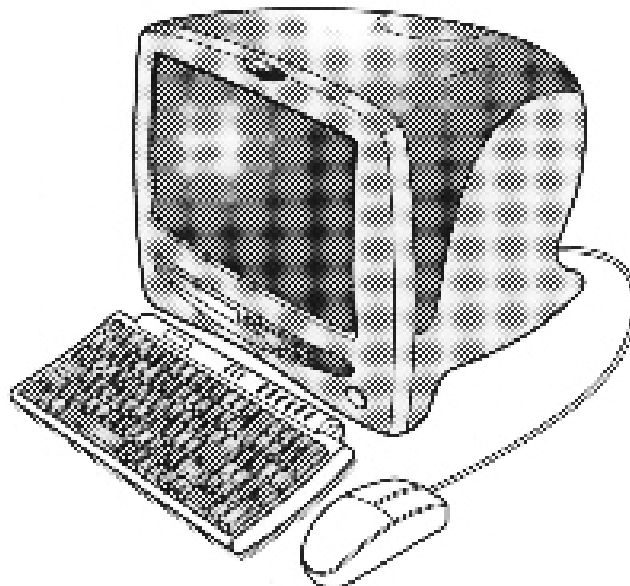


**1 How to use this manual**

It is very easy to set up the computer system with this manual. Please read this guide carefully, before you begin.

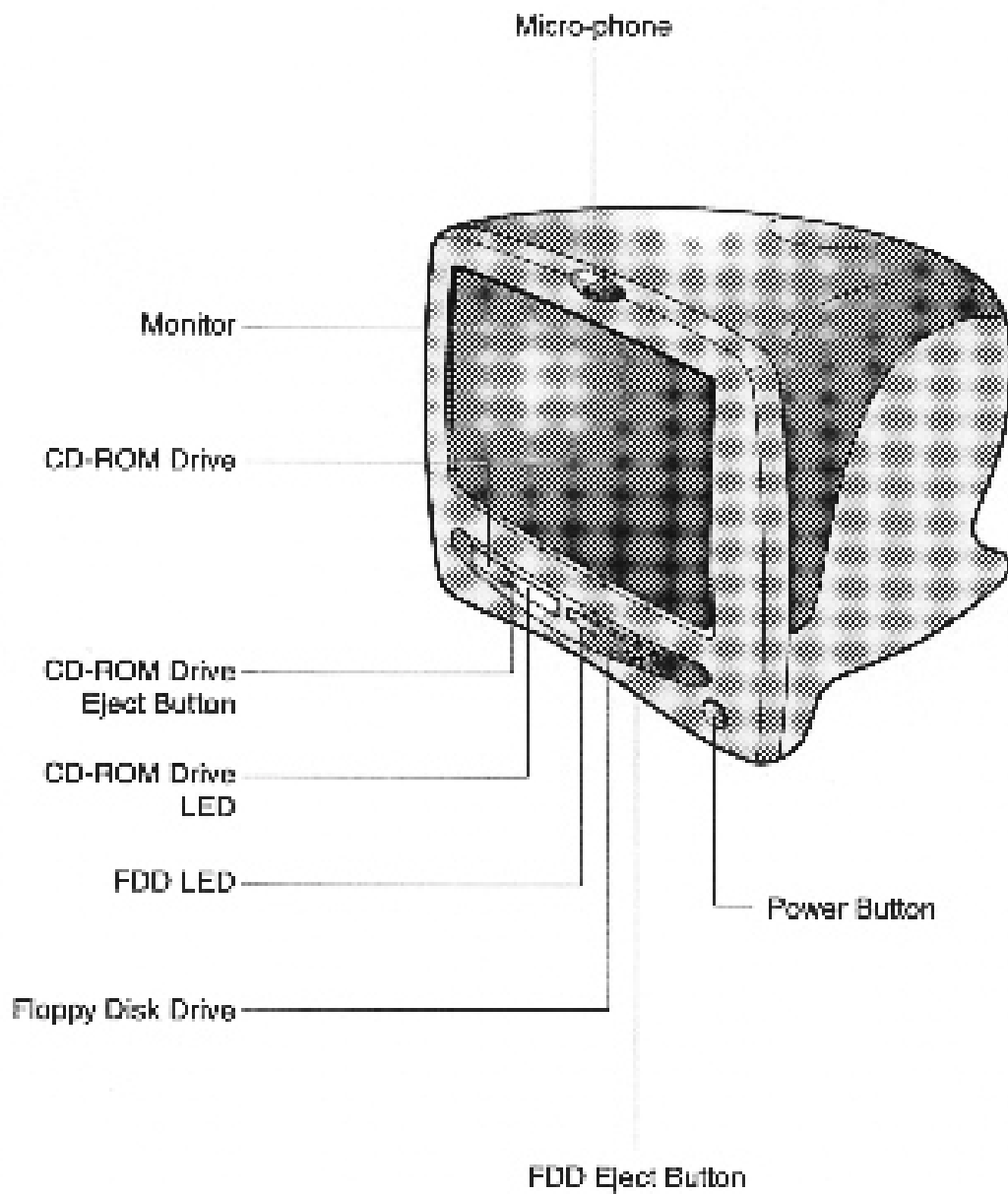
*⚠* For your safety, remember to turn off the system and to disconnect all the cords and cables before opening the system chassis.

*⚠* To avoid electric shock, do not open the monitor frame chassis.



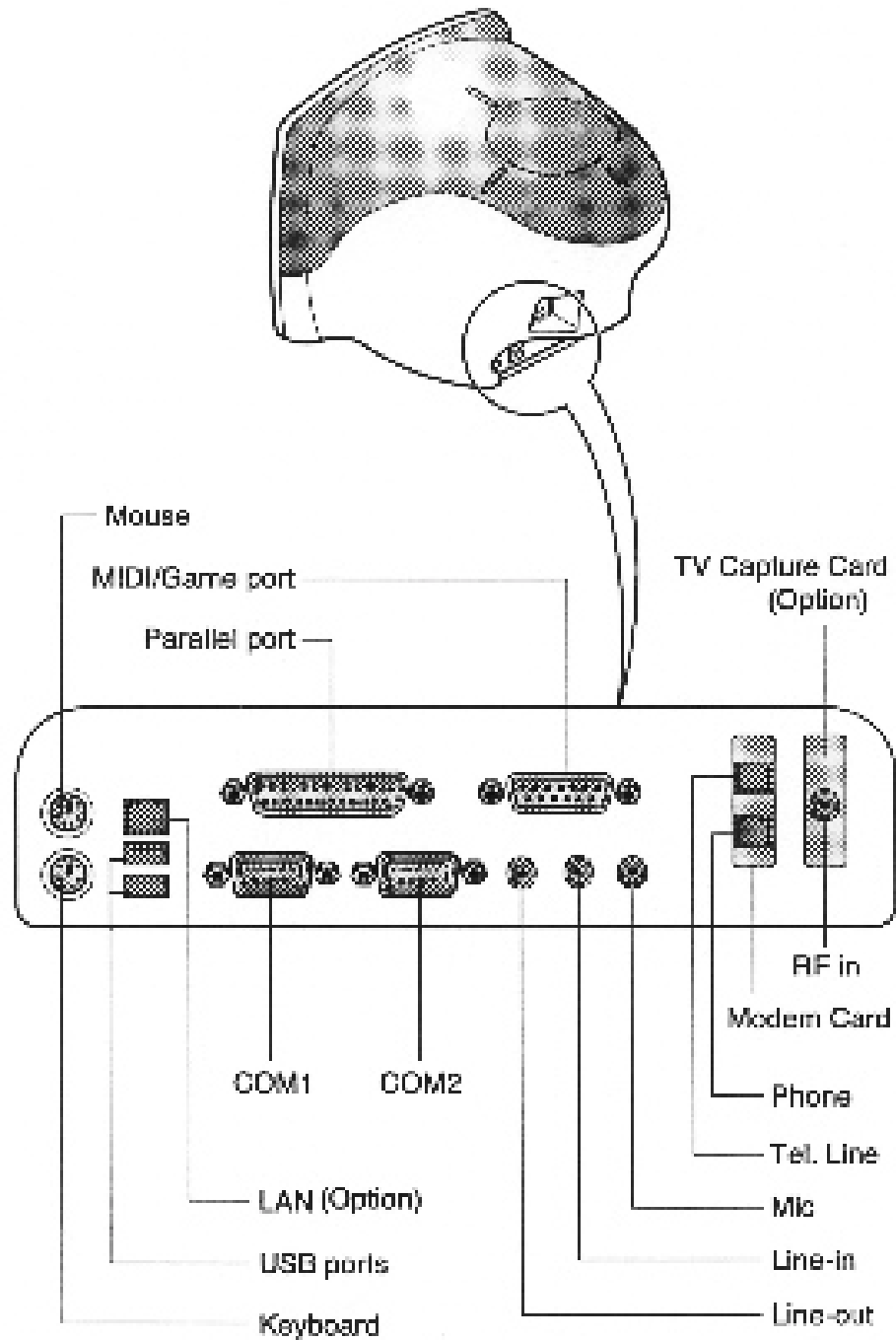
## Part 2 System Configuration

### 2.1 Front View



[Figure.2]

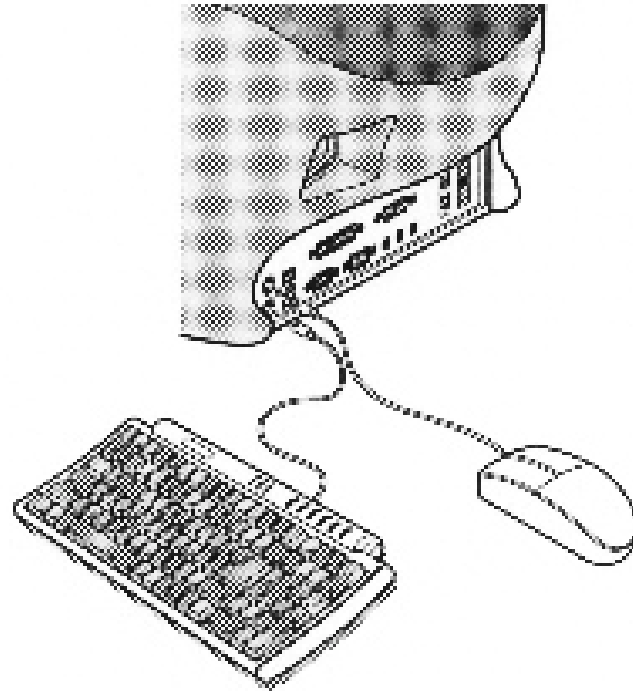
## 2.2 Rear View



[Figure.3]

## Part 3 Setting Up the System

### 3 Plug in the keyboard and mouse



[Figure.4]

Keyboard and mouse connectors are on the rear panel.  
Connect the keyboard to the keyboard connector colored blue.  
Connect the mouse to the mouse connector colored green.

This model provides the ability to upgrade its components and add options that gives your system greater flexibility. This chapter describes how to properly open and close the chassis, remove and replace the internal metal chassis, as well as install optional components or upgrade ones.



The system is only warranted to be free from defects in its original configuration. Damage caused to your computer because of improper opening or closing or incorrect installation of components may void the warranty.

### **Are you ready?**

To make working inside your computer easier be sure you have proper lighting and a clean and comfortable workspace. If you temporarily disconnect cables or remove any components, make sure you note the position of the connectors and slots so that you can reassemble the system correctly.

#### **Rules for safety**

- 1) Disconnect all AC power source to your computer and all peripherals. The system may be damaged if you attempt to remove or add any device while the power cable is still connected.
- 2) Disconnect any telephone or telecommunication lines from the computer to reduce the chance of personal injury or electrical shock that might damage the equipment.
- 3) Please wait 5 seconds after turning off the computer before disconnecting any peripherals from the computer. Failure to do so may result in damage to the system board.
- 4) To avoid static electricity that might harm internal components, please touch an unpainted metal surface on the computer chassis such as the power supply, before you begin to work on the system and periodically throughout the process. Improper handling of components or touching contacts on a card or pins on a IC chip might cause damage.

**5.1 Factory preset display mode**

Preset mode	Resolution		Frequency	
	H(Pixel)	V(Line)	H(KHz)	V(Hz)
VGA	640	350	31.5	70
	720	400	31.5	70
	640	480	31.5	60
VESA	640	480	37.5	75
	640	480	43.2	85
	800	600	37.9	60
	800	600	48.9	75
	800	600	53.5	85
	1024	768	48.3	60
	1024	768	63.7	85
	1280	1024	64.0	60

**5.2 Specifications**

Item	Specifications
Size	17"(16" viewable)
Dot Pitch	0.27mm
Max Resolution(HXV)	1280X1024
Horizontal frequency	30~70KHz
Vertical frequency	50~150Hz
Video Dot Rate	110MHz
Active Display Area	Preset 305X225mm Full 324X244mm
Dimensions	591mmx571mmx572mm(Carton Box)
Weight	Net Weight 21.0Kg Gross Weight 25.0Kg
Features	Invar shadow mask ASIAnti-Static coating

## 6 Specification

Processor	Socket 370 Support Intel Pentium® III/Coppermine and Celeron® processors
Chipset	VIA® ProMedia AC'97 North Bridge: VT8501 South Bridge: VT82060A
BIOS	Award® BIOS, support ACPI, DMI, Plug-and-Play, Boot from CD-ROM, SCSI, LSI-120, and ZIP devices Symbios® SCSI BIOS, Anti-virus BIOS to prevent boot virus
System Memory	2x 168 pin DIMM Sockets support up to 512MB SDRAM memory capacity Support 32/64/128/256MB Memory Module
On-board I/O Features	1x Floppy Port (Up to 2.88MB) 1x Parallel Port (EPP, ECP Port) 2x Serial Port (16550 Fast UART Compatible) 2x USB Ports 1x IrDA / IrXX Header 1x Modem Port 1x Audio Jack: Line-out, Line-in and Mic-in 1x Video Port
Advanced Features	AGP2x support AC'97 Audio on board AMR for MO37 modem upgrade Modem Ring-in Remote Power on Wake up on LAN Hardware Monitoring function
PCI Bus Master IDE	2x Ultra DMA/66 IDE Ports support up to 66MB/Sec.
Expansion Slots	1x AMR slot, 1x 32-bit PCI Bus Master slot
ATX Power Connector	3V, 5V and 12V 20-Pin ATX Power connector
Switching VR	Switching Voltage Regulator to support 1.3V to 3.5V
Form Factor	ATX Form factor 206mm by 190mm

## 7.1 About the BIOS

The Mainboard BIOS(Basic Input/Output System) acts as the bridge between your Hardware(CPU, Disk Drives, Video, etc.) and Operating System Software(Windows 95, OS/2 and so on). The BIOS Setup (also called CMOS Setup) is where many hardware configuration options are set and stored. This configuration information will remain in the BIOS until it is changed, or cleared by removing the battery for a while then reinstalling it or by setting the Clear CMOS jumper if there is one.

CMOS(Complementary Metal Oxide Semiconductor) refers to the chip in which the BIOS information is stored. This mainboard features Award BIOS, which provides an easy to use Setup program to aid in hardware configuration. In this section we will look at the various menus and options contained in the Award BIOS Setup Program. This mainboard also features a Flash BIOS. A Flash BIOS can be upgraded via software, thereby eliminating the need to actually replace the BIOS Chip on the mainboard. Procedures for updating the BIOS follow this section.

The Award BIOS installed in your computer system's ROM(Read Only Memory) is a custom version of an industry standard BIOS. This means that it supports Intel processor in a standard IBM AT compatible input/output system.

### 7.1.1 Using Setup

In general, you use the arrow keys to highlight items, <Enter> to select or display the possible selections, <PageUp> and <PageDown> keys to change entries, <F1> for general help and <Esc> to quit.

An item marked with an arrow indicates that there is a submenu for this function. A gray-out item marked with an x indicates that the item is not available. The item may be associated with another item and its availability is dependent on that associated item. Gray-out items are for information display only and contain no selectable fields.



### 7.1.2 Getting Help

Pressing <F1> will display a help window that describes the appropriate keys to use. Pressing <Enter> will display a small help window that describes the possible selections for the highlighted item. To exit the Help Window press <Esc>.

A brief description of some highlighted selection may appear at the right frame (titled Item Help) of the setup screen.

### 7.1.3 A Final Note about Setup

Not all systems have the same Setup. While the basic look and function of the Setup program remains the same for all systems, individual motherboard and chipset combinations require custom configurations. For example, you may find that your Setup main menu has a different number of entries from the main menu displayed in this manual. These are simply features not supported (or not user configurable) on your system.

## 7.2 Main Menu

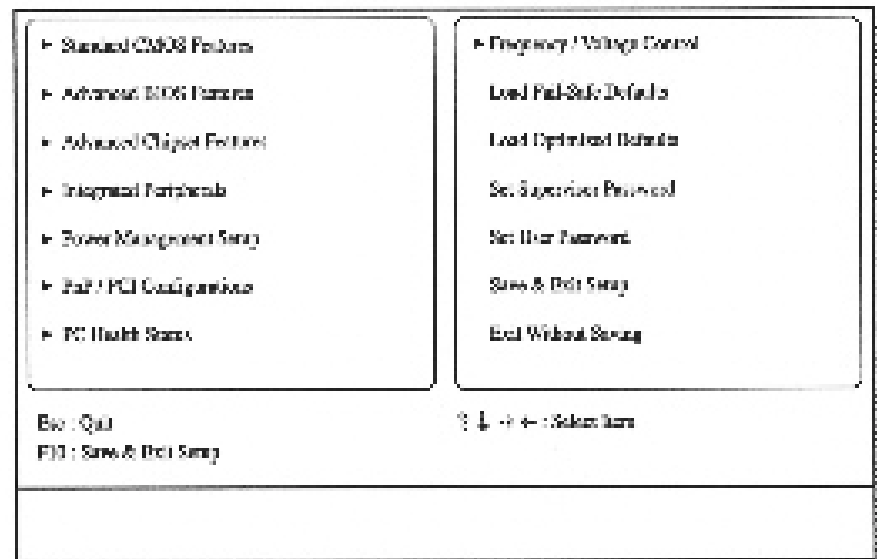
Shortly after the system is powered on, provided a CPU and sufficient RAM are installed, you will see the message:

**Press DEL to enter SETUP**

- Press the DEL key to enter the Award BIOS Setup program.

Once you enter the Award BIOS CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

CMOS Setup Utility - Copyright (C) 1984-2000 Award Software



Note that a brief description of each highlighted selection appears at the bottom of the screen.

## 7.3 Standard CMOS Features

This first menu is where the most basic hardware options are set. Information regarding the system clock, IDE hard disks and floppy drives are stored and configured in this section. To enter the Standard CMOS Features setup screen, press the [ENTER] key with this menu highlighted.

Upon entering the Standard CMOS Setup screen, you will see a screen like that below:

		Item Help
Date (mm/dd/yy): Time(hh:mm:ss)	Mon, Dec 18 2000 00:00:00	Menu Level >
IDE Primary Master	Free Disk 2111MB	
IDE Primary Slave	Free Disk None	
IDE Secondary Master	Free Disk None	
IDE Secondary Slave	Free Disk None	
Drive A	1.44M, 3.5 in	
Drive B	None	
Video	EGA/VGA	
Init Dc	At, Full Keyboard	
Bios Memory	64KB	
Extended Memory	1399KB	
Total Memory	1463KB	

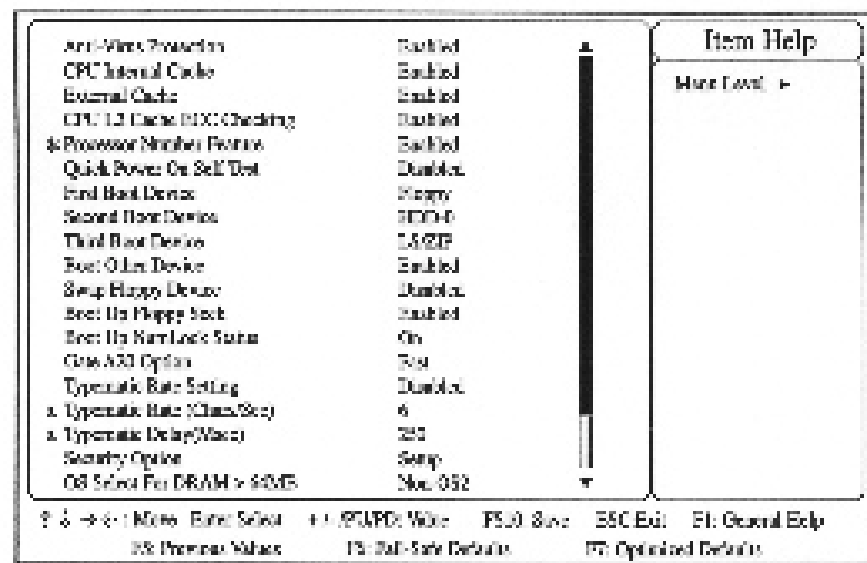
↑ ↓ → ← : Move Enter>Select    F10: Save    ESC: Exit    F1: General Help  
F8: Previous Values    F9: Exit-Save Defaults    F7: Load Defaults

- ❑ **Date and Time**  
Use the arrow keys to move to and highlight the Date option. Select the Month by using the PgDn and PgUp keys. This is how most settings will be configured. Then, move to the day, year and time via the arrow keys to finish setting the system date and time.
- ❑ **IDE Primary Master, IDE Primary Slave, IDE Secondary Master, IDE Secondary Slave**  
These four options relate to the (4) IDE hard drives, CD-ROMs or other ATAPI devices that can be controlled via the on-board IDE controller. The IDE Primary Master setting specifies the first device on the primary IDE channel, IDE Primary Slave – the second, IDE Secondary Master and IDE Secondary Slave specify the devices on the secondary channel.

## 7.4

### Advanced BIOS Features

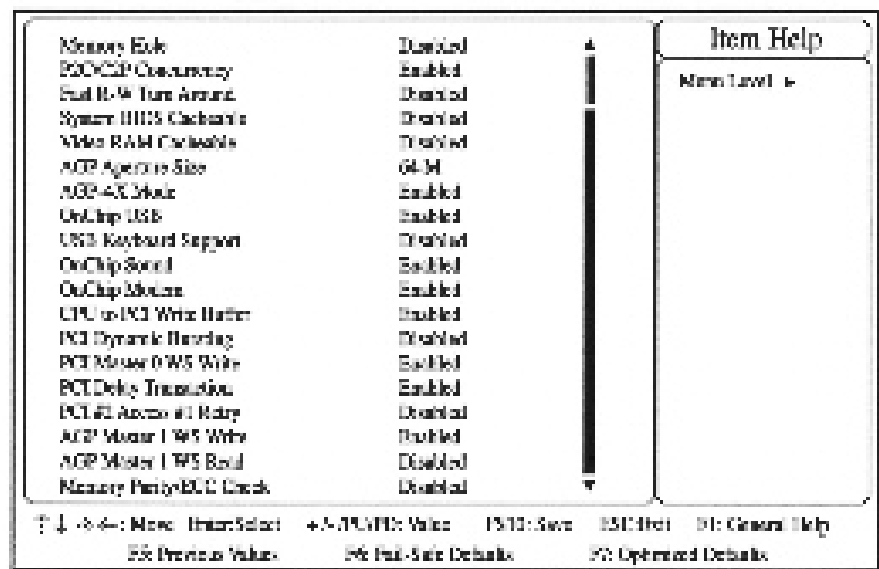
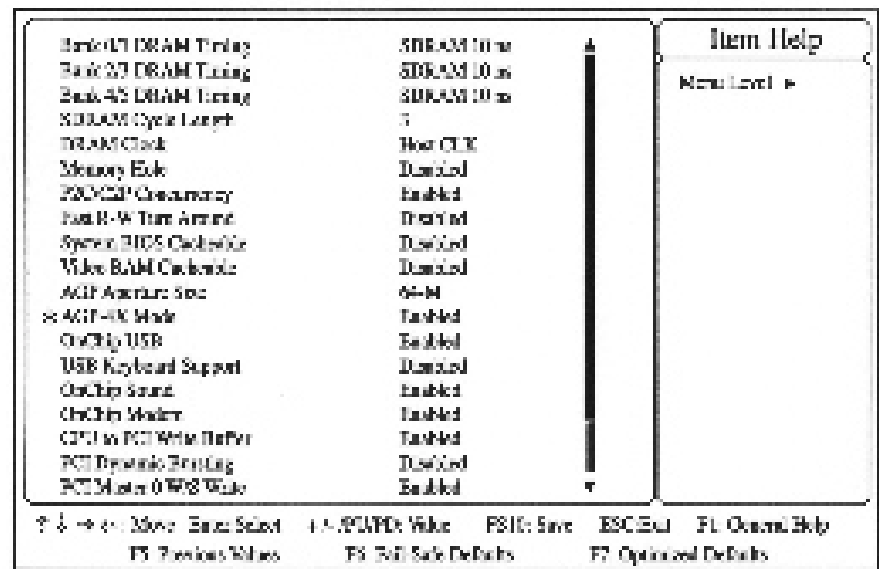
This menu provides access to more advanced BIOS configuration settings that deal with overall performance of the system and peripheral setup. This section allows you to configure your system for advanced operation. You have the opportunity to select the system's default speed, boot up sequence, keyboard operation and security.



- ❑ **Anti-Virus Protection**  
Enables/Disables the built-in anti-virus for protection against boot virus infection. This Anti-Virus protection provides more complete virus protection by taking control early in the boot process.
- ❑ **CPU Internal Cache**  
Enables or Disables the Level1 Internal Cache memory. Generally, this would only be Disabled for troubleshooting purposes.
- ❑ **External Cache**  
Enables or Disables the Level2 External Cache memory. Generally, this would only be Disabled for troubleshooting purposes.
- ❑ **CPU L2 Cache ECC Checking**  
Enables or Disables ECC (Error Checking and Correcting) for the CPU's Level2 built-in cache.

## 7.5 Advanced Chipset Features

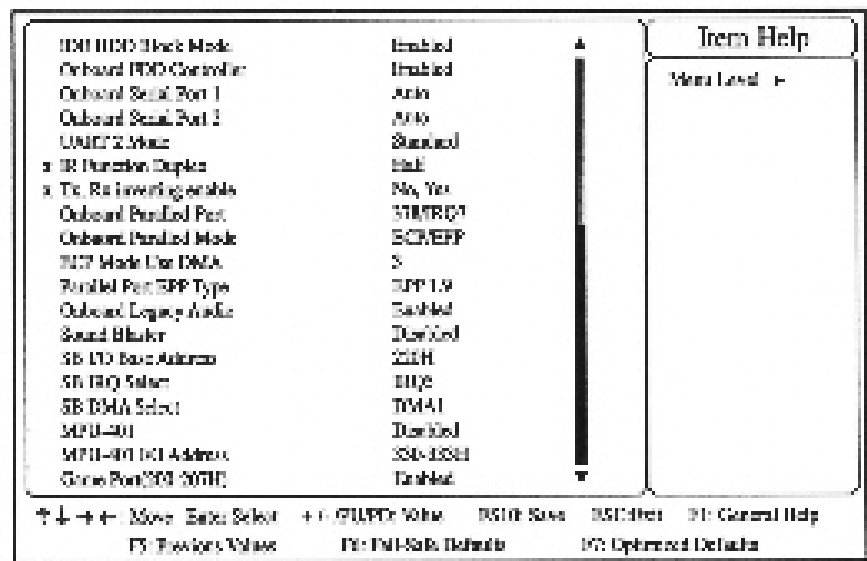
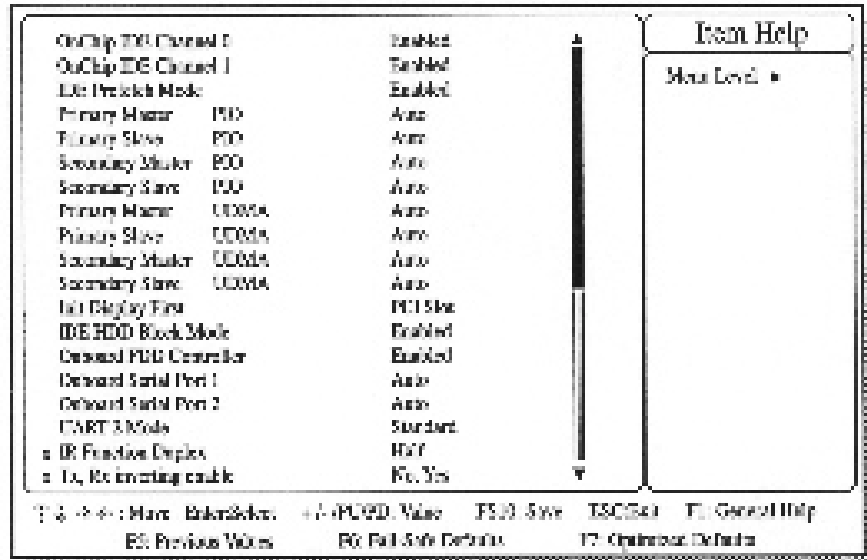
This setup menu contains advanced configuration options relating to the mainboard chipset. These options are rarely changed by the user.



- **Bank 0/1, 2/3, 4/5 DRAM Timing**  
 DRAM timing is controlled by the DRAM timing registers. The timings programmed into this register are dependent on the system design.

## 7.6 Integrated Peripherals

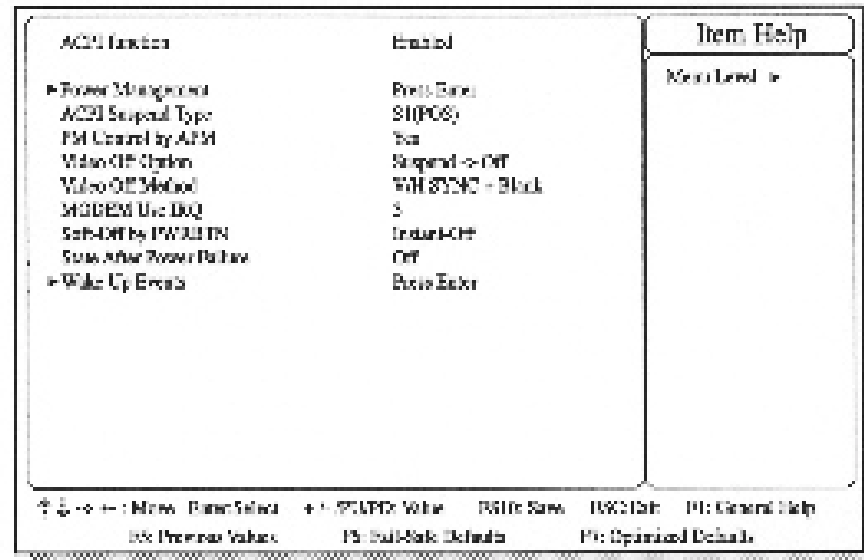
This menu is used to configure the integrated IDE subsystem and other peripherals.



## 7.7

### Power Management Setup

Power Management allows you to configure your system to use energy most efficiently, and still in a manner consistent with your own style of computer use.



#### ACPI function

This option allows you to enable/disable the Advanced Configuration and Power Interface, which makes hardware status information available to the operating system and offers improved power management. To make an ACPI system, you must use an ACPI OS such as Windows 98.



#### Power Management

Press <Enter> to bring up the submenu. This category allows you to select the type (or degree) of Green PC power saving and is directly related to the HDD Power Down, Doze Mode and Suspend Mode options in the submenu. There are three selections for Power Management, two of which have fixed mode settings:

User Defined	Set each mode individually. When Enabled, each range is from 10 sec. to 1 hr., except for HDD Power Down which ranges from 1 min. to 15 min.
Max Saving	Maximum power management - ONLY AVAILABLE FOR SL CPUs. Doze Mode = 10sec., Suspend Mode = 10 sec.
Min Saving	Minimum power management. Doze Mode = 1 hr, Suspend Mode = 1 hr.

## 7.8

### PnP/PCI Configurations

The PCI (Personal Component Interconnect) Bus was developed to address two important issues: a) How to allow peripheral devices to take the fullest advantage of the power of Pentium and Pentium Pro chip technology, and b) Provide a simpler installation process for peripheral devices, such as Network cards, EIDE or SCSI controllers.

PCI accomplishes these goals with its 32-bit Data path Local Bus design, and support for Plug & Play. Unlike older expansion bus architectures, PCI provides peripherals with a direct connection to the CPU and memory. The PCI bus runs at 33MHz and has a maximum transfer capability of 132MBps. With Plug & Play, the system BIOS automatically determines hardware resources for new peripherals, simplifying the installation of multiple interface cards.

This Setup Menu provides configuration options for the PCI Bus and its assigned resources.

PNP OS Installed	No	Item Help
Power Configuration Type	Disabled	Next Level >
Resources Controlled By	Auto(E820)	
IRQ Resources	Predefined	
DMA Resources	Predefined	
PCI/VGA Memory Setup	Disabled	
Assign IRQ For VGA	Enabled	
Assign IRQ For USB	Enabled	
SYNCHRONOUS SCSI BIOS	Auto	
↓ → ← : Move   Enter/Select   +/-: PNP/PCI Value   F10: Save   ESC: Exit   F1: General Help		
F8: Previous Value   F5: Full-Screen Defaults   F7: Optimized Defaults		



#### PNP OS Installed

Set to Yes if your operating system supports Plug & Play, such as Windows® 95.



## 7.9

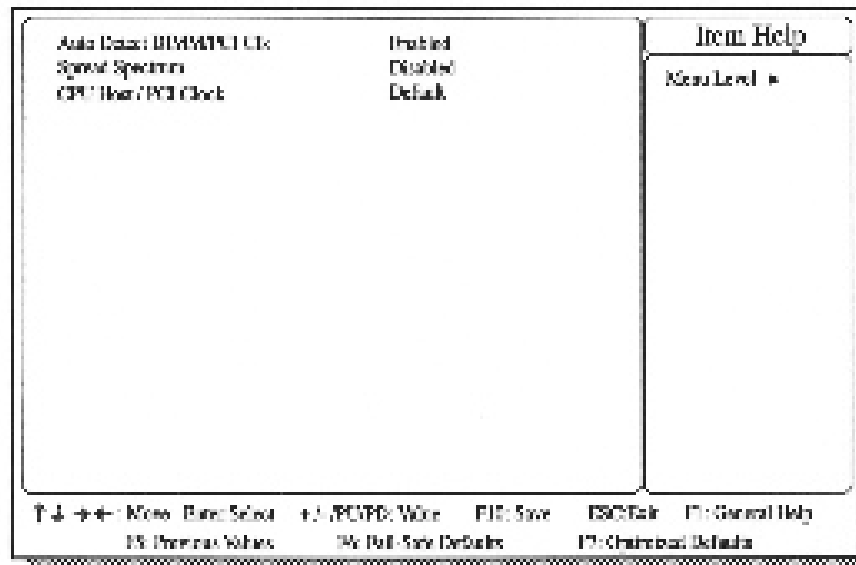
### PC Health Status

The onboard hardware monitor allows you to observe the current temperatures of the system and CPU, current speeds (in RPM, rotation per minute) of the system and CPU fans, as well as the various operating voltages. (If the fan is not installed, 0 RPM will be shown.)

Current CPU Temp.	39°C/99°F	Item Help More Load →
Current System Temp.	39°C/99°F	
Current CPU FAN1 Speed	1400RPM	
Current CPU FAN2 Speed	0 RPM	
Vcore	1.04V	
2.5V	1.50V	
3.3V	1.50V	
5V	4.97V	
12V	11.85V	
↑ ↓ → ← : Move. Esc: Exit. F1: General Help F5: Refresh Values. F6: Full Size Defaults. F7: Operating Defaults.		

## 7.10 Frequency / Voltage Control

Use this menu to specify your settings for frequency / voltage control.

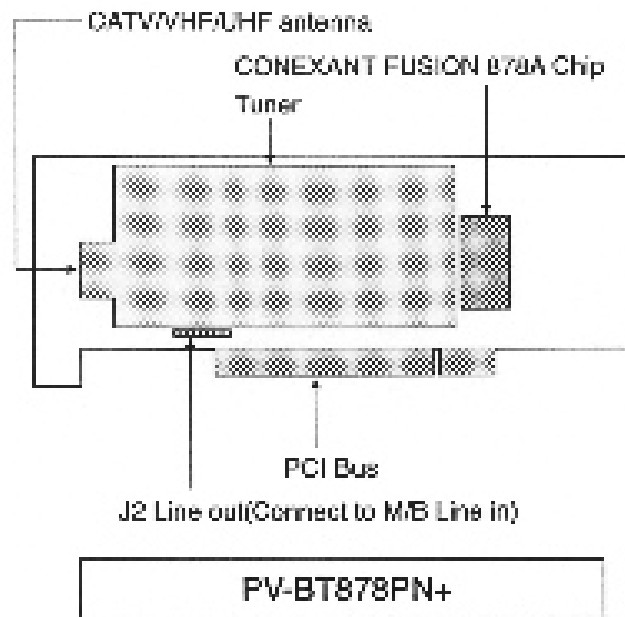


- ❑ **Auto Detect DIMM/PCI Clk**  
When enabled, any DIMM/PCI clock not in use will be disabled to reduce EMI radiation.
- ❑ **Spread Spectrum**  
The default is the optimal value determined by the system designer to reduce EMI radiation peak. Users should not attempt to change it.
- ❑ **CPU Host / PCI Clock**  
This option lets you select the CPU/PCI Bus clock. Overclocking may cause serious system damage.

## Part 8 TV Capture card (Option)

### 8.1 Specifications

#### 8.1.1 Adapter Configuration



### 8.2 Hardware Installation

- 1) If inserting the card into the slot is difficult, you can remove the converter(s) from TV tuner to allow for the installation of this card. Once the card is firmly seated, then re-plug the converter(s).
- 2) Connect the CATV/VHF/UHF antenna to the tuner input part of the card.
- 3) Plug the audio cable into the audio output port of this card J2. And plug the other end of the audio cable into "J20" connector on the mother board.
- 4) After completing the above steps, you may begin to install the application software.

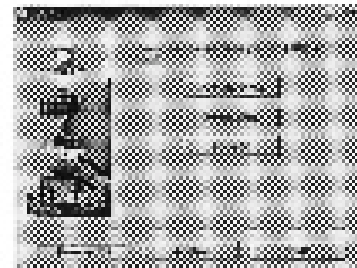
## 8.3 Software Installation

### 8.3.1 Installation driver Windows 95/98

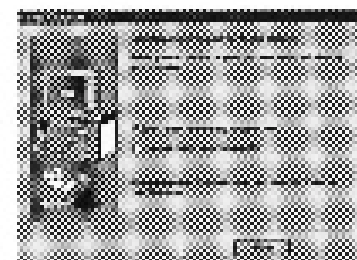
1. Turn on your computer and let it boot up with Windows 95/98.
2. Your Windows 95/98 will detect the newly added hardware and will show the following message on your monitor.
3. Click 'Cancel' or press 'ESC' to skip the wizard.
4. Put the AutoRun driver into CD-ROM (waiting for a few seconds). Click 'PV-BT878PN+' on the Installation window.



5. Click 'Install Driver'.
6. Click 'NEXT' on every message box.
7. Chose 'Yes, I want to restart my computer now' and click 'Finish' to restart Windows.



8. After restart your Windows, Windows will detect the newly added hardware and Wizard will search a driver for this new hardware.



## Part 9 Modem Card Driver Installation (PnP)

1. Boot the system from Windows 98, Windows will auto-detect the existence of the modem.
2. Now Windows will begin the "Update Device Driver Wizard" and search for new drivers for "PCI Card". Click on the "Next" button.
3. Select searching the most fit of driver-suggested to use. Click "Next" button.
4. Select CD-ROM item and put driver disc into the CD-ROM, Click on the "Next" button.
5. Windows driver file search for the device "AMR Voice Modem". Click on the "Next" button.
6. Windows finds your modem model "AMR Voice Modem". Click on the "Finish" button if the displayed modem name fits yours.
7. After completing to copy the modem driver, the "Update Device Driver Wizard" will continue to complete the installation the "Wave Device for the Voice Modem" for modem, click on the "Next" button.
8. Select searching the most fit of driver suggested to use. Click the "Next" button.
9. Select CD-ROM item. Click the "Next" button.
10. Click the "Finish" button.
11. Now you've completed installing the drivers for the modem.