

# **Magellan EBX**

**(E6BX-ATX)**

**AGP/ PCI/ ISA/ IO  
Mother Board  
User's Manual**

**PART NO. M533G00200 Rev 1.0 MAY. 1998**

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# SPECIFICATIONS

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## 1. E6BX-ATX SPECIFICATIONS

<b>CPU</b>	<b>CPU</b>	Intel Pentium II / Intel Celeron / Deschutes
	<b>CPU Speed</b>	233/266/300/333/350/400/450MHz
	<b>System Speed</b>	66/100MHz
<b>BIOS</b>	<b>BIOS</b>	128K BIOS; PnP Compliant
	<b>BIOS ROM</b>	Flash Memory
<b>MEMORY</b>	<b>DRAM Size</b>	From 8M up to 384M Bytes
	<b>DRAM Module</b>	DIMM x 3 of 168 Pins
		Data Path 64 Bit Wide
<b>ON BOARD I/O</b>	<b>I/O Function</b>	Local Bus Enhanced Dual-Channel IDE
		Bus Master PCI IDE / Mode 4, Ultra DMA-33 Support
		ECP/EPP Parallel Port
		2 Serial Ports
		IR Function (Optional)
		FDD Support
		2 PnP DMA Channel Steering Via BIOS
<b>GREEN</b>	<b>SYSTEM</b>	SMM Control, Stop CPU Clock
	<b>VGA</b>	Control Of DPMS
<b>SLOT</b>	<b>Expansion Slot</b>	16 Bit ISA x 3
		32 Bit PCI x 4 (4 Master Support)
	<b>AGP</b>	1 AGP
	<b>Slot 1</b>	For Pentium II, Celeron and Deschutes CPUs
<b>USB</b>		Two USB Ports
<b>MOUSE</b>		PS/2 Mouse
<b>KEYBOARD</b>	<b>Keyboard CNN</b>	PS/2 Keyboard
<b>OTHERS</b>	<b>Main Chipset</b>	INTEL 82440BX AGPset
		PIIX4x1
	<b>I/O Chipset</b>	Winbond W83977TF, Keyboard & PS/2 Mouse Boot Support (optional)
		PCI Bus Master IDE Embedded Via PIIX4
<b>PCB Size</b>		305mm x 180mm x 1.6mm, 4 layers

# JUMPER SETTING

## 2. Jumper & Memory Setting

### 2.1 CPU Jumper Setting

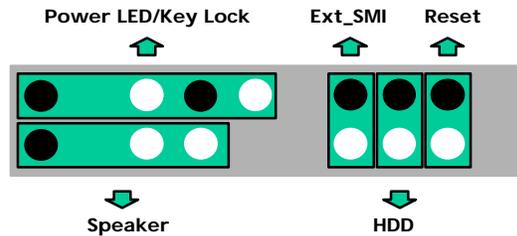
CPU SPEED (JP7)	1-2	3-4	5-6	7-8
450MHz	OFF	ON	OFF	ON
400MHz	OFF	ON	ON	ON
350MHz	ON	OFF	OFF	ON
333MHz	OFF	OFF	ON	ON
300MHz	OFF	ON	OFF	ON
266MHz	OFF	ON	ON	ON
233MHz	ON	OFF	OFF	ON
166MHz	ON	ON	OFF	ON

### 2.2 Special Function Jumpers

Jumper Number	FUNCTION
COM1	COM1
COM2	COM2
FAN1	POWER FAN
FAN2	CPU FAN
FAN3	SYSTEM FAN
P1	ATX POWER CONNECTOR
IR1	IR PORT
USB1	USB PORT
PRT1	PRINT PORT CONNECTOR
JP1	1-2 SUPPORT K/B BOOT FUNCTION 2-3 NORMAL
JP2	RESERVED
JP3	CMOS SELECT 1-2 NORMAL 2-3 CLEAR CMOS
JP5	RESERVED
J1	ATX-POWER SWITCH BUTTON
J2-P2/4/6/8	SPEAKER CONNECTOR
J2-P1/3/5/7/9	POWER LED & KEYLOCK
J2-P13/14	EXTERNAL SMI SWITCH
J2-P15/16	HDD LED
J2-P17/18	RESET SWITCH
J3	LAN CARD BOOT UP
FDD	FDD CONNECTOR
IDE1	PRIMARY HDD CONNECTOR
IDE2	SECONDARY HDD CONNECTOR

# JUMPER SETTING

## 2.3 Multifunction Connector



## 2.4 Memory Size

●168 PIN DIMM

Option	Type
DIMM1/2/3	8M, 16M, 32M, 64M, 128M

- NOTE :**
- 1 The DRAM interface supports 8 Mbytes to 384 Mbytes. For access time DIMM , you must use 60ns or less.
  - 2 DIMM1/2/3 support 168pin 3.3v Sync. Mode DRAM.

## 2.5 Single Edge Contact CPU

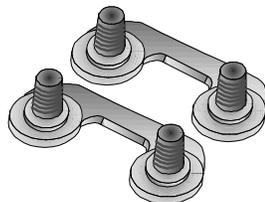
This motherboard provides a Single Edge Contact (SEC) slot for a Pentium II processor packaged in an SEC cartridge. The SEC slot is not compatible with other non-Pentium II processors.

**Before your begin:**

Use a system case with either the power supply fan or a secondary fan circulating air across the SEC cartridge's passive heat sink.

**WARNING:** Without sufficient air circulation the SEC cartridge may overheat and cause damage to both the SEC cartridge and the motherboard.

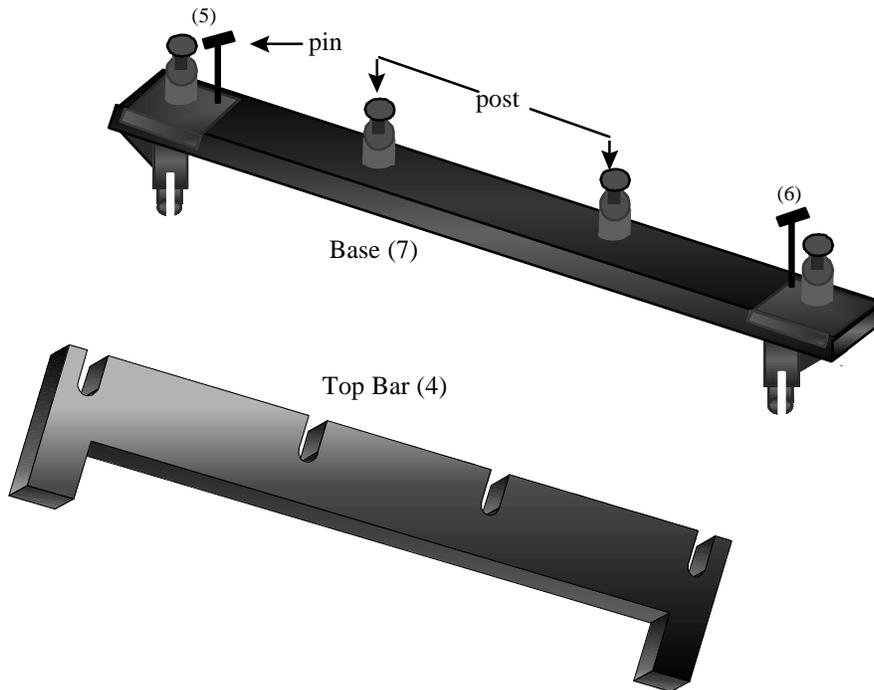
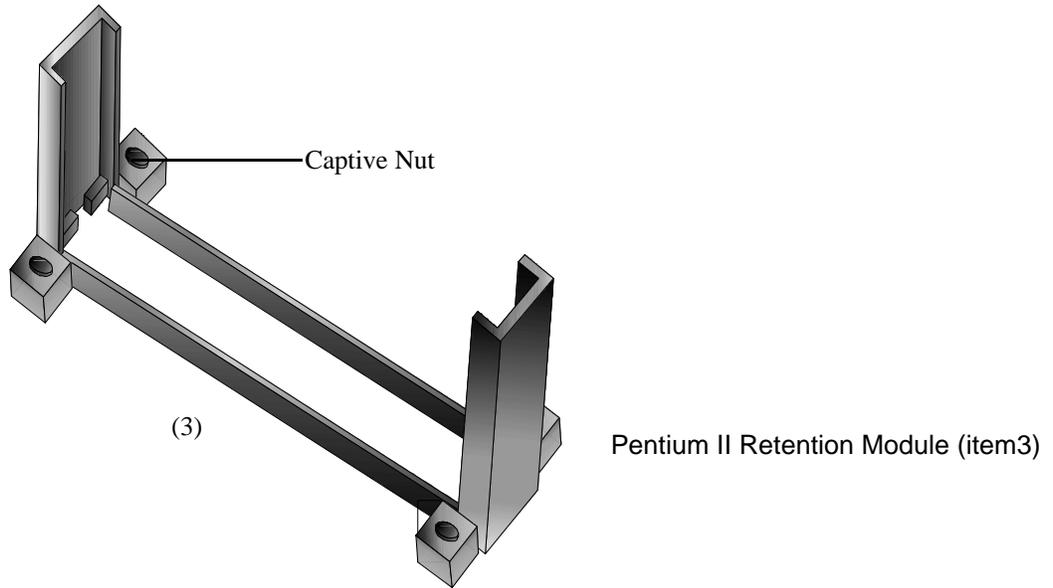
You should check to see that you have the following 8 items. (*NOTE: The images in the following pages will have the same item number next to them for your reference.*)



Attach Mount Bridges (Items 1 and 2)

# JUMPER SETTING

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Heat Sink Support Base Top Bar (item4-7)

# JUMPER SETTING

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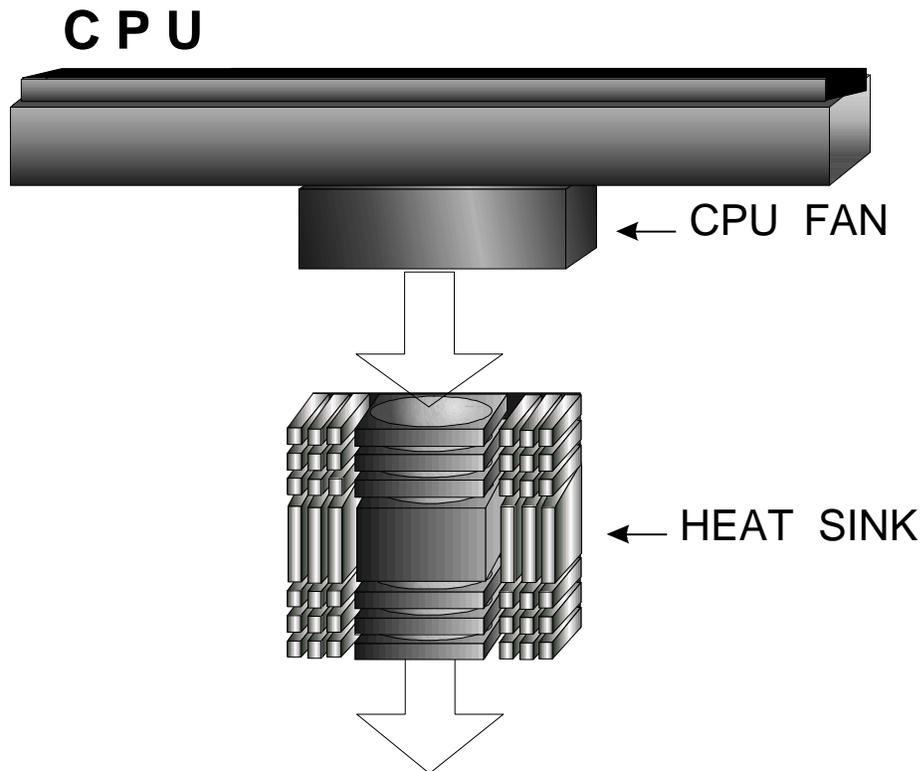
Pentium II Processor Heat Sink

Heat Sink bottom groove for the Support Top Bar (item8)

# JUMPER SETTING

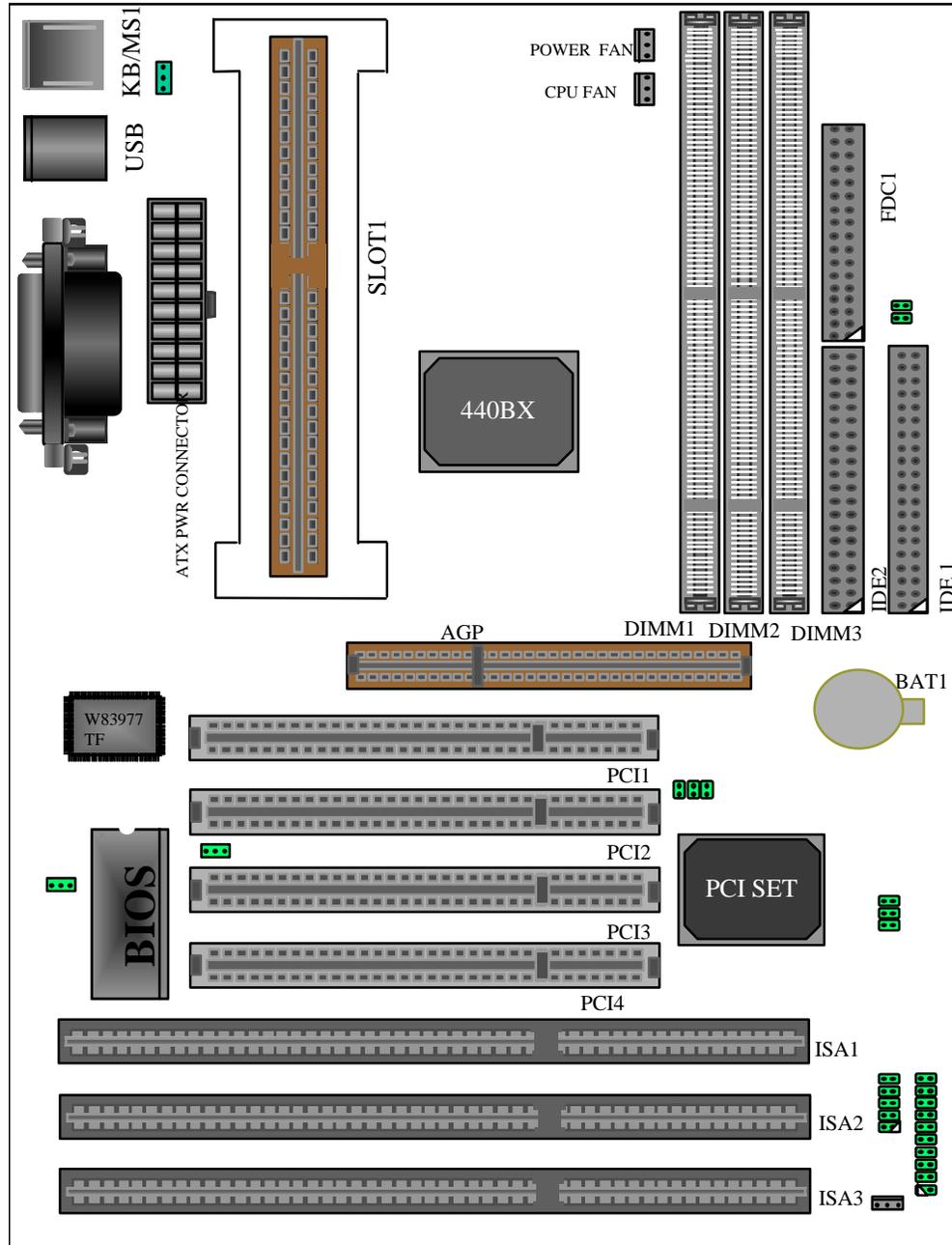
## 2.6 Installing the Pentium II Processor

1. Mount the Pentium II Retention Module: Place the Retention Module over the SEC Slot with the Retainer's Lock Holes toward the motherboard's memory slots and screw the captive Nuts using a flat head screw driver.
2. Insert the SEC Cartridge : Insert the SEC Cartridge into the Locks indicated on preceding picture (item3) and make sure that the Heat Sink is facing the memory slot. Push down slowly while holding the Retention Module's sides inward so that the SEC Cartridge does not push away the two walls of the Retention Module.
3. Secure the Heat Sink: Slide the Heat Sink support Top Bar into the bottom groove of Heat Sink until it locks into the heat sink support Base Posts.
4. Heat Sink Direction For Chipset (440LX): How to allocate Heat Sink on board efficiently.



# JUMPER SETTING

## 2.7 Chart Of Jumpers



# AWARD BIOS SETUP

## 3. AWARD BIOS SETUP

### 3.1 BIOS Setup

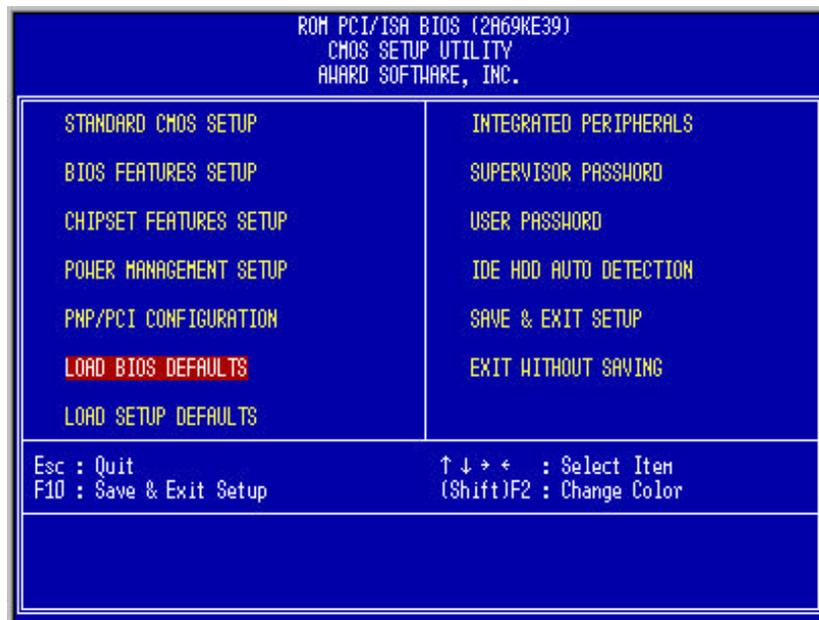
The motherboard supports 5V programmable Flash ROM chips. These memory chips can be updated when BIOS upgrades are released. Use the Flash Memory Writer utility to download the new BIOS file into the ROM chip as described in detail in this section.

All computer motherboards provide a Setup utility program for specifying the system configuration and settings. If your motherboard came in a computer system, the proper configuration entries may have already been made. If so, enter the Setup utility, by hitting the Delete key during bootup, and take note of the configuration settings for future reference; in particular, the hard disk specifications.

If you are installing the motherboard, reconfiguring your system or you receive a Run Setup message, you will need to enter new setup information. This section describes how to configure your system using this utility.

The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the system provides you with the opportunity to run this program. This appears during the Power-On Self Test (POST). Press the <Delete> Key to call up the Setup utility. If you are a little bit late pressing the mentioned key(s), POST will continue with its test routines, thus preventing you from calling up Setup. If you still need to call Setup, reset the system by simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys, or by pushing the Reset button on the system case. You can also restart by turning the system off and then back on again.

When you enter CMOS Setup, the CMOS SETUP UTILITY main program screen will appear with the following options:



# AWARD BIOS SETUP

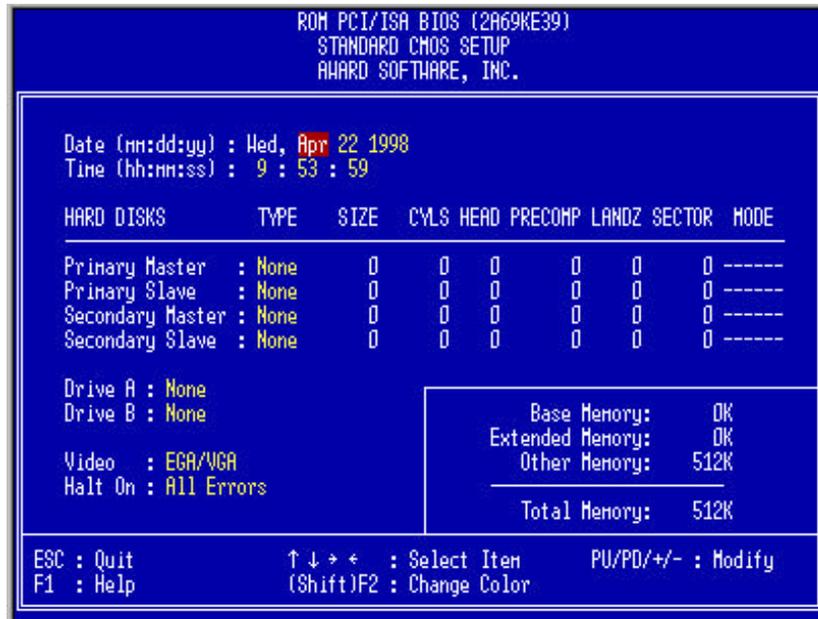
## Load Defaults

The “Load BIOS Defaults” option loads the minimized settings for troubleshooting. “Load Setup Defaults”, on the other hand, is for loading optimized defaults for regular use. Choosing defaults at this level, will modify all applicable settings.

A section at the bottom of the above screen displays the control keys for this screen. Take note of these keys and their respective uses. Another section just below the control keys section displays information on the currently highlighted item in the list.

## 3.2 Standard CMOS Setup

This “Standard CMOS Setup” option allows you to record some basic system hardware configuration and set the system clock and error handling. If the motherboard is already installed in a working system, you will not need to select this option anymore. However, if the configuration stored in the CMOS memory on the board gets lost or damaged, or if you change your system hardware configuration, you will need to reenter the configuration values. The configuration values usually get lost or corrupted when the power of the onboard CMOS battery weakens.



The above screen provides you with a list of options. At the bottom of this screen are the control keys for use on this screen. Take note of these keys and their respective uses.

User-configurable fields appear in a different color. If you need information on the selected field, press the <F1> key. The help menu will then appear to provide you with the information you need. The memory display at the lower right-hand side of the screen is read-only and automatically adjusts accordingly.

# AWARD BIOS SETUP

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## Date

To set the date, highlight the "Date" field and then press the page up/page down or +/- keys to set the current date. Follow the month, day and year format. Valid values for month, day and year are:

<b>Month:</b>	<b>1 to 12</b>
<b>Day:</b>	<b>1 to 31</b>
<b>Year:</b>	<b>up to 2099</b>

## Time

To set the time, highlight the "Time" field and then press the page up/page down or +/- keys to set the current time. Follow the hour, minute and second format. Valid values for hour, minute and second are:

<b>Hour:</b>	<b>00 to 23</b>
<b>Minute:</b>	<b>00 to 59</b>
<b>Second:</b>	<b>00 to 59</b>

You can bypass the date and time prompts by creating an AUTOEXEC.BAT file. For information on how to create this file, please refer to the MS-DOS manual.

## Hard Disk Drives

This field records the specifications for all non-SCSI hard disk drives installed in your system. The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices. Each channel can support up to two hard disks; the first of which is the "master" and the second is the "slave".

Specifications for SCSI hard disks need not be entered here since they operate using device drivers and are not supported by any of the BIOS. If you install other vendor's SCSI controller card, please refer to their respective documentation's on how to install the required SCSI drivers.

To enter specifications for a hard disk drive, you must select first a "type". You can select "User" and specify the specifications yourself manually, or you can select from the provided predefined drive specifications. To select, simply press the <Page Up> or <Page Down> key to change the option listed after the drive letter.

### For IDE hard disk drive setup, you can:

- Use the Auto setting for detection during bootup.
- Use the IDE HDD AUTO DETECTION in the main menu to automatically enter the drive specifications.
- Enter the specifications yourself manually by using the "User" option.

The entries for specifying the hard disk type include **CYLS** (number of cylinders), **HEAD** (number of read/write heads), **PRECOMP** (write precompensation), **LANDZ** (landing zone), **SECTOR** (number of sectors) and **MODE**. The **SIZE** field automatically adjusts according to the configuration you specify, The documentation that comes with your hard disk should provide you with the information regarding the drive specifications.

# AWARD BIOS SETUP

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The MODE entry is for IDE hard disks only, and can be ignored for MFM and ESDI drives. This entry provides three options: Normal, Large, LBA, or Auto (see below). Set MODE to the Normal for IDE hard disk drives smaller than 528MB; set it to LBA for drives over 528MB that support Logical Block Addressing (LBA) to allow larger IDE hard disks; set it to Large for drives over 528MB that do not support LBA. Large type of drive can only be used with MS-DOS and is very uncommon. Most IDE drives over 528MB support the LBA mode.

## Auto detection of hard disks on bootup

For each field: Primary Master, Primary Slave, Secondary Master, and Secondary Slave, you can select Auto under the TYPE and MODE fields. This will enable auto detection of your IDE drives during bootup. This will allow you to change your hard drives (with the power off) and then power on without having to reconfigure your hard drive type. If you use older hard drives which do not support this feature, then you must configure the hard drive in the standard method as described above by the "User" option.

**NOTE:** After the IDE hard disk drive information has been entered into BIOS, new IDE hard disk drives must be partitioned (such as with FDISK) and then formatted before data can be read from and write on. Primary IDE hard disk drives must have its partition set to active (also possible with FDISK).

**NOTE:** SETUP Defaults are noted in parenthesis next to each function heading.

## Drive A/Drive B (None)

These fields record the types of floppy disk installed in your system. The available options for drives A and B are: 360KB, 5.25in.; 1.2MB, 5.25in.; 720KB, 3.5in.; 1.44MB, 3.5in.; None.

To enter the configuration value for a particular drive, highlight its corresponding field and then select the drive type using the left-or right-arrow key.

## Floppy 3 Mode Support (Disabled)

This is the Japanese standard floppy drive. The standard stores 1.2MB in a 3.5" diskette. This is normally disabled but you may choose from either: Drive A, Drive B, Both, and Disabled.

## Video (EGA/VGA)

Set this field to the type of video display card installed in your system. The options are: EGA/VGA, Mono (for Hercules or MDA), CGA 40, and CGA 80.

If you are using a VGA or any higher resolution card, choose the "EGA/VGA" option.

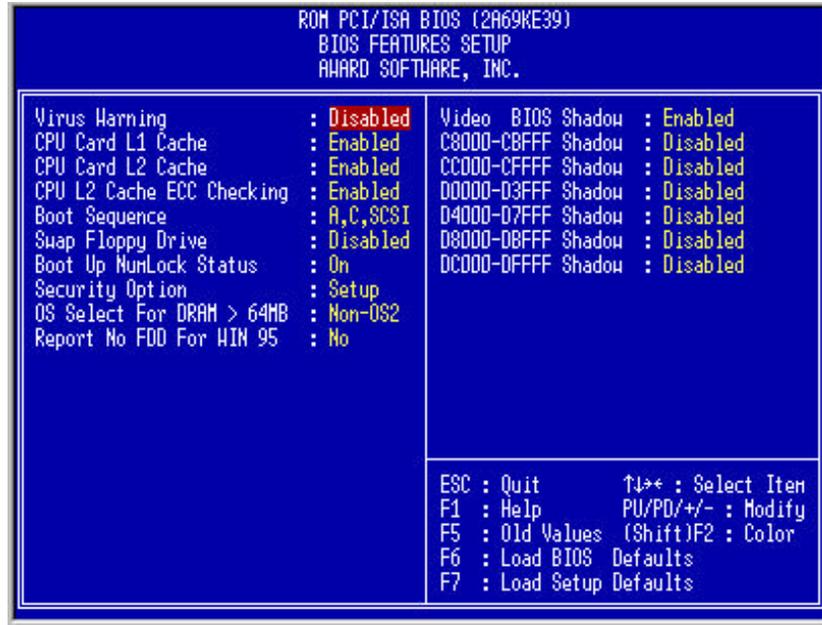
## Halt On (All Errors)

This field determines which types of errors will cause the system to halt. Choose from: "All Errors", "No Errors", "All, But Keyboard", "All, But Diskette", and "All, But Disk/Key".

# AWARD BIOS SETUP

## 3.3 BIOS Features Setup

This "BIOS Features Setup" option consists of configuration entries that allow you to improve your system performance, or let you set up some system features according to your preference. Some entries here are required by the motherboard's design to remain in their default settings.



A section at the lower right of the screen displays the control keys you can use. Take note of these keys and their respective uses. If you need information on a particular entry, highlight it and then press the <F1> key. A pop-up help menu will appear to provide you with the information you need. To load the last set values, press the <F5> key. <F6> and <F7> load the BIOS default values and Setup default values, respectively.

**NOTE:** SETUP Defaults are noted in parenthesis next to each function heading.

### Virus Warning (Disabled)

This field protects the boot sector and partition table of your hard disk against accidental modifications. Any attempt to write to them will cause the system to halt and display a warning message. If this occurs, you can either allow the operation to continue or use a bootable virus-free floppy disk to reboot and investigate your system. This setting is recommended because conflicts with new operating systems. Installation of new operating systems require that you disable this to prevent write errors.

# AWARD BIOS SETUP

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## **CPU Card L1 Cache (Enabled)**

This fields allow you to choose from the default of Enable or choose Disable to turn on or off the CPU's Level 1 built-in cache.

## **CPU Card L2 Cache (Enabled)**

This fields allow you to choose from the default of Enable or choose Disable to turn on or off the CPU's Level2 built-in cache.

## **Boot Sequence (A,C,SCSI)**

This field determines where the system looks first for an operating system. Options are A, C, SCSI ; C, A, SCSI ; C, CDROM, A ; CDROM, C, A ; D, A, SCSI ; E, A, SCSI ; F, A, SCSI ; SCSI, A, C ; SCSI, C, A ; C only; LS/ZIP,C The setup default setting is to check first the hard disk and then the floppy drive; that is A,C,SCSI.

## **Swap Floppy Drive (Disabled)**

When enabled, the BIOS swaps floppy drive assignments so that Drive A becomes Drive B, and Drive B becomes Drive A under DOS.

## **Boot Up NumLock Status (On)**

This field enables users to activate the NumberLock function upon system boot.

## **Security Option (Setup)**

This field determines when the system prompts for the password. The default setting is System, where the system prompts for the User Password every time you boot up. The other option is Setup, where the system always boots up, and prompts for the Supervisor Password only when the Setup utility is called up. You can specify a password by using the Supervisor Password or User Password option from the main screen as explained later in this section.

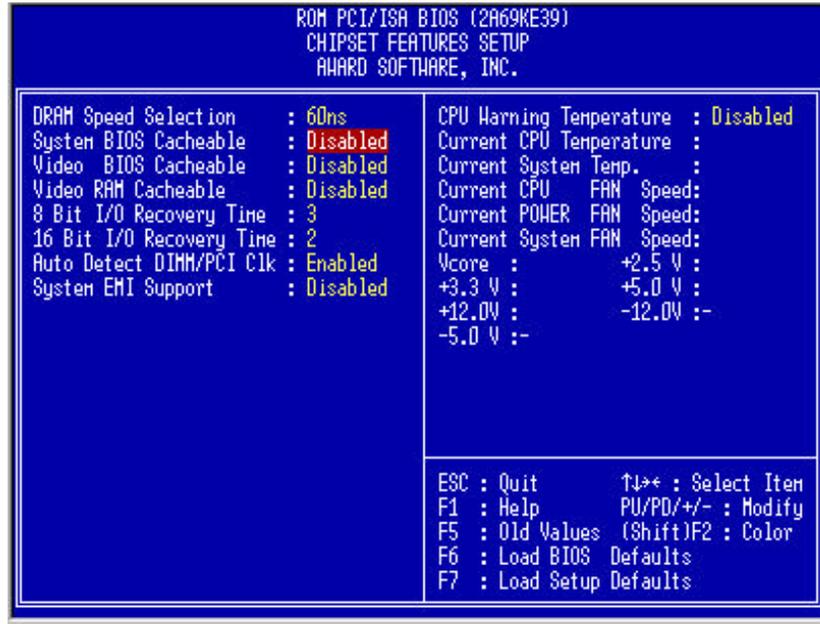
## **OS/2 Select For DRAM > 64M (Non-OS2)**

When using OS/2 operating systems with installed DRAM of greater than 64MB, you need to Enable this option otherwise leave this on the setup default of Non-OS2.

# AWARD BIOS SETUP

## 3.4 Chipset Features Setup

This “Chipset Features Setup” option controls the configuration of the board’s chipset. Control keys for this screen are the same as for the previous screen.



### DRAM Speed Selection (60ns DRAM)

The default setting of 60ns DRAM sets the optimal timings for 60ns DRAM modules. If you are using 50ns DRAM modules, you must change this item to 50ns DRAM.

### System BIOS Cacheable (Disabled)

Enabling this item allows you to cache the system BIOS to further enhance system performance.

### Video BIOS Cacheable (Disabled)

Allows the Video BIOS to be cached to allow faster execution. Leave on default setting of Enabled for better performance, otherwise Disabled.

### Video RAM Cacheable (Disabled)

Allows the Video RAM to be cached to allow faster execution. Leave on default setting of Enabled for better performance, otherwise Disabled.

### 8-bit I/O Recovery Time (3 BUSCLK)

This option specifies the ISA back to back cycle. Some ISA CARDS need long Recovery Time.

# AWARD BIOS SETUP

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## **16-bit I/O Recovery Time (2 BUSCLK)**

This option specifies the ISA back to back cycle. Some ISA CARDS need long Recovery Time.

## **Auto Detect DIMM/PCI CLK (Enabled)**

When this item is set to Enabled, the motherboard will Auto Detect DIMM and PCI CLK.

## **System EMI Support (Disabled)**

When this item is set to enabled, the motherboard will passed the EMI Test.

## **CPU Warning Temperature (Disabled)**

Enabling this item allows system to slow down when CPU temperature is over warning temperature.

## **Current CPU/System Temperature**

The onboard hardware monitor is able to detect the CPU and the system temperatures.

## **Fan Monitor**

The onboard hardware monitor is able to detect the CPU Fan Speed, Power Fan Speed, and System Fan Speed in Rotations Per Minute (RPM). These values refresh upon any key entries in the BIOS setup screen.

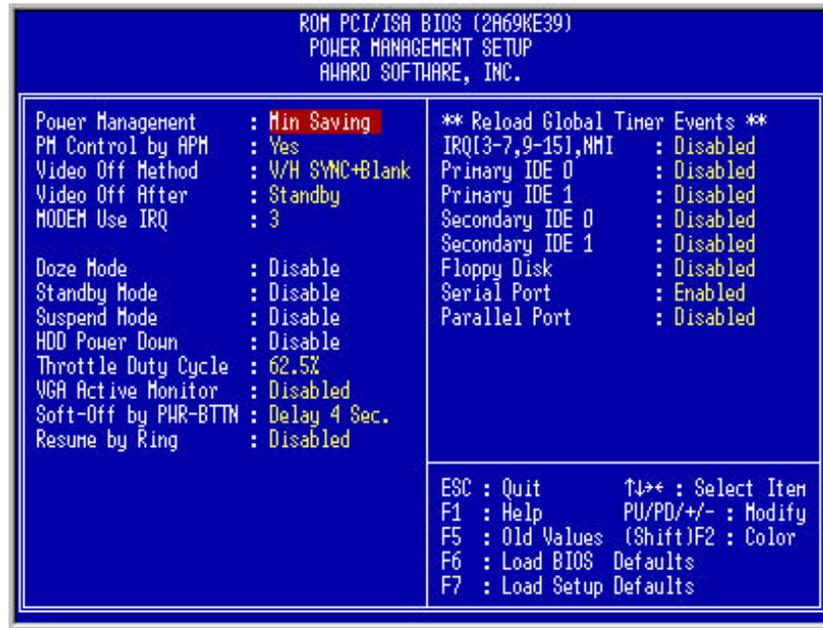
## **Voltage Monitor**

The onboard voltage monitor is able to detect the voltages put out by the voltage regulators. These values refresh upon key entries.

# AWARD BIOS SETUP

## 3.5 Power Management Setup

The Power Management Setup screen enables you to control the mainboard green features. See the following screen.



### Power Management (Min Saving)

This function allows you to set the default parameters of power-saving modes. Set to Disable to turn off power management function. Set to Use Defined to choose your own parameters.

### PM Controlled by APM (Yes)

If "Max Saving" is selected, you can turn on this item, transfer power management control to APM (Advanced Power Management) and enhance power saving function. For example, stop CPU internal clock.

### Video Off Method (V/H SYNC + Blank)

This determines the way that monitor is off. Blank Screen writes blanks to video buffer. V/H SYNC + Blank allows BIOS to control VSYNC and HSYNC signals. This function applies only for DPMS (Display Power Management Standard) monitor. The DPMS mode uses DPMS function provided by VGA the card.

### Video Off After (Standby)

To turn off video monitor at which power down mode.

# AWARD BIOS SETUP

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## **MODEM Use IRQ (3)**

You can set IRQs 3, 4, 5, 7 individually through modem. Activity detected from any IRQ channel will wake up the system.

## **Doze Mode (Disabled)**

This item lets you set the period of time after which the system enters into Doze mode. In this mode, the CPU clock slows down. The ratio is specified in the "Throttle Duty Cycle". Any activity detected returns the system to full power. The system activity (or event) is detected by monitoring the IRQ signals.

## **Standby Mode (Disabled)**

This item lets you set the period of time after which the system enters into Standby mode. In this mode, CPU clock slows down, hard disk will be shut off and the monitor power-saving feature activates. Any activity detected returns the system to full power. The system activity (or event) is detected by monitoring the IRQ signals.

## **Suspend Mode (Disabled)**

This item lets you set the period of time after which the system enters into Suspend mode. The Suspend mode can be Power On Suspend or Suspend to Hard Drive, selected by "Suspend Mode Option".

## **HDD Power Down (Disabled)**

This option lets you specify the IDE HDD idle time before the device enters the power down state. This item is independent from the power states previously described in this section (Standby and Suspend).

## **Throttle Duty Cycle (62.5%)**

Clock Throttling means at the Doze/Standby state. The CPU clock count in a given time (not the frequency) is reduced to the ratio specified in the parameter. Actually, the period per CPU clock remains the same 30ns clock period when system goes into Doze/Suspend. The chipset generates the STPCLK (stop clock) signal periodically to prevent CPU for accepting clock from clock generator. For full power on, the CPU can receive 66M count in one second. If the Slow Clock Ratio is set to 50%, the CPU will only receive 33M clock count in one second. This will effectively reduce CPU speed as well as CPU power.

## **VGA Active Monitor (Disabled)**

To enable or disable the detection of VGA activity for power down state transition.

## **Soft-Off by PWR-BTTN (Delay 4 Sec)**

The system can be in one of two states, one is suspend mode and the other is the Soft-Off mode. Pushing the power button for less than 4 seconds places the system into suspend mode. When the power button is pressed for more than 4 seconds, it enters the Soft-Off mode.

# **AWARD BIOS SETUP**

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## **Resume by Ring (Disabled)**

Enabled this item allows computer to be turned on remotely through a modem.

## **IRQ[3-7, 9-15]**

To enable or disable the detection of IRQ3-7, IRQ9-15 or NMI interrupt events for power down state transition.

## **Primary IDE 0**

## **Primary IDE 1**

## **Secondary IDE 0**

## **Secondary IDE 1**

## **Floppy Disk**

## **Serial Port**

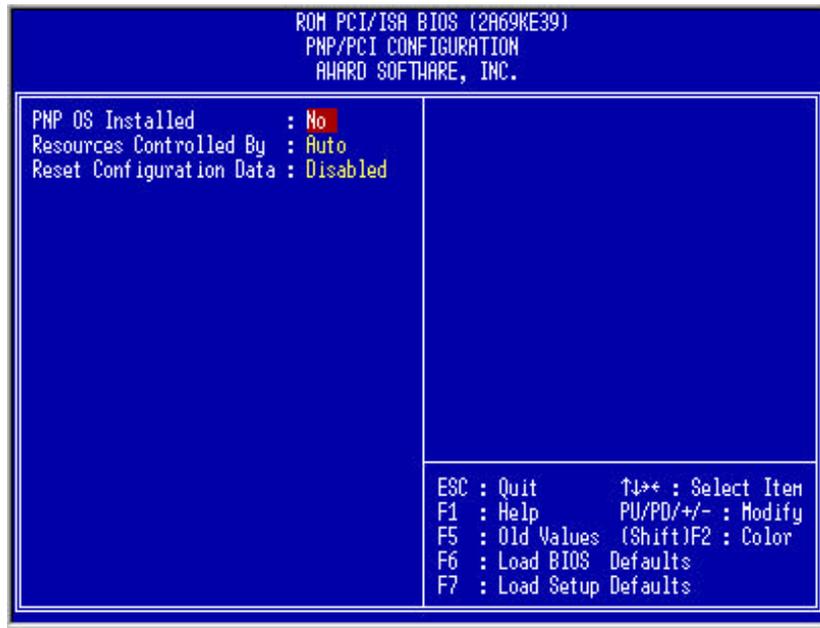
## **Parallel Port**

These items enable or disable the detection of IDE, floppy, serial and parallel port activities for power down state transition. Actually it detects the read/write to/from I/O or address port.

# AWARD BIOS SETUP

## 3.6 PNP/PCI Configuration Setup

The PNP/PCI Configuration Setup allows you to configure the ISA and PCI devices installed in your system. The following screen appears if you select the option "PNP/PCI Configuration Setup" from the main menu.



### PnP OS Installed (No)

Normally, the PnP resources are allocated by BIOS during POST (Power-On Self Test). If you are using a PnP operating system (such as Windows 95), set this item to Yes to inform BIOS to configure only the resources needed for booting (VGA/IDE or SCSI). The rest of system resources will be allocated by PnP operating system.

### Resources Controlled By (Auto)

Setting this option to Manual allows you to individually assign the IRQs and DMAs to the ISA and PCI devices. Set this to Auto to enable the auto-configuration function.

### Reset Configuration Data (Disabled)

In case conflict occurs after you assign the IRQs or after you configure your system, you can enable this function, allow your system to automatically reset your configuration and reassign the IRQs.

# AWARD BIOS SETUP

## 3.7 Load BIOS Defaults

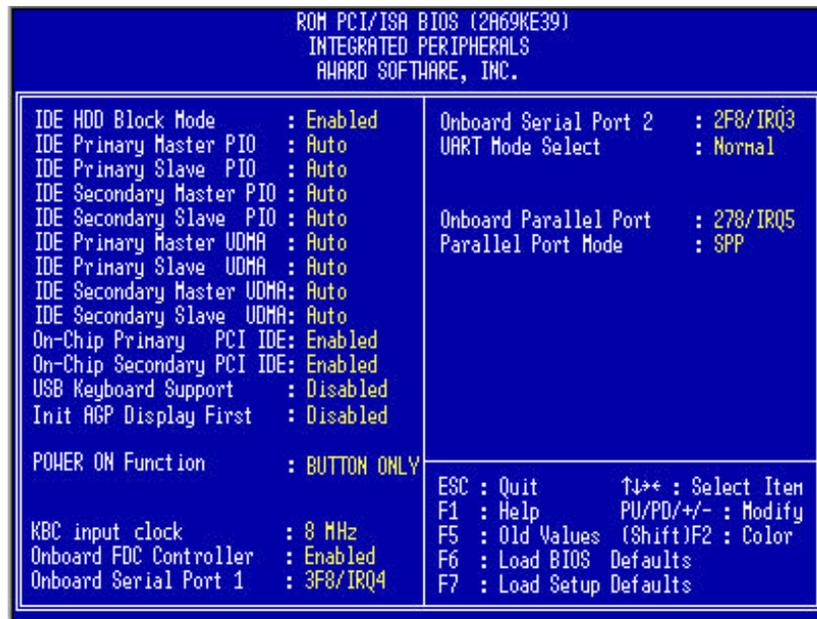
This “Load BIOS Defaults” option allows you to load the troubleshooting default values permanently stored in the BIOS ROM. These default settings are non-optimal and disable all high performance features. To load these default settings, highlight “Load BIOS Defaults” on the main screen and then press the <Enter> key. The system displays a confirmation message on the screen. Press the <Y> key and then the <Enter> key to confirm. Press the <N> key and then the <Enter> key to abort. This feature does not affect the fields on the Standard CMOS Setup screen.

## 3.8 Load Setup Defaults

This “Load Setup Defaults” option allows you to load the default values to the system configuration fields. These default values are the optimized configuration settings for the system. To load these default values, highlight “Load Setup Defaults” on the main screen and then press the <Enter> key. The system displays a confirmation message on the screen. Press the <Y> key and then the <Enter> key to confirm. Press the <N> key and then the <Enter> key to abort. This feature does not affect the fields on the Standard CMOS Setup screen.

## 3.9 Integrated Peripherals

The following screen appears if you select the option “Integrated Peripherals” from the main menu. This option allows you to configure the I/O features.



# AWARD BIOS SETUP

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## **On-Chip Primary PCI IDE (Disabled)**

## **On-Chip Secondary PCI IDE (Disabled)**

These parameters lets you enable or disable the IDE device connected to the primary/secondary IDE connector.

## **IDE Primary Master PIO (Auto)**

## **IDE Primary Slave PIO (Auto)**

## **IDE Secondary Master PIO (Auto)**

## **IDE Secondary Slave PIO (Auto)**

Setting these items to Auto activates the HDD speed auto-detect function. The PIO mode specifies the data transfer rate of HDD. For example: mode 0 data transfer rate is 3.3MB/s, mode 1 is 5.2MB/s, mode 2 is 8.3MB/s, mode 3 is 11.1MB/s and mode 4 is 16.6MB/s. If your hard disk performance becomes unstable, you may manually try the slower mode.

## **IDE Primary Master UDMA (Auto)**

## **IDE Primary Slave UDMA (Auto)**

## **IDE Secondary Master UDMA (Auto)**

## **IDE Secondary Slave UDMA (Auto)**

These items allows you to set the Ultra DMA/33 mode supported by the hard disk drive connected to your primary/secondary IDE connector.

## **Power ON Function (BUTTON ONLY)**

You can select one of "button only , password , Hot-Key , Mouse-Left , or Mouse-Right" switch to power on.(Note : Mouse is for PS/2 mouse)

## **USB Keyboard Support (Disabled)**

This item lets you enable or disable the USB keyboard driver within the onboard BIOS. The keyboard driver simulates legacy keyboard command and let you use USB keyboard during POST or after boot if you don't have USB driver in the operating system.

## **Onboard FDC Controller (Enabled)**

Setting this parameter to Enabled allows you to connect your floppy disk drives to the onboard floppy disk connector instead of a separate controller card. Change the setting to Disabled if you want to use a separate controller card.

## **Onboard Serial Port 1 (3F8/IRQ4)**

This option specifies the first serial port address and IRQ on the motherboard.

## **Onboard Serial Port 2 (2F8/IRQ3)**

This option specifies the secondary serial port address and IRQ on the motherboard.

## **UART Mode Select (Normal)**

This option specifies the COM port operation mode as Standard, HPSIR or ASKIR.

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## Onboard Parallel Port (378/IRQ7)

This item controls the onboard printer port address and interrupt.

## Parallel Port Mode (SPP)

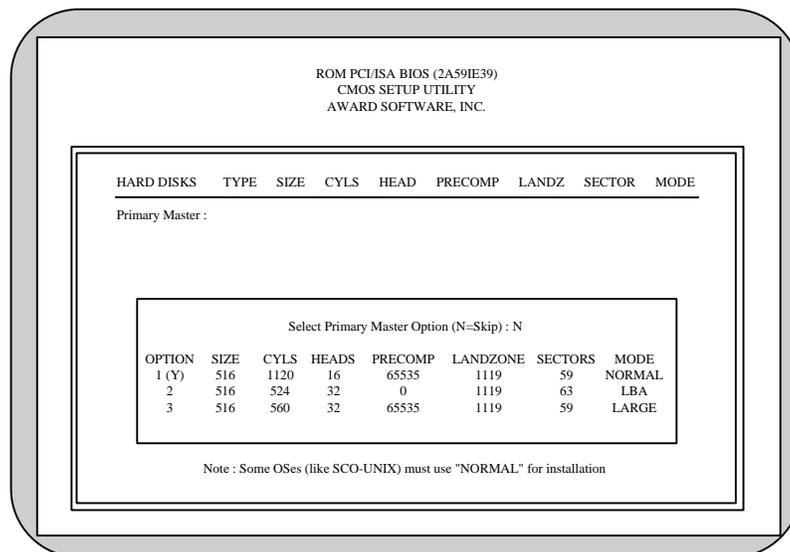
This item lets you set the parallel port mode. The mode options are Normal (Standard and Bidirection Printer Port), EPP (Enhanced Printer Port) and ECP(Extended Printer Port). Normal is the IBM AT and PS/2 compatible mode. EPP enhances the printer port throughput by directly writing/reading data to/from printer port without latch. ECP supports DMA and RLE (Run Length Encoded) compression and decompression.

## 3.10 Supervisor Password and User Password

These two options set the system passwords. "Supervisor Password" sets a password that will be used to protect the system and the Setup utility; "User Password" sets a password that will be used exclusively on the system. By default, the system comes without any passwords. To specify a password, highlight the type you want and then press the <Enter> key. A password prompt appears on the screen. Taking note that the password is case sensitive, and can be up to 8 alphanumeric characters long, type in your password and then press the <Enter> key. The system confirms your password by asking you to type it again. After setting a password, the screen automatically reverts to the main screen. To implement the password protection, specify in the "Security Option" field of the BIOS Features Setup screen when the system will prompt for the password. If you want to disable either password, press the <Enter> key instead of entering a new password when the "Enter Password" prompt appears. A message confirms the password has been disabled.

## 3.11 IDE HDD AUTO Detection

This "IDE HDD Auto Detection" option detects the parameters of an IDE hard disk drive, and automatically enters them into the Standard CMOS Setup screen.



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Up to four IDE drives can be detected, with parameters for each listed inside the box. To accept the optimal entries, press the <Y> key or else select from the numbers displayed under the OPTIONS field (2,1,3 in this case); to skip to the next drive, press the <N> key. If you accept the values, the parameters will appear listed beside the drive letter on the screen. The process then proceeds to the next drive letter. Pressing the <N> key to skip rather than to accept a set of parameters causes the program to enter zeros after that drive letter.

Remember that if you are using another IDE controller that does not feature Enhanced IDE support for four devices, you can only install two IDE hard disk drives. Your IDE controller must support the Enhanced IDE features in order to use Drive E and Drive F. The onboard PCI IDE controller supports Enhanced IDE, with two connectors for connecting up to four IDE devices. If you want to use another controller that supports four drives, you must disable the onboard IDE controller in the Chipset Features Setup screen.

When auto-detection is completed, the program automatically enters all entries you accepted on the field for that drive in the Standard CMOS Setup screen. Skipped entries are ignored and are not entered in the screen.

If you are auto-detecting a hard disk that supports the LBA mode, three lines will appear in the parameter box. Choose the line that lists LBA for an LBA drive. Do not select Large or Normal.

The auto-detection feature can only detect one set of parameters for a particular IDE hard drive. Some IDE drives can use more than one set. This is not a problem if the drive is new and there is nothing on it.

**IMPORTANT:** If your hard drive was already formatted on an older previous system, incorrect parameters may be detected. You will need to enter the correct parameters manually or use low-level format if you do not need the data stored on the hard drive.

If the parameters listed differ from the ones used when the drive was formatted, the drive will not be readable. If the auto-detected parameters do not match the ones that should be used for your drive, do not accept them. Press the <N> key to reject the presented settings and enter the correct ones manually from the Standard CMOS Setup screen.

## 3.12 Save and Exit Setup

Select this option to save into the CMOS memory all modifications you specify during the current session. To save the configuration changes, highlight the "Save & Exit Setup" option on the main screen and then press the <Enter> key.

## 3.13 Exit Without Saving

Select this option to exit the Setup utility without saving the modifications you specify during the current session. To exit without saving, highlight the "Exit Without Saving" option on the main screen and then press the <Enter> key.