

## **Chapter 3**

### **AWARD® BIOS SETUP**

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

### **3.1 Entering Setup**

Power on the computer and press <Del> immediately to allow you to enter Setup. The other way to enter Setup is to power on the computer. When the below message appears briefly at the bottom of the screen during the POST (Power On Self Test), press <Del> key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

TO ENTER SETUP BEFORE BOOT, PRESS <CTRL-ALT-ESC>  
OR <DEL> KEY

If the message disappears before you respond and you still wish to enter Setup, restart the system to try again by turning it OFF then ON or pressing the “RESET” button on the system case. You may also restart by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys. If you do not press the keys at the correct time and the system does not boot, an error message will be displayed and you will again be asked to,

PRESS <F1> TO CONTINUE, <CTRL-ALT-ESC>  
OR <DEL> TO ENTER SETUP

### **3.2 Getting Help**

#### **Main Menu**

The on-line description of the highlighted setup function is displayed at the bottom of the screen.

#### **Status Page Setup Menu/Option Page Setup Menu**

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item. To exit the Help Window, press <Esc>.

**3.3 The Main Menu**

Once you enter Award® BIOS CMOS Setup Utility, the Main Menu (Figure 1) will appear on the screen. The Main Menu allows you to select from twelve setup functions and two exit choices. Use arrow keys to select among the items and press <Enter> to accept or enter the sub-menu.

|   |                           |
|---|---------------------------|
| CMOS Setup Utility - Copyright(C) 1984-2000 |                           |
| STANDARD CMOS Features                      | Frequency/Voltage Control |
| Advanced BIOS Features                      | Load Fail-Safe Defaults   |
| Advanced Chipset Features                   | Load Optimized Defaults   |
| Integrated Peripherals                      | Set Supervisor Password   |
| Power Management Setup                      | Set User Password         |
| PnP/PCI Configurations                      | Save & Exit Setup         |
|   | Exit Without Saving       |
| Esc : Quit                                  | ↑↓→← : Select Item        |
| F10 : Save & Exit Setup                     |                           |
| Time, Date, Hard Disk Type...               |                           |

**Standard CMOS Setup**

Use this Menu for basic system configurations.

**Advanced BIOS Features**

Use this menu to set the Advanced Features available on your system.

**Advanced Chipset Features**

Use this menu to change the values in the chipset registers and optimize your system's performance.

**Integrated Peripherals**

Use this menu to specify your settings for integrated peripherals.

**Power Management Setup**

Use this menu to specify your settings for power management.

**PnP/PCI Configuration**

This entry appears if your system supports PnP/PCI.

**Frequency/Voltage**

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

**Load Fail-Safe Defaults**

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

**Load Optimized Defaults**

Use this menu to load the BIOS default values that are factory settings for optimal performance system operations.

**Supervisor/User Password**

Use this menu to set User and Supervisor Passwords.

**Save & Exit Setup**

Save CMOS value changes to CMOS and exit setup.

**Exit Without Saving**

Abandon all CMOS value changes and exit setup.

3.4 Standard CMOS Setup

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 the <PgUp> or <PgDn> keys to select the value you want in each item.

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

|   |  |              |
|---|--|--------------|
| Date(mm:dd:yy):<br>Time(hh:mm:ss):  | Fri,May 5,2000<br>00:00:00   | Item Help    |
| IDE Primary Master<br>IDE Primary Slave<br>IDE Secondary Master<br>IDE Secondary Slave  | Press Enter27326MB<br>Press Enter None<br>Press Enter None<br>Press Enter None | Menu Level > |
| Drive A<br>Drive B  | 1.44M, 3.5in.<br>None  |              |
| Video<br>Halt On  | EGA/VGA<br>All, But Keyboard   |              |
| Based Memory<br>Extended Memory<br>Total Memory   | 640K<br>64512K<br>1024K  |              |
| ↑↓ →← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |  |              |

**Date**

The date format is <day><month> <date> <year>.

|              |  |
|--------------|--|
| <b>Day</b>   | Day of the week, from Sun to Sat, determined by BIOS. Read-only. |
| <b>month</b> | The month from Jan. through Dec.                                 |
| <b>date</b>  | The date from 1 to 31 can be keyed by numeric function keys.     |
| <b>year</b>  | The year, depends on the year of the BIOS                        |

**Time**

The time format is <hour> <minute> <second>.

**PrimaryMaster/PrimarySlave****SecondaryMaster/Secondary Slave**

Press PgUp/<+> or PgDn/<-> to select Manual, None, Auto type. 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 Manual to define your own drive type manually.

If you select Manual, related information is asked to be entered to the following items. Enter the information directly from the keyboard. This information should be provided in the documentation from your hard disk vendor or the system manufacturer.

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

If the controller of HDD interface is CD-ROM, the selection shall be  
“None”.

|                     |   |
|---------------------|---|
| <b>Access Mode</b>  | The settings are Auto, Normal, Large,LBA. |
| <b>Cylinder</b>     | number of cylinders                       |
| <b>Head</b>         | number of heads                           |
| <b>Precomp</b>      | write precom                              |
| <b>Landing Zone</b> | landing zone                              |
| <b>Sector</b>       | number of sectors                         |

3.5 Advanced BIOS Features

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Advanced BIOS Features

|                            |          |              |
|----------------------------|----------|--------------|
| Anti-Virus Protection      | Enabled  | Item Help    |
| CPU Internal Cache         | Enabled  |              |
| External Cache             | Enabled  | Menu Level > |
| CPU L2 Cache ECC Checking  | Enabled  |              |
| Quick Power On Self Test   | Disabled |              |
| First Boot device          | Floppy   |              |
| Second Boot device         | HDD-0    |              |
| Third Boot device          | LS120    |              |
| Boot other device          | Enabled  |              |
| Swap Floppy Drive          | 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    |              |
| OS Select for DRAM > 64MB  | Non-OS2  |              |
| Video BIOS Shadow          | Enabled  |              |
| C8000-CBFFF Shadow         | Disabled |              |
| CC000-CFFFF Shadow         | Disabled |              |
| D0000-D3FFF Shadow         | Disabled |              |
| D4000-D7FFF Shadow         | Disabled |              |
| D8000-DBFFF Shadow         | Disabled |              |
| DC000-DFFFF Shadow         | Disabled |              |

|  |  |  |
|--|--|--|
| ↑↓←→ Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |  |  |
|--|--|--|

Anti-Virus Protection

Allows you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep.

- Disabled

No warning message to appear when anything attempts to access the boot sector or hard disk partition table.
- Enabled (default)

Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector of hard disk partition table.



### **CPU Internal Cache**

The default value is Enabled.

**Enabled** (default)      Enable cache

**Disabled**              Disable cache

**Note:** The internal cache is built in the processor.

### **External Cache**

Choose Enabled or Disabled. This option enables the level 2 cache memory.

### **CPU L2 Cache ECC Checking**

Choose Enabled or Disabled. This option enables the level 2 cache memory ECC(error check correction).

### **Quick Power On Self Test**

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

**Enabled**              Enable quick POST

**Disabled** (default)    Normal POST

### **First/Second/Third/Other Boot Device**

The BIOS attempts to load the operating system from the devices in the sequence selected in these items. The settings are Floppy, LS/ZIP, HDD-0/HDD-1/HDD-2/HDD-3, SCSI, CDROM, LAN, and Disabled.

### **Swap Floppy Drive**

Switches the floppy disk drives between being designated as A and B. Default is 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.

**Boot Up NumLock Status**

The default value is On.

**On** (default) Keypad is numeric keys.

**Off** Keypad is arrow keys.

**Gate A20 Option**

**Normal** The A20 signal is controlled by keyboard controller or chipset hardware.

**Fast** The A20 signal is controlled by port 92 or chipset specific method.

**Typematic Rate Setting**

Key strokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected. The settings are: Enabled/Disabled.

**Typematic Rate (Chars/Sec)**

Sets the number of times a second to repeat a key stroke when you hold the key down. The settings are: 6, 8, 10, 12, 15, 20, 24, 30.

**Typematic Delay (Msec)**

Sets the delay time after the key is held down before it begins to repeat the keystroke. The settings are: 250, 500, 750, 1000.

**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(default)** The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

**OS Selection for DRAM > 64MB**

Allows OS2® to be used with > 64 MB of DRAM. Settings are Non-OS/2 (default) and OS2. Set to OS/2 if using more than 64MB and running OS/2®.

3.6 Advanced Chipset Features

The Advanced Chipset Features Setup option is used to change the values of the chipset registers. These registers control most of the system options in the computer.

Choose the “ADVANCED CHIPSET FEATURES” from the Main Menu and the following screen will appear.

| CMOS Setup Utility - Copyright(C) 1984-2000 Award Software<br>Advanced Chipset Features  |              |              |
|--|--------------|--------------|
| Bank 0/1 DRAM Timing   | SDRAM 8/10ns | Item Help    |
| Bank 2/3 DRAM Timing   | SDRAM 8/10ns |              |
| Bank 4/5 DRAM Timing   | SDRAM 8/10ns | Menu Level > |
| SDRAM Cycle Length   | 3            |              |
| DRAM Clock   | Host CLK     |              |
| Memory Hole  | Disabled     |              |
| P2C/C2P Concurrency  | Enabled      |              |
| Fast R-W Turn Around   | Disabled     |              |
| System BIOS Cacheable  | Disabled     |              |
| Video RAM Cacheable  | Disabled     |              |
| AGP Aperture Size  | 64M          |              |
| AGP 4X Mode  | Enabled      |              |
| AGP Driving Control  | Auto         |              |
| AGP Driving Value  | DA           |              |
| K7 CLK_CTL Select  | Optimal      |              |
| OnChip USB   | Enabled      |              |
| USB Keyboard Support   | Disabled     |              |
| OnChip Sound   | Auto         |              |
| OnChip Modem   | Auto         |              |
| CPU to PCI Write Buffer  | Enabled      |              |
| PCI Dynamic Bursting   | Enabled      |              |
| PCI Master 0 WS Write  | Enabled      |              |
| PCI Delay Transaction  | Enabled      |              |
| PCI#2 Access #1 Retry  | Disabled     |              |
| AGP Master 1 WS Write  | Enabled      |              |
| AGP Master 1 WS Read   | Enabled      |              |
| Memory Parity/ECC Check  | Disabled     |              |
| ↑↓←→ Move Enter:Select +/-/PU/PD=Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |              |              |

**Note:** Change these settings only if you are familiar with the chipset.

**Bank 0/1 DRAM Timing****Bank 2/3 DRAM Timing****Bank 4/5 DRAM Timing**

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.

**SDRAM Cycle Length**

This item allows you to select the SDRAM cycle length. The settings are 2 or 3.

**DRAM Clock**

The chipset support synchronous and asynchronous mode between the host clock and DIMM clock.

|                           |                                |
|---------------------------|--------------------------------|
| <b>Host CLK (default)</b> | DIMM clock equal to host clock |
| <b>66MHz</b>              | DIMM clock equal to 66MHz      |

**Memory Hole**

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 16 MB.

|                    |                            |
|--------------------|----------------------------|
| Enabled            | Memory hole supported.     |
| Disabled (default) | Memory hole not supported. |

**P2C/C2P Concurrency**

This item allows you to Enable or Disable the PCI to CPU, CPU to PCI concurrency. The default setting is Enabled.

**Fast R-W Turn Around**

This item controls the DRAM timing. It allows the user to Enable or Disable the fast read, write turn around. The settings are Enabled or Disabled. The default setting is Disabled.

### **System BIOS Cacheable**

Selecting *Enabled* allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

### **Video RAM Cacheable**

Select Enabled allows caching of the video BIOS , resulting in better system performance. However, if any program writes to this memory area, a system error may result. The settings are: Enabled and Disabled.

### **AGP Aperture Size**

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.

### **AGP-4X Mode**

This item is used to Enabled or Disabled the AGP support for AGP 4x mode.

### **AGP Driving Control**

This item allows you to adjust the AGP driving force. Choose Manual to key in a AGP Driving Value in the next selection. This field is recommended to set in Auto for avoiding any error in your system. The default setting is Auto.

### **AGP Driving Value**

This item allows you to adjust the AGP driving force.

**Onchip USB**

Set this option to Enable or Disable the onchip USB controller. The default setting is Enabled.

**USB Keyboard Support**

Set this option to Enable or Disable the USB keyboard/mouse support. The default setting is Disabled.

**OnChip Sound**

This item allows you to control the onboard AC 97 audio.

**OnChip Modem**

This item allows you to control the onboard MC 97 Modem.

**CPU to PCI Write Buffer**

When this field is Enabled, writes from the CPU to the PCI bus are buffered, to compensate for the differences between the CPU and the PCI bus. When Disabled, the writes are not buffered and the CPU must wait until the write is complete before starting another cycle. The default setting is Enabled.

**PCI Dynamic Bursting**

This item allows you to Enable or Disable the PCI dynamic bursting function. The settings are Enabled or Disabled.

**PCI Delay 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 settings are Enabled or Disabled.

**PCI#2 Access #1 Retry**

When Disabled, PCI#2 will not be disconnected until access finishes (default). When Enabled, PCI#2 will be disconnected if max retries are attempted without success. The default setting is Enabled.

**AGP Master 1 WS Write**

When Enabled, writes to the AGP (Accelerated Graphics Port) are executed with one wait states. The default setting is Enabled.

**AGP Master 1 WS Read**

When Enabled, reads to the AGP (Accelerated Graphics Port) are executed with one wait states. The default setting is Enabled.

**Memory Parity/ECC Check**

This item when Enabled detects the memory parity and Error Checking & Correction. The settings are Enabled or Disabled.



3.7 Integrated Peripherals

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Integrated Peripherals

|  |          |              |
|--|----------|--------------|
| Onchip IDE Channel0  | Enabled  | Item Help    |
| Onchip IDE Channel1  | Enabled  |              |
| IDE Prefetch Mode  | Enabled  |              |
| Primary Master PIO   | Auto     | Menu Level > |
| Primary Slave PIO  | Auto     |              |
| Secondary Master PIO   | Auto     |              |
| Secondary Slave PIO  | Auto     |              |
| Primary Master UDMA  | Auto     |              |
| Primary Slave UDMA   | Auto     |              |
| Secondary Master UDMA  | Auto     |              |
| Secondary Slave UDMA   | Auto     |              |
| Init Display First   | PCI Slot |              |
| IDE HDD Block Mode   | Enabled  |              |
| Onboard FDD Controller   | Enabled  |              |
| Onboard Serial Port 1  | Auto     |              |
| Onboard Serial Port 2  | Auto     |              |
| UART 2 Mode  | Standard |              |
| X IR Function Duplex   | Half     |              |
| X TX,RX inverting enable   | No, Yes  |              |
| Onboard Parallel Port  | 378/IRQ7 |              |
| Onboard Parallel Mode  | Normal   |              |
| ECP Mode Use DMA   | 3        |              |
| Parallel Port EPP Type   | EPP 1.9  |              |
| Onboard Legacy Audio   | Enabled  |              |
| Sound Blaster  | Disabled |              |
| SB I/O Base Address  | 220H     |              |
| SB IRQ Select  | IRQ 5    |              |
| SB DMA Select  | DMA1     |              |
| MPU-401  | Disabled |              |
| MPU-4-1 I/O Address  | 330-333H |              |
| Game Port (200-207H)   | Enabled  |              |
| ↑↓ → ← Move Enter:Select +/-/PU/PD=Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |          |              |

OnChip IDE Channel0/Onchip IDE Channel1

The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select *Enabled* to activate each channel separately. The settings are: Enabled and Disabled.

IDE Prefetch Mode

This item is used to Enabled or Disabled the IDE Read/Write Prefetch buffer. This buffer is used to store data for faster performances.

### **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 settings are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

### **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 and Ultra DMA/66, select Auto to enable BIOS support. The settings are: Auto, Disabled.

### **Init Display First**

This item allows you to decide to activate whether PCI Slot or AGP Slot. The settings are: PCI Slot, AGP Slot.

### **IDE HDD Block Mode**

Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support. The settings are: Enabled, Disabled.

### **Onboard FDD Controller**

Select Enabled if your system has a floppy disk controller (FDD) installed on the system board and you wish to use it. If you install add-on FDC or the system has no floppy drive, select Disabled in this field. The settings are: Enabled and Disabled.

### **Onboard Serial Port 1/Port 2**

Select an address and corresponding interrupt for the first and second serial ports. The settings are: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled, Auto.

---

**UART 2 Mode**

This item allows you to select which mode for the Onboard Serial Port 2. The settings are: Standard, HPSIR, ASKIR.

**IR Function Duplex**

This item allows you to select the IR half/full duplex function.

**TX, RX inverting enable**

This item allows you to enable the TX, RX inverting which depends on different H/W requirement. This field is not recommended to change its default setting for avoiding any error in your system.

**Onboard Parallel Port**

There is a built-in parallel port on the on-board Super I/O chipset that provides Standard, ECP, and EPP features. It has the following options:

**Disable**

|           |                     |
|-----------|---------------------|
| 3BCH/IRQ7 | Line Printer port 0 |
| 278H/IRQ5 | Line Printer port 2 |
| 378H/IRQ7 | Line Printer port 1 |

### **Onboard Parallel Mode**

SPP : Standard Parallel Port

EPP : Enhanced Parallel Port

ECP : Extended Capability Port

To operate the onboard parallel port as Standard Parallel Port only, choose “SPP.” To operate the onboard parallel port in the ECP and SPP modes simultaneously, choose “ECP/SPP.” By choosing “ECP”, the onboard parallel port will operate in ECP mode only. Choosing “ECP/EPP” will allow the onboard parallel port to support both the ECP and EPP modes simultaneously. The ECP mode has to use the DMA channel, so choose the onboard parallel port with the ECP feature. After selecting it, the following message will appear: “ECP Mode Use DMA” At this time the user can choose between DMA channels 3 or 1. The onboard parallel port is EPP Spec. compliant, so after the user chooses the onboard parallel port with the EPP function, the following message will be displayed on the screen: “EPP Mode Select.” At this time either EPP 1.7 spec. or EPP 1.9 spec. can be chosen.

### **ECP Mode Use DMA**

Select a DMA channel for the parallel port for use during ECP mode. The settings are 3 or 1. The default setting is 3.

### **Parallel Port EPP Type**

Select EPP port type 1.7 or 1.9.

### **Onboard Legacy Audio**

This field controls the onboard legacy audio.

- Sound Blaster
- SB I/O Base Address
- SB IRQ Select
- SB DMA Select
- MPU-401
- MPU-401 I/O Address
- Game Port (200-207H)

3.8 Power Management Setup

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

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Power Management Setup

|                           |                |              |
|---------------------------|----------------|--------------|
| ACPI Function             | Enabled        | Item Help    |
| Power Management          | Press Enter    |              |
| ACPI Suspend Type         | S1(POS)        | Menu Level > |
| PM Control by APM         | Yes            |              |
| Video Off Option          | Suspend->Off   |              |
| Video Off Method          | V/H SYNC+Blank |              |
| MODEM Use IRQ             | 3              |              |
| Soft-Off by PWRBTN        | Instant-Off    |              |
| State After Power Failure | Off            |              |
| LED In Suspend            | Blink          |              |
| Wake Up Events            | Press Enter    |              |
|                           |                |              |
|                           |                |              |

|  |  |  |
|--|--|--|
| ↑↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |  |  |
|--|--|--|

ACPI Function

This item allows you to Enabled/Disabled the Advanced Configuration and Power Management (ACPI). The Settings are Enabled and Disabled.

## Power Management

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

1. HDD Power Down
2. Doze Mode
3. Suspend Mode

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

|                               |   |
|-------------------------------|---|
| <b>Min. Power Saving</b>      | Minimum power management. Suspend Mode = 1hr., and HDD Power Down = 15 min.   |
| <b>Max. Power Saving</b>      | Maximum power management — Suspend Mode = 1 min., and HDD Power Down = 1 min.   |
| <b>User Defined (default)</b> | 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. |

## ACPI Suspend Type

This item will set which ACPI suspend type will be used.

|                 |   |
|-----------------|---|
| <b>S1 (POS)</b> | The S1 sleeping state is low wake-up latency sleeping state. In this state, no system context is lost(CPU or chip set) and hardware maintains all system context.   |
| <b>S3 (STR)</b> | The S3 state is a low wake-up latency sleeping state where all system context is lost except system memory. CPU, cache, and chipset context are lost in this state. Hardware maintains memory context and restores some CPU and L2 configuration context. |

**PM Control by APM**

- |            |  |
|------------|--|
| <b>No</b>  | System BIOS will ignore APM when power managing the system.        |
| <b>Yes</b> | System BIOS will wait for APM's prompt before it enter any PM mode |

**Note :**Enable this for O.S. with APM like Windows® 98, Windows® NT, etc.

**Video Off Option**

The settings are N/A, Standby, Doze, or Suspend. This option is for choosing the setting in which the monitor will turn off.

- |                |  |
|----------------|--|
| <b>N/A</b>     | Always turn on.                                      |
| <b>Doze</b>    | During Doze mode, the monitor will be turned off.    |
| <b>Standby</b> | During Standby mode, the monitor will be turned off. |
| <b>Suspend</b> | During Suspend mode, the monitor will be turned off. |
- The default setting is Standby.

**Video Off Method**

This determines the manner in which the monitor is blanked.

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

**Modem Use IRQ**

This determines the IRQ in which the MODEM can use.  
The settings are: 3, 4, 5, 7, 9, 10, 11, NA.

**Soft-Off by PWR-BTTN**

Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state. The settings are: Delay 4 Sec, Instant-Off.

State After Power Failure

This option will determine how the system will power on after a power failure.

Wake Up Events

|   |             |              |
|---|-------------|--------------|
| VGA   | Off         | Item Help    |
| LPT & COM   | LPT/COM     |              |
| HDD & FDD   | On          | Menu Level > |
| PCI Master  | Off         |              |
| Power On by PCI Card  | Disabled    |              |
| Wake Up On LAN/Ring   | Disabled    |              |
| RTC Alarm Resume  | Disabled    |              |
| Date (of Month)   | 0           |              |
| Resume Time   | 0:0:0       |              |
| IRQs Activity Monitoring  | Press Enter |              |
|   |             |              |
| ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |             |              |

VGA

When Enabled, you can set the VGA to awaken the system.

LPT & COM

When LPT & COM is On, any activity from one of the listed system peripheral devices or IRQs wakes up the system

HDD & FDD

When HDD & FDD is On, any activity from one of the listed system peripheral devices or IRQs wakes up the system

PCI Master

When PCI Master is On, any activity from one of the listed system peripheral devices or IRQs wakes up the system





The following is a list of IRQ's, Interrupt **Re**Quests, which can be exempted much as the COM ports and LPT ports above can. When an I/O device wants to gain the attention of the operating system, it signals this by causing an IRQ to occur. When the operating system is ready to respond to the request, it interrupts itself and performs the service.

When set On, activity will neither prevent the system from going into a power management mode nor awaken it.

- IRQ3 (COM 2)
- IRQ4 (COM 1)
- IRQ5 (LPT 2)
- IRQ6 (Floppy Disk)
- IRQ7 (LPT 1)
- IRQ8 (RTC Alarm)
- IRQ9 (IRQ2 Redir)
- IRQ10 (Reserved)
- IRQ11 (Reserved)
- IRQ12 (PS/2 Mouse)
- IRQ13 (Coprocessor)
- IRQ14 (Hard Disk)
- IRQ15 (Reserved)

3.9 PnP/PCI Configuration Setup

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, 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.

CMOS Setup Utility - Copyright(C) 1984-2000 Award Software  
PnP/PCI Configuration Setup

|   |             |              |
|---|-------------|--------------|
| PnP OS Installed  | No          | Item Help    |
| Reset Configuration Data  | Disabled    |              |
| Resources Controlled By   | Auto (ESCD) | Menu Level > |
| IRQ Resources   | Press Enter |              |
| DMA Resources   | Press Enter |              |
| PCI/VGA Palette Snoop   | Disabled    |              |
| Assign IRQ for VGA  | Enabled     |              |
| Assign IRQ for USB  | Enabled     |              |
| ↑↓ →← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |             |              |

PnP OS Installed

When set to YES, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Windows® 95 or 98. When set to NO, BIOS will initialize all the PnP cards. So, for non-PnP operating system (DOS, Netware®), this option must set to Yes.

### **Reset Configuration Data**

Normally, you leave this field Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system can not boot.

The settings are: Enabled and Disabled .

### **Resource Controlled By**

The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95/98. If you set this field to “manual” choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a “➤”). The settings are: Auto(ESCD), Manual.

### **IRQ Resources**

When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

### **DMA Resources**

This sub menu can let you control the DMA resource.

### **PCI/VGA Palette Snoop**

Leave this field at *Disabled*. The settings are Enabled, Disabled.

### **Assign IRQ for VGA**

Leave this field at *Enabled*. The settings are Enabled, Disabled.

### **Assign IRQ for USB**

Leave this field at *Enabled*. The settings are Enabled, Disabled.

3.10 Frequency/Voltage Control

This section is for setting CPU Frequency/Voltage Control.

|   |          |              |
|---|----------|--------------|
| CMOS Setup Utility - Copyright(C) 1984-2000 Award Software  |          |              |
| Frequency/Voltage Control   |          |              |
| Auto Detect DIMM/PCI Clk  | Enabled  | Item Help    |
| Spread Spectrum Modulated   | Disabled |              |
| CPU Host/PCI Clock  | Default  |              |
|   |          | Menu Level > |
| ↑↓ →← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help<br>F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults |          |              |

Auto Detect DIMM/PCI CLK

This item allows you to enable/disable auto detect DIMM/PCI Clock.

The settings are: Enabled, Disabled.

Spread Spectrum Modulated

This item allows you to set the Spread Spectrum.

CPU Host/PCI Clock

This item allows you to select the CPU Host/PCI Clock.

### **3.11 Load Fail-Safe/Optimized Defaults**

#### **Load Fail-Safe Defaults**

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

Load Fail-Safe Defaults (Y/N) ? N

Pressing 'Y' loads the BIOS default values for the most stable, minimal-performance system operations.

#### **Load Optimized Defaults**

When you press <Enter> on this item, you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N) ? N

Pressing 'Y' loads the default values that are factory settings for optimal performance system operations.

## **3.12 Set Supervisor/User Password**

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

**Supervisor password :** can enter and change the options of the setup menus.

**User password :** 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 part 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.