

BIOS Setup

The mainboard comes with an AMI BIOS chip that contains the ROM Setup information of your system. This chip serves as an interface between the processor and the rest of the mainboard's components. This chapter explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

Main Setup



The Main Setup screen is displayed above. Each item may have one or more option settings. It allows you to change the system Date and Time, IDE hard disk, floppy disk drive types for drive A: and B:.

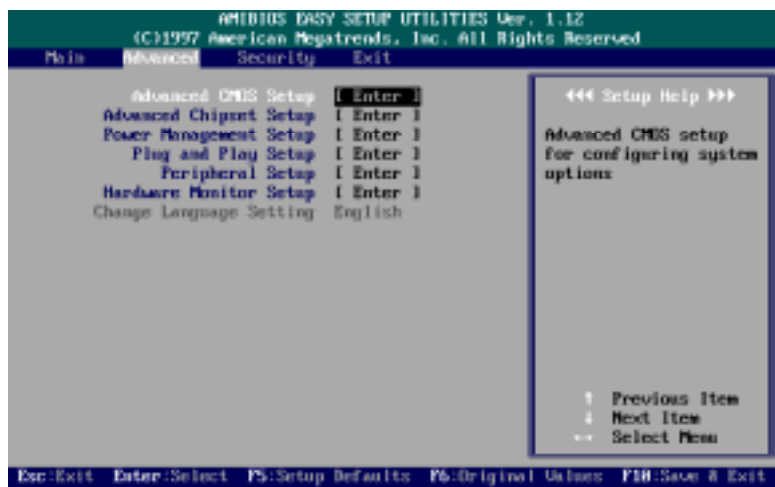
Auto-Detect Hard Disks

Allows the system BIOS to detect all hard disk parameters automatically.

Boot Sector Virus Protection

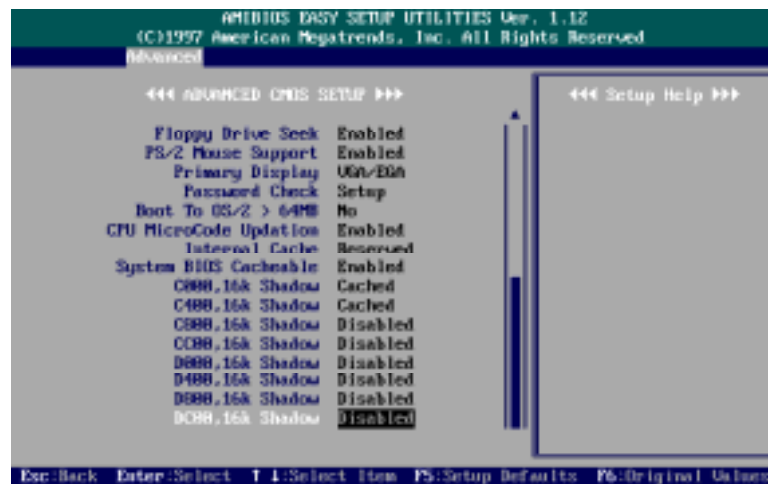
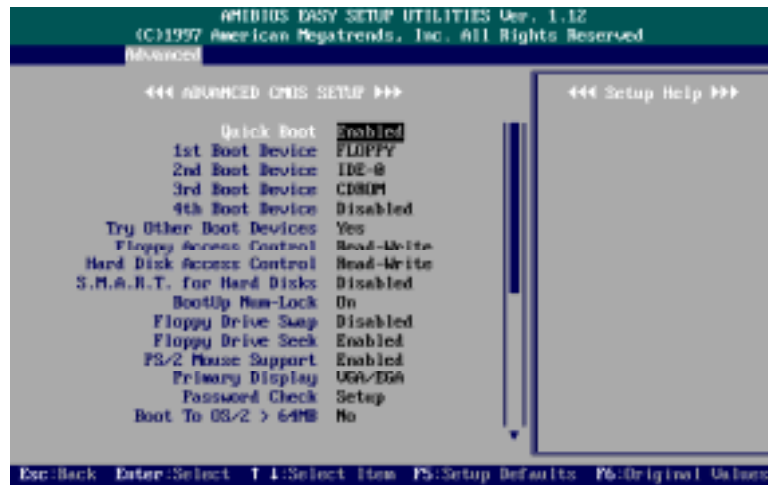
When Enabled, a warning will be given when any program or virus sends a Disk Format command or tries to write to the boot sector of a hard disk drive.

Advanced Setup



Advanced Setup options are displayed by choosing item from the AMI BIOS Setup main menu. All Advanced Setup options are described in this section.

Advanced CMOS Setup



Quick Boot

Set this option to Enabled to instruct AMI BIOS to boot quickly when the computer is powered on. This option replaces the old 1MB Memory Test Advanced Setup option.

The settings are Disabled or Enabled. The default setting is Enabled.

1st Boot Device

This item allows you to select the first drive for booting up the system.

The settings are Disabled, IDE-0, IDE-1, IDE-2, IDE-3, FLOPPY, FLOPTICAL, CDROM, SCSI, or NETWORK. The default setting is FLOPPY.

2nd Boot Device

This item allows you to select the second drive for booting up the system.

The settings are Disabled, IDE-0, or FLOPTICAL. The default setting is IDE-0.

3rd Boot Device

This item allows you to select the third drive for booting up the system.

The settings are Disabled, FLOPTICAL, CDROM. The default setting is CDROM.

4th Boot Device

This item allows you to select the fourth drive for booting up the system.

The settings are Disabled or FLOPTICAL. The default setting is Disabled.

Try Other Boot Devices

If you select Yes, the BIOS will try to boot up the system from other boot devices if all selected boot devices failed to boot. If No selected, the BIOS will try to boot up the system from only the selected devices.

The settings are Yes or No. The default setting is Yes.

Floppy Access Control

It is effective only if the floppy diskette drive is accessed through BIOS INT40H function.

The settings are Read-Write or Read-Only. The default setting is Read-Write.

HDD Access Control

It is effective only if the hard disk drive is accessed through BIOS INT40H function.

The settings are Read-Write or Read-Only. The default setting is Read-Write.

S.M.A.R.T. for Hard Disks

“S.M.A.R.T” stands for “Self-Monitoring, Analysis and Reporting Technology”. To enable it will assist you in preventing some (but not all) system down time due to hard disk drive failure.

The settings are Disabled or Enabled. The default setting is Disabled.

BootUp Num-Lock

Set this option to Off to turn the Num Lock key off when the computer is booted so you can use the arrow keys on both the numeric keypad and the keyboard.

The settings are On or Off. The default setting is On.

Floppy Drive Swap

Set this option to Enabled to permit drives A: and B: to be swapped.

The settings are Disabled or Enabled. The default setting is Disabled.

Floppy Drive Seek

Set this option to Enabled to specify that floppy drive A: will perform a Seek operation at system boot.

The settings are Disabled or Enabled. The default setting is Enabled.

PS/2 Mouse Support

When this option is set to Enabled, AMI BIOS supports a PS/2-type mouse.

The settings are Enabled or Disabled. The default setting is Enabled.

Primary Display

This option specifies the type of display monitor and adapter in the computer.

The settings are Absent, VGA/EGA, CGA40x25, CGA80x25, or Mono. The default setting is VGA/EGA.

Password Check

This option enables password checking every time the computer is powered on or every time AMI BIOS Setup is executed. If Always is chosen, a user password prompt appears every time the computer is turned on. If Setup is chosen, the password prompt appears if AMI BIOS is executed. The settings are Setup or Always. The default setting is Setup.

Boot To OS/2 > 64MB

This item allows you to enable the system BIOS to run with the IBM OS/2 operating system. The settings are Yes or No. The default setting is No.

CPU MicroCode Updation

This feature allows technicians to update CPU MicroCode by dedicated utility set at Enabled. The settings are Disabled or Enabled. The default setting is Enabled.

Internal Cache

This option specifies the caching algorithm used for L1 internal cache memory. If Disabled is selected, L1 is disabled. If WriteThru is selected, use the write-through caching algorithm. If WriteBack is selected, use the write-back caching algorithm. The settings are Disabled, WriteBack, or WriteThru. The default setting is WriteBack.

System BIOS Cacheable

Enable it to allow the contents of the F0000h system memory segment to be read from or written to the L2 cache memory. The contents of the F0000h memory segment are always copied from the BIOS ROM to system RAM for faster execution. The settings are Disabled or Enabled. The default setting is Enabled.

C000,16K Shadow; C400,16K Shadow;
C800,16K Shadow; CC00,16K Shadow;
D000,16K Shadow; D400,16K Shadow;
D800,16K Shadow; DC00,16K Shadow

These options control the location of the contents of the ROM beginning at the specified memory location. If no adapter ROM is using the named ROM area, this area is made available to the local bus.

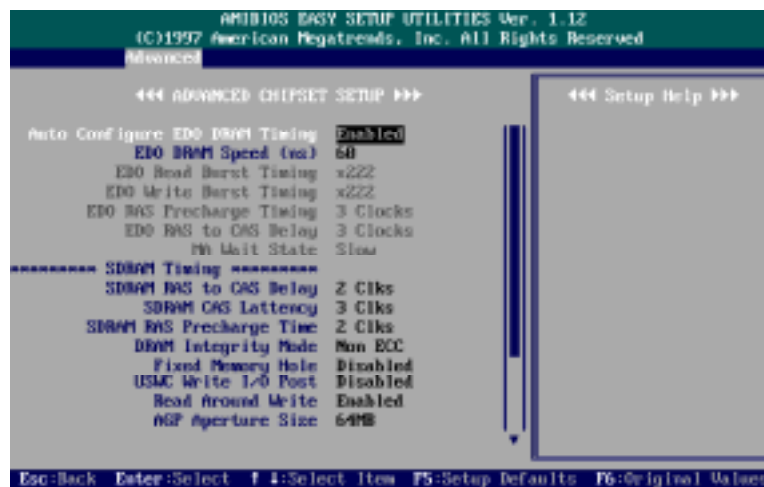
[Disabled] The video ROM is not copied to RAM. The contents of the video ROM cannot be read from or written to cache memory.

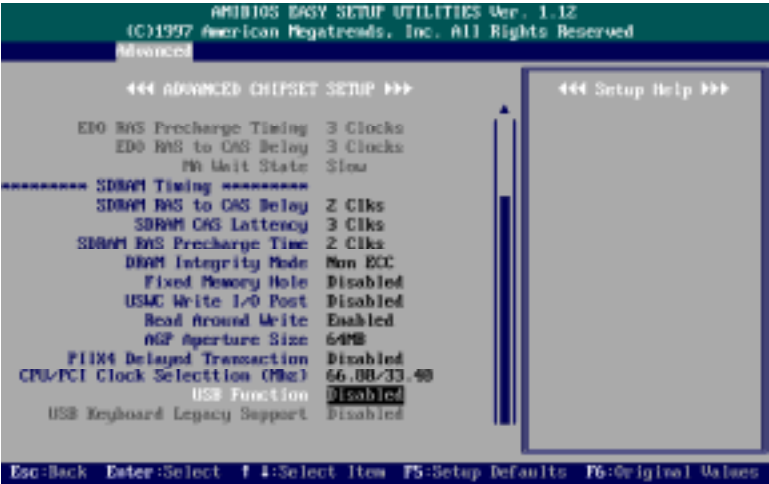
[Enabled] The contents of C0000h - DC00h are written to the same address in system memory (RAM) for faster execution.

[Cached] The contents of the named ROM area are written to the same address in system memory (RAM) for faster execution, if an adapter ROM will be using the named ROM area. Also, the contents of the RAM area can be read from and written to cache memory.

The settings are Disabled, Enabled, Cached. The default setting of “C000, 16K Shadow; C400, 16K Shadow” is Cached; the others are Disabled.

Advanced Chipset Setup





Auto Configure EDO DRAM Timing

When set at Disabled, it allows you to configure the features that from the second one (DRAM Read Burst Timing) to the sixth one (RAS Precharge). The settings are Disabled, Enabled. The default setting is Enabled.

EDO DRAM Speed (ns)

This item allows you to select the DRAM speed.
The settings are 50ns, 60ns, or 70ns. The default setting is 60ns.

EDO Read Burst Timing

When Auto Configure DRAM Timing set at Disabled, allows you to define the DRAM read burst timing.
The settings are x333 or x222. The default setting is x222, depends on the CPU frequency and DRAM type.

EDO Write Burst Timing

When Auto Configure DRAM Timing set at Disabled, allows you to define the DRAM write burst timing.
The settings are x333 or x222. The default setting is x222, depends on the CPU frequency and DRAM type.

EDO RAS Precharge Timing

Allows you to select the DRAM RAS# Precharge Time.
The settings are 4 Clocks or 3 Clocks. The default setting is 3 Clocks.

EDO RAS to CAS Delay

When Auto Configure DRAM Timing set at Disabled, allows you to define the delay time that from the DRAM RAS# active to CAS# active.
The settings are 2 Clocks or 3 Clocks. The default setting is 3 Clocks, depends on the CPU frequency and DRAM type.

MA Wait State

Allows you to select the memory address wait state.
The settings are Slow or Fast. The default setting is Slow.

SDRAM RAS to CAS Delay

When Auto Configure SDRAM Timing set at Disabled, allows you to define the delay time that from the DRAM RAS# active to CAS# active.
The settings are 2 Clocks or 3 Clocks. The default setting is 2 Clocks, depends on the CPU frequency and DRAM type.

SDRAM CAS Latency

If any DIMM is installed, this feature allows you to select the CAS Latency.
The settings are 2 Clocks or 3 Clocks. The default setting is 3 Clocks.

SDRAM RAS Precharge Timing

Allows you to select the SDRAM RAS# Precharge Time.
The settings are 2 Clocks or 3 Clocks. The default setting is 2 Clocks.

DRAM Integrity Mode

This feature provides software configurability of selecting between ECC (ECC generation and checking/correction) mode, EC-only (error checking only) mode, or non-ECC mode of operation of the DRAM interface.
The settings are Non-ECC, EC-only or ECC. The default setting is Non-ECC.

Fixed Memory Hole

When enabled, the memory hole at 15MB address will be relocated to the 15~16MB address range of the ISA cycle when the processor accesses the 15~16MB address area.

When Disabled, the memory hole at the 15MB address will be treated as a DRAM cycle when the processor accesses the 15~16MB address area.

The settings are Disabled, 512KB-640KB, or 15MB-16MB. The default setting is Disabled.

USWC Write I/O Post

This feature allows system to reduce the access times of CPU write to I/O data so that speed up the performance.

The options are Disabled or Enabled. The default setting is Disabled.

Read Around Write

This feature speeds up data read performance when it stays Enabled.

The options are Disabled or Enabled. The default setting is Enabled.

AGP Aperture Size

It allows you to select the main memory frame size for AGP use.

The options are 4, 8, 16, 32, 64, 128, 256MB. The default setting is 64MB.

PIIX4 Delayed Transaction

Enable this feature to abort the current CPI master cycle and to accept the new PCI master request, it reaccepts the original PCI master and returns the PCI data phase to the original PCI master. It will enhance the system performance.

The options are Disabled or Enabled. The default setting is Disabled.

CPU/PCI Clcok Selection (Mhz)

This feature allows you to set the ratio of CPU external clock to PCI bus clock.

The options are 50.00/25.00, 75.00/32.00, 83.00/41.05, 68.5/34.25, 55.00/27.50, 75.00/37.50, 60.00/30.00, 66.80/33.40. The default setting is 66.80/33.40.

USB Function

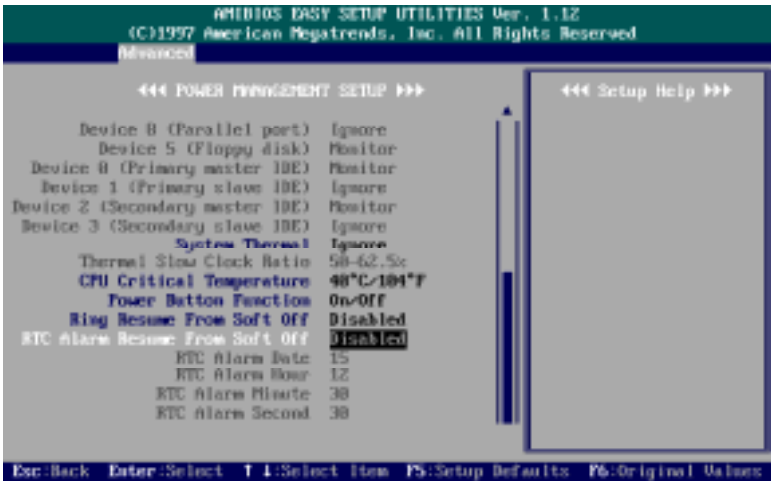
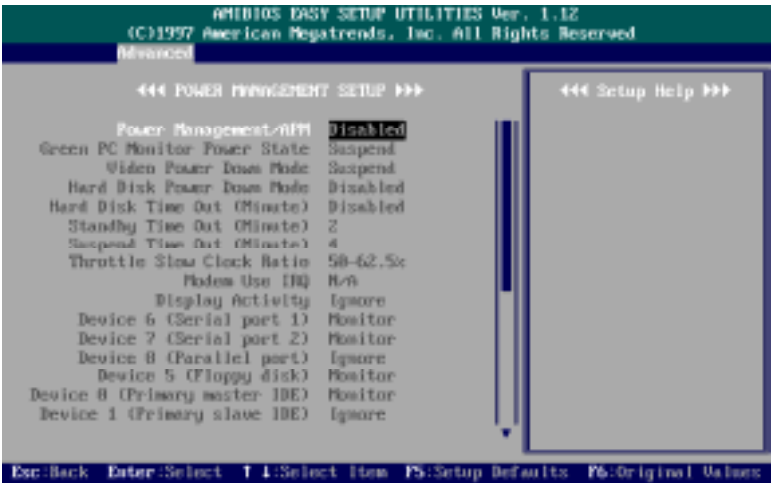
This option allows you to enable the Universal Serial Bus (USB) feature. The settings are Disabled or Enabled. The default setting is Disabled.

USB Keyboard/Mouse Support

If you use a USB keyboard/mouse, set at Enabled. Otherwise, keep it disabled. When enabled, allows the BIOS to detect and initiate the USB keyboard/mouse for making the keyfunctions of POST to work.

The settings are Disabled or Enabled. The default setting is Disabled.

Power Management Setup



Power Management/APM

Set this option to Enabled to enable the power management and APM (Advanced Power Management) features.

The settings are Enabled or Disabled. The default setting is Disabled.

Green PC Monitor Power State

Specifies the power management state that the Green PC-compliant video monitor enters after the specified period of system inactivity has expired. The settings are Suspend, Off, Blank, or Standby. The default setting is Suspend.

Video Power Down Mode

This option specifies the power management state that the video subsystem enters after the specified period of system inactivity has expired.

The settings are Disabled, Standby, or Suspend. The default setting is Suspend.

Hard Disk Power Down Mode

This option specifies the power management state that the hard disk drive enters after the specified period of system inactivity has expired.

The settings are Disabled, Standby, or Suspend. The default setting is Disabled.

Hard Disk Time Out (Minute)

This option specifies the length of a period of hard disk inactivity. When this period expires, the hard disk drive enters the power-conserving mode specified in the Hard Disk Power Down Mode option described above.

The settings are Disabled, 1 Min (minutes), and all one minute intervals up to and including 15 Min. The default setting is Disabled.

Standby Time Out (Minute)

This option specifies the length of the period of system inactivity when the computer is in Full-On mode before the computer is placed in Standby mode.

In Standby mode, some power use is curtailed.

The settings are Disabled, 1 Min, 2 Min, and all one minute intervals up to and including 15 Min. The default setting is 2 Min.

Suspend Time Out (Minute)

This option specifies the length of the period of system inactivity when the computer is already in Standby mode before the computer is placed in Suspend mode. In Suspend mode, nearly all power use is curtailed.

The settings are Disabled, 1 Min, 2 Min, and all one minute intervals up to and including 15 Min. The default setting is 4 Min.

Throttle Slow Clock Ratio

This option specifies the speed at which the system clock runs in power saving modes. The settings are expressed as a ratio between the normal clock speed and the power down clock speed.

The settings are 0-12.5 %, 12.5 - 25 %, 25-37.5 %, 37.5-50 %, 50-62.5 %, 62.5 - 75%, 75-87.5 %. The default setting is 50-62.5 %.

Modem Use IRQ

This feature allows you to select the IRQ# of the system that is the same IRQ# as the modem use.

The options are: NA (Default), 3, 4, 5, 7, 9, 10, 11.

Display Activity, Device 6 (Serial port 1), Device 7 (Serial port 2), Device 8 (Parallel port), Device 5 (Floppy disk), Device 0 (Primary master IDE), Device 1 (Primary slave IDE), Device 2 (Secondary master IDE), Device 3 (Secondary slave IDE)

The devices that connected to the system via these channels or ports can be set at Monitor for waking up the system when the system in Suspend mode

The settings are Ignore or Monitor.

The default setting of Display Activity, Device 8, Device 1, Device 3 is Ignore. The default setting of Device 6, 7, 5, 0, 2 is Ignore.

System Thermal

When you install an ATX power supply and this feature is set at Monitor, the system fan will be started the thermal sensor located under the the processor detects the heat in the case is over 65° C or 149° F.

The settings are Ignore or Monitor. The default setting is Ignore.

Thermal Slow Clock Ratio

It allows you to set the percentage's range of CPU internal clock to prevent CPU overheat. The higher percentage usually causes more easily CPU overheat.

The settings are 0-12.5 %, 12.5 - 25 %, 25-37.5 %, 37.5-50 %, 50-62.5 %, 62.5 - 75%, 75-87.5 %. The default setting is 50-62.5 %.

CPU Critical Temperature

It allows you to select the temperature that the system starts CPU overheat critical procedure, such as slowdown

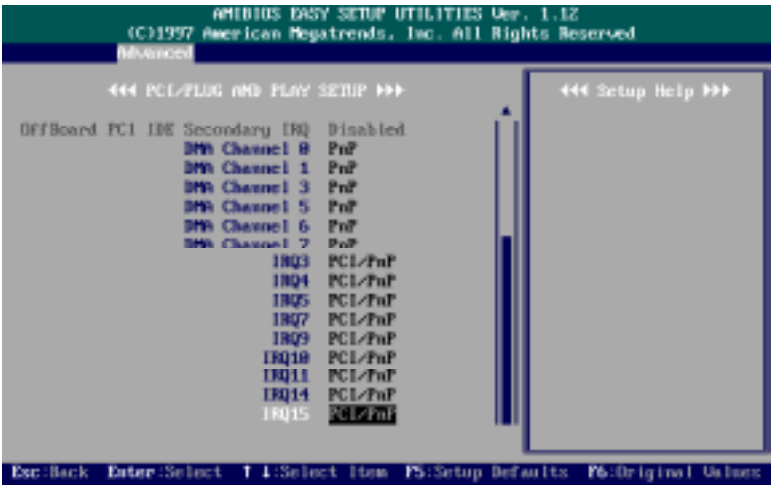
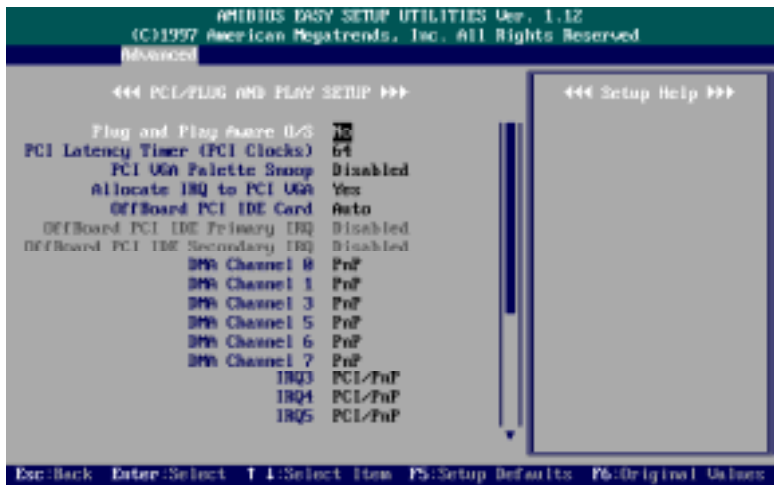
The settings are Disabled, 30°C/86°F, 35°C/95°F, 40°C/104°F, 45°C/113°F, 50°C/122°F, 55°C/131°F, 60°C/186°F. The default setting is 40°C/104°F.

Power Button Function

This allows you to set Power Button usage. If you select ON/OFF, pressing the Power Button will turn the system power on or off. If you select Suspend, pressing the Power Button will put the system into Suspend mode. Keeping the button pressed for 4 seconds will then put the system into Power Off mode.

The settings are ON/OFF, Suspend. The default setting is ON/OFF.

Plug and Play Setup



Plug and Play Aware O/S

Set this option to Yes if the operating system installed in the computer is Plug and Play-aware. AMI BIOS only detects and enables PnP ISA adapter cards that are required for system boot. The Windows 95 operating system detects and enables all other PnP-aware adapter cards. Windows 95 is PnP-aware. Set this option to No if the operating system (such as DOS, OS/2, Windows 3.x) does not support PnP. You must set this option correctly or PnP-aware adapter cards installed in your computer will not be configured properly.

The settings are No or Yes. The default setting is No.

PCI Latency Timer (PCI Clocks)

This option sets latency of all PCI devices on the PCI bus. The settings are in units equal to PCI clocks.

The settings are 32, 64, 96, 128, 160, 192, 224, or 248. The default setting is 32.

PCI VGA Palette Snoop

This option must be set to Enabled if any ISA adapter card installed in the computer requires VGA palette snooping.

The settings are Disabled or Enabled. The default setting is Disabled.

Allocate IRQ to PCI VGA

When set at Yes, allows the system to keep the ESCD (Extended System Configuration Data).

The settings are No or Yes. The default setting is Yes.

OffBoard PCI IDE Card

The option specifies if an offboard PCI IDE controller adapter card is used. You must also specify the PCI slot where the card is installed. If an offboard PCI IDE controller is used, the onboard IDE controller is disabled. The settings are Auto (Default), Slot1, Slot2, Slot3, Slot5, Slot6. The default setting is Auto.

OffBoard PCI IDE Primary IRQ

This options allow you to select the IRQ if you use an offboard primary PCI IDE card.

The settings are Disabled, INTA, INTB, INTC, INTD, Hardwired. The default setting is Disabled.

OffBoard PCI IDE Secondary IRQ

This options allow you to select the IRQ if you use an offboard secondary PCI IDE card.

The settings are Disabled, INTA, INTB, INTC, INTD, Hardwired. The default setting is Disabled.

DMA Channel 0, 1, 3, 5, 6, 7

This option allows you to specify the bus type that the named DMA channels are used on.

The settings are PnP or ISA/EISA . The default setting is PnP.

IRQ3, 4, 5, 7, 9, 10, 11, 14, 15

These options specify the bus that the named interrupt request lines (IRQs) are used on. These options allow you to specify IRQs for use by legacy ISA adapter cards. These options determine if AMI BIOS should remove an IRQ from the pool of available IRQs passed to BIOS configurable devices. The available IRQ pool is determined by reading the ESCD NVRAM. If more IRQs must be removed from the pool, the end user can use these PCI/PnP Setup options to remove the IRQ by assigning the option to the ISA/EISA setting. Onboard I/O is configurable by AMI BIOS. The IRQs used by onboard I/O are configured as PCI/PnP.

The settings are PCI/PnP or ISA/EISA. The default setting is PCI/PnP.

Peripheral Setup



Onboard FDC

This option enables the floppy drive controller on the mainboard.
The settings are Auto, Enabled, or Disabled. The default setting is Auto.

Onboard Serial PortA

This option enables serial port 1 on the mainboard and specifies the base I/O port address for serial port 1.
The settings are Auto, Disabled, 3F8h/COM1, 2F8h/COM2, 3E8h/COM3, 2E8h/COM4. The default setting is 3F8h/COM1.

Onboard Serial PortB

This option enables serial port 2 on the mainboard and specifies the base I/O port address for serial port 2.
The settings are Auto, Disabled, 3F8h/COM1, 2F8h/COM2, 3E8h/COM3, 2E8h/COM4. The default setting is 2F8h/COM2.

IR Mode Support

This option allows you to set the IR port that the second serial port is working in.
The settings are Disabled or Enabled. The default setting is Disabled.

IR Mode Select

This options allow you to select the IR modes.

The settings are SIR, ASKIR, FIR, or SIR. The default setting is SIR.

IR Base Address Select

This options allow you to select the IR address.

The settings are 3E0, 2E0, 3E8, or 2E8. The default setting is 3E0.

IR IRQ Select

This options allow you to select the IR IRQ.

The settings are 3, 4, 10, 11. The default setting is 10.

IR DMA Select

This options allow you to select the IR DMA.

The settings are Disabled, 0, 1, 3. The default setting is Disabled.

Onboard Parallel Port

This option enables the parallel port on the mainboard and specifies the parallel port base I/O port address.

The settings are 378h, 278h, 3BCh, Auto, or Disabled. The default setting is 378h.

Parallel Port Mode

This option allows you to select the mode of the parallel port. The settings are Normal, Bi-Dir, EPP, or ECP. The default setting is Normal.

EPP Version

This option allows you to select the EPP version.

The settings are 1.9, 1.7. The default setting is 1.9.

Parallel Port IRQ

This option allows you to select the IRQ of the parallel port. The settings are 5 or 7. The default setting is 7.

Parallel Port DMA Channel

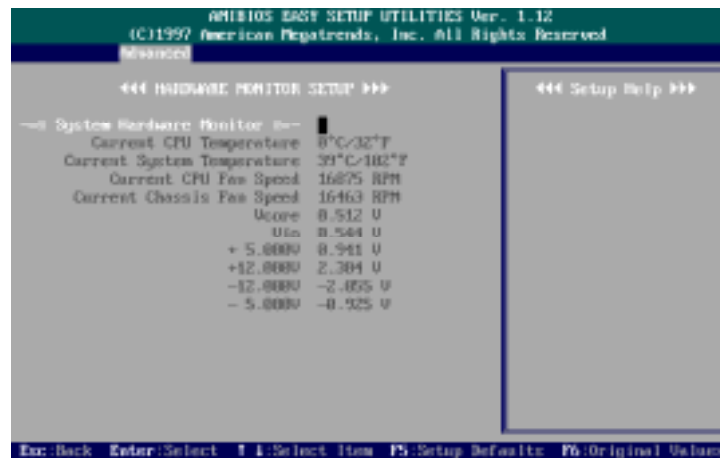
This option allows you to select the DMA channel of the parallel port. The settings are 1 or 3. The default setting is 3.

OnBoard IDE

Set this option to Enabled to specify that the IDE controller on the PCI local bus has bus mastering capability.

The settings are Disabled, Primary, Secondary, Both. The default setting is Both.

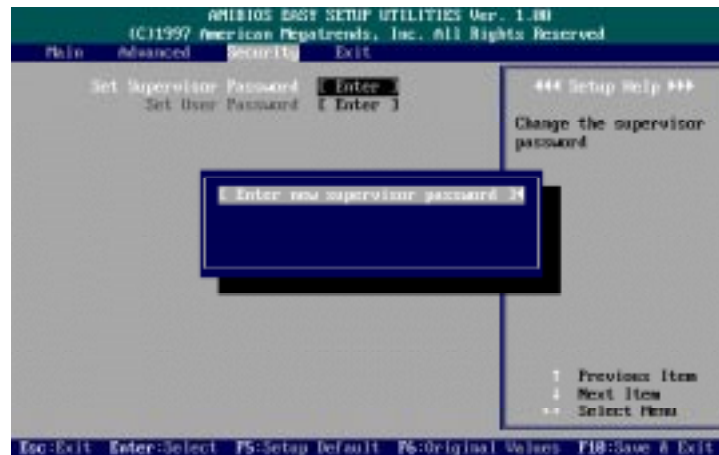
Hardware Monitor Setup



This feature allows end users and technicians to monitor the data provided by the LDCM function of this mainboard.

NOTE : The data shown above may not be the same as yours. They depend on your system.

Security Setup



Set Supervisor and User Passwords

You can set either a Supervisor password or a User password. If you do not use a password, Just press **Enter** when the password prompt appears. The password check option is enabled in Advanced Setup by choosing either Always (the password prompt appears every time the system is powered on) or Setup (the password prompt appears only when AMI BIOS is run). You can enter a password by typing the password on the keyboard. When you select Supervisor or User, AMI BIOS prompts for a password. You must set the Supervisor password before you can set the User password. Enter a 1 to 6 character password. The password does not appear on the screen when typed.

Changing a Password

Enter the password and press **Enter**. After the new password is entered, retype the new password as prompted and press **Enter**. If the password confirmation is incorrect, an error message appears. If the new password is entered without error, press to return to the AMI BIOS Main Menu.

Clear Password

If you forget your password, turn off the system power first and remove the system unit cover. Locate Jumper CPW and cap it. Remove Jumper CPW and reset the system. At this point, you will not be asked for the password to enter Setup.

Exit Setup



Exit Saving Changes

This item allows you to write the current settings to CMOS and exit.

Exit Discarding Changes

This item allows you to exit without writing the current settings to CMOS.

Load Optimal Settings

This item is selected for settings which provide the best system performance.

Load Fail Safe Settings

This item is for settings that provide a more efficient computer. If the computer will not boot, select this option and try to diagnose the problem after the computer boots. These settings do not give optimal performance.

Load Original Values

This item recalls your last set of previous settings. This option is convenient if you change settings and decide you wish to return to the previous settings.

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