

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 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 key or simultaneously press <Ctrl>, <Alt>, and <Esc> keys.

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

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.

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Standard CMOS Setup

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

Date

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

| | |
|--------------|--|
| Day | Day of the week, from Sun to Sat, determined by BIOS. Read-only. |
| Month | The month from Jan. through Dec. |
| Date | The date from 1 to 31 can be keyed by numeric function keys. |
| Year | 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”.

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

3.5 Advanced BIOS Features

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

| | | |
|-----------------------------|----------|--------------|
| Anti-Virus Protection | Disabled | 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 | |
| Typeomatic Rate Setting | Disabled | |
| Typeomatic Rate (Chars/Sec) | 6 | |
| Typeomatic 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 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 date into this area, BIOS will show a warning message on screen and alarm beep.

| | |
|--------------------|---|
| Disabled (default) | No warning message to appear when anything attempts to access the boot sector or hard disk partition table. |
| Enabled | 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 Advanced Chipset Features | | |
|--|------------|--------------|
| Bank 0/1 DRAM Timing | SDRAM 10ns | Item Help |
| Bank 2/3 DRAM Timing | SDRAM 10ns | |
| SDRAM Cycle Length | 3 | Menu Level > |
| 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 | |
| Frame Buffer Size | 8M | |
| 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 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**

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.

Host CLK (default)

DIMM clock equal to host clock

Host CLK+33M

DIMM clock equal to 133MHz

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.

Frame Buffer Size

This item allows you to adjust on board frame buffer size from 4MB, 8MB, 16MB to 32MB. The default size will be 8MB.

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 | AGP | |
| 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 | DMAl | |
| 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 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 Mode 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, 66 or 100, select Auto to enable BIOS support. The settings are Auto and Disabled.

Init Display First

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

UART 2 Mode

This item allows you to select which mode for the Onboard Serial Port

2. The settings are Standard, HPSIR and 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 fields 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.

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

| | |
|-------------------------------|--|
| Min. Power Saving | Minimum power management. Suspend Mode = 1hr., and Doze Mode = 1 hr. |
| Max. Power Saving | Maximum power management — Suspend Mode = 1 min., and Doze Mode = 1 min. |
| User Defined (default) | 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. |

ACPI Suspend Type

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

- | | |
|-----------------|---|
| S1 (POS) | 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. |
|-----------------|---|

PM Control by APM

- | | |
|------------|--|
| No | System BIOS will ignore APM when power managing the system. |
| Yes | 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 Always On, Suspend and All Modes. This option is for choosing the setting in which the monitor will turn off.

- | | |
|------------------|---|
| Always On | Always turn on. |
| Suspend | During Suspend mode, the monitor will be turned off. The default setting is Suspend. |
| All Modes | The monitor is turned off during Doze, Standby or Suspend mode. |

Video Off Method

This determines the manner in which the monitor is 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(default) | 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 and 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 and 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 I/O ACCESS | LPT/COM | |
| HDD & FDD I/O ACCESS | 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 Wake Up Event | ON | |
| IRQs Activity Monitoring | Press Enter | |
| | | |
| | | |

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

VGA

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

LPT & COM

The settings are NONE, LPT, COM and COM/LPT. You can set which port is used to wake up the system when there is any activity from one of the listed ports.

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

Wake Up On LAN/Ring

To use this function, you need a LAN add-on card or Modem which supports power on functions. During Disabled, the system cannot be boot up through LAN and ignores any incoming call from the modem. During Enabled, the system can be boot up through LAN and modem.

RTC Alarm Resume

This function is for setting date and time for your computer to boot up. During Disabled, you cannot use this function. During Enabled, choose the Date and Time Alarm:

- Date(of month) Alarm** You can choose which month the system will boot up. Set to 0, to boot every day.
- Time(hh:mm:ss) Alarm** You can choose what hour, minute and second the system will boot up.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system, before this function will work.

IRQs Wake Up Event

When On, any activity from one of the IRQs wakes up the system

IRQs Activity Monitoring

| | |
|---|--------------|
| IRQ3 (COM 2) Primary IRQ4 (COM 1) Primary IRQ5 (LPT 2) Primary IRQ6 (Floppy Disk) Primary IRQ7 (LPT 1) Primary IRQ8 (RTC Alarm) Disabled IRQ9 (IRQ2 Redir) Secondary IRQ10 (Reserved) Secondary IRQ11 (Reserved) Secondary IRQ12 (PS/2 Mouse) Primary IRQ13 (Coprocessor) Primary IRQ14 (Hard Disk) Primary IRQ15 (Reserved) Disabled | Item Help |
| | Menu Level > |
| ↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults | |

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 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 |
| CPU Host/PCI Clock | Default | |
| | | Menu Level > |
| ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help 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 and 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.

ENTERPASSWORD:

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.

PASSWORDDISABLED.

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.