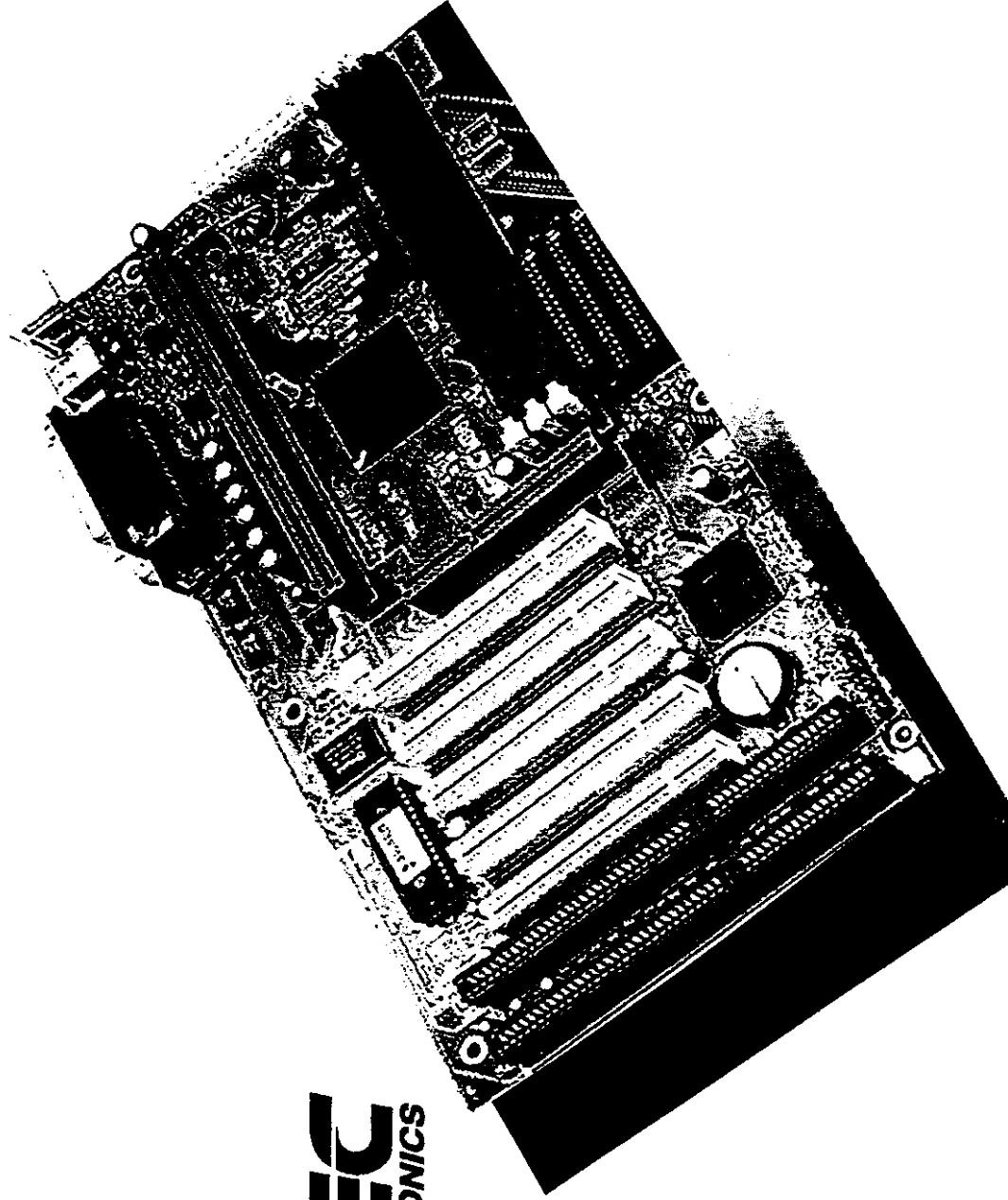


MAINBOARD

USER'S MANUAL

MB61

MB61 USER'S MANUAL



MEC
ELECTRONICS

Handling Precautions

Warning:

1. Static electricity may cause damage to the integrated circuits on the motherboard. Before handling any motherboard outside of its protective packaging, ensure that there is no static electric charge in your body.
2. There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer.
3. Discard used batteries according to the manufacturer's instructions.

Observe the following basic precautions when handling the motherboard or other computer components:

- Wear a static wrist strap that fits around your wrist and is connected to natural earth ground.
- Touch a grounded or antistatic surface or a metal fixture such as a water pipe.
- Avoid contacting the components on add-on cards, boards and modules and with the "gold finger" connectors plugged into the expansion slot. It is best to handle system components by their mounting bracket.

The above methods prevent static build-up and cause it to be discharged properly.

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Introduction

The motherboard is designed with the Intel 82443BX PCI chipset which provides increased integration and improved performance designs to fully support the Pentium II Processor PCI/ISA system.

The chipset provides an integrated IDE controller with two high performance IDE interfaces for up to four IDE devices (hard devices, CD-ROM device, etc). The Super I/O controller provides the standard PC I/O function: floppy interface, two 16 Byte FIFO serial ports and EPP/ECP capable parallel port.

The motherboard provides three 168-pin DIMM which supports minimum of 8MB system memory and maximum of 768MB SDRAM. The socket supports 1M*32 (32MB) single-sided or double-sided memory modules.

The board also supports two onboard PCI IDE connectors, and can automatically detects the IDE hard disk type by the BIOS utility. Besides, The system also supports Award Plug & Play BIOS for the ISA and PCI cards.

Package Checklist

Please check that your package is complete. If you discover damaged or missing items, please contact your retailer.

- * 1 Motherboard
 - * 1 40-pin IDE connector Flat Cable
 - * 1 34-pin Floppy Disk Drive Flat Cable
- This User's Manual
- * 1 CD Driver
 - * 1 Guarantee card

Processor

- Slot1 for Pentium II MMX
- Support Intel Pentium® II 233 ~ 333 MHz (Extra Bus Clock: 66 MHz)
- Support Intel Pentium® II 350 ~ 450 MHz (Extra Bus Clock: 100 MHz)
- Support Intel® Celeron 266 ~ 333 MHz (Extra Bus Clock: 66 MHz)
- CPU Clock Select support 66/77/83/100/112/ and 133 MHz Front Side Bus Clock

Chipset

- Intel 82443BX System Controller
- Intel 82371EB PCI/ISA IDE Accelerator
- Winbond W83781D Hardware Monitor/CPU Temperature reading Circuit Design

BIOS

- Award BIOS with 2 MB Flash ROM, compliant with ACPI
- Support PnP, PCI 2.1, CD-ROM, ATAPI, LS-120, and any IDE Device Bootable.
- Switching Mode Voltage Regulator & CPU Voltage Auto-detect
- Virus Protection
- Jumper-less Design
- Year 2000 Compliant
- DMI Ready

System Memory

- 3*168-pin DIMM Slots support up to 768MB SDRAM
- Support ECC Function for Reliability

Onboard Multi I/O

- Winbond 83977EF super I/O controller
- 2 * High Speed Serial Ports with UART 16C550
- 1 * FDD Ports support up to 2.88MB
- 1 * Parallel Port support ECP/EPP
- 2 * Onboard USB connectors.
- 2 * PS/2 connector for mouse and keyboard
- 2 * IrDA Front and Rear Port

PCI Bus Master IDE

- PCI Enhanced IDE interface with 2 IDE Channels support Maximum 4 EIDE Devices.
- Support up to PIO Mode4 / DMA mode2
- Support Ultra DMA/33
- Support HDD Auto-Detect
- Fully compatible with PCI Local Bus Specifications V2.1

ATX Stack Connector

- 2*USB ports
- 1*PS/2 Keyboard Port
- 1*PS/2 Mouse Port
- 1*Parallel port
- 2*Com port

Expansion Slots

- 2*16-bit ISA Slots with 100% ISA Compatible Function
- 5*32-bit PCI Slots supporting PCI BUS Master Slots Conform with PCI specification Version 2.1
- 1*AGP Slot port

Options

- 2*Infrared (IrDA) Wireless Interface Kit (Front & Rear)
- Universal Serial Bus (UBS) Connector Kit
- LDCM for system Voltage, System Temperature, Fan Speed detect

Dimension: 305mm*170mm

Form Factor: ATX Form Factor with double stack connector design

ACPI Ready

ACPI (Advanced Configuration and Power Interface) is also implemented on this motherboard. ACPI provide more Energy Saving Features for the future operating system (OS) supporting OS Direct Power Management (DPM) functionality. With these features implemented in the OS, PCs can be ready around the clock everyday, yet satisfy all the energy saving standards. To fully utilize the benefits of ACPI, an ACPI-supported OS such as in the next release of Windows 95/98 must be used.

PC'97 Compliant

Both the BIOS and hardware levels of smart series of motherboards meet PC'97 compliance. The PC 97 requirements for systems and components are based on the following high-level goals: Support for Plug and Play compatibility and power management for configuring and managing all system components, and 32-bit device drivers and installation procedures for both Windows 95/98 and Windows NT.

Temperature Monitoring and Alert

To prevent system overheat and system damage, there are heat sensors to monitor the CPU and system temperatures to warn of damaging temperatures.

Voltage Monitoring and Alert

System voltage levels are monitored to ensure stable current to critical motherboard components. Voltage specifications are more critical for future processors, so monitoring is necessary to ensure proper system configuration and management.

Modem Ring On

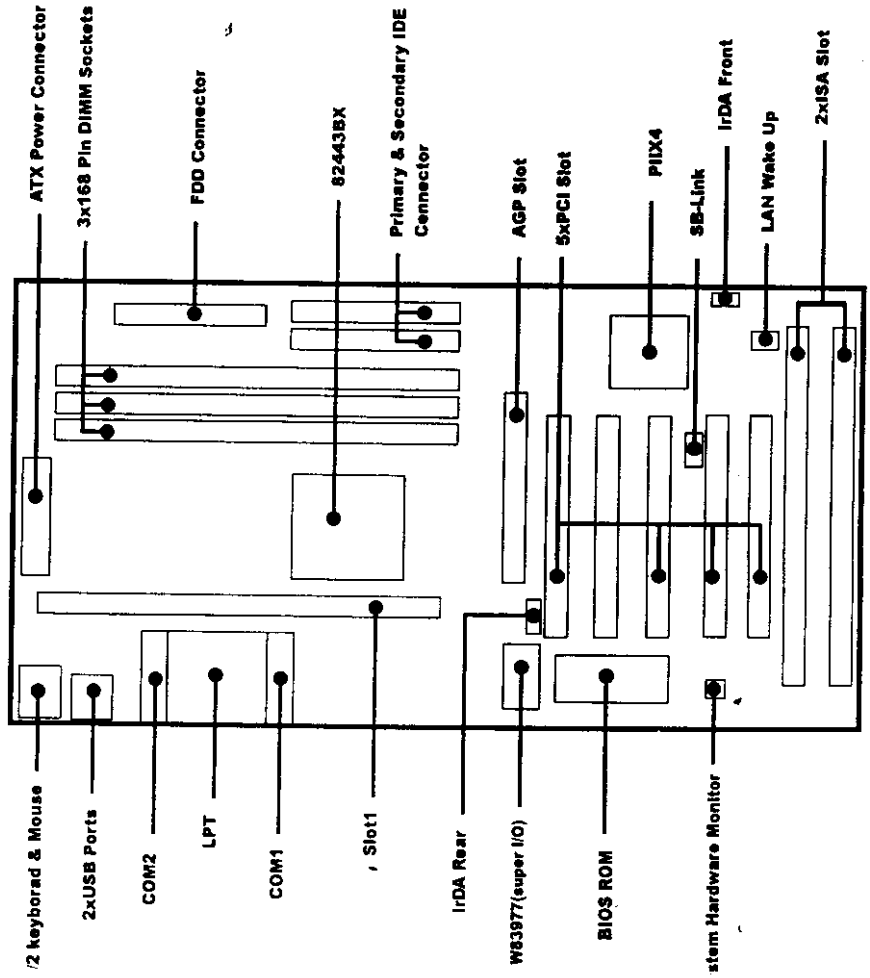
This allows a computer to be turned on remotely through an external modem. With this benefit on-hand, any user can access vital information from their computer from anywhere in the world.

Wake ON LAN

This main board implements a LAN-Wake UP connector, to use LAN Wake-up function, user need a network card that supports this feature. In addition, user also needs to install network management software, such as LDCM. The connector will receive a wakeup packet or signal from LAN Card to power up the system.

Sometimes, the external MODEM just power ON/OFF, the pulse will be taken as the Ring in signal, which will make the machine power up. User needs to pay more attention about this symptom.

Motherboard Layout



Installation Steps

Before using your computer, you must complete the following steps:

- 1.Jumpers Setting
- 2.Install System Memory Modules
- 3.Install the Central Processing Unit (CPU)
- 4.Install Expansion Cards
- 5.Connect Ribbon Cables, Cabinet Wires, and Power Supply
- 6.Power on Procedure
- 7.Setup the BIOS software

WARNING! Computer motherboards, baseboards and components, such as SCSI cards, contain very delicate integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

- 1.Unplug your computer when working on the inside.
- 2.Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to safely grounded object or to a metal object, such as the power supply case.
- 3.Hold components by the edges and try not to touch the IC chips, leads or connectors, or other components.
- 4.Place components on a grounded antistatic pad or on the bag that came with the component whenever the components are separated from the system.

Jumpers Setting

Jumpers

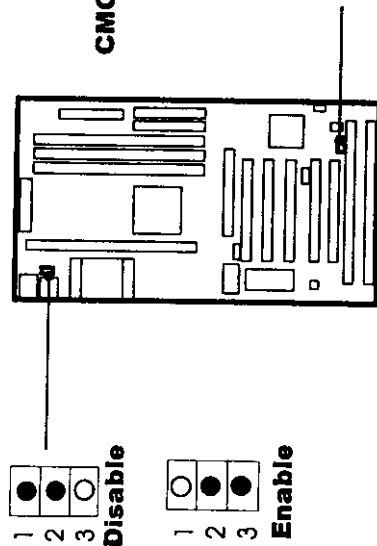
Jumpers are used to select the operation modes for your system. Some jumpers on the board have three metal pins, each pin representing a different function. To set a jumper, a black cap containing metal contacts is placed over the jumper pin according to the required configuration. A jumper is said to be shorted when the black cap have been placed on one or two of its pins.

Note: Users are not encouraged to change the jumper settings not listed in this manual. Changing the jumper settings improperly may adversely affect system performance.

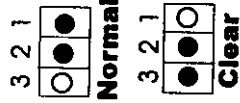
Keyboard Power-On select .7.

Keyboard Power-On select

This is new for those whose keyboard and mouse controller (KBC) is enhanced with Programmable OnNow/Security Wake-Up "feature. It provides the function that users can wake up a shutdown PC system simply by a keystroke or a click of mouse button. This is a perfect implement of OnNow. Users are able to program combination of 1-5 characters as the password.



CMOS Clearing Jumper



Note: Intel ATX version 2.0 specification has recommended user use the power supply with 0.72A(720mA) in 5.0VSB. If your power supply didn't support this specification. Please set the jumper to Disable.

CMOS Clearing

CMOS Clear, which is a safety hook if you forget the password. Follow the steps:

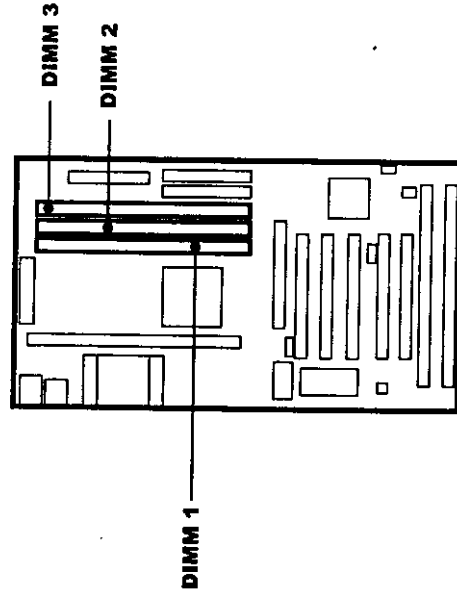
- first you have to turn off your computer, clear the CMOS memory by momentarily shorting pins 2-3 for a few second.
- then restore it to the initial 1-2 jumper setting in order to recover and retain the default settings. After that rest your computer.

Install System Memory Modules .8.

This motherboard supports three 168-pin Dual Inline Memory Modules (DIMM). The Dual Inline Memory module (DIMM) must be 3.3 Volt Unbuffered Synchronous DRAM (SDRAM) or Extended Data Output (EDO) DRAM of either 8, 16, 32, 64, 128 or 256 MB to form a memory size between 8 to 768 MB.

For 66MHz host bus CPUs, please use 12ns or faster DIMM modules. For 100 MHz host bus CPUs, please use 8ns or faster DIMM modules. The following is the example to install the system SDRAM memory module combination: if you have two DIMM Modules, you has better install them into DIMM Slot1 & Slot2 with the Max possible memory size up to 256MB (128+128) if the 128MB DIMM module is available.

Number of Memory Module	DIMM1	DIMM2	DIMM3	Memory Module	Max. Size
1	1 st			8-256MB	256MB
2	1 st	2 nd		8-256MB	512MB
3	1 st	2 nd	3 rd	8-256MB	768MB



Total Memory Size: There is no jumper setting required for the memory size or type. It is automatically detected by the system BIOS, and the total memory size is to add them together.

Selecting the CPU Frequency

PU voltage auto-detect and allow user to set CPU frequency through CMOS setup, no jumper or switch is needed. The correct CPU information is saved to EEPROM, with these technologies, the disadvantages of Pentium base jumper-less design are eliminated. There will be no worry of wrong CPU voltage detection and no need to re-open the housing if CMOS battery loss. The CPU frequency selection is set by as follows steps:

IOS setup → Chipset Features Setup → CPU Clock Frequency (The possible setting is 66, 75, 83, 100, 103, 112 and 133 MHz)

IOS setup → Chipset Features Setup → CPU Clock Ratio
The possible setting is 3x, 3.5x, 4x, 4.5x, 5x, 5.5x, 6x)

Note:

you want to Over-Clock the CPU, please make sure the other peripherals in work fine with one another. That mean you need to well test the whole system with your own configuration, otherwise, please set the default and safe setting with 66MHz or 100MHz front side bus.

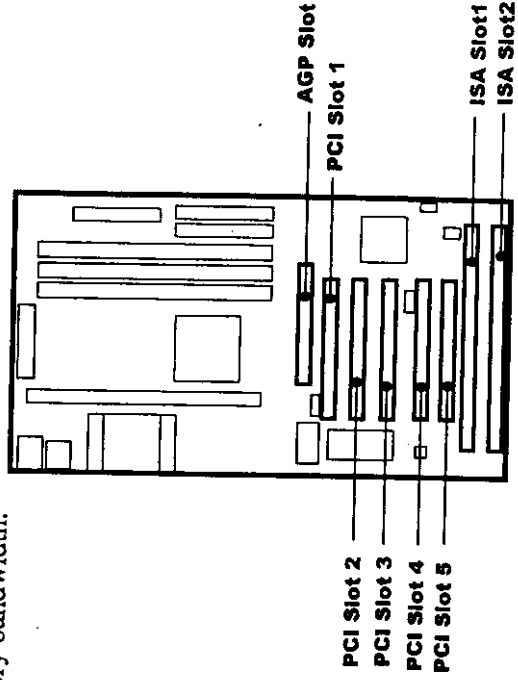
CPU Host Clock (MHz)	X	Multiplier	=	CPU Frequency (MHz)
66	X	3	=	200
66	X	3.5	=	233
66	X	4.0	=	266
66	X	4.5	=	300
66	X	5	=	333
100	X	3	=	300
100	X	3.5	=	350
100	X	4	=	400
100	X	4.5	=	450
100	X	5	=	500

Warning!

Unplug your power supply when adding or removing expansion cards or other system components.
Failure to do so may cause server damage to both your motherboard and expansion cards.

Expansion Card Installation Procedure

- Read the documentation for your expansion card and make any necessary hardware or software setting for your expansion card, such as jumpers.
- Remove your computer system's cover and the bracket plate on the slot you intend to use. Keep the bracket for possible future use.
- Carefully align the card's connectors and press firmly.
- Secure the card on the slot with the screw you removed above.
- Replace the computer system's cover.
- Set up the BIOS if necessary (such as IRQ xx Used By IAS: Yes in PNP AND PCI SETUP)
- Install the necessary software drivers for your expansion card.
- This motherboard also provide an AGP (Accelerated Graphics Port) slot to support a new generation of graphics cards with ultra-high memory bandwidth.



Install Expansion Cards Tips

Assigning IRQs for Expansion Cards

Some expansion cards need to use the IRQ to operate. Generally an IRQ must be exclusively assigned to one use. In a standard design there are 16 IRQs available but most of them are already in use, leaving 6 IRQs free for expansion cards.

Both ISA and PCI expansion cards may require to use IRQs. System IRQs are available to cards installed in the ISA expansion bus first, then any remaining IRQs are available to PCI cards.

Currently, there are two types of ISA cards. The original ISA expansion card design, now referred to as Legacy ISA cards, requires that you configure the card's jumpers manually and then install it in any available slot on the ISA bus. You may use Microsoft Diagnostics (MSD.EXE) utility located in the Windows directory to see a map of your used and free IRQs. For Windows 95/98 users, the "Control Panel" icon in "My computer," contains a "system" icon which gives you a "Device Manager" tab. Double clicking on a specific device you can see "Resources" tab which shows the interrupt number and address. Make sure that no two devices use the same IRQs or your computer will experience problems when those two devices are in use at the same time.

To simplify this process, this motherboard provide the Plug and Play (PnP) function which allows system automatically assign IRQ# to any PnP compliant card when it was added to the system. If the system has both Legacy and PnP ISA cards installed, IRQs are assigned to PnP cards from those not used by Legacy cards. For older Legacy cards that do not work with the BIOS, you can contact your vendor for an ISA Configuration Utility.

An IRQ number is automatically assigned to PCI expansion cards after those used by Legacy and PnP ISA cards. In the PCI bus design, the BIOS automatically assigns an IRQ to a PCI slot that has a card in it that requires an IRQ.

To install a PCI cards, you need to set something called the INT (interrupt) assignment. Since all the PCI slots on this motherboard use an INTA#, be sure that the jumpers on your PCI cards are set to INTA.

Install Expansion Cards Tips

Assigning DMA Channels for ISA Cards.

Some ISA cards, both Legacy and PnP, may also need to use a DMA (Direct Some Memory Access) channel. DMA assignments for this motherboard are handled the same way as the IRQ assignment process described earlier. You can select a DMA channel in the PCI and PnP configuration section of the BIOS Setup utility.

IMPORTANT

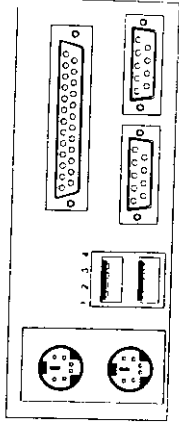
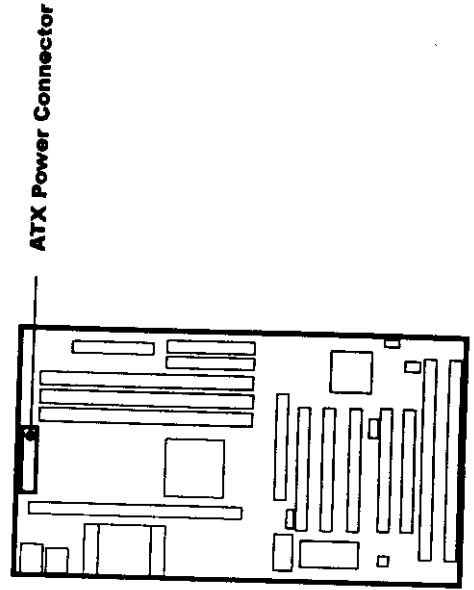
To avoid conflicts, reserve the necessary IRQs and DMAs for Legacy ISA cards (under PnP AND PCI SETUP of the BIOS SOFTWARE, choose Yes in IRQ xx Used By ISA and DMA * Used by ISA for those IRQs and DMAs you want to reserve.)

Important

1. Ribbon cables should always be connected with the red stripe on the Pin 1 side of the connector. The Four Corners of the connectors are labeled on the motherboard. Pin 1 is the side closest to the power connector on hard drives and floppy drives. IDE ribbon cable must be less than 18in (46cm), with the second drive connector no more than 6in. (15cm) from the first connector.
2. The motherboard requires a power supply with at least 250 Watts and a "power good" signal. Make the ATX power supply can take at least 10mAmp load on the 5V Standby lead (5VSB) to meet the standard ATX specification.
3. To prevent electrical spikes, make sure that the power supply is not connected to an outlet when making or removing connections. Power supplies contain power remains, which can damage electrical components.

Power Supply Connector

Plug the connector from the power directly into the 20-pin male ATX PW connector on the motherboard as shown in the following figure. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned and the power supply is off before connecting or disconnecting the power cable.



PS/2 Keyboard Connector

The motherboard provides a standard PS/2 6-pin Mini-Din keyboard connector for attaching a keyboard. You can plug a keyboard cable directly to this connector.

Pin	Description	Pin	Description
1	Keyboard Data	2	N.C.
3	Ground	4	+5VDC
5	Keyboard Clock	6	N.C.

PS/2 Mouse Connector

The motherboard provides a standard PS/2 mouse mini DIN connector for attaching a PS/2 mouse. You can plug a PS/2 mouse directly into this connector.

Pin	Description	Pin	Description
1	Mouse Data	2	N.C.
3	Ground	4	+5VDC
5	Mouse Clock	6	N.C.

USB (Universal Serial Bus Connector)

You can attach USB devices to the USB connector. The motherboard contains two USB connectors, which are marked as USB. USB is a new serial bus design that is capable of cascading low-/medium-speed peripherals (less than 12Mbps) such as keyboard, mouse, joystick, scanner, printer and modem/ISDN. With USB, complex cable connections at the back panel of your PC can be eliminated.

Pin	Description	Pin	Description
1	+5 VDC	5	N.C.
2	DATA-	6	DATA-
3	DATA+	7	DATA+
4	Ground	8	Ground

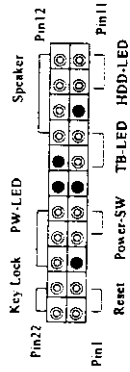
Serial Devices (COM1/COM2)

The onboard serial connectors are 9-pin D-type connector on the back panel of motherboard. The serial port 1 connector is marked as COM1 and the serial port 2 connector is marked as COM2.

Printer Port (LPT)

The onboard printer connector is a 25-pin D-type connector marked PRINTER. The view angle of drawing shown here is from back panel of the housing.

Front Panel Connector .15.



IDE Activity LED (Pin 10, 11)

This connector connects to the IDE (hard disk) activity indicator light on the system cabinet.

System Power LED (Pin 18, 19, 20)

This 3-pin connector lights the system power LED when the motherboard has power.

Turbo LED (Pin 7, 8)

If the cabinet provides the turbo LED cable, connect the cable to this two pin connector to turn on the LED on the front panel.

ATX Power Switch (Pin 4, 5)

The system power is controlled by a push-switch, connected to this lead. Pushing the button once will turn on the power and pushing again will turn off the power. The system power LED shows that status of the system's power. The power to the ATX power supply is interrupted while the motherboard is on, standby power will remember that the motherboard should be on and boot the computer when power is reapplied to the ATX power supply.

Reset Switch (Pin 1,2)

This 2-pin connector connects to the case-mounted reset switch for rebooting our computer without having to turn off your power switch. This is a preferred method of rebooting in order to prolong the life of the system's power supply.

Keyboard Lock Switch Lead (Pin 21, 22)

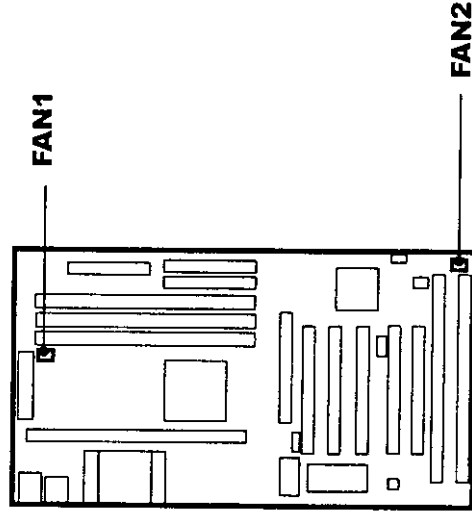
This 3-pin connector connects to the case-mounted keyboard lock switch for locking the keyboard.

Speaker Connector (Pin 12, 13, 14, 15)

This 4-pin connector connects to the case-mounted speaker.

CPU Cooling Fan Connector (FAN1, FAN2) .16.

This connector supports a CPU cooling fan of 500 mA (6WATT, +12V) or less. Orient the fan so that the heat sink fins allow airflow to go across the onboard heat sink(s). Depending on the fan manufacturer, the wiring and plug may be different. The red wire should be positive (+12V), while the black should be ground. Connect the fan's plug to the board taking into consideration the polarity of the connector.

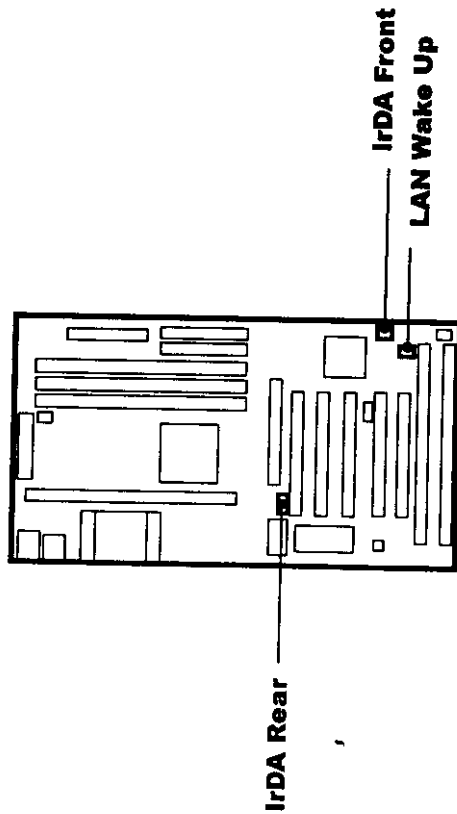


WARNING!

The CPU and/or motherboard will overheat if there is no airflow across the CPU and onboard Heatsink. Damage may occur to the motherboard and/or the CPU fan if these pins are incorrectly used. These are not jumpers, do not place jumper caps over these pins.

IrDA Compliant Infrared Module Connector .17.

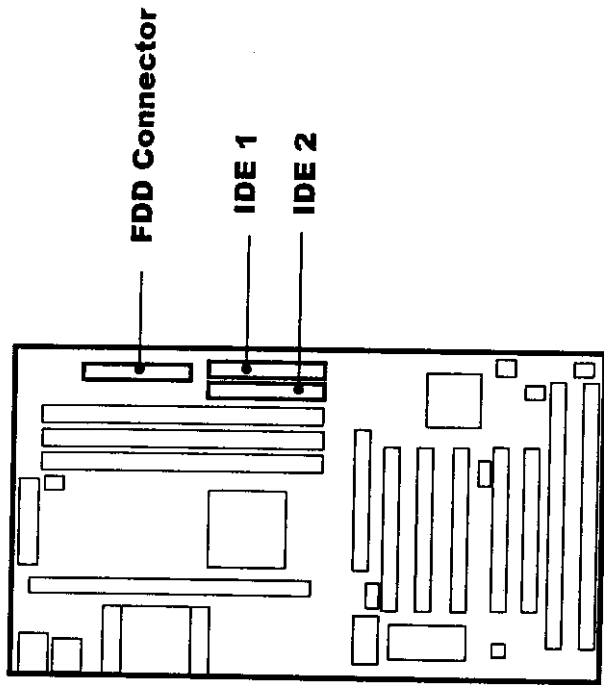
This connector support the optional wireless transmitting and receiving infrared module. This module mounts to a small opening on system cases that support this feature. You must also configure UART2. Use infrared in Chipset Features Setup to select whether UART2 is directed for use with COM2 or IrDA. When IrDA is selected in BIOS, COM2 will be disabled. Use the five pins or six pins as shown and connect a ribbon cable from the module to the motherboard to the pin definitions. There are two connectors are available for the IrDA, one is near to Front Panel the other is rear, user can use one of them to connect to IrDA module depending on the location you want.



Wake-On-LAN (WOL)

Attach the 3-pin connector from the LAN card which supports the Wake-On-LAN (WOL) function to the WOL connector on the motherboard. This WOL function lets users wake up the connected computer through the LAN card. Please install according to the above pin assignment.

FDD & HDD Connector .18.



1. After all connections are made, close the system case cover.
2. Be sure that all switches are off (in some systems, marked with o)
3. Make sure your power supply voltage is correctly set to 110V or 230V.
4. Connect the power supply cord into the power supply located on the back of your system case according to your system user's manual.
5. Connect the power cord into a power outlet that is equipped with a surge protector.
6. You may then turn on your devices in the following order:

Your monitor

External SCSI devices (starting with the last device on the chain)

Your system power. For ATX power supplies, you need to switch on the power supply as well as press the ATX power switch on the front of the case.

7. The power LED on the front panel of the system case will light. For ATX power supplies, the system LED will light when the ATX power switch is pressed. The monitor LED may light up after the system power up. If it complies with " green " standards or if it has a power standby feature. The system will then run power-on tests. While the tests are running, additional messages will appear on the screen. If you don't see anything within 30 seconds from the time you turn on the power, the system may have failed a power-on test. Recheck your jumper settings and connections or call your retailer for assistance. During power-on, hold down < Delete > to enter BIOS setup menu if you want to run the BIOS Setup Utility.

Note:

Powering off your computer: You must first exit or shut down your operating system before switching off the power switch. For ATX power supplies, you can press the ATX power switch after exiting or shutting down your operating system. If you use Windows 95/98, click the start button, click shut down, and then click shut down the computer. The system will give three quick beeps after about 30 seconds and then power off after Windows shuts down.

AWARD

Award BIOS ROM has a built-in Setup program to modify the basic system configuration. This type of information is stored in battery-backed RAM (COMOS RAM), so that it retains the Setup information when the power is turned off.

Entering Setup

You can enter BIOS Setup in one of two ways as below:

By pressing < Del > immediately after switching the system on.

By pressing the < Del > key when the following message appears briefly at the bottom of the screen during the POST (Power On Self Test).

Press DEL to enter SETUP.

Main Menu

Once you enter the Award BIOS COMOS Setup Utility, the Main Menu will appear on the screen. The 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.

ROM PCI/ISA BIOS (2A69KMS9)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

STANDARD CMOS SETUP	CPU SPEED SETTING
BIOS FEATURES SETUP	INTEGRATED PERIPHERALS
CHIPSET FEATURES SETUP	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	IDE HDD AUTO DETECTION
LOAD BIOS DEFAULTS	SAVE & EXIT SETUP
LOAD SETUP DEFAULTS	EXIT WITHOUT SAVING
Esc : Quit	↑ ↓ → ← : Select Item
F10 : Save & Exit Setup	(Shift) F2 : Change Color
	Time, Date, Hard Disk Type

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

Standard CMOS Setup .21.

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use <PgUp> or <PgDn> Keys to select the value you want in each item.

ROM PCI/ISA BIOS (2A59F008)
 CMOS SETUP UTILITY
 AWARD SOFTWARE, INC.

Date (mm: dd: yy) : Fri, Aug 16 1996									
Time (hh: mm: ss) : 11: 09: 04									
HARD DISKS	TYPE	SIZE	CYLs	HEAD	PRECOMP	LANDZ	SECTOR	MODE	
Primary Master	: Auto	0	0	0	0	0	0	0	Auto
Primary Slave	: Auto	0	0	0	0	0	0	0	Auto
Secondary Master	: Auto	0	0	0	0	0	0	0	Auto
Secondary Slave	: Auto	0	0	0	0	0	0	0	Auto
Drive A: 1.44M, 3.5 in.									
Drive B: None									
Video : EGA/VGA									
Halt On : All Errors									
Base Memory : 640 K									
Extended Memory : 15,360 K									
Other Memory : 384K									
Total Memory : 15,360K									
Esc : Quit									
F1 : Help									
↑ ↓ ← → : Select Item									
(Shift) F2 : Change Color									
PUP/D+/-:Modify									

Primary Master/ Primary Slave/ Secondary Master/ Secondary Slave 1 to Type 45 are predefined. Type user is user-definable.

The categories identify the types of 2 channels that have been installed in the computer. There are 45 predefined types and 4 user definable types are for Enhanced IDE BIOS. Type 1 to Type 45 are predefined. Type user is user-definable.

Press PgUp or PgDn to select a numbered hard disk type or type the number and press <Enter>. Note that the specifications of your drive must match with the drive table. The hard disk will not work properly if you enter improper information for this category. If your hard disk drive type is not matched or listed, you can use "user" to define your own drive type manually.

Standard CMOS Setup .22.

If you select Type "user", you will need to know the information listed below. Enter the information directly from the keyboard and press <Enter>. This information should be included in the documentation from your hard disk vendor or the system manufacturer.

If the controller of HDD interface is ESDI, the selection shall be "type 1".

If the controller of HDD interface is SCSI, the selection shall be "None".

If you select Type "Auto", BIOS will Auto-Detect the HDD & CD-ROM Drive at the POST stage and showing the IDE for HDD & CD-ROM Drive.

TYPE	Drive type
CYLS	Number of cylinders
HEADS	Number of heads
PRECOMP	Write precomp
LANDZONE	Landing Zone
SECTORS	Number of Sectors
MODE	Mode type

If a hard disk has not been installed select NONE and press <Enter>.

Drive A Type/Drive B Type

The category identifies the types of floppy disk drive A or drive B that have been installed in the computer.

Video

The category selects the type of video adapter used for the primary system monitor. Although secondary monitors are supported, you do not have to select the type in Setup.

Halt On

The category determines whether the computer will stop if an error is detected during power up.

Standard CMOS Setup .23.

No errors	Whenever the BIOS detects a non-fatal error the system will be stopped and you will be prompted.
All errors	The system boot will not be stopped for any error that may be detected.
All, But Keyboard	The system boot will not stop for a keyboard error; it will stop for all other errors.
All, But Diskette	The system boot will not stop for a disk error; it will stop for all other errors.
All, But Disk/Key	The system boot will not stop for a keyboard or disk error; it will stop for all other errors.

Memory

The category is display-only which is determined by POST (Power On Self Test) of the BIOS.

Base Memory

The POST will determine the amount of base (or conventional) memory installed in the system. The value of the base memory is typically 512K for system with 512K memory installed on the motherboard, or 640K for systems with 640K or more memory installed on the motherboards.

Extended Memory

The BIOS determines how much extended memory is present during the POST. This is the amount of memory located above 1MB in the CPU's memory address map.

Other Memory

This refers to the memory located in the 640K to 1024K address space. This is memory that can be used for different applications. DOS uses this area to load device drivers in an effort to keep as much base memory free for application programs. The BIOS is the most frequent user of this RAM area since this is where it shadows RAM.

BIOS Features Setup .24.

ROM PCI/ISA BIOS (2A69KMS9)
 BIOS FEATURES SETUP
 AWARD SOFTWARE, INC.

Virus Warning : Disabled	Video BIOS Shadow : Enabled
CPU Internal Cache : Enabled	C8000-CBFFF Shadow: Disabled
External Cache : Enabled	CC000-CFFFF Shadow: Disabled
CPU L2 Cache ECC Checking : Enabled	D0000-D3FFF Shadow: Disabled
Quick Power On Self Test : Disabled	D4000-D7FFF Shadow : Disabled
Boot Sequence : A,C,SCSI	D8000-DBFFF Shadow : Disabled
Swap Floppy Drive :Disabled	DC000-DEFFF Shadow : Disabled
Boot Up Floppy Seek : Enabled	
Boot Up NumLock Status : ON	
Gate A20 Option :Normal	
Typematic Rate Setting :Disabled	
Typematic Rate (Chars/Sec) :6	
Typematic Delay (Msec) :250	
Security Option :Setup	
PCI/VGA Palette Snoop :Disabled	
Assign IRQ for VGA :Disabled	
OS Select for DRAM>64MB:Non-OS2	
Report No FDD for Win95 : NO	
ESC: Quit ↑ ↓ → ← : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults	

Virus Warning

When this item is enabled, the Award BIOS will monitor the boot sector and partition table of the hard disk drive for any attempt at modification. If an attempt is made, the BIOS will halt the system and the following error message will appear. Afterwards, if necessary, you will be able to run an anti-virus program to locate and remove the problem before any damage is done.

! WARNING!

Disk boot sector is to be modified Type " Y " to accept write or " N " to abort write

Award Software, Inc.

BIOS Features Setup .25.

CPU Internal Cache/External Cache

These two categories speed up memory access. However, it depends on CPU/chipset design. The default value is enable.

The choice : Enable, Disable.

Quick Power On Self Test

This category speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

Enabled	Enable quick POST
Disabled	Normal POST

Boot Sequence

This category determines which drive to search first for the disk operating system (i.e., DOS). Default value is A, C, SCSI.

Swap Floppy Drive

This item allows you to determine whether enable the swap floppy drive or not.

The Choice: Enabled/Disabled.

Boot Up Floppy Seek

During POST, BIOS will determine if the floppy disk drive installed is 40 or 80 tracks. 360K type is 40 tracks while 760K, 1.2M and 1.44M are all 80 tracks.

Enabled	BIOS searches for floppy disk drive to determine if it is 40 or 80 tracks. Note that BIOS can not tell from 720K, 1.2M or 1.44M drive type as they are all 80 tracks.
Disabled	BIOS will not search for the type of floppy disk drive by track number. Note that there will not be any warning message if the drive installed is 360K.

BIOS Features Setup .26.

Boot Up NumLock Status

This allows you to determine the default state of the numeric keypad. By default, the system boots up with NumLock on.

On	Keypad is number keys
Off	Keypad is arrow keys

Gate A20 Option

This entry allows you to select how the gate A20 is handled. The gate A20 is a device used to address memory above 1 Mbytes. Initially, the gate A20 was handled via a pin on the keyboard. Today, while keyboards still provide this support, it is more common, and much faster, for the system chipset to provide support for gate A20.

Normal	Keyboard
Fast	Chipset

Typematic Rate Setting

This determines if the typematic rate is to be used. When disabled, continually holding down a key on your keyboard will generate only one instance. In other words, the BIOS will only report that they key is down. When the typematic rate is enabled, the BIOS will report as before, but it will then wait a moment, and if the key is still down, it will begin the report that the key has been depressed repeatedly. For example, you would use such a feature to accelerate cursor movements with the arrow keys.

Typematic Rate (Chars/Sec)

When they typematic rate is enabled, this selection allows you select the rate at which the keys are accelerated.

BIOS Features Setup .27.

6	6 characters per second
8	8 characters per second
10	10 characters per second
12	12 characters per second
15	15 characters per second
20	20 characters per second
24	24 characters per second
30	30 characters per second

Typematic Delay (Msec)

When the typematic rate is enabled, this selection allows you to select the delay between when the key was first depressed and when the acceleration begins.

250	250 msec
500	500 msec
750	750 msec
1000	1000 msec

Security Option

This category allows you to limit access to the system and Setup, or just to Setup.

System	The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup	The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

Note: To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

PCI/VGA Palette Snoop

determines whether the MPEG ISA/VESA VGA Cards can work with PCI/VGA or not.

BIOS Features Setup .28.

Enabled	When PCI/VGA working with MPEG ISA/VESA VGA Card.
Disabled	When PCI/VGA not working with MPEG ISA/VESA VGA Card.

Assign IRQ for VGA

This option allows BIOS to assign IRQ for VGA device.

OS Select for DRAM > 64

This item allows you to access the memory that over 64MB in OS/2.

The choice: Non-OS2, OS2.

Report No FDD for Win95

This function is only use when you are testing SCT for windows 95 logo.

Video BIOS Shadow

Determines whether video BIOS will be copied to RAM. However, it is optional depending on chipset design. Video Shadow will increase the video speed.

Enabled	Video shadow is enabled
Disabled	Video shadow is disabled.

C8000-CBFFF Shadow/DC000 DFFFF Shadow

These categories determine whether option ROMs will be copied to RAM for faster execution

Enabled	Optional shadow is enabled
Disabled	Optional shadow is disabled

ROM PCI/ISA BIOS (2A69KMS9)
 CHIPSET FEATURES SETUP
 AWARD SOFTWARE, INC.

Auto Configuration	: Enabled	Auto Detect DIMM/PCI Clk:	Enabled
EDO DRAM Speed Selection	: 60ns	Spread Spectrum	: Disabled
EDO CAS# MA Wait State	: 2		
EDO RASx# Wait State	: 2		
SDRAM RAS-to-CAS Delay	: 3		
SDRAM RAS Precharge Time	: 3		
SDRAM CAS latency Time	: 3		
SDRAM Precharge Control	: Disabled		
DRAM Data Integrity Mode	: Non-ECC		
System BIOS Cacheable	: Disabled		
Video BIOS Cacheable	: Disabled		
Video Ram Cacheable	: Disabled		
8 Bit I/O Recovery Time	: 3		
16 Bit I/O Recovery time	: 2		
Memory Hole at 15M-16M	: Disabled		
Passive Release	: Disabled		
Delayed Transaction	: Disabled		
AGP Aperture Size (MB)	: 64		

Auto Configuration

This item allows you select pr-determined optimal values for DRAM, cache, timing according to CPU type & system clock.

Note: When this item is enabled, many fields in this screen are not available.

The Choice: Enabled, Disabled.

EDO DRAM Speed Selection

The DRAM timing is controlled by the DRAM Timing Registers. The timings programmed into this register are dependent on the system design. Slower rates may be required in certain system designs to support loose layouts or slower memory. Please note this feature only work , when Auto configuration set at disabled

The Choice : 50ns, 60ns

EDO CASX#MA Wait State

When auto configuration set at disabled You could select the timing control type of DEO DRAM CASE MA (memory address bus).
 The choice : 1,2

EDO RASx# Wait State

You could select the timing control type of EDO DRAM RAS MA (memory address bus), when auto configuration set at disabled
 The choice : 1,2

SDRAM RAS-to -CAS Delay

When Auto configuration set at disabled, allows you to define the delay time that from the DRAM RAS# active to CAS# active. The setting are 2 clocks or 3 clocks. The default setting is 3 clocks, depends on the CPU frequency and DRAM type.
 The Choice: 2,3

SDRAM RAS Precharge Time

Allows you to select the SDRAM RAS precharge time.
 The Choice : 2, 3

SDRAM CAS Latency Time

You can select CAS latency time in HCLKs of 2/2 or 3/3. The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.
 The Choice: 2,3

DRAM Data Integrity Mode

Select Non-ECC or ECC (error-correcting code), according to the type of installed DRAM.
 The Choice : Non-ECC, ECC.

System BIOS Cacheable

Select Enabled allows caching of the system BIOS ROM at F000h-FFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The Choice : Enabled, Disabled.

Video BIOS Cacheable

Select Enabled allows caching of the video BIOS ROM at C0000h-F7FFFh, resulting in better video performance. However, if any program writes to this memory area, a system error may result.

The Choice : Enabled, Disabled.

Video RAM Cacheable

Select Enabled allows caching of the video RAM, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

8 Bit I/O Recovery Time

The recovery time is the length of time, measured in CPU clocks, which the system will delay after the completion of an input/output request. This delay takes place because the CPU is operating so much faster than the input/output bus that the CPU must be delayed to allow for the completion of the I/O.

This item allows you to determine the recovery time allowed for 8 bit I/O Choices are from NA, 1 to 8 CPU clocks.

16 Bit I/O Recovery Time

This item allows you to determine the recovery time allowed for 16 bit I/O choices are from NA, 1 to 4 CPU clocks.

Memory Hole at 15M-16M

In order to improve performance, certain space in memory can be reserved for ISA cards. This memory must be mapped into the memory space below 16MB.

The Choice : Enabled, Disabled.

Passive Release

When Enabled, CPU to PCI bus accesses are allowed during passive release. Otherwise, the arbiter only accepts another PCI master access to local DRAM.

The Choice : Enabled, Disabled.

Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

The Choice : Enabled, Disabled.

AGP Aperture Size (MB)

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation.

The choice: 4, 8, 16, 32, 64, 128, 256

ROM PCI/ISA BIOS (2A69KMS9)
 INTEGRATED PERIPHERALS
 AWARD SOFTWARE, INC.

IDE HDD Block Mode	: Enabled	Onboard Serial Port2 : 2F8/IRQ3
IDE Primary Master PIO	: Auto	UART Mode Select : Normal
IDE Primary Slave PIO	: Auto	RxD, TxD Active : Hi, Lo
IDE Secondary Master PIO	: Auto	IR Transmission delay : Enabled
IDE Secondary Slave PIO	: Auto	Onboard Parallel Port
IDE Primary Master UDMA	: Auto	Parallel Port Mode
IDE Primary Slave UDMA	: Auto	ECP Mode Use DMA : 3
IDE Secondary Master UDMA	: Auto	EPP Mode Select : EPP1.9
IDE Secondary Slave UDMA	: Auto	
On-Chip Primary PCI IDE	: Enabled	
On-Chip Secondary PCI IDE	: Enabled	
USB Keyboard Support	: Disabled	
Init Display First	: PCI Slot	
POWER ON Function	: Button only	ESC : Quit
KB Power On Password	: Enter	F1 : Help
Hot Key Power ON	: Ctrl-F1	F5 : Old Values (Shift) F2 : Color
KBC input clock	: 12MHz	F6 : Load BIOS Defaults
Onboard FDC Controller	: Enabled	F7 : Load setup Defaults
Onboard Serial Port1	: 2F8/IRQ3	

IDE HDD Block Mode

This allows your hard disk controller to use the fast block mode to transfer data and from your hard disk drive (HDD).

Enabled	IDE controller uses block mode.
Disabled	IDE controller uses standard mode.

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In auto mode the system automatically determines the best mode for each device.

The Choice : Auto, Mode 0 to 4

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select Auto to enable BIOS support.

The Choice: Auto, Disabled.

On-Chip Primary/ Secondary PCI IDE

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select Enabled to activate each channel separately.

The Choice: Enabled, Disabled.

USB Keyboard Support

Select Enabled if your system contains a Universal Serial Bus The Choice: Enabled, Disabled.

POWER ON Function

This item allows user to determine the power on options to turn on the system.

The Choice: Keyboard 98 ,password,Hot key,Mouse left,Mouse right, Button only.

KB Power On Password

This item only work when you select " KB Power on "password" as your system's Power On Function.

Hot Key Power ON

When you selects this option as your system's Power On Function, Hot Key Power On will displayed; " Ctrl-F1 " allows you to select a Hot Key (Ctrl-F1 to Ctrl-F12). After the system is turned off, the user types in the Hot Key to power up the system.

Onboard FDC Controller

This should be enabled if your system has a floppy disk drive (FDD) installed on the system board and you wish to use it. Even when so equipped, if you add a higher performance controller you will need to disable this feature.
The Choice: Enabled, Disabled.

Onboard Serial Port 1/Port 2

This item allows you to determine access onboard serial port 1/ port 2 controller with which I/O address.
The Choice: 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3, Disabled, Auto

UART Mode Select

This item allows you to determine which Infra Red (IR) function of onboard I/O chip.
The Choice: IrDA, ASKIR, Normal.

RxD, TxD Active

This item allows you to select the active signals of the reception end and the transmission end. This is for technician use only.
The Choice : " Hi, Hi ", " Lo, Lo ", " Lo, Hi ", " Hi, Lo "

Onboard Parallel Port

Select a logical LPT port name and matching address for the physical parallel (printer) port.
The Choice : 378H/IRQ7, 278H/IRQ5, 3BCH/IRQ7, Disabled.

Parallel Port Mode

Select an operating mode for the onboard parallel port. Select compatible or extended unless you are certain both your hardware and software support EPP or ECP mode.
The choice : SPP, ECP, ECP+EPP,EPP.

ECP Mode Use DMA

If you select ECP or ECP/EPP mode to be the onboard parallel mode, this feature allows you to select Direct Memory Access (DMA) channel.

Choices are 3, 1.

EPP Mode Select:

If you select EPP or ECP/EPP mode to be the onboard parallel mode this feature allows to select EPP mode.
choices are : EPP1.9 , EPP1.7

Power Management Setup .37.

The Power Management Setup allows you to configure your system to most effectively save energy while operating in a manner consistent with your own style of computer use.

ROM PCI/ISA BIOS (2A69KMS9) POWER MANAGEMENT SETUP AWARD SOFTWARE, INC.

ACPI function	: Enabled	*** Reload Global Timer Events ***
Power Management	: User define	IRQ [3-7, 9-15], MMIO : Disabled
PM Control by APM	: Yes	Primary IDE 0 : Disabled
Video Off Method	: V/H	Primary IDE 1 : Disabled
	: SYNC+Blank	Secondary IDE 0 : Disabled
Video Off After	: Standby	Secondary IDE 1 : Disabled
Modem Use IRQ	: 3	Floppy Disk : Disabled
Doze Mode	: 1 Hour	Serial Port : Enabled
Standby Mode	: 1 Hour	Parallel Port : Disabled
Suspend Mode	: 1 Hour	
HDD Power Down	: 15 Min	ESC : Quit
Throttle Duty Cycle	: 62.5%	F1 : Help
PCI/VGA Act-monitor	: Disabled	F5 : Old Values (Shift) F2 : Color
Soft-Off by PWR-BTTN	: Instant-Off	F6 : Load BIOS Defaults
PowerOn by Ring	: Disabled	F7 : Load setup Defaults
Resume by Alarm	: Disabled	
Wake Up on LAN	: Enabled	
IRQ 8 Break Suspend	: Disabled	

Power Management

This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

- Doze Mode
- Standby mode
- Suspend mode
- HDD Power Down

There are four selections for Power Management three of which have fixed mode settings.

Disable (default)	No power management.	Disables all four modes
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Power Management Setup .38.

Min. Power Saving	Minimum power management. Doze Mode=1 hr. Standby Mode=1 hr., Suspend Mode=1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management ONLY AVAILABLE FOR SL CPU S. Doze Mode=1 min., Standby Mode=1 min., Suspend Mode=1 min., and HDD Power Down = 1 min.
User Defined	Allows you to set each mode individually. When not disabled, each of the ranges are from 1 min. to 1 hr. except for HDD Power Down which ranges from 1 min. to 15 min. and disable.

PM Control APM

When enabled, and Advanced Power Management device will be activated to enhance the Max. Power Saving mode and stop the CPU internal clock.

If the Max. Power Saving is not enabled, this will be preset to NO.

Video Off Method

This determines the manner in which the monitor in blanked.

V/H SYNC+Blank	This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.
Blank Screen	This option only writes blanks to the video buffer.
DPMS	Initial display power management signaling.

Video Off After

When enabled, this feature allows the VGA adapter to operate in a power saving mode.

N/A	Monitor will remain on during power saving modes.
-----	---

Suspend	Monitor blanked when the systems enters the Suspend mode.
Standby	Monitor blanked when the system enters Standby mode.
Doze	Monitor blanked when the system enters any power saving mode.

MODEM Use IRQ

This feature allows you to select the IRQ# to meet your modem's IRQ#(if any) on your system. Activity of the selected IRQ always awakens the system.

Doze Mode

When enabled and after the set time of system inactivity, the CPU clock will run at slower speed while all other devices still operate at full speed.

Standby Mode

When enabled and after the set time of system inactivity, the fixed disk drive and the video would be shut off while all other devices still operate at full speed.

Suspend Mode

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

HDD Power Down

When enabled and after the set time of system inactivity, all devices except the CPU will be shut off.

Throttle Duty Cycle

When the system enters Doze mode, the CPU clock runs only parts of the time. You may select the percent of time that the clock runs.

PCI/VGA Active Monitor

When Enabled, any video activity restarts the global timer for Standby mode.

Soft-off by PWR-BTTN

When Enabled, turning the system off with the on/off button places the system in a very low-power-usage state, with only enough circuitry receiving power to detect power button activity or Resume by Ring activity.

Install off	The system will turn off once you push the switch
Delay 4 sec.	If you push the switch one time, the system goes into suspend mode and if you push it more than 4 second, the system will be turn off.

Resume by Alarm

This function is for setting date and time for your computer to boot up. During enabled, choose the date and time alarm as below.

Date (of month) alarm	You can choose which month the system will boot up, set
Time (hh:mm:ss) alarm	You can choose which hour, minutes, seconds the system will boot up.

Resume by Ring

This feature allows you to determine if let incoming call on the modem awakens the system from a soft off state or not.

Enabled	The system will boot up if there s an incoming call from the modem.
Disabled	The system will ignore any incoming call from the modem.

Wake Up On LAN

To use this function, you need a LAN add-on card which support power on function.

Enabled	Wake up LAN supported
Disabled	Wake up LAN does not supported

IRQ 8 Break Suspend

You can Enable or Disable monitoring of IRQ8 so it does not awaken the system from Suspend mode.

The Choice : Enabled, Disabled.

Reload Global Timer Events

When Enabled, an event occurring on each device listed below restarts the global time for Standby mode.

- IRQ [3-7, 9-15], NMI: Disabled
- Primary IDE 0 : Disabled
- Primary IDE 1 : Disabled
- Secondary IDE 0 : Disabled
- Secondary IDE 1 : Disabled
- Floppy Disk : Disabled
- Serial Port : Disabled
- Parallel Port : Disabled

This section describes configuring the PCI bus system. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

ROM PCI/ISA BIOS (2A69KMS9)
 PNP/PCI CONFIGURATION
 AWARD SOFTWARE, INC.

PNP OS Installed : No	Used MEM base addr: N/A
Resources Controlled By : Auto	Used MEM length: 8k
Reset Configuration Date : Disabled	Assign IRQ For USB: Enabled
ESC : Quit	↑ ↓ → ← : Select Item
F1 : Help	PU/PD/+/-: Modify
F5 : Old Values (Shift) F2 : Color	F6 : Load BIOS Defaults
F7 : Load setup Defaults	

PNP OS Installed

Select Yea if the system operating environment is Plug-and-Play aware (e.g., Windows 95).
 The Choice: Yea and No

Resources Controlled By

The Award Plug and Play BIOS can automatically configure all the boot and Plug and Play-compatible devices. If you select "Auto", the system BIOS will detect the system resource and automatically assign the relative IRQ and DMA Channel for each peripheral. And, if you choose "Manual", the user will need to assign IRQ&DMA for add-on cards. Be sure that there is no conflict for IRQ/DMA and I/O ports.
 The Choice: Auto and Manual

Rest Configuration Data

The system BIOS supports the PnP feature so the system needs to record which resource is assigned and protect resources from

conflict. Every peripheral device has a node which is called ESCD. This node records which resources are assigned to it. The system needs to record and update ESCO to the memory locations. These locations are reserved at the system BIOS.

If Disabled is chose the system's ESCD will update only when the new configuration varies from the last one.

If Enabled is chosen the system will be forced to update the system's ESCD. Then, this option will be auto set to Disabled.

- IRQ-3 assigned to : Legacy ISA
- IRQ-4 assigned to : Legacy ISA
- IRQ-5 assigned to : PCI/ISA PnP
- IRQ-7 assigned to : Legacy ISA
- IRQ-9 assigned to : PCI/ISA PnP
- IRQ-10 assigned to : PCI/ISA PnP
- IRQ-11 assigned to : PCI/ISA PnP
- IRQ-12 assigned to : PCI/ISA PnP
- IRQ-14 assigned to : PCI/ISA PnP
- IRQ-15 assigned to : PCI/ISA PnP
- DMA-0 assigned to : PCI/ISA PnP
- DMA-1 assigned to : PCI/ISA PnP
- DMA-3 assigned to : PCI/ISA PnP
- DMA-5 assigned to : PCI/ISA PnP
- DMA-6 assigned to : PCI/ISA PnP
- DMA-7 assigned to : PCI/ISA PnP

The above settings will be shown on the screen only if " Manual" is chosen for the " Resources Controlled By function.

Legacy is the term which signifies that a resource is assigned to the ISA Bus and provides for non PnP ISA add-on card. PCI/ISA PnP signifies that a resource is assigned to the PCI Bus or provides for ISA PnP add-on cards and peripherals.

Used MEM base addr

Select a base address for the memory area used by any peripheral that requires high memory

The Choice : C800,CC00,D000,D400,D800,DC00,N/A.

Used MEM Length

Select a length for the memory area specified in the pervious field. This field does not appear if no base address is specified.

The Choice : 8k,16k,32k,64k.

ROM PCI/ISA BIOS (2A69KMS9)
 CPU FEATURES SETUP
 AWARD SOFTWARE, INC.

Load BIOS/SETUP Defaults

This Main Menu item loads the default system value. These setting are recommended for optimum performance. If the CMOS is corrupted when enter BIOS setup utility you must load setup default again. Choose this item and the following message appears:

Load SETUP Defaults (Y/N) ? Y

To use the Setup defaults, change the prompt to and press <Y> and press <Enter>.

Note:

Optimal is not the slowest setting for this motherboard. If you need to verify a unstable problem, you may manually set the parameter in the " BIOS Features Setup" and " Chipset Features Setup " to get slowest and safer setting.

CPU Speed	: Manual	ESC : Quit	↑ ↓ → ← : Select Item
CPU Ratio	: x 3.5	F1 : Help	PU/PD/+/-: Modify
CPU Frequency	:	F5 : Old Values (Shift) F2 : Color	
CPU Warning Temperature: 70°C/158°F		F6 : Load BIOS Defaults	
Current System Temp. :		F7 : Load setup Defaults	
Current CPU1 Temperature :			
Current CPUFAN1 speed :			
Current CPUFAN2 speed :			
Current CPUFAN3 speed :			
IND (V) :	INA (V) :		
IND2 (V) :	+ 5V :		
+12V :	-12V :		
-5V :			
Shutdown Temperature	: 60°C/140°F		

CPU Speed/CPU Ratio/CPU Frequency

Check your processor and set this function accordingly.
 If you set this to Manual, you can set the CPU Ratio and CPU Frequency accordingly.

The Choice of CPU Frequency are : 66, 75, 83, 100, 103, 112 and 133.

The Choice of CPU ratio are : 3, 3.5, 4, 4.5, 5, 5.5, 6

Note:

If you set the CPU ratio and CPU frequency to be too high, and the system will not turn on. Then restart the system, press " F10" until bootup. This will set the default setting.

CPU Warning Temperature

This feature allows you to determine CPU Warning temperature.

The Choice : 50°C/122°F, 53°C/127°F, 56°C/133°F, 60°C/140°F,
63°C/145°F, 66°C/151°F, 70°C/158°F, Disabled.

Current CPU1 Temperature

This fields display the current temperature, if your computer contains a monitoring system.

Current CPU FAN1/ 2/3 Speed

These fields display the current speed of up to three CPU fans, if your computer contains a monitoring system.

Shutdown Temp

This option is for setting the Shutdown temperature level for the processor, when the processor reach the temperature you set. This will shutdown the system. This function only works with Windows 95 operating system

The Choice : 60°C/140°F, 65°C/149°F, 70°C/158°F, 75°C/167°F.

You can set either supervisor or user password, or both of them. The differences between are:

Supervisor password: can enter and change the options of the setup menus.
User password : just can only enter but do not have the right to change the options of the setup menus.

When you select this function , the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter >. You may also press <Esc> to abort the selection and not enter a password.

To disable a password, just press < Enter > when you are prompted to enter the password. A message will confirm the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any parts of your system configuration. Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option. If the Security option is set to " system ", the password will be required both at boot and at entry to setup. If set to "Setup" prompting only occurs when trying to enter Setup.