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## Chapter 4

# Award BIOS

This chapter tells how to configure the system parameters. You may update your BIOS via AWARD Flash Utility.



**Important:** *Because the BIOS code is the most often changed part of the mainboard design, the BIOS information contained in this chapter (especially the Chipset Setup parameters) may be a little different compared to the actual BIOS that came with your mainboard.*

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## 4.1 Entering the Award BIOS Setup Menu

The BIOS setup utility is a segment of codes/routines residing in the BIOS Flash ROM. This routine allows you to configure the system parameters and save the configuration into the 128 byte CMOS area, (normally in the RTC chip or directly in the main chipset). To enter the BIOS Setup, press **DEL** during POST (Power-On Self Test). The BIOS Setup Main Menu appears as follows.





**Tip:** Choose "Load Setup Defaults" for recommended optimal performance. Choose "Load Turbo Defaults" for best performance with light system loading. Refer to section 3.7.



The section at the bottom of the screen tells how to control the screen. Use the arrow keys to move between items, F9 to change language, ESC to exit, and F10 to save the changes before exit. Another section at the bottom of the screen displays a brief description of the highlighted item.

After selecting an item, press Enter to select or enter a submenu.



## 4.2 Standard CMOS Setup

The "Standard CMOS Setup" sets the basic system parameters such as the date, time, and the hard disk type. Use the arrow keys to highlight an item and  or  to select the value for each item.

### Standard CMOS à Date

To set the date, highlight the Date parameter. Press  or  to set the current date. The date format is month, date, and year.

### Standard CMOS à Time

To set the time, highlight the Time parameter. Press  or  to set the current time in hour, minute, and second format. The time is based on the 24 hour military clock.

### Standard CMOS à IDE Primary Master à Type

### Standard CMOS à IDE Primary Slave à Type

### Standard CMOS à IDE Secondary Master à Type

### Standard CMOS à IDE Secondary Slave à Type

|                                  |
|----------------------------------|
| <b><u>IDE Primary Master</u></b> |
|----------------------------------|

|        |
|--------|
| Auto   |
| Manual |
| None   |

This item lets you select the IDE hard disk parameters that your system supports. These parameters are Size, Number of Cylinder, Number of Head, Start Cylinder for Pre-compensation, Cylinder number of Head Landing Zone and Number of Sector per Track. The default setting is Auto, which enables BIOS to automatically detect the parameters of installed HDD at POST (Power-On Self Test). If you prefer to enter HDD parameters manually, select Manual. Select None if no HDD is connected to the system.

The IDE CDROM is always automatically detected.

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**Tip:** For an IDE hard disk, we recommend that you use the "IDE HDD Auto Detection" to enter the drive specifications automatically. See the section "IDE HDD Auto Detection".

### Standard CMOS à Drive A Standard CMOS à Drive B

#### Drive A

None  
360KB 5.25"  
1.2MB 5.25"  
720KB 3.5"  
1.44MB 3.5"  
2.88MB 3.5"

These items select floppy drive type. The available settings and types supported by the mainboard are listed on the left.

### Standard CMOS à Video

#### Video

EGA/VGA  
CGA40  
CGA80  
Mono

This item specifies the type of video card in use. The default setting is VGA/EGA. Since current PCs use VGA only, this function is almost useless and may be disregarded in the future.

### Standard CMOS à Halt On

#### Halt On

No Errors  
All Errors  
All, But Keyboard  
All, But Diskette  
All, But Disk/Key

This parameter enables you to control the system stops in case of Power-On Self Test (POST) error.

## 4.3 Advanced BIOS Features

This screen appears when you select the option "BIOS Features Setup" from the main menu.

### Advanced BIOS Features à Virus Warning

|                             |   |
|-----------------------------|---|
| <b><u>Virus Warning</u></b> | Set this parameter to Enabled to activate the warning message. This feature protects the boot sector and partition table of your hard disk from virus intrusion. Any attempt during boot up to write to the boot sector of the hard disk drive stops the system and the following warning message appears on the screen. Run an anti-virus program to locate the problem. |
| Enabled                     |   |
| Disabled                    |   |

**! WARNING !**

Disk Boot Sector is to be modified  
Type "Y" to accept write, or "N" to abort write  
Award Software, Inc.

### Advanced BIOS Features à CPU Internal Cache

|                                  |  |
|----------------------------------|--|
| <b><u>CPU Internal Cache</u></b> | Enabling this parameter activates the CPU internal cache. Disabling the parameter slows down the system. Therefore, we recommend that you leave it enabled unless you are troubleshooting a problem. |
| Enabled                          |  |
| Disabled                         |  |

### Advanced BIOS Features à External Cache

|                              |   |
|------------------------------|---|
| <b><u>External Cache</u></b> | Enabling this parameter activates the secondary cache (currently, PBSRAM cache). Disabling the parameter slows down the system. Therefore, we recommend that you leave it enabled unless you are troubleshooting a problem. |
| Enabled                      |   |
| Disabled                     |   |

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## Advanced BIOS Features à CPU L2 Cache ECC

|                                    |
|------------------------------------|
| <b><u>CPU L2 Cache<br/>ECC</u></b> |
|------------------------------------|

|          |
|----------|
| Enabled  |
| Disabled |

This item lets you enable or disable L2 Cache ECC checking.

## Advanced BIOS Features à Quick Power On Self Test

|  |
|--|
| <b><u>Quick Power on<br/>Self test</u></b> |
|--|

|          |
|----------|
| Enable   |
| Disabled |

This parameter speeds up POST by skipping some items that are normally checked.

## Advanced BIOS Features à First Boot Device

|                                 |
|---------------------------------|
| <b><u>First Boot Device</u></b> |
|---------------------------------|

|          |
|----------|
| A:       |
| LS/ZIP   |
| C:       |
| SCSI     |
| CDROM    |
| D:       |
| E:       |
| F:       |
| LAN      |
| Disabled |

This parameter allows you to specify the system boot up search sequence. The hard disk ID are listed below:

C: Primary master  
D: Primary slave  
E: Secondary master  
F: Secondary slave  
LS: LS120  
Zip: IOMEGA ZIP Drive

## Advanced BIOS Features à Second Boot Device

|                                  |
|----------------------------------|
| <b><u>Second Boot Device</u></b> |
|----------------------------------|

|          |
|----------|
| A:       |
| LS/ZIP   |
| C:       |
| SCSI     |
| CDROM    |
| D:       |
| E:       |
| F:       |
| LAN      |
| Disabled |

This parameter allows you to specify the system boot up search sequence. The hard disk ID are listed below:

C: Primary master  
D: Primary slave  
E: Secondary master  
F: Secondary slave  
LS: LS120  
Zip: IOMEGA ZIP Drive

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### Advanced BIOS Features à Third Boot Device

#### Third Boot Device

A:  
LS/ZIP  
C:  
SCSI  
CDROM  
D:  
E:  
F:  
LAN  
Disabled

This parameter allows you to specify the system boot up search sequence. The hard disk ID are listed below:

C: Primary master  
D: Primary slave  
E: Secondary master  
F: Secondary slave  
LS: LS120  
Zip: IOMEGA ZIP Drive

### Advanced BIOS Features à Boot Other Device

#### Boot Other Device

Enabled  
Disabled

This parameter allows you to specify the system boot up search sequence. The hard disk ID are listed below:

### Advanced BIOS Features à Swap Floppy Drive

#### Swap Floppy Drive

Enabled  
Disabled

This item allows you to swap floppy drives. For example, if you have two floppy drives (A and B), you can assign the first drive as drive B and the second drive as drive A or vice-versa.

### Advanced BIOS Features à Boot Up NumLock Status

#### Boot Up NumLock Status

On  
Off

Setting this parameter to On enables the numeric function of the numeric keypad. Set this parameter to Off to disregard the function. Disabling the numeric function allows you to use the numeric keypad for cursor control.

### Advanced BIOS Features à Typematic Rate Setting

#### Typematic Rate Setting

Enabled  
Disabled

Set this parameter to Enable/Disable the keyboard repeat function. When enabled, continually holding down a key on the keyboard will generate repeatedly keystrokes.

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### Advanced BIOS Features à Typematic Rate (Chars/Sec)

| <u>Typematic Rate</u> | This item allows you to control the speed of repeated keystrokes. The default is 30 characters/sec. |
|-----------------------|---|
| 6                     |   |
| 8                     |   |
| 10                    |   |
| 12                    |   |
| 15                    |   |
| 20                    |   |
| 24                    |   |
| 30                    |   |

### Advanced BIOS Features à Typematic Delay (Msec)

| <u>Typematic Delay</u> | This parameter allows you to control the delay time between the first and the second keystroke (where the repeated keystrokes begin). The typematic delay settings are 250, 500, 750, and 1000 msec. |
|------------------------|--|
| 250                    |  |
| 500                    |  |
| 750                    |  |
| 1000                   |  |

### Advanced BIOS Features à Security Option

| <u>Security Option</u> | The <b>System</b> option limits access to both the System boot and BIOS setup. A prompt asking you to enter your password appears on the screen every time you boot the system. |
|------------------------|---|
| Setup                  |   |
| System                 |   |

The **Setup** option limits access only to BIOS setup.

To disable the security option, select Password Setting from the main menu, don't type anything and just press <Enter>.

### Advanced BIOS Features à OS Select for DRAM > 64MB

| <u>OS Select for<br/>DRAM &gt; 64MB</u> | Set to OS/2 if your system is utilizing an OS/2 operating system and has a memory size of more than 64 MB. |
|---|--|
| OS/2                                    |  |
| Non-OS/2                                |  |



### 4.4 Advanced Chipset Features

The "Chipset Features Setup" includes settings for the chipset dependent features. These features are related to system performance.



**Caution:** Make sure you fully understand the items contained in this menu before you try to change anything. You may change the parameter settings to improve system performance. However, it may cause system unstable if the setting is not correct for your system configuration.

#### Advanced Chipset Features à SDRAM CAS Latency Time

##### SDRAM CAS Latency Time

2  
3

These are timing of SDRAM CAS Latency and RAS to CAS Delay, calculated by clocks. They are important parameters affects SDRAM performance, default is 2 clocks. If your SDRAM has unstable problem, change 2/2 to 3/3.

#### Advanced Chipset Features à SDRAM Cycle Time

##### SDRAM Cycle Time

5/7  
6/8

This item will affect SDRAM performance. If the system fails to bootup, please set this item to 6/8.

#### Advanced Chipset Features à SDRAM RAS-to-CAS Delay

##### SDRAM RAS-to-CAS Delay

3  
2

SDRAM RAS-to-CAS Delay is an important parameter that affects SDRAM performance. If the system fails to bootup, please set this item to 3.

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### Advanced Chipset Features à SDRAM RAS Precharge Time

|  |
|--|
| <b><u>SDRAM RAS<br/>Precharge Time</u></b> |
|--|

|   |
|---|
| 3 |
| 2 |

The RAS Precharge means the timing to inactive RAS and the timing for DRAM to do precharge before next RAS can be issued. RAS is the address latch control signal of DRAM row address. The default setting is **3 clocks**.

### Advanced Chipset Features à Video BIOS Cacheable

|  |
|--|
| <b><u>Video BIOS<br/>Cacheable</u></b> |
|--|

|          |
|----------|
| Enabled  |
| Disabled |

Allows the video BIOS to be cached to allow faster video performance.

### Advanced Chipset Features à Video RAM Cacheable

|                                       |
|---------------------------------------|
| <b><u>Video RAM<br/>Cacheable</u></b> |
|---------------------------------------|

|          |
|----------|
| Enabled  |
| Disabled |

This item lets you cache Video RAM A000 and B000.

### Advanced Chipset Features à Memory Hole At 15M-16M

|  |
|--|
| <b><u>Memory Hole At<br/>15M-16M</u></b> |
|--|

|          |
|----------|
| Enabled  |
| Disabled |

This option lets you reserve system memory area for special ISA cards. The chipset accesses code/data of these areas from the ISA bus directly. Normally, these areas are reserved for memory mapped I/O card.

### Advanced Chipset Features à Delayed Transaction

|                                   |
|-----------------------------------|
| <b><u>Delayed Transaction</u></b> |
|-----------------------------------|

|          |
|----------|
| Enabled  |
| Disabled |

This item lets you control the Delayed Transaction function of the PIIX4 chipset (Intel PCI to ISA bridge). This function is used to meet latency of PCI cycles to or from ISA bus. Try to enable or disable it, if you have ISA card compatibility problem.

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### Advanced Chipset Features à On-Chip Video

|                             |
|-----------------------------|
| <b><u>On-Chip Video</u></b> |
|-----------------------------|

|         |
|---------|
| Enabled |
|---------|

|          |
|----------|
| Disabled |
|----------|

This item is used to enable or disable the onchip AGP.

### Advanced Chipset Features à On-Chip Video Window Size

|                             |
|-----------------------------|
| <b><u>On-Chip Video</u></b> |
| <b><u>Window Size</u></b>   |

|      |
|------|
| 64MB |
|------|

|      |
|------|
| 32MB |
|------|

This item is used to select graphic display cache window size.

### Advanced Chipset Features à Cas# Latency

|                            |
|----------------------------|
| <b><u>Cas# Latency</u></b> |
|----------------------------|

|   |
|---|
| 2 |
|---|

|   |
|---|
| 3 |
|---|

Cas# Latency is an important parameter that affects SDRAM performance. If the system fails to bootup, please set this item to 3.

### Advanced Chipset Features à Paging Mode Control

|                                   |
|-----------------------------------|
| <b><u>Paging Mode Control</u></b> |
|-----------------------------------|

|      |
|------|
| Slow |
|------|

|      |
|------|
| Fast |
|------|

This item will affect SDRAM performance. If the system fails to bootup, please set this item to Slow.

### Advanced Chipset Features à RAS-to-CAS Override

|                          |
|--------------------------|
| <b><u>RAS-to-CAS</u></b> |
| <b><u>Override</u></b>   |

|      |
|------|
| Slow |
|------|

|      |
|------|
| Fast |
|------|

This item will affect SDRAM performance. If the system fails to bootup, please set this item to Slow.

### Advanced Chipset Features à RAS# Timing

|                           |
|---------------------------|
| <b><u>RAS# Timing</u></b> |
|---------------------------|

|      |
|------|
| Slow |
|------|

|      |
|------|
| Fast |
|------|

This item will affect SDRAM performance. If the system fails to bootup, please set this item to Slow.

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## Advanced Chipset Features à RAS# Precharge

|                              |
|------------------------------|
| <b><u>RAS# Precharge</u></b> |
|------------------------------|

|      |
|------|
| Slow |
|------|

|      |
|------|
| Fast |
|------|

This item will affect SDRAM performance. If the system fails to bootup, please set this item to Slow.

## 4.5 Integrated Peripherals

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

**Integrated Peripherals à On-Chip Primary PCI IDE**

**Integrated Peripherals à On-Chip Secondary PCI IDE**

**On-Chip Primary  
PCI IDE**

Enabled  
Disabled

This parameter lets you enable or disable the IDE device connected to the primary IDE connector.

**Integrated Peripherals à IDE Primary Master PIO**

**Integrated Peripherals à IDE Primary Slave PIO**

**Integrated Peripherals à IDE Secondary Master PIO**

**Integrated Peripherals à IDE Secondary Slave PIO**

**IDE Primary Master  
PIO**

Auto  
Mode 1  
Mode 2  
Mode 3  
Mode 4

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



**Caution:** It is recommended that you connect the first IDE device of each channel to the endmost connector of the IDE cable. Refer to section "Connectors" for details on how to connect IDE device(s).

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### Integrated Peripherals à IDE Primary Master UDMA

### Integrated Peripherals à IDE Primary Slave UDMA

### Integrated Peripherals à IDE Secondary Master UDMA

### Integrated Peripherals à IDE Secondary Slave UDMA

#### IDE Primary Master UDMA

Auto  
Disabled

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

### Integrated Peripherals à USB Controller

#### USB Controller

Enabled  
Disabled

This item lets you enable or disable the USB controller.

### Integrated Peripherals à USB Keyboard Support

#### USB Keyboard Support

Enabled  
Disabled

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



**Caution:** You can not use both USB driver and USB legacy keyboard at the same time. Disable "USB Legacy Support" if you have USB driver in the operating system.

### Integrated Peripherals à Init Display First

#### Init Display First

PCI Slot  
Onboard

If you installed a PCI VGA card, this item lets you decide which one is the initial display card.

### Integrated Peripherals à AC97 Audio

#### AC97 Audio

Enabled  
Disabled

This item is used to enable or disable the onboard audio.

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### Integrated Peripherals à AC97 Modem

#### AC97 Modem

Enabled  
Disabled

This item is used to enable or disable the AC97 modem. If disabled, an AMR modem card can't work properly.

### Integrated Peripherals à IDE HDD Block Mode

#### IDE HDD Block Mode

Enabled  
Disabled

This feature enhances disk performance by allowing multisector data transfers and eliminates the interrupt handling time for each sector. Most IDE drives, except with old designs, can support this feature.

### Integrated Peripherals à Power On Function

#### Power On Function

Any Key  
Button Only  
Keyboard 98  
Password  
Hot Key  
Mouse Left  
Mouse Right

This item is used to select Wake on Keyboard/Mouse mode.

**Any Key:** This function allows you wake up the system by clicking any key.

**Button Only:** Disable Wake on KB/MS function. You can boot up your system by power button only.

**Keyboard 98:** If selecting this option, you can boot up the system by power button and the "Wake" key on Keyboard 98.

**Password:** Disable the function of power button and let the system can only be powered on through the preset keys (like a password).

**Hot Key:** If selecting this option, you also need to specify the hot key from "Hot Key Power On" item.

**Mouse Left:** This function allows you wake up the system by clicking left mouse button twice successively.

**Mouse Right:** This function allows you wake up the system by clicking right mouse button twice successively.



**Caution:** To implement Wake On Keyboard/Mouse function, you must set JP28 to Enabled.

**Caution:** Wake On Mouse function applies to PS/2 mouse only.

**Caution:** If you set a Password but forget it, please clear CMOS.

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## Integrated Peripherals à KB Power On Password

### KB Power On Password

You can specify 1-5 keys as a password.

## Integrated Peripherals à Hot Key Power On

### Hot Key Power On

Ctrl-F1  
Ctrl-F2  
Ctrl-F3  
Ctrl-F4  
Ctrl-F5  
Ctrl-F6  
Ctrl-F7  
Ctrl-F8  
Ctrl-F9  
Ctrl-F10  
Ctrl-F11  
Ctrl-F12

If you select "Hot Key" option in "Power On Function" Item, you need to specify a hot key here.

## Integrated Peripherals à Onboard FDC Controller

### Onboard FDC Controller

Enabled  
Disabled

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



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### Integrated Peripherals à Onboard Serial Port 1 Integrated Peripherals à Onboard Serial Port 2

#### Onboard Serial Port 1

Auto  
3F8/IRQ4  
2F8/IRQ3  
3E8/IRQ4  
2E8/IRQ3  
Disabled

This item allow you to assign address and interrupt for the board serial port. Default is **Auto**.



**Note:** If you are using a network card, make sure that the interrupt does not conflict.

### Integrated Peripherals à UART Mode Select

#### UART Mode Select

IrDA  
ASKIR  
Normal

This item is configurable only if the "Onboard UART 2" is enabled. This allows you to specify the mode of serial port2. The available mode selections are:

- **ASKIR** – Select this setting if you installed an Infrared module via IrDA connector (refer to section 2.3 "Connectors"). This ASKIR setting allows infrared serial communication at a maximum baud rate of 56K baud.
- **HPSIR** – Select this setting if you installed an Infrared module in your system via IrDA connector (refer to section 2.3 "Connectors"). The HPSIR setting allows infrared serial communication at a maximum baud rate of 115K baud.
- **FIR** – Select this setting if you installed an Infrared module via IrDA connector (refer to section 2.3 "Connectors"). This FIR (Fast IR) setting allows infrared serial communication at a maximum baud rate of 4M baud.
- **Normal** – Sets serial port 2 to operate in normal mode. This is the default setting.

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### Integrated Peripherals à RxD, TxD Active

|                               |
|-------------------------------|
| <b><u>RxD, TxD Active</u></b> |
|-------------------------------|

|        |
|--------|
| Hi, Hi |
|--------|

|         |
|---------|
| Hi, Lo, |
|---------|

|        |
|--------|
| Lo, Hi |
|--------|

|        |
|--------|
| Lo, Lo |
|--------|

This item is used to select RxD (Receive Data) and TxD (Transmit Data) mode for UART, for instance, IR device, modem, etc. Normally, we suggest you keep the default setting. Please see the documentation that comes with your device.

### Integrated Peripherals à IR Transmission Delay

|                                     |
|-------------------------------------|
| <b><u>IR Transmission Delay</u></b> |
|-------------------------------------|

|         |
|---------|
| Enabled |
|---------|

|          |
|----------|
| Disabled |
|----------|

If Enabled is selected, there will be a 4 character delay when SIR is changed from TX mode to RX mode.

### Integrated Peripherals à Onboard Parallel Port

|                                     |
|-------------------------------------|
| <b><u>Onboard Parallel Port</u></b> |
|-------------------------------------|

|          |
|----------|
| 3BC/IRQ7 |
|----------|

|          |
|----------|
| 378/IRQ7 |
|----------|

|          |
|----------|
| 278/IRQ5 |
|----------|

|          |
|----------|
| Disabled |
|----------|

This item controls the onboard parallel port address and interrupt.



**Note:** If you are using an I/O card with a parallel port, make sure that the addresses and IRQ do not conflict.

### Integrated Peripherals à Parallel Port Mode

|                                  |
|----------------------------------|
| <b><u>Parallel Port Mode</u></b> |
|----------------------------------|

|     |
|-----|
| SPP |
|-----|

|     |
|-----|
| EPP |
|-----|

|     |
|-----|
| ECP |
|-----|

|           |
|-----------|
| ECP + EPP |
|-----------|

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

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### Integrated Peripherals à EPP Mode Select

#### EPP Mode Select

EPP1.7  
EPP1.9

This item lets you select EPP mode.

### Integrated Peripherals à ECP Mode Use DMA

#### ECP Mode Use DMA

3  
1

This item lets you set the DMA channel of ECP mode.

### Power Management à PWRON After PWR-Fail

#### PWRON After PWR-Fail

Former-Sts  
On  
Off

A traditional ATX system should remain at power off stage when AC power resumes from power failure. This design is inconvenient for a network server or workstation, without an UPS, that needs to keep power-on. This item is used to solve this problem. Selecting On lets the system can automatically power-on after AC power resumes; in the other hand, the system will power-off if you select Off. If Former-Sts option is selected, the system will power-on or power-off based on the original state.

### Integrated Peripherals à Game Port Address

#### Game Port Address

Disabled  
201  
209

This item is used to assign an address for the Game port.

### Integrated Peripherals à MIDI Port Address

#### MIDI Port Address

Disabled  
330  
300

This item is used to assign an address for the MIDI port.

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## Integrated Peripherals à MIDI Port IRQ

| <u>MIDI Port IRQ</u> |
|----------------------|
| 5                    |
| 7                    |

This item is used to assign an IRQ for the MIDI port.

## 4.6 Power Management Setup

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

### Power Management à ACPI Function

|                             |  |
|-----------------------------|--|
| <b><u>ACPI Function</u></b> | If your OS is ACPI enabled you have to set this item to Enabled, or there may be unexpected errors. If your OS is APM mode, you can remain the Disabled setting. |
| Enabled                     |  |
| Disabled                    |  |

### Power Management à Power Management

|                                |  |
|--------------------------------|--|
| <b><u>Power Management</u></b> | This function allows you to set the default parameters of power-saving modes. Set to <b>Disable</b> to turn off power management function. Set to User Define to choose your own parameters. |
| Max Saving                     |  |
| Mix Saving                     |  |
| User Define                    |  |
| Disabled                       |  |

| Mode       | Doze   | Standby | Suspend | HDD Power Down |
|------------|--------|---------|---------|----------------|
| Min Saving | 1 hour | 1 hour  | 1 hour  | 15 min         |
| Max Saving | 1 min  | 1 min   | 1 min   | 1 min          |

### Power Management à Video Off Method

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

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### Power Management à Video Off In Suspend

| <u>Video Off In Suspend</u> |
|-----------------------------|
|-----------------------------|

|     |
|-----|
| No  |
| Yes |

The item is used to decide whether the video is off in the suspend mode.

### Power Management à Suspend Type

| <u>Suspend Type</u> |
|---------------------|
|---------------------|

|               |
|---------------|
| PWRON Suspend |
| Stop Grant    |

You can select suspend mode by this item. If **PWRON Suspend** is selected, the CPU will enter into Doze mode. If **Stop Grant** is selected, the CPU clock will enter into Sleep mode. In both of these modes, the system activities are detected by monitoring the IRQ signals or I/O.

### Power Management à Modem Use IRQ

| <u>Modem Use IRQ</u> |
|----------------------|
|----------------------|

|     |
|-----|
| 3   |
| 4   |
| 5   |
| 7   |
| 9   |
| 10  |
| 11  |
| N/A |

This item lets you set an IRQ for the modem.

### Power Management à Suspend Mode

| <u>Suspend Mode</u> |
|---------------------|
|---------------------|

|          |
|----------|
| Disabled |
| 1 Min    |
| 2 Min    |
| 4 Min    |
| 8 Min    |
| 12 Min   |
| 20 Min   |
| 30 Min   |
| 40 Min   |
| 1 Hour   |

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

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### Power Management à HDD Power Down

#### **HDD Power Down**

Disabled  
1 Min  
.....  
15 Min

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

### Power Management à Soft-Off by PWR-BTTN

#### **Soft-Off by PWR-BTTN**

Delay 4 sec.  
Instant-Off

This is a specification of ACPI and supported by hardware. When **Delay 4 sec.** is selected, the soft power switch on the front panel can be used to control power On, Suspend and Off. If the switch is pressed less than 4 sec during power On, the system will go into Suspend mode. If the switch is pressed longer than 4 sec, the system will be turned Off. The default setting is **Instant-Off**, soft power switch is only used to control On and Off, there is no need to press 4 sec, and there is no Suspend.

### Power Management à Wake On LAN

#### **Wake On LAN**

Enabled  
Disabled

This option lets you specify enable or disable LAN Wake Up function.

### Power Management à CPU THRM-Throttling

#### **CPU THRM-Throttling**

87.5%  
75.0%  
62.5%  
50.0%  
37.5%  
25.0%

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

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### Power Management à Resume By Alarm

#### Resume By Alarm

Enabled  
Disabled

This option lets you enable or disable the RTC Wake Up function.

### Power Management à Date (of Month)

#### Date (of Month)

0  
1  
.....  
31

This item is displayed when you enable the Wake On RTC Timer option. Here you can specify what date you want to wake up the system. For Example, setting to 15 will wake up the system on the 15th day of every month.



**Note:** Setting this item to 0 will wake up the system on the specified time (which can be set in the Wake On RTC Timer item) every day.

### Power Management à Time (hh:mm:ss)

#### Time (hh:mm:ss)

hh:mm:ss

This item is displayed when you enable the Wake ON RTC Timer option. Here you can specify what time you want to wake up the system.

### Power Management à Primary IDE 0

### Power Management à Primary IDE 1

### Power Management à Secondary IDE 0

### Power Management à Secondary IDE 1

### Power Management à FDD, COM, LPT Port

### Power Management à PCI PIRQ [A-D] #

#### Primary IDE 0

Enabled  
Disabled

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



## 4.7 PNP/PCI Configurations

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

### PNP/PCI Configuration à Reset Configuration Data

#### Reset Configuration Data

Enabled  
Disabled

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

### PNP/PCI Configuration à Resources Controlled By

#### Resources Controlled by

Auto  
Manual

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

**PNP/PCI Configuration à IRQ3 (COM2)**

**PNP/PCI Configuration à IRQ4 (COM1)**

**PNP/PCI Configuration à IRQ5 (Network/Sound or Others)**

**PNP/PCI Configuration à IRQ7 (Printer or Others)**

**PNP/PCI Configuration à IRQ9 (Video or Others)**

**PNP/PCI Configuration à IRQ10 (SCSI or Others)**

**PNP/PCI Configuration à IRQ11 (SCSI or Others)**

**PNP/PCI Configuration à IRQ12 (PS/2 Mouse)**

**PNP/PCI Configuration à IRQ14 (IDE1)**

**PNP/PCI Configuration à IRQ15 (IDE2)**

#### IRQ 3

Legacy ISA  
PCI/ISA PnP

If your ISA card is not PnP compatible and requires a special IRQ to support its function, set the selected IRQ to **Legacy ISA**. This setting informs the PnP BIOS to reserve the selected IRQ for the installed legacy ISA card. The default is **PCI/ISA PnP**. Take note that PCI cards are always PnP compatible (except old PCI IDE card).

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### PNP/PCI Configuration → PCI/VGA Palette Snoop

|                                     |
|-------------------------------------|
| <b><u>PCI/VGA Palette Snoop</u></b> |
|-------------------------------------|

|         |
|---------|
| Enabled |
|---------|

|          |
|----------|
| Disabled |
|----------|

Enabling this item informs the PCI VGA card to keep silent (and to prevent conflict) when palette register is updated (i.e., accepts data without responding any communication signals). This is useful only when two display cards use the same palette address and plugged in the PCI bus at the same time (such as MPEQ or Video capture). In such case, PCI VGA is silent while MPEQ/Video capture is set to function normally.

### 4.8 PC Health Status

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

#### PC Health Status à CPU Warning Temperature

| <b><u>CPU Warning<br/>Temperature</u></b> |
|---|
|---|

|          |
|----------|
| Disabled |
| 50       |
| 53       |
| 56       |

This item is used to specify a CPU warning temperature. When the CPU's temperature is higher than this predefined value, the CPU's speed will automatically slow down and there will be a warning from BIOS.

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## 4.9 Frequency/Voltage Control

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

### Frequency/Voltage Control à Clock Spread Spectrum

|                                     |
|-------------------------------------|
| <b><u>Clock Spread Spectrum</u></b> |
| Enabled                             |
| Disabled                            |

This item is used to set clock spread spectrum for EMI testing. Normally, you don't need to change the default setting.

### Frequency/Voltage Control à Clock Speed Setup

|  |
|--|
| <b><u>Clock Speed Setup</u></b>  |
| 66.8, 72, 75, 83.3, 90,<br>95, 100.2, 105, 107,<br>110, 112, 114, 117,<br>119, 121, 124, 125,<br>127, 129, 130, 133.6,<br>136, 138, 140, 145,<br>150, and 155 MHz. |
| x 3, x 3.5, x 4, x 4.5, x<br>5, x 5.5, x 6, x 6.5, x 7,<br>x 7.5, and x8   |

The item is used to select the CPU clock speed.

### 4.10 Load Setup Defaults

The "Load Setup Defaults" option loads optimized settings for optimum system performance. Optimal settings are relatively safer than the Turbo settings. All the product verification, compatibility/reliability test report and manufacture quality control are based on "Load Setup Defaults". We recommend that you use this settings for normal operation. "Load Setup Defaults" is not the slowest setting for this motherboard. If you need to verify an unstable problem, you may manually set the parameter in the "BIOS Features Setup" and "Chipset Features Setup" to get slowest and safer setting.

### 4.11 Load Turbo Defaults

The "Load Turbo Defaults" option gives better performance than "Load Setup Defaults". It is provided for the convenience of power user who wants to push the motherboard to get better performance. Turbo setting does not go through all the detail reliability and compatibility test, it is tested only with limited configuration and loading (for example, a system that contains only a VGA card and two DIMMs). Use Turbo setting only when you fully understand the items in Chipset Setup menu. The performance improvement of Turbo setting is normally around 3% to 5%, depending on the chipset and the application.

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## 4.12 Set Password

Password prevents unauthorized use of your computer. If you set a password, the system prompts for the correct password before boot or access to Setup.

To set a password:

1. At the prompt, type your password. Your password can be up to 8 alphanumeric characters. When you type the characters, they appear as asterisks on the password screen box.
2. After typing the password, press Enter.
3. At the next prompt, re-type your password and press again to confirm the new password. After the password entry, the screen automatically reverts to the main screen.

To disable the password, press when prompted to enter the password. The screen displays a message confirming that the password has been disabled.

## 4.13 Save & Exit Setup

This function automatically saves all CMOS values before leaving Setup.

## 4.14 Exit without Saving

Use this function to exit Setup without saving the CMOS value changes. Do not use this option if you want to save the new configuration.

## 4.15 Load EEPROM Defaults

Except "Load Setup Default" and "Load Turbo Default", you may also use "Save EEPROM Default " to save your own settings into EEPROM, and reload by using this item.

### 4.16 Save EEPROM Defaults

You may use this item to save your own settings into EEPROM. Then, if the data in CMOS is lost or you forget the previous settings, you may use "Load EEPROM Default " to reload.

### 4.17 How to Upgrade the BIOS

AOpen Easy Flash is more user friendly than traditional flash method. The BIOS binary file and flash routine are combined together and you simply run a single file to complete the flash process.

1. Get new BIOS upgrade program from AOpen's web site. For example, MX3W200.EXE.
2. Reboot the system to DOS mode without loading any memory handler (such as EMM386) or device driver. It needs around 520K free memory space.
3. Execute A:> MX3W200  
**DO NOT turn off the power during FLASH PROCESS.**
4. Reboot the system by turn off the power after flash is completed.
5. Reload the "BIOS SETUP DEFAULT" and reconfigure other items as previous set. Save & Exit. Done!



**Note:** The upgrade of new BIOS will permanently replace your original BIOS content after flashing. The original BIOS setting and Win95/Win98 PnP information will be refreshed and you probably need to re-configure your system.