

SECTION 3.

CMOS SETUP UTILITY

3-1 BIOS Setup Main Menu

This section tells you how to configure the system by changing BIOS setup options. To enter the BIOS Setup Utility, press **DEL** key during POST (Power-On Self Test). The BIOS Setup Main Menu will appear as shown below.

```

ROM PCI/ISA BIOS (00000006)
CMOS SETUP UTILITY
AWARD SOFTWARE, INC.

```

STANDARD CMOS SETUP	INTEGRATED PERIPHERALS
BIOS FEATURES SETUP	PASSWORD SETTING
CHIPSET FEATURES SETUP	IDE HDD AUTO DETECTION
POWER MANAGEMENT SETUP	SAVE & EXIT SETUP
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
LOAD SETUP DEFAULTS	
LOAD TURBO DEFAULTS	

```

Esc : Quit
F10 : Save & Exit Setup
↑ ↓ → ← : Select Item
(Shift)F2 : Change Color

```

The main menu displays a table of items which defines basic information about your system. Below are the keyboard function keys you can use under the menu.

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Menu function keys:

ESC

To close the BIOS Setup Utility.

↑ ↓ → ←

To move around the screen. An item is highlighted if it is selected.

F1

To displays information about the highlighted item you selected.

SHIFT + F2

To Change the color scheme.

F10

To save the changes before exit the BIOS Setup Utility.

ENTER

To select or enter a submenu.

3-2 Standard CMOS Setup

This "Standard CMOS Setup" sets the basic system settings such as the date, time, and the hard disk type, Video display type and error handling. Use the arrows keys **↑ ↓ → ←** to highlight an item and use **Page Up** / **Page Down** or **+** **-** to set the value for each item.

```
ROM PCI/ISA BIOS (00000006)
STANDARD CMOS SETUP
AWARD SOFTWARE, INC.

Date (mm:dd:yy) : Thu, Apr 30 1998
Time (hh:mm:ss) : 14 : 8 : 0

HARD DISKS      TYPE  SIZE  CYLS  HEAD  PRECOMP  LANDZ  SECTOR  MODE
Primary Master  : Auto    0      0    0      0      0      0    AUTO
Primary Slave   : Auto    0      0    0      0      0      0    AUTO
Secondary Master : Auto    0      0    0      0      0      0    AUTO
Secondary Slave : Auto    0      0    0      0      0      0    AUTO

Drive A : 1.44M, 3.5 in.
Drive B : None

Video : EGA/UGA
Halt On : All Errors

Base Memory:  0K
Extended Memory:  0K
Other Memory: 512K
Total Memory: 512K

ESC : Quit      ↑ ↓ → ← : Select Item      PU/PD/+/- : Modify
F1  : Help      (Shift)F2 : Change Color
```

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➤ **Date**

To set the date, highlight the date area. Press **+** / **-** or **Page Up** / **Page Down** to set the current date. The date format is month: **Jan. ~ Dec.**, date: **1 ~ 31**, and year: **1994 ~ 2079**.

➤ **Time**

To set the time, highlight the time area. Press **+** / **-** or **Page Up** / **Page Down** to set the current time. The time format is hour: **00 ~ 23**, minute: **00 ~ 59**, and second: **00 ~ 59**.

- **Hard Disks → Primary Master**
- **Hard Disks → Primary Slave**
- **Hard Disks → Secondary Master**
- **Hard Disks → Secondary Slave**

TYPE:

- Auto
- User
- None

This item lets you set your system IDE hard disk type. Select Auto to let BIOS automatically detect the installed hard disk when system boot up. Select User if you prefer manually enter the hard disk type. The available parameters are SIZE(HDD Size), CYLS(No. of Cylinder), HEAD(No. of Head), PRECOMP(Pre-compensation), LANDZ(Landing Zone), SECTOR(No. of Sector) and MODE(HDD Mode). Select None if there is no hard disk connected to the system.

Default: Auto

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MODE:

- AUTO
- NORMAL
- LBA
- LARGE

Select NORMAL for IDE HDD smaller than 528MB. Select LBA for IDE HDD over than 528MB and support LBA(Logical Block Addressing) mode. Select LARGE for IDE HDD over than 528MB and do not support LBA mode.

Note: We recommend that you set both IDE HDD TYPE and MODE to AUTO to let BIOS automatically detect the hard disk drives for you

Default: Auto

- **Floppy → Drive A**
- **Floppy → Drive B**

Drive A / B:

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

Select the floppy drive type installed in your system. The available options for Drive A and Drive B are: 360KB 5.25", 1.2MB 5.25", 720KB 3.5", 1.44MB 3.5", 2.88MB 3.5" and None.

Default: Drive A => 1.44MB 3.5 "

Drive B => None

- **Video**

Video:

- EGA/VGA
- CGA40
- CGA80
- Mono

Select the video display card type installed in your system. The available types are: EGA/VGA, CGA 40, CGA 80 and Mono.

Default: EGA/VGA

- **Halt On**

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Halt On:

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

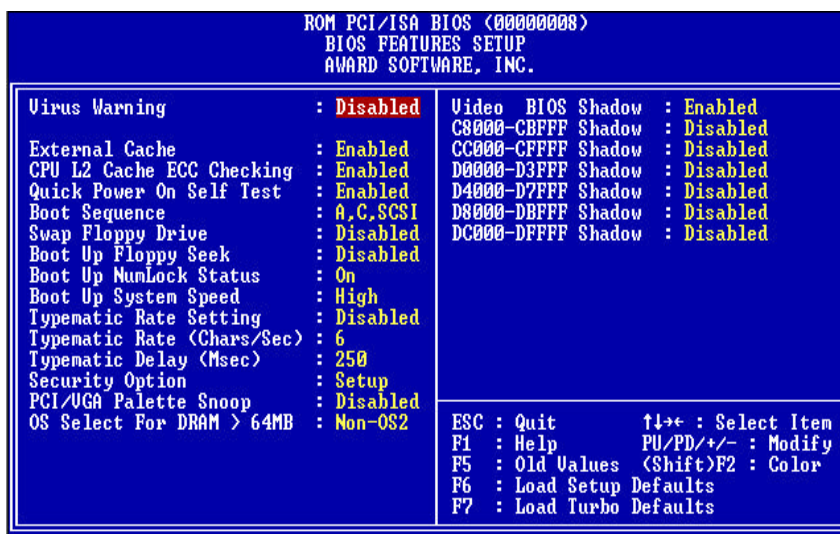
This item defines the operation of the system POST(Power On Self Test). You can use this item to select which kind of errors will cause the system to halt during POST.

Default: All Errors

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3.3 BIOS Features Setup

This "BIOS Features Setup" option allows you to setup and improve your system features and performance.



➤ Virus Warning

Virus Warning:

- Enabled
- Disabled

When this item is enabled, it provides some protection against viruses which try to write to the boot sector and partition table of your hard disk drive. The default setting is Disabled so that you can install an operating system or software application. We recommend that you enable Virus Warning as soon as you have installed an OS in your hard disk drive.

Default: Disabled

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➤ External Cache

External Cache: This item controls Enable/Disable the external L2 cache.
- Enabled **Default: Enabled**
- Disabled

➤ CPU L2 Cache ECC Checking

CPU L2 Cache ECC Checking: This item can be used to enable ECC (Error Checking and Correcting) function of the CPU level-2 cache memory. When the item is enabled, BIOS will automatically check if CPU support L2 ECC function. This item will not be displayed if CPU does not support L2 ECC.
- Enable
- Disabled **Default: Enabled**

➤ Power-On Self-Test

Quick Power-on Self-test: This item can be used to start operating system quickly by skip some normal POST checking items.
- Enable **Default: Enabled**
- Disabled

➤ Boot Sequence

Boot Sequence: This item defines where the system will look for an operating system, and the order of priority. The boot up search sequence shown as left.
- A,C,SCSI
- C,A,SCSI
- C,CDROM,A
- CDROM,C,A **Default: A, C, SCSI**
- D,A,SCSI
- E,A,SCSI
- F,A,SCSI
- SCSI,A,C
- SCSI,C,A
- C only
- LS/ZIP,C

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➤ Swap Floppy Drive

Swap Floppy Drive: If you have two floppy drives in your system, This item allows you to swap around the assigned drive letters so that drive A becomes drive B, and drive B becomes drive A. **Default:**
- Enabled
- Disabled **Disabled**

➤ Boot Up Floppy Seek

Boot Up Floppy Seek: This item controls the system to seek floppy drive during boot up POST.
- Enabled **Default: Disabled**
- Disabled

➤ Boot Up NumLock Status

Boot Up NumLock Status: This item defines if the keyboard **NumLock** key is active when your system is started.
- On **Default: On**
- Off

➤ Boot Up System Speed

Boot-up System Speed: This item allows the system boot up with High or Low speed.
- High **Default: High**
- Low

➤ Typematic Rate Setting

Typematic Rate Setting: To Enable or Disable the speed of keyboard to send repeat keystrokes.
- Enabled **Default: Disabled**
- Disabled

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➤ Typematic Rate (Chars/Sec)

Typematic Rate:

This item provides typematic rate setting, which allows you to control the repeated keystrokes speed.

- 6
- 8
- 10
- 12
- 15
- 20
- 24
- 30

Default: 6

➤ Typematic Delay (Msec)

Typematic Delay:

This item provides typematic delay setting, which allows you control the delay time between the first and the second keystroke.

- 250
- 500
- 750
- 1000

Default: 250

➤ Security Option

Security Option:

The setup option for password request in entering setup.

- Setup
- System

The system option for password request in entering setup & boot up.

Default:

Setup

➤ PCI/VGA Palette Snoop

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PCI/VGA Palette

Snoop:

- Enabled
- Disabled

Set this item to Enabled to reduce display problem when both PCI VGA and some graphic accelerator devices such as MPEG/Video capture cards are installed in your system.

Default: Disabled

➤ **OS Select for DRAM > 64MB**

**OS Select for
DRAM > 64MB:**

- OS/2
- Non-OS/2

This item is to patch that can not report correct memory size for more than 64 MB. Set it to OS/2 if you have an OS/2 installed and have over 64MB system memory.

Default: Non-OS/2

➤ **Video BIOS Shadow**

Video BIOS

Shadow:

- Enabled
- Disabled

This item defines if you leave default setting, video BIOS memory will be copied from ROM into DRAM area to enhance system performance as DRAM access time is faster than ROM.

Default: Enabled

➤ **C8000-CBFFF Shadow to DC000-DFFFF Shadow**

**C8000-CBFFF to
DC000-DFFFF
Shadow:**

- Enabled
- Disabled

Set Enabled if you know the address that your add on card ROM used to shadow them. If the item is Enabled, BIOS will copy the selected area from ROM to RAM to increase system performance.

Default: Disabled

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3-4 Chipset Features Setup

This option display a table of items which define timing parameters of the mainboard components including the graphic system, memory, and the system logic. In general rule, you should leave the items on this page at the default values unless you are familiar with the technical specifications of your hardware. If you change the values, you may introduce fatal errors or recurring instability into your system.

ROM PCI/ISA BIOS <00000000> CHIPSET FEATURES SETUP AWARD SOFTWARE, INC.			
Auto Configuration	: Enabled	Pentium II Micro Codes	: Enabled
DRAM Speed Selection	: 60ns	CPU Clock Frequency	: 66.8 MHz
MA Wait State	: Fast		
EDO RAS# To CAS# Delay	: 3		
EDO RAS# Precharge Time	: 4		
EDO DRAM Read Burst	: x333		
EDO DRAM Write Burst	: x333		
SDRAM(CAS Lat/RAS-to-CAS)	: 3/3		
SDRAM RAS Precharge Time	: 3 T		
DRAM ECC Function	: Disabled		
CPU-to-PCI IDE Posting	: Enabled		
Video BIOS Cacheable	: Disabled		
Video RAM Cacheable	: Disabled		
8 Bit I/O Recovery Time	: 4		
16 Bit I/O Recovery Time	: 2		
Memory Hole At 15M-16M	: Disabled		
Passive Release	: Disabled		
Delayed Transaction	: Disabled		
AGP Aperture Size (MB)	: 64		
		ESC : Quit	↑↓←→ : Select Item
		F1 : Help	PU/PD/+/- : Modify
		F5 : Old Values	(Shift)F2 : Color
		F6 : Load Setup Defaults	
		F7 : Load Turbo Defaults	

➤ Auto Configuration

Auto Configuration: Leave this item at the default value Enabled. This will automatically install the correct values for the system DRAM timing. Set Disabled if you want to specify your own DRAM timing.

- Enabled
- Disabled

Default: Enabled

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➤ DRAM Speed Selection

DRAM Speed Selection:

This item allows you set your DRAM speed, 50ns or 60ns.

- 50ns
- 60ns

Default: 60ns

➤ MA Wait State

MA Wait State:

This item defines DRAM MA (Memory Address) wait state. Set it to Fast when DRAM loading is heavy or the speed is lower.

- Slow
- Fast

Default: Slow

➤ EDO RAS# To CAS # Delay

EDO RAS# To CAS# Delay:

This item defines the delay state between DRAM Row Address Strobe (RAS) and Column Address Strobe (CAS).

- 2
- 3

Default: 3

➤ EDO RAS# Precharge Time

EDO RAS# Precharge:

This item defines the waiting time after issuing a precharge command to EDO.

- 3
- 4

Default: 3

➤ EDO DRAM Read Burst

EDO DRAM Read Burst:

This item defines the four continuous memory reading from EDO DRAM within one read burst cycle.

- X222
- X333

Default: X333

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➤ EDO DRAM Write Burst

EDO DRAM Write Burst:

- X222
- X333

This item defines the four continuous memory writing to EDO DRAM within one write burst cycle.

Default: X333

➤ SDRAM(CAS Lat/RAS-to-CAS)

SDRAM(CAS Lat/RAS-to-CAS):

- 2/2
- 3/3

SDRAM CAS Latency defines the latency between SDRAM read command and the actual data time.

SDRAM RAS-to-CAS Delay defines the latency between SDRAM active command and the read/write command.

It is an important SDRAM parameter. If your SDRAM has unstable problem, try set this item to 3T.

Default: 3/3

➤ SDRAM RAS Precharge Time

SDRAM RAS Precharge:

- 2T
- 3T

This item defines the waiting time after issuing a SDRAM Precharge command.

Default: 3T

➤ DRAM ECC Function

DRAM ECC Function:

- Enabled
- Disabled

This item enables/disables ECC(Error Checking and Correction) for the main memory. We recommend that you leave this item at Disabled if you have not verified that your memory modules support ECC. To use this function, you need 72 bits(64+8 bit parity) DIMM.

Default: Disabled

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➤ CPU-To-PCI IDE Posting

CPU-To-PCI IDE Posting:

- Enabled
- Disabled

This item defines CPU to IDE posting cycle. Set it to disabled if you have any IDE compatibility problem.

Default: Enabled

➤ Video BIOS Cacheable

Video BIOS Cacheable:

- Enabled
- Disabled

This item allows the video BIOS to be cached for faster video performance.

Default: Disabled

➤ Video RAM Cacheable

Video RAM Cacheable:

- Enabled
- Disabled

This item allows the Video RAM to be cached for faster video performance.

Default: Disabled

- **8 Bit I/O Recovery Time**
- **16 Bit I/O Recovery Time**

8 Bit I/O Recovery Time:

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- NA

16 Bit I/O Recovery Time:

- 1
- 2
- 3
- 4
- NA

This two items set timing parameters for 8-bit and 16-bit ISA expansion cards.

Default: 8-Bit I/O Recovery Time => 4

8-Bit I/O Recovery Time => 2

- **Memory Hole At 15M-16M**

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**Memory Hole At
15M-16M:**

This item can be used to reserve memory space for some ISA cards that require it.

- Enabled
- Disabled

Default: Disabled

- **Passive Release**
- **Delayed Transaction**

**Passive Release,
Delayed Transaction:**

These two items make the PCI Bus Compliant with the PCI Specification ver. 2.1.

- Enabled
- Disabled

Default: Enabled

- **AGP Aperture Size (MB)**

**AGP Aperture Size
(MB):**

This item defines the effective memory size of the AGP Aperture.

- 4
- 8
- 16
- 32
- 64
- 128
- 256

Default: 64

- **Pentium II Micro Codes**

**Pentium II Micro
Codes:**

This item defines the Pentium II Micro Codes which are used to resolve Pentium II CPU bugs. We recommend that you leave this item at the default value for better reliability.

- Enabled
- Disabled

Default: Enabled

- **CPU Clock Frequency**

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CPU Clock

This item allows you set CPU external clock.

Frequency:

Default: 66.8 MHz

- 66.8 MHz
- 68.5 MHz
- 75.0 MHz
- 83.3 MHz

3-5 Power Management Setup

This option displays a table of items which lets you control the power management of the system. Modern operating system take care of much of the routine power management. This mainboard supports ACPI (Advanced Configuration and Power Interface).

ROM PCI/ISA BIOS (00000000)	
POWER MANAGEMENT SETUP	
AWARD SOFTWARE, INC.	
Power Management : Disabled	** Reload Global Timer Events **
PM Control by APM : Yes	IRQ[3-7,9-15],NMI : Enabled
Video Off After : Standby	Primary IDE 0 : Disabled
Doze Mode : Disabled	Primary IDE 1 : Disabled
Standby Mode : Disabled	Secondary IDE 0 : Disabled
Suspend Mode : Disabled	Secondary IDE 1 : Disabled
HDD Power Down : Disabled	Floppy Disk : Disabled
Modem Wake Up : Disabled	Serial Port : Enabled
Lan Wake Up : Disabled	Parallel Port : Disabled
UGA Active Monitor : Enabled	
Power Button Override: Enabled	
RTC Wake Up Timer : Disabled	
** Break Event From Suspend **	
IRQ 8 Clock Event : Disabled	
	ESC : Quit ↑↓+* : Select Item
	F1 : Help PU/PD/+/- : Modify
	F5 : Old Values (Shift)F2 : Color
	F6 : Load Setup Defaults
	F7 : Load Turbo Defaults

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➤ Power Management

Power Management:

- This item allows you to set the default parameters of power-saving modes. Set to Disable to disable power management function. Set to User Define to define your own parameters.
- Max Saving
 - Mix Saving
 - User Define
 - Disabled
- Default: User Define**

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

➤ PM Controlled by APM

PM Controlled by APM:

- Set to Yes to transfer power management control to APM (Advanced Power Management) and enhance power saving function.
- Yes
 - No
- Default: Yes**

➤ Video Off After

Video Off After:

- To select the power down mode option to turn off video monitor.
- N/A
 - Doze
 - Standby
 - Suspend
- Default: Standby**

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➤ Doze Mode

Doze Mode:

- 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 timer after which the system enters into Doze mode from working mode. The system event is detected by monitoring the IRQ signals or other I/O events.

Default: Disabled

➤ Standby Mode

Standby Mode

- 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 timer after which the system enters into Standby mode from Doze mode.

In this mode, the monitor power-saving feature activates. Any activity detected returns the system to normal full power mode. The system activity is detected by monitoring the IRQ signals or other I/O events.

Default: Disabled

➤ Suspend Mode

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Suspend Mode:

- 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 time after which the system enters into Suspend mode from Standby mode. The system activity is detected by monitoring the IRQ signals or other I/O events.

Default: Disabled

➤ **HDD Power Down**

HDD Power Down:

- Disabled
- 1 Min
-
- 15 Min

This item allows you specify the IDE HDD idle time before the device enters the power down state. This item is independent from the power states, Standby and Suspend Mode.

Default: Disabled

➤ **Modem Wake Up**

Modem Wake Up:

- Enabled
- Disabled

To enable or disable Modem Wake Up function.

Default: Disabled

➤ **LAN Wake Up**

LAN Wake Up:

- Enabled
- Disabled

To enable or disable LAN Wake Up function.

Default: Disabled

➤ **VGA Active Monitor**

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VGA Active Monitor: To enable or disable the detection of VGA activity for power saving mode.
- Enabled
- Disabled
Default: Enabled

➤ Power Button Override

Power Button Override: When set to Enabled, the power switch on the front panel can be used to control power On/Suspend/Off.
- Enabled
- Disabled

<u>Press switch</u>	<u>System status</u>
Less than 4 seconds	Suspend mode
Longer than 4 seconds	Power off

When set to Disabled, the power switch is only used to control On/Off, no Suspend mode function.

Default: Enabled

➤ RTC Wake Up Timer

RTC Wake Up Timer: To enable or disable the RTC Wake Up function.
- Enabled
- Disabled
Default: Disabled

➤ WakeUp Date (of Month)

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WakeUp Date (of Month):

- 0
- 1
-
- 31

This item displayed only when you enable the RTC Wake Up Timer item.

You can use this item to specify the date you want to wake up the system. For Example, if you set to 18, the system will wake up on the 18th day of every month. If set to 0, the system will wake up on the specified time every day.

➤ **WakeUp Time (hh:mm:ss)**

WakeUp Time (hh:mm:ss):

- hh:mm:ss

This item is displayed only when you enable the RTC Wake Up Timer item. You can use this item to specify the time you want to wake up the system.

➤ **IRQ 8 Clock Event**

IRQ 8 Clock Event:

- Enabled
- Disabled

OS/2 has periodically IRQ8 RTC(Real Time Clock) event. When set this item to enabled, OS/2 may has problem to go into Doze/Standby/Suspend mode.

Default: Disabled

➤ **IRQ [3-7,9-15],NMI**

IRQ [3-7,9-15],NMI:

- Enabled
- Disabled

To enable or disable the detection of IRQ3-7, IRQ9-15 or NMI interrupt events for power saving mode.

Default: Enabled

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- Primary IDE 0
- Primary IDE 1
- Secondary IDE 0
- Secondary IDE 1
- Floppy Disk
- Serial Port
- Parallel Port

**Primary/Secondary
IDE 0/1, Floppy,
Serial & Parallel**

Port:

- Enabled
- Disabled

These items enable or disable the detection of IDE, Floppy, Serial and Parallel port activities for power saving mode.

Default: Serial Port => Enabled

Others => Disabled

3-6 PNP/PCI Configuration

This option display a table of items that configures how PNP (Plug and Play) and PCI expansion cards operates in your system.

ROM PCI/ISA BIOS (00000000) PNP/PCI CONFIGURATION AWARD SOFTWARE, INC.	
PNP OS Installed : No	PCI IDE IRQ Map To : PCI-AUTO
Resources Controlled By : Manual	Primary IDE INT# : A
Reset Configuration Data : Disabled	Secondary IDE INT# : B
IRQ-3 assigned to : Legacy ISA	Used MEM base addr : N/A
IRQ-4 assigned to : Legacy ISA	PCI Slot1 IRQ (Right) : Auto
IRQ-5 assigned to : PCI/ISA PnP	PCI Slot2 IRQ : Auto
IRQ-7 assigned to : PCI/ISA PnP	PCI Slot3 IRQ : Auto
IRQ-9 assigned to : PCI/ISA PnP	PCI Slot4 IRQ (Left) : Auto
IRQ-10 assigned to : PCI/ISA PnP	
IRQ-11 assigned to : PCI/ISA PnP	
IRQ-12 assigned to : PCI/ISA PnP	
IRQ-14 assigned to : PCI/ISA PnP	
IRQ-15 assigned to : PCI/ISA PnP	
DMA-0 assigned to : PCI/ISA PnP	ESC : Quit ↑↓+* : Select Item
DMA-1 assigned to : PCI/ISA PnP	F1 : Help PU/PD/+/- : Modify
DMA-3 assigned to : PCI/ISA PnP	F5 : Old Values (Shift)F2 : Color
DMA-5 assigned to : PCI/ISA PnP	F6 : Load Setup Defaults
DMA-6 assigned to : PCI/ISA PnP	F7 : Load Turbo Defaults
DMA-7 assigned to : PCI/ISA PnP	

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➤ PnP OS Installed

PnP OS Installed:

- Yes
- No

Normally, BIOS will allocate the PnP resources during POST (Power-On Self Test). Set this item to Yes if you have a PnP operating system such as Windows 95, BIOS will bypass PNP device initial except of boot device (VGA/IDE or SCSI) and PNP operating system will do these PNP devices resource allocation. If this item is set to No, BIOS will handle all PNP devices.

Default: No

➤ Resources Controlled By

Resources Controlled by:

- Auto
- Manual

Basically, BIOS will allocate the IRQ/DMA resources automatically for these PNP/PCI and onboard devices. The exception might be encountered when legacy ISA devices are installed, which occupies resources that BIOS can not know. Therefore, this option is for BIOS to know in advance that IRQ/DMA is occupied by legacy ISA devices if Manual is selected.

Default: Manual

➤ Reset Configuration Data

Reset Configuration Data:

- Enabled
- Disabled

When this item is set to Enabled, BIOS will turn it Disabled again in the next boot up. This item is for clearing ESCD data. The only reason to clear is the data losing the confidence. The engineering test is a good reason to change the default setting.

Default: Disabled

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- **IRQ3, IRQ4, IRQ5, IRQ7, IRQ9, IRQ10, IRQ11, IRQ12, IRQ14, IRQ15**

IRQ 3-5, 7, 9-12, 14-15:

Legacy ISA
PCI/ISA PnP

Set the selected IRQ to Legacy ISA if your ISA card is not PnP compatible card and requires a special IRQ to make it function.

These options provide IRQ resources allocation for Legacy ISA or PCI/ISA PnP card.

Default: IRQ 3~4 => Legacy ISA

Others =>PCI/ISA PnP

- **DMA 0**
- **DMA 1**
- **DMA 3**
- **DMA 5**
- **DMA 6**
- **DMA 7**

DMA 0,1,3,5-7:

- Legacy ISA
- PCI/ISA PnP

Set the selected DMA channel to Legacy ISA if your ISA card is not PnP compatible card and requires a special DMA channel to make it function.

Default: PCI/ISA PnP

- **PCI IDE IRQ Map To**

PCI IDE IRQ Map To:

- ISA
- PCI-Slot1
- PCI-Slot2
- PCI-Slot3
- PCI-Slot4
- PCI-Auto

This is a complement for the case that an ISA or PCI add-on IDE card is installed. Since most of PCI add-on IDE cards are not PCI Compliant, a location and INT# inputs are necessary for acknowledging to BIOS.

Set this item to **PCI-Auto** to allow BIOS to configure the installed PCI IDE card automatically .

Default: PCI-Auto

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- **Primary IDE INT#**
- **Secondary IDE INT#**

**Primary/Secondary
IDE INT#:**

- A
- B
- C
- D

Each PCI slot has four PCI interrupts (INT) aligned as listed , A, B, C, D. You should specify the slot in the "PCI IDE IRQ Map To", and set the PCI interrupt (INT) here to the interrupt connection on the card.

Use this item to specify the interrupt of the primary/secondary channel of the PCI IDE add-on card.

Default: Primary IDE INT# => A

Secondary IDE INT# => B

- **Used MEM Base Addr**

**Used MEM base
addr:**

- N/A
- C800
- CC00
- D000
- D400
- D800
- DC00

This item lets you set a memory space for non-PnP ISA card and specifies the memory base of the reserved memory space.

Default: N/A

- **Used MEM Length**

Used MEM Length:

- 8K
- 16K
- 32K
- 64K

This item is displayed when the above Used MEM base addr option is not set to N/A.

If your ISA card is not PnP card and requires special memory space to make it function, use item to set the memory size to inform the PnP BIOS to reserve the specified memory space for installing legacy ISA card.

III. CMOS SETUP UTILITY

- PCI Slot4 IRQ (Right)
- PCI Slot3 IRQ
- PCI Slot2 IRQ
- PCI Slot1 IRQ (Left)

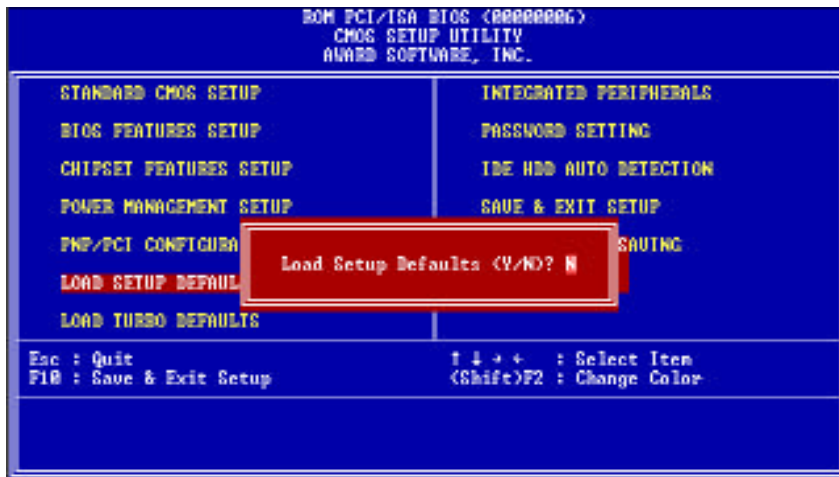
PCI Slot 1 to PCI Slot4 IRQ:

- 3
- 4
- 5
- 7
- 9
- 10
- 11
- 12
- 14
- 15
- Auto

These items allow you manually assign an specified IRQ to each PCI slot.

Leave this item at default "Auto", BIOS will automatically assign an available IRQ to the device on each PCI slot.

3.7 Load Setup Defaults

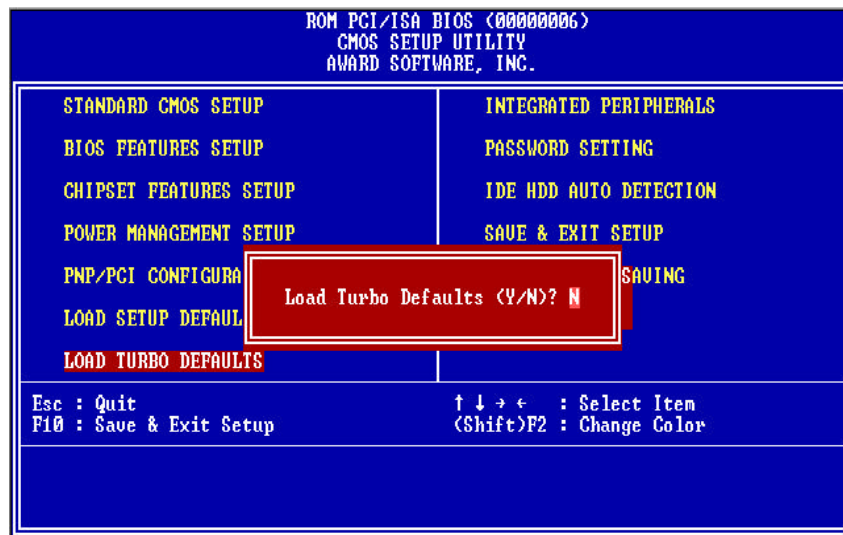


III. CMOS SETUP UTILITY

This option allows you load BIOS optimized settings for optimum system performance. We recommend you to use the Optimal settings if your system has large memory size and fully loading with add-on cards.

To load Setup Default, press Y key to confirm the operation when you see the above display.

3-8 Load Turbo Defaults



This option provides better performance than optimal setup values. Load the turbo values if you have light system loading, that is, few add-on cards and memories.

If your system has heavy loading (more add-on cards and memories), you may manually set the parameters in the "Chipset Features Setup" to get proper setting to get the best system performance. Before changing any settings in the "Chipset Features Setup", be sure that you understand the functions of every item.

III. CMOS SETUP UTILITY

3-9 Integrated Peripherals

This option allows you to configure the I/O features.

ROM PCI/ISA BIOS (00000000)	
INTEGRATED PERIPHERALS	
AWARD SOFTWARE, INC.	
IDE HDD Block Mode : Enabled	Onboard Parallel Port : 378/IRQ7
IDE Primary Master PIO : Auto	Parallel Port Mode : SPP
IDE Primary Slave PIO : Auto	
IDE Secondary Master PIO : Auto	
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	
On-Chip Primary PCI IDE : Enabled	
On-Chip Secondary PCI IDE : Enabled	
USB Legacy Support : Disabled	
USB IRQ Released : No	
Flash/Upgrade BIOS : Enabled	
Onboard FDC Controller : Enabled	ESC : Quit ↑↓+* : Select Item
Onboard Serial Port 1 : Auto	F1 : Help PU/PD/+/- : Modify
Onboard Serial Port 2 : Auto	F5 : Old Values <Shift>F2 : Color
UR2 Mode : Standard	F6 : Load Setup Defaults
	F7 : Load Turbo Defaults

➤ IDE HDD Block Mode

IDE HDD Block Mode:

- Enabled
- Disabled

This BIOS supports the enhanced IDE specification and allow multiple sectors access in a time when read/write. If set this item to disabled, IDE runs in single sector access.

Default: Enabled

III. CMOS SETUP UTILITY

- IDE Primary Master PIO
- IDE Primary Slave PIO
- IDE Secondary Master PIO
- IDE Secondary Slave PIO

IDE

**Primary/Secondary
Master/Secondary**

PIO:

- Auto
- Mode 1
- Mode 2
- Mode 3
- Mode 4

Set these items to Auto to auto-detect the HDD speed. The PIO mode specifies the data transfer rate of HDD.

<u>IDE HDD Mode</u>	<u>Transfer Rate</u>
----------------------------	-----------------------------

Mode 0	3.3MB/s
Mode 1	5.2MB/s
Mode 2	8.3MB/s
Mode 3	11.1MB/s
Mode 4	16.6MB/s.

Set to slower mode if your hard disk performance becomes unstable.

Default: Auto

- IDE Primary Master UDMA
- IDE Primary Slave UDMA
- IDE Secondary Master UDMA
- IDE Secondary Slave UDMA

IDE

**Primary/Secondary
Master/Slave UDMA:**

- Auto
- Disabled

These items allows you to set the Ultra DMA/33 mode supported by the IDE hard disk drive installed in your system.

Default: Auto

III. CMOS SETUP UTILITY

- **On-Chip Primary PCI IDE**
- **On-Chip Secondary PCI IDE**

**On-Chip
Primary/Secondary
PCI IDE:**

To enable or disable the IDE device connected to the Primary/Secondary IDE connector.

Default: Enabled

- Enabled
- Disabled

- **USB Legacy Support**

USB Legacy Support:

This BIOS simulates USB keyboard in legacy mode, which means during POST or under operating system, you can use a USB keyboard without loading USB driver. Note you can not use both USB driver and USB legacy keyboard at the same time. Set disabled if you have USB driver in the operating system.

Default: Disabled

- Enabled
- Disabled

- **USB IRQ Released**

USB IRQ Released:

This item allows you to release USB controller IRQ if you do not have any USB device or your system IRQ are not enough for add-on cards allocation.

Default: No

- Yes
- No

- **Flash/Upgrade BIOS**

Flash/Upgrade BIOS:

This item allows you to protect your mainboard BIOS being flashed/upgraded by MAXFLASH.EXE flash utility if you set this item disabled.

You can specify the BIOS password to avoid that someone can change your setting.

Default: Enabled

- Enabled
- Disabled

III. CMOS SETUP UTILITY

➤ Onboard FDC Controller

**Onboard FDC
Controller:**

- Enabled
- Disabled

To enable or disable the onboard floppy disk controller. Set to disabled if you want to use a separate floppy disk controller card.

Default: Enabled

➤ Onboard Serial Port 1

➤ Onboard Serial Port 2

**Onboard Serial Port
1 & 2:**

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

This item allows you to select the I/O port and IRQ used by the onboard serial ports.

Default: Onboard Serial Port 1=>3F8/IRQ4

Onboard Serial Port 2=>2F8/IRQ3

➤ Onboard UART Mode

**Onboard UART
Mode:**

- Standard
- IrDA
- ASKIR

This item is selectable only when the onboard serial port 2 is enabled. The available mode selections for the serial port 2 are Standard, IrDA, and ASKIR.

Standard: Configures serial port as normal mode.

IrDA: Set to this setting if there is an infrared device connected on the onboard IrDA connector. The maximum baud rate of this setting is: 115K baud.

ASKIR: Set to this setting if there is an infrared device connected on the onboard IrDA connector. The maximum baud rate of this setting is: 19.2K baud.

Default: Standard

III. CMOS SETUP UTILITY

➤ Onboard Parallel Port

Onboard Parallel Port:

- 3BC/IRQ7
- 378/IRQ7
- 278/IRQ7
- Disabled

This item controls the onboard parallel port address and interrupt.

Default: 378/IRQ7

➤ Parallel Port Mode

Parallel Port Mode:

- SPP
- EPP
- ECP
- ECP + EPP

This item allows you to set the parallel port mode.

1. **SPP (Standard Parallel Port):** IBM AT and PS/2 compatible mode
2. **EPP (Enhanced Parallel Port):** To enhance the parallel port by directly write/read data to/from parallel port without latch.
3. **ECP (Extended Parallel Port):** ECP supports DMA and RLE (Run Length Encoded) compression and decompression.

Default: SPP

➤ ECP Mode Use DMA

ECP Mode Use DMA:

- 3
- 1

This item is displayed when you select the ECP mode above for the parallel port. You can set the DMA channel of ECP mode.

Default: 3

III. CMOS SETUP UTILITY

3-10 Password Setting

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, the steps as follows,

1. Highlight the item Password Setting on the main menu and press ENTER.
2. The password dialog box will appear.
3. If you are installing a new password, carefully type in the password. Press ENTER after you have typed in the password. If you are deleting a password that is already installed just press ENTER when the password dialog box appears.
4. The system will ask you to confirm the new password by asking you to type it in a second time. Carefully type the password again and press ENTER, or just press ENTER if you are deleting a password that is already installed.
5. If you typed the password correctly, the password will be installed.

[Note]

If you forget your password, or you want to cancel your password, you can do the steps as the following,

(1) Password forgotten:

- i> Turn off the system
- ii> Short JP1 at Pin 2-3 for a few seconds to clear CMOS.
- iii> Set the JP1 back to Pin 1-2.
- iv> Power on the system.

(2) Clear Password:

Clear your password by key-in the password you installed before, then go to PASSWORD SETTING to press ENTER twice.

III. CMOS SETUP UTILITY

3-11 IDE HDD Auto Detection

This item automatically detects and installs any hard disk drives installed on the primary and secondary IDE channel. Most modern drives can be detected. If you are using a very old drive that can not be detected, you can install it manually using the Standard CMOS Setup option. Setup will check for two devices on the primary IDE channel and then two devices on the secondary IDE channel. At each device, the system will flash an N in the dialog box. Press Enter to skip the device and proceed to the next device. Press Y, then Enter to tell the system to accept the BIOS auto-detected device type.

3-12 Save & Exit Setup

Highlight this item and press ENTER to save the changes that you have made in the setup utility and exit the setup program. When the *Save and Exit* dialog box appears, press Y to save and exit, or press N to return to the setup main menu.

3-13 Exit without Saving

Use this option to exit Setup Utility without saving the CMOS value changes.