenta
Saturn	-	Dark yellow
Uranus	-	Medium green
Neptune	-	Light blue
Pluto	-	Dark blue

Unfortunately, on an NTSC display, there are a lot of color bleeding and chromatic changes, which can make it difficult to differentiate the different colors. That is not an issue under emulation of course.

Constellation lines can be toggled on and off by pressing L. The lines are shown in medium red color. Due to the way color is displayed in bitmap mode on the TI, all the pixels on the same 8 pixel horizontal block will have the same color, the fact which can create some difficulty pinpointing individual stars inside each constellation. There is no practical work-around to this....

In order to identify selected objects, a moveable cursor can be displayed on screen by pressing C. The cursor will appear as a magenta arrow in the center of the view field. You can exit cursor mode by pressing C again. While the cursor is displayed, you cannot switch view fields or toggle constellation lines. To move the cursor, simply press the S (left arrow), D (right arrow), E (up arrow) or X (down arrow) keys. The cursor arrow will indicate which direction you are moving. Each keypress will move the cursor 1 pixel. If you wish to move more rapidly, press the F key, which will make the cursor move in 10 pixel increments. Press F again to go back to single pixel motion. To identify an object, place the tip of the cursor arrow right next to it. For object displayed as 4 pixel blocks, place the tip of the cursor arrow next to the left upper pixel of the block. Once properly positioned, press I and after

TI-99/4A – Game Shelf Edutainment

some database searching the selected object information will be displayed including name, constellation (for stars only), magnitude, azimuth and altitude (in degrees). Press sny key to clear the text area and return to cursor mode. It is best to use cursor mode without constellation lines for better positioning of the cursor.

Outside of cursor mode, press R to restart the program with a different set of data, and press Q to exit the program.

Final words:

It is my hope that you find this program useful and educational. While nowadays vastly superior astronomy programs are available for modern computers, it is nice to know that our little TI is capable of performing some of the same tasks...

As usual, this program is released to the public domain with no restrictions. Please feel free to modify and enhance it as you see fit as long as you release your changes to the TI community free of charge.

Any comments/suggestions are welcome!

Walid Maalouli.
wmaalouli(at)comcast.net.

October 8, 2007

Pi Calculator

G-B-1 [Disk: 306-PICA] By Walid Maalouli

```

Pi Calculator
By Walid Maalouli
August 2007

# of decimals (mult. of 8)
(Maximum of 5200 decimals)

      240

Pi=3.
14159265 35897932 38462643
38327950 28841971 69399375
10582097 49445923 07816406
28620899 86280348 25342117
06798214 80865132 82306647
09384460 95505822 31725359
40812848 11174502 84102701
93852110 55596446 22948954
93038196 44288109 75665933
44612847 56482337 86783165

End. Press any key to exit
    
```

If you have ever had the urge to calculate many decimals of Pi, then this program is for you. Originally written in XB, it can calculate up to 5200 decimals of Pi. The limitation is really available memory as well as time as it can take several hours to extract a large number of decimals. The result can be displayed on screen, saved in a file, or printed. **Fred Kaal** converted the program to c99, resulting in much faster calculations but limited to 2600 decimals due to limitations of c99.

Requirements: XB or E/A cartridge, 32K RAM, tape or disk drive. Printer optional.

Executable to run: PICALCXB (XB version) or PICALC (c99 version - E/A option 5)

Download Picalc:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

View the first 5200 Pi decimals calculated by Pi Calculator [here](#).

XB vesion:

Start from mega menu: G – B – 1

PGR:

Features: Title Screen, XB, One Player

Controls: Keyboard

c99 version:

Start from mega menu: G – B – 2

PGR:

Features: Title Screen, XB, One Player

Controls: Keyboard

TI-99/4A – Game Shelf Edutainment

Pi=3.

14159265 35897932 38462643 38327950 28841971 69399375 10582097 49445923 07816406
28620899 86280348 25342117 06798214 80865132 82306647 09384460 95505822
31725359 40812848 11174502 84102701 93852110 55596446 22948954 93038196 44288109
75665933 44612847 56482337 86783165 27120190 91456485 66923460 34861045
43266482 13393607 26024914 12737245 87006606 31558817 48815209 20962829 25409171
53643678 92590360 01133053 05488204 66521384 14695194 15116094 33057270
36575959 19530921 86117381 93261179 31051185 48074462 37996274 95673518 85752724
89122793 81830119 49129833 67336244 06566430 86021394 94639522 47371907
02179860 94370277 05392171 76293176 75238467 48184676 69405132 00056812 71452635
60827785 77134275 77896091 73637178 72146844 09012249 53430146 54958537
10507922 79689258 92354201 99561121 29021960 86403441 81598136 29774771 30996051
87072113 49999998 37297804 99510597 31732816 09631859 50244594 55346908
30264252 23082533 44685035 26193118 81710100 03137838 75288658 75332083 81420617
17766914 73035982 53490428 75546873 11595628 63882353 78759375 19577818
57780532 17122680 66130019 27876611 19590921 64201989 38095257 20106548 58632788
65936153 38182796 82303019 52035301 85296899 57736225 99413891 24972177
52834791 31515574 85724245 41506959 50829533 11686172 78558890 75098381 75463746
49393192 55060400 92770167 11390098 48824012 85836160 35637076 60104710
18194295 55961989 46767837 44944825 53797747 26847104 04753464 62080466 84259069
49129331 36770289 89152104 75216205 69660240 58038150 19351125 33824300
35587640 24749647 32639141 99272604 26992279 67823547 81636009 34172164 12199245
86315030 28618297 45557067 49838505 49458858 69269956 90927210 79750930
29553211 65344987 20275596 02364806 65499119 88183479 77535663 69807426 54252786
25518184 17574672 89097777 27938000 81647060 01614524 91921732 17214772
35014144 19735685 48161361 15735255 21334757 41849468 43852332 39073941 43334547
76241686 25189835 69485562 09921922 21842725 50254256 88767179 04946016
53466804 98862723 27917860 85784383 82796797 66814541 00953883 78636095 06800642
25125205 11739298 48960841 28488626 94560424 19652850 22210661 18630674
42786220 39194945 04712371 37869609 56364371 91728746 77646575 73962413 89086583
26459958 13390478 02759009 94657640 78951269 46839835 25957098 25822620
52248940 77267194 78268482 60147699 09026401 36394437 45530506 82034962 52451749
39965143 14298091 90659250 93722169 64615157 09858387 41059788 59597729
75498930 16175392 84681382 68683868 94277415 59918559 25245953 95943104 99725246
80845987 27364469 58486538 36736222 62609912 46080512 43884390 45124413
65497627 80797175 69143599 77001296 16089441 69486855 58484063 53422072 22582848
86481584 56028506 01684273 94522674 67678895 25213852 25499546 66727823
98645659 61163548 86230577 45649803 55936345 68174324 11251507 60694794 51096596
09402522 88797108 93145669 13686722 87489405 60101503 30861792 86809208
74760917 82493858 90097149 09675985 26136554 97818931 29784821 68299894 87226588
04857564 01427047 75551323 79641451 52374623 43645428 58444795 26586782
10511413 54735739 52311342 71661021 35969536 23144295 24849371 87110145 76540359
02799344 03742007 31057853 90621983 87447808 47848968 33214457 13868751
94350643 02184531 91048481 00537061 46806749 19278191 19793995 20614196 63428754
44064374 51237181 92179998 39101591 95618146 75142691 23974894 09071864
94231961 56794520 80951465 50225231 60388193 01420937 62137855 95663893 77870830
39069792 07734672 21825625 99661501 42150306 80384477 34549202 60541466
59252014 97442850 73251866 60021324 34088190 71048633 17346496 51453905 72626856
10055081 06658796 99816357 47363840 52571459 10289706 41401109 71206280
43903975 95156771 57700420 33786993 60072305 58763176 35942187 31251471 20532928
19182618 61258673 21579198 41484882 91644706 09575270 69572209 17567116
72291098 16909152 80173506 71274858 32228718 35209353 96572512 10835791 51369882
09144421 00675103 34671103 14126711 13699086 58516398 31501970 16515116
85171437 65761835 15565088 49099898 59982387 34552833 16355076 47918535 89322618
54896321 32933089 85706420 46752590 70915481 41654985 94616371 80270981
99430992 44889575 71282890 59232332 60972997 12084433 57326548 93823911 93259746
36673058 36041428 13883032 03824903 75898524 37441702 91327656 18093773
44403070 74692112 01913020 33038019 76211011 00449293 21516084 24448596 37669838
95228684 78312355 26582131 44957685 72624334 41893039 68642624 34107732
26978028 07318915 44110104 46823252 71620105 26522721 11660396 66557309 25471105
57853763 46682065 31098965 26918620 56476931 25705863 56620185 58100729
36065987 64861179 10453348 85034611 36576867 53249441 66803962 65797877 18556084
55296541 26654085 30614344 43185867 69751456 61406800 70023787 76591344
01712749 47042056 22305389 94561314 07112700 04078547 33269939 08145466 46458807
97270826 68306343 28587856 98305235 80893306 57574067 95457163 77525420
21149557 61581400 25012622 85941302 16471550 97925923 09907965 47376125 51765675
13575178 29666454 77917450 11299614 89030463 99471329 62107340 43751895
73596145 89019389 71311179 04297828 56475032 03198691 51402870 80859904 80109412
14722131 79476477 72622414 25485454 03321571 85306142 28813758 50430633
21751829 79866223 71721591 60771669 25474873 89866549 49450114 65406284 33663937
90039769 26567214 63853067 36096571 20918076 38327166 41627488 88007869
25602902 28472104 03172118 60820419 00042296 61711963 77921337 57511495 95015660
49631862 94726547 36425230 81770367 51590673 50235072 83540567 04038674
35136222 24771589 15049530 98444893 33096340 87807693 25993978 05419341 44737744
18426312 98608099 88868741 32604721 56951623 96586457 30216315 98193195
16735381 29741677 29478672 42292465 43668009 80676928 23828068 99640048 24354037
01416314 96589794 09243237 89690706 97794223 62508221 68895738 37986230
01593776 47165122 89357860 15881543

Game of Life

G-B-3 [Disk: 307-GALI] By Mark Wills



Few games are more venerable than this one yet its appeal remains timeless. This is essentially a simulation of the life cycle of cellular automata where your screen represents the world. You place single cells in the world then watch them reproduce and die, creating in the process some fascinating patterns that seem to have a life of their own. Some end up in stable patterns while others migrate around and affect the lives of surrounding cells. This version of Life is very well done and fast, with features such as a screen editor as well as a wrap-around world. An instant classic.

Requirements: Editor/Assembler cartridge, 32K RAM, disk drive.

Executable to run: LIFE (E/A option 5)

Download Game of Life:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – B – 3

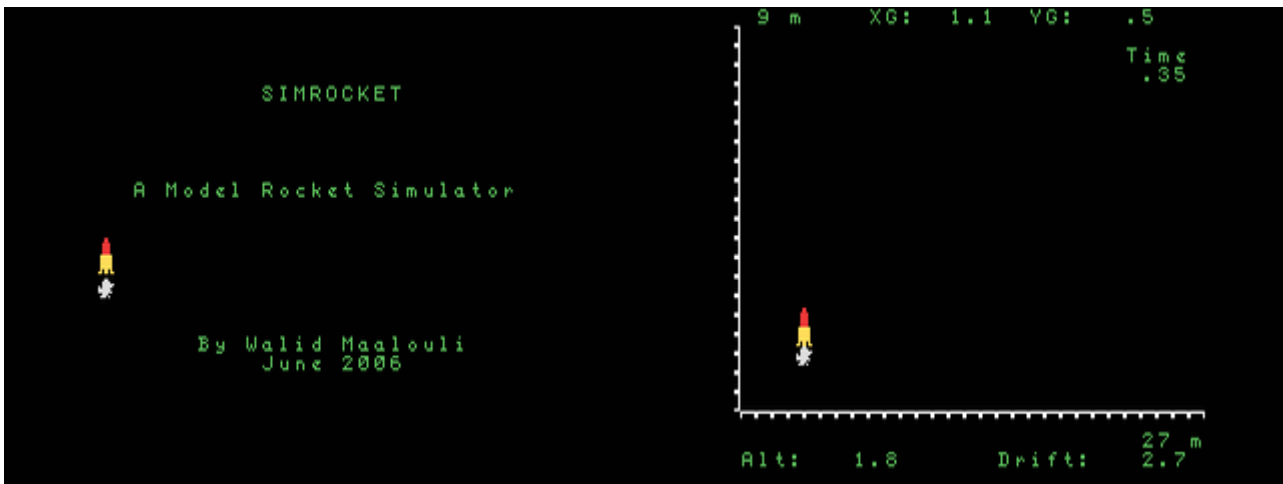
PGR: ***

Features: Title Screen, EA5, One Player

Controls: Keyboard

SimRocket

G-B-4 [Disk: 308-SIRO] By Walid Maalouli



For the model rocketeers among you, this program is a model rocket flight simulator which takes into account the rocket's basic specifications, motor, as well as drag, wind speed, launch rod angle and recovery type. Flight data can be viewed in 2D animation, saved to disk or printed. This is a great tool to test different rocket and launch configurations without risking the real thing, but can also be fun to play with even if you don't fly rockets.

Requirements: XB cartridge, 32K RAM, disk drive.

Executable to run: SIMROCKET

Download SimRocket:

[\[TIFILES format\]](#)

[\[V9T9 .DSK Format\]](#)

Start from mega menu: G – B – 4

PGR:

Features: Title Screen, XB, One Player, Sound

Controls: Keyboard

TI-99/4A – Game Shelf Edutainment

SIMROCKET

A Model Rocket Simulator

By Walid Maalouli

June 2006

This program attempts to simulate the flight of a model rocket taking into account drag, wind speed, launch rod angle, motor specifications and recovery type.

Requirement:

TI 99/4A, 32k RAM, Extended Basic, disk drive.

Usage:

The program starts with a short introductory screen then you are presented with the main menu. From there you can start a new simulation, load a saved simulation from disk, view the data of the simulation currently in memory, change the base disk drive (default is DSK1) or exit the program. If you wish to permanently change the default drive, you will need to edit line 180 of the program, making sure that the drive name is followed by a period.

For a new simulation, you will be presented with several input screen requesting a variety of data needed. The program has an extensive database of most common rocket motors which will simplify data entry, but you can always enter custom values. Remember that with the exception of wind speed, the Metric System is used as it is the internationally accepted measurement system.

Once all the data is entered, a recap of the simulation starting state will be displayed, and you will then have the option to modify it, launch the rocket, or view the launch data if already available. If the base data is modified, then any previous launch data is discarded and you will have to launch the rocket again.

When you launch the rocket, the program will calculate its flight path using 0.05 seconds intervals, performing many floating-point calculations along the way. Therefore, in view of the slow processing speed of the TI, it will take several minutes to complete a flight simulation.

Once the simulation is complete, a summary of the rocket flight will be presented, with an option to print it to the parallel (PIO) port, save it to disk, view it in 2D animation or go back to the simulation base data screen. The program will always save to the base disk drive and use the simulation title as a filename.

In 2D animation mode, you will be presented with a graphical representation of

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the flight path. On this screen, XG and YG represent the scale in meters of the graph graduations. Wind always blows from left to right. Once the animation is complete, you may return to the flight data screen by pressing any key.

Notes:

As with any simulation, the results are as good as the data you feed it. One of the limitations of the program is that it cannot model the exact shape of the rocket, and hence wind-corking effects cannot be simulated and this can induce a significant error in the total rocket drift. In addition, air density variations are not taken into effect and a constant wind speed is assumed. Nonetheless, the results obtained correlate quite acceptably with far more advanced rocket simulators such as RockSim for the PC/Mac computers (Available at ApogeeRockets.com).

As usual, this program is completely Freeware, and you are welcome to make any modifications you wish as long as they are shared with the rest of the TI community.

Please feel free to contact me with comments or bug reports at [wmaalouli\(at\)comcast.net](mailto:wmaalouli(at)comcast.net)

Have fun!

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TI Game Shelf – Mega Menu Screens

TI Game Shelf – Mega Menu Screen overview

```
=====  
Mar/03/2020 10:49  
=====  
RXB2015 Game Shelf 1  
=====  
1-Bouncy Obst CTRL+H=Help  
2-Pengo 3-Blockade  
3-Kblitz 4-Bounce Pliss  
4-Tron 5-Turmoil 6-Jewel of 7*  
7-Red Planet 8-Mummies Tomb  
9-Night Stalk 0-Moon Rex  
A-Lunar Miss. B-Demolish  
C-Castle Con2 D-Eric  
E-Grail of Gods U-Exit  
S-Game Shelf 1  
K-Game Shelf 2  
3-M.P.TOOL
```

```
=====  
Mar/03/2020 10:49  
=====  
RXB2015 Game Shelf 1  
=====  
1-Bouncy Obst CTRL+H=Help  
2-Pengo 3-Blockade  
3-Kblitz 4-Bounce Pliss  
4-Tron 5-Turmoil 6-Jewel of 7*  
7-Red Planet 8-Mummies Tomb  
9-Night Stalk 0-Moon Rex  
A-Lunar Miss. B-Demolish  
C-Castle Con2 D-Eric  
E-Grail of Gods U-Exit  
S-Game Shelf 1  
K-Game Shelf 2  
3-M.P.TOOL
```

```
=====  
Mar/03/2020 11:31  
=====  
RXB2015 Game Shelf 2  
=====  
1-Tetris 2-Exxon UFO  
3-Tetris 4-Exxon UFO  
5-Load Hunter 6-Exxon UFO  
6-Bounce Babies 7-Exxon UFO  
7-Titanium 8-Exxon UFO  
8-Mr. Scramble 9-Exxon UFO  
9-Mad Marvin 0-Exxon UFO  
A-Run Run Run 1-Exxon UFO  
B-Calaix 2-Exxon UFO  
C-Bud Busters 3-Exxon UFO  
D-Zzzbler 4-Exxon UFO  
E-Perfect Push 5-Exxon UFO  
F-Maiden Mason 6-Exxon UFO  
S-Game Shelf 2  
K-Game Shelf 3  
3-M.P.TOOL
```

```
=====  
Mar/03/2020 11:32  
=====  
RXB2015 Game Shelf 3  
=====  
1-Nether Lander CTRL+H=Help  
2-High Fighter 3-Deimos Attack  
3-Ti-Keno 4-Cross Pical  
4-Space Har 5-Ti-Clickety  
5-Night Mare 6-Ti-Clickety  
6-Bang Bang 7-Astro blitz  
7-Lasso 8-Tre day  
8-Tu. of Doom 9-Miss. 'X'  
9-Mission 0-Adventure  
A-Adventure B-Sargon I  
B-Sargon I C-The Mine  
C-The Mine D-Clowns  
E-Clowns U-Exit  
S-Game Shelf 3  
K-Game Shelf 4  
3-M.P.TOOL
```

```
=====  
Mar/03/2020 11:33  
=====  
RXB2015 Game Shelf 4  
=====  
1-Bonadit 2-Ti-Clickety  
2-Bonadit 3-Ti-Clickety  
3-Bonadit 4-Ti-Clickety  
4-Bonadit 5-Ti-Clickety  
5-Bonadit 6-Ti-Clickety  
6-Bonadit 7-Ti-Clickety  
7-Bonadit 8-Ti-Clickety  
8-Bonadit 9-Ti-Clickety  
9-Bonadit 0-Ti-Clickety  
A-Ti-Clickety B-Ti-Clickety  
C-Ti-Clickety D-Ti-Clickety  
E-Ti-Clickety U-Exit  
S-Game Shelf 4  
K-Game Shelf 5  
3-M.P.TOOL
```

TI Game Shelf – Mega Menu Screens

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=====
Mar/03/2020                               11:33
=====
RXB2015                                     Game Shelf 5
=====
1-Living Tomb                               G-CTRL+H=Help
2-Stratego                                  H-In The Dark
3-Tiles                                     I-Space Trek
4-Quest                                     J-panz. Strike
5-Dark Maze                                K-Back Digger
6-Refreshables                             L-Prison Pent
7-Crystal Cave                             M-Moon Lander
8-Royal Game Ur                            N-Hangy Rider
9-Intercept                                O-Heavy Maze
A-Oregon Trail                             P-Maple Mad.
B-Wizard                                     Q-Mirror Maze
C-Flip Square                              R-Space Tra
D-Notepad                                   S-Mazes
E-Floora Way                               U-Texan Dealer
F-Billy Ball
G-SK1=MM
H-SK2=MM.P.XB
I-SK3=MM.P.TOOL
=====

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=====
Mar/03/2020                               11:34
=====
RXB2015                                     Game Shelf 6
=====
1-TI Lego                                  G-Pyramid
2-Biplane                                  H-Missile War
3-Ghost House                              I-Honey Comb
4-Bar X                                     J-Thief
5-Clear Action                             K-Trombone
6-Quasimodo                               L-Roman War
7-Ball 2.0                                 M-DeVastator
8-Break Out                                N-Void
9-Arlington                                O-Heist
A-Riding Brand                             P-Sudoku99
B-Blackbeard                               R-The Hermit
C-Pharaoh Tomb                             S-Airline
D-CN:Sector                                T-Mars Attack
E-Balloon Wars                             U-Fishy
F-Manzeman
G-SK1=MM
H-SK2=MM.P.XB
I-SK3=MM.P.TOOL
=====

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=====
Mar/03/2020                               11:35
=====
RXB2015                                     Game Shelf 7
=====
1-Aztec                                     G-CTRL+H=Help
2-Nighty Sniper                            H-Astromania
3-Slinky                                    I-Ninja
4-Lost Patrol                              J-City Protect
5-Frenzy                                    K-Mini Raiders
6-Tower                                     L-Telex. Hunt
7-Hangman PEN                              M-Treas. Hunt
8-Teufel                                    N-Wizards Lair
9-Maya I                                     O-Wiz. Rev. Lenge
A-Psychiatris                              P-Legends II
B-Puzzles                                   Q-Legends III
C-TI Casino                                R-Carfax Abbey
D-Robot War                                 U-Return Isle
E-Dark Caves2
F-Daffy
G-SK1=MM
H-SK2=MM.P.XB
I-SK3=MM.P.TOOL
=====

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=====
Mar/03/2020                               11:40
=====
RXB2015                                     Game Shelf 8
=====
1-Star Wars                                G-CTRL+H=Help
2-Goblins                                  H-Bowling
3-Spring Jack                              I-Asteroids
4-Patscram                                  J-Romeo
5-Asteroid                                 K-TI-Tris U3
6-Beetle Walk                              L-Crazy Cliff
7-Icecream Van                             M-Backgammon
8-Space Scout                              N-Skiing
9-TI Sudoku                                O-Battlefront
A-Fireball                                 P-Jump-A-Peg
B-Krazy Koala                              R-Runway 180
C-Sky Rescue                               S-Periscope
D-Galaxy                                    T-Bouncer
E-Missile Com.                             U-Sea Battle
F-Spider Bop
G-SK1=MM
H-SK2=MM.P.XB
I-SK3=MM.P.TOOL
=====

```

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=====
Mar/03/2020                               11:41
=====
RXB2015                                     Game Shelf 9
=====
1-At the Races                             G-CTRL+H=Help
2-Othello                                  H-Bertie
3-Eliza                                    I-Hot Rod
4-Lost Ruins                               J-Frosti
5-Alien Ruins                              K-Star Invader
6-Circus                                    L-XLander
7-Jump Miner                               M-Tank
8-Nanuk                                     N-Helikopter
9-Stardust                                 O-Reaction
A-Golf                                       P-Word
B-Par Fore                                  Q-Bomber
C-Mille Bornes                             R-Meteor
D-Escape                                    S-Meteor
E-Skier 99                                 U-Meteor
F-Capt. Scram
G-SK1=MM
H-SK2=MM.P.XB
I-SK3=MM.P.TOOL
=====

```

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=====
Mar/03/2020                               11:42
=====
RXB2015                                     Game Shelf 10
=====
1-Aperture                                 G-Declathon
2-Bloxo-TI-Z                              H-Winging It
3-Dedalus                                  I-TI Puck
4-Nightmare                               J-TI-Trek
5-Khe Sanh                                K-Checkers
6-Morphy                                    L-Wild TI Key
7-Witch Hour                              M-Orbital
8-Romulan                                  N-Musings AI
9-Camelot                                  O-Core War
A-Robot finds                              P-Musings
B-Grabbers                                 Q-Nano Process
C-Battleships                             R-Nano Assembl
D-3DLabyrinth                             S-Nano Editor
E-Racing                                   T-Boolean
F-Bonkers                                  U-SkyChart
G-SK1=MM
H-SK2=MM.P.XB
I-SK3=MM.P.TOOL
=====

```