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  Feature  │ Frequency/Voltage  Control    │
 │  Advanced  BIOS  Feature  │ Load  Fail-Safe  Defaults     │
 │  Advanced  Chipset  Feature │ Load  Optimized  Defaults   │
 │  Integrated  Peripherals  │ Set  Supervisor  Password     │
 │  Power  Management  Setup │ Set  User  Password           │
 │  PnP/PCI  Configurations  │ Save  &  Exit  Setup          │
 │  PC  Health  Status       │ Exit  Without  Saving         │
 ├──────────────────────────────────────────────────────────┤
 │  Esc  :  Quit        ↑↓→←    : Select Item                │
 │  F10  :  Save & Exit Setup  (Shift)F2 : Change Color      │
 ├──────────────────────────────────────────────────────────┤
 │          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.

PC Health Status

This entry shows your PC health status.

Frequency/Voltage Control

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 catego-ries. 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):        Fri, Feb 28,1999
Time(hh:mm:ss):        00:00:00                         Item Help


IDE  Primary Master    Press Enter 2557MB      Menu Level   >
IDE  Primary Slave     Press Enter None
IDE  Secondary Master  Press Enter None
IDE  Secondary Slave   Press Enter None


Drive A                1.44M, 3.5in.
Drive B                None


Video                  EGA/VGA
Halt On                All Errors


Based Memory           640K
Extended  Memory       64512K
Total  Memory          65536K


↑ ↓ → ← 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      │                          │
│ CPU Internal Cache         Enabled       │        Item Help         │
│ External Cache             Enabled       │                          │
│ CPU L2 Cache ECC Checking  Enabled       │──────────────────────────│
│ Processor Number Feature   Enabled       │                          │
│ Quick Power On Self Test   Disabled      │ Menu Level   >           │
│ First Boot device          Floppy        │                          │
│ Second Boot device         HDD-0         │                          │
│ Third Boot device          LS/Zip        │                          │
│ Fourth Boot device         Disabled      │                          │
│ Swap Floppy Drive          Disabled      │                          │
│ Boot Up Floppy Seek        Disabled      │                          │
│ Boot Up Numlock Status     Off           │                          │
│ Gate A20 Option            Fast          │                          │
│ Typematic Rate Setting     Disabled      │                          │
│ Typematic Rate (Chars/Sec) 6             │                          │
│ Typematic Delay (Msec)     250           │                          │
│ Security Option            Setup         │                          │
│ OS Select for DRAM > 64MB  Non-OS2       │                          │
│ HDD S.M.A.R.T. Capability  Disabled      │                          │
│ Report No FDD for Win 95   No            │                          │
│                                          │                          │
│                                          │                          │
├─────────────────────────────────────────┴──────────────────────────┤
│ ↑↓→←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 data into this area, BIOS will show a warning message on screen and alarm beep.

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

Enable   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).

Processor Number Feature

This option is for Pentium® III processor. During Enabled, this will check the CPU Serial number. Disabled this option if you don't want the system to know the Serial number.

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/Fourth 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(default)	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®.

HDD S.M.A.R.T Capability

        This item allows you to Enabled or Disabled the HDD S.M.A.R.T (Self-Monitoring Analysis and Reporting Technology) Capability. The default setting is Disabled.

Report No FDD For Win 95

        Whether report no FDD for Win 95 or not. The settings are: Yes, No.

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
 ┌──────────────────────────────────────────┬─────────────────────────┐
 │ SDRAM CAS Latency Time      3             │                         │
 │ SDRAM Cycle Time Tras/Trc   6/8           │       Item Help         │
 │ SDRAM RAS-to-CAS Delay      3             │                         │
 │ SDRAM RAS Precharge Time    3             ├─────────────────────────┤
 │ System BIOS Cacheable       Disabled      │                         │
 │ Video BIOS Cacheable        Disabled      │ Menu Level   >          │
 │ Memory Hole at 15M-16M      Disabled      │                         │
 │ CPU Latency Timer           Disabled      │                         │
 │ Delayed Transaction         Disabled      │                         │
 │ On-Chip Video Window Size   64MB          │                         │
 │ AGP Graphics Aperture Size  64MB          │                         │
 │ System Memory Frequency     Auto          │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 │                                           │                         │
 ├──────────────────────────────────────────┴─────────────────────────┤
 │ ↑↓→← 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.

SDRAM CAS latency Time

When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.   The settings are: 2 and 3.

SDRAM Cycle Time Tras/Trc

Select the number of SCLKs for an access cycle. The settings are: 5/7 and 6/8.

SDRAM RAS-to-CAS Delay

This field lets you insert a timing delay between the CAS and RAS strobe signals, used when DRAM is written to, read from, or refreshed. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system. The settings are: 2 and 3.

SDRAM RAS Precharge Time

If an insufficient number of cycles is allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. *Fast* gives faster performance; and *Slow* gives more stable performance. This field applies only when synchronous DRAM is installed in the system.   The settings are: 2 and 3.

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 BIOS 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.

Memory Hole At 15M-16M

You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements. The settings are: Enabled and Disabled.

CPU Latency Timer

During Enabled, A deferrable CPU cycle will only be Deferred after it has been in a Snoop Stall for 31 clocks and another ADS# has arrived. During Disabled, A deferrable CPU cycle will be Deferred immediately after the GMCH receives another ADS#.

Delayed Transaction

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

On-Chip Video Window Size

This option allows the user to set the on-chip video window size for VGA driver use.

AGP Graphics Aperture Size

This option determines the effective size of the graphics aperture used in the particular PAC configuration. The AGP aperture is memory-mapped, while graphics data structure can reside in a graphics aperture. The aperture range should be programmed as not cacheable in the processor cache, accesses with the aperture range are forwaded to the main memory, then PAC will translate the original issued address via a translation table that is maintained on the main memory. The option allows the selection of an aperture size of 32MB, 64MB.

System Memory Frequency
         Select the Onboard Display Cache frequency.   The settings are
100MHz, 133MHz or Auto.

3.7 Integrated Peripherals

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

```
┌─────────────────────────────────────────┬──────────────────────────┐
│ OnChip Primary PCI IDE      Enabled      │                          │
│ OnChip Secondary PCI IDE    Enabled      │        Item Help         │
│ IDE Primary Master PIO      Auto         │                          │
│ IDE Primary Slave PIO       Auto         │                          │
│ IDE Secondary Master PIO    Auto         │ Menu Level   >           │
│ IDE Secondary Slave PIO     Auto         │                          │
│ IDE Primary Master UDMA     Auto         │                          │
│ IDE Primary Slave UDMA      Auto         │                          │
│ IDE Secondary Master UDMA   Auto         │                          │
│ IDE Secondary Slave UDMA    Auto         │                          │
│ USB Controller              Enabled      │                          │
│ USB Keyboard Support        Disabled     │                          │
│ Init Display First          PCI Slot     │                          │
│ AC97 Audio                  Auto         │                          │
│ AC97 Modem                  Auto         │                          │
│ IDE HDD Block Mode          Enabled      │                          │
│ Keyboard Power On           Disabled     │                          │
│ Power On Function           Button Only  │                          │
│ KB Power On Password        Enter        │                          │
│ Hot Key Power On            Ctrl-F1      │                          │
│ Onboard FDC Controller      Enabled      │                          │
│ Onboard Serial Port 1       3F8/IRQ4     │                          │
│ Onboard Serial Port 2       2F8/IRQ3     │                          │
├──────────────────────────────────────────────────────────────────── │
│ ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help │
│    F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults     │
└──────────────────────────────────────────────────────────────────────┘
```

```
┌─────────────────────────────────────────┬──────────────────────────┐
│ UART Mode Select            Normal       │                          │
│ RxD, TxD Active             Hi, Lo       │                          │
│ IR Transmition Delay        Enabled      │                          │
│ UR2 Duplex Mode             Half         │                          │
│ USE IR Pins                 IR-Rx2Tx2    │                          │
│ Onboard Parallel Port       378/IRQ7     │                          │
│ Parallel Port Mode          SPP          │                          │
│ EPP Mode Select             EPP 1.7      │                          │
│ ECP Mode use UDMA           3            │                          │
│ PWRON After PWR-Fail        Off          │                          │
│ Game Port Address           201          │                          │
│ Midi Port Address           330          │                          │
│ Midi Port IRQ               10           │                          │
│ Power Status LED            Single       │                          │
└─────────────────────────────────────────┴──────────────────────────┘
```

OnChip Primary/Secondary PCI IDE

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

IDE Primary/Secondary Master/Slave PIO

The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device. The settings are: Auto, Mode 0, Mode 1, Mode 2, Mode 3, Mode 4.

IDE Primary/Secondary Master/Slave UDMA

Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, Ultra DMA/66 select Auto to enable BIOS support. The settings are: Auto, Disabled.

USB Controller

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals. The settings are: Enabled, Disabled.

USB Keyboard Support

Select *Enabled* if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard. The settings are: Enabled, Disabled.

Init Display First

This item allows you to decide to activate whether PCI Slot or on-chip VGA first.   The settings are: PCI Slot, Onboard.

AC97 Audio

This item allows you to decide to enable/disable the 815 chipset family to support AC97 Audio.

Audio Multi-Channel (optional)

This item allows you to Enabled or Disabled the AC97 Modem.

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.

Keyboard Power on Function

This function allows you to Enabled or Disabled the Keyboard Power On. The default setting is Disabled.

Power On Function

This function allows you to select the item to power on the system. The settings are : Button Only, Mouse Left, Mouse Right, Password, Hotkey, keyboard 98.

Onboard FDC 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 Mode Select

This item allows you to determine which InfraRed(IR) function of the onboard I/O chip, this functions uses.

Onboard Parallel Port

Disabled **(3BCH/IRQ7)/** **(278H/IRQ5)/** **(378H/IRQ7)**	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

SPP/EPP/ECP/ **ECP+EPP**	To operate the onboard parallel port as Standard Parallel Port only, choose "SPP." To operate the onboard parallel port in the EPP modes simultaneously, choose "EPP." 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.

PWRON After PWR-FAIL

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

Game Port Address/Midi Port Address

This will determine which Address the Game Port/Midi Port will use.

Power Status LED

This item determines which state the Power LED will use. The
settings are Blinking, Dual, and Single. During blinking, the power LED will
blink when the system enters the suspend mode. When the mode is in Dual,
the power LED will change its color. Choose the single and the power LED
will always remain lit.

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           │                      │
│ ACPI Suspend Type          S1(POS)           │     Item Help        │
│ Power Management           User Define        │                      │
│ Video Off Method           DPMS              ├──────────────────────┤
│ Video Off In Suspend       Yes               │                      │
│ Suspend Type               Stop Grant        │ Menu Level  >        │
│ Modem Use IRQ              3                 │                      │
│ Suspend Mode               Disabled          │                      │
│ HDD Power Down             Disabled          │                      │
│ Soft-Off by PWR-BTTN       Instant-Off       │                      │
│ Wake-Up by PCI Card        Disabled          │                      │
│ Power On by Ring           Enabled           │                      │
│ Wake-Up on LAN             Enabled           │                      │
│ USB KB Wake-Up from S3     Disabled          │                      │
│ CPU Thermal-Throtting      50%               │                      │
│ Resume By Alarm            Disabled          │                      │
│ Date(of Month) Alarm       0                 │                      │
│ Date(hh:mm:ss)             0 0 0             │                      │
│                                              │                      │
│ **Reload Global Timer Events**               │                      │
│ Primary IDE 0                 Disabled       │                      │
│ Primary IDE 1                 Disabled       │                      │
│ Secondary IDE 0               Disabled       │                      │
│ Secondary IDE 1               Disabled       │                      │
│ FDD, COM, LPT Port            Disabled       │                      │
│ PCI PIRQ[A-D]#                Disabled       │                      │
├─────────────────────────────────────────────┴──────────────────────┤
│ ↑↓→← 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.

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.

S3 (STR)

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.

Power Management

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

      1.   Suspend Mode

      2.   HDD Power Down

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

Min. Power Saving	Minimum power management. Suspend Mode = 1 hr., and HDD Power Down = 15 min.
Max. Power Saving	Maximum power management — Suspend Mode = 1 min., and HDD Power Down = 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. and disable.

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.

Video Off In Suspend
    This determines the manner in which the monitor is blanked.
The settings are: Yes and No.

Suspend Type
    Select the Suspend Type. The settings are: PWRON Suspend, Stop
Grant.

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

Suspend Mode
    When enabled and after the set time of system inactivity, all devices
except the CPU will be shut off. The settings are: 1/2/4/8/12/20/30/40 Min, 1
Hour, and Disabled.

HDD Power Down
    When enabled and after the set time of system inactivity, the hard
disk drive will be powered down while all other devices remain active.
The settings are: 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15Min and Disabled.

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.

Wake-Up by PCI Card
    This will enable the system to wake up through PCI Card peripheral.
The settings are : Enabled and Disabled.

Power On by Ring
During Disabled, the system will ignore any incoming call from the modem. During Enabled, the system will boot up if there's an incoming call from the modem.

Wake-Up on LAN
To use this function, you need a LAN add-on card which support power on functions. It should also support the wake-up on LAN jumper (JWOL1).

Enabled	Wake up on LAN supported.
Disabled	Wake up on LAN not supported.

USB KB Wake-Up From S3
This option is used to Enabled/Disabled USB keyboard wake up with suspend to RAM.

CPU Thermal-Throttling
Select the CPU THRM-Throttling rate. The settings are: 12.5%, 25.0%, 37.5%, 50.0%, 62.5%, 75.0%, 87.5%.

Resume by Alarm
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.

Reload Global Timer Events

Reload Global Timer events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything which occurs to a device which is configured as *Enabled* , even when the system is in a power down mode.

> **Primary IDE 0**
> **Primary IDE 1**
> **Secondary IDE 0**
> **Secondary IDE 1**
> **FDD, COM, LPT Port**
> **PCI PIRQ[A-D] #**

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
┌──────────────────────────────────────────┬─────────────────────────┐
│ Reset Configuration Data    Disabled      │                         │
│                                           │       Item Help         │
│ Resources Controlled By     Auto (ESCD)   │                         │
│ IRQ Resources               Press Enter   │                         │
│                                           ├─────────────────────────┤
│ PCI/VGA Palette Snoop       Disabled      │ Menu Level  >           │
│ INT Pin 1 Assignment        Auto          │                         │
│ INT Pin 2 Assignment        Auto          │                         │
│ INT Pin 3 Assignment        Auto          │                         │
│ INT Pin 4 Assignment        Auto          │                         │
│                                           │                         │
│                                           │                         │
│                                           │                         │
│                                           │                         │
│                                           │                         │
│                                           │                         │
│                                           │                         │
│                                           │                         │
│                                           │                         │
├───────────────────────────────────────────────────────────────────┤
│ ↑ ↓ → ← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
│    F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults    │
└───────────────────────────────────────────────────────────────────┘
```

Reset Configuration Data

Normally, you leave this field to 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.

PCI/VGA Palette Snoop

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

3.10 PC Health Status

This section shows the Status of your CPU, Fan, Warning for overall system status.

```
        CMOS Setup Utility - Copyright(C) 1984-2000 Award Software
                            PC Health Status
┌─────────────────────────────────────────┬──────────────────────────┐
│ CPU Warning Temperature      Disabled    │                          │
│ Current System Temp          39°C/102°F  │         Item Help        │
│ Current CPU Temperature      66°C/150°F  │                          │
│ Current Top Tech. III Temp.  32°C/89°F   │                          │
│ Current System Fan           0RPM        ├──────────────────────────┤
│ Current Power Fan            0RPM        │ Menu Level  >            │
│ Current CPU FAN              5532RPM     │                          │
│ Vcore                        1.96V       │                          │
│ VTT                          1.48V       │                          │
│ 3.3V                         3.24V       │                          │
│ +5V                          4.89V       │                          │
│ +12V                         11.79V      │                          │
│ -12V                         12.19V      │                          │
│ -5V                          -4.53V      │                          │
│ VBAT(V)                      3.10V       │                          │
│ 5VSB(V)                      5.37V       │                          │
│ Chassis Intrusion Detect     Disabled    │                          │
│ Shutdown Temperature         Disabled    │                          │
│                                          │                          │
│                                          │                          │
│                                          │                          │
│                                          │                          │
├──────────────────────────────────────────┴──────────────────────────┤
│ ↑↓→← Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help│
│    F5:Previous Values F6:Fail-safe defaults F7:Optimized Defaults     │
└──────────────────────────────────────────────────────────────────────┘
```

CPU Warning Temperature

During Enabled, this will warn the user when the CPU temperature reach a certain temperature.

Current System Temp/Current CPU Temperature/Current Top Tech. III Temp/Current System Fan (optional)/Power Fan (optional)/Cpu Fan/Vcore/VTT/3.3V/+5V/+12V/-12V/-5V/ VBAT(V)/5VSB(V)

     This will show the CPU/FAN/System voltage chart and FAN Speed.

Chassis Intrusion Detect

     Set this option to Enabled, Reset, or Disabled the chassis intrusion detector. During Enabled, any intrusion on the system chassis will be recorded. The next time you turn on the system, it will show a warning message. To be able to clear those warning, choose reset. After clearing the message it will go back to Enabled.

Shutdown Temperature

     This option is for setting the Shutdown temperature level for the processor. When the processor reach the temperature you set, this will shutdown the system.

3.11 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    │                           │
 │ Spread Spectrum               Enabled    │         Item Help         │
 │ Clock By Slight Adjust        133        │                           │
 │ CPU Clock Ratio               Auto       │                           │
 │ Vcore Adjust                  1.65V      │ Menu Level  >             │
 │ (May be dangerous if Vcore Adjust is over 10%) │                     │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 │                                          │                           │
 ├─────────────────────────────────────────┴───────────────────────────┤
 │ ↑↓→← 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, Disabled.

Spread Spectrum

This item allows you to set the Spread Spectrum.

Clock By Slight Adjust

This item allows you to select the CPU clock from 133MHz to 166MHz or 100MHz to 133MHz depending on the CPU host clock.

Vcore Adjust

This function is used to adjust the CPU voltage. During overclocking, the processor might get unstable. Try adjusting the CPU voltage to lessen the heat, generated by the CPU voltage.

Note: We do not guarantee that the mainboard or other components will work properly after overclocking.

3.12 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.

3.13 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.