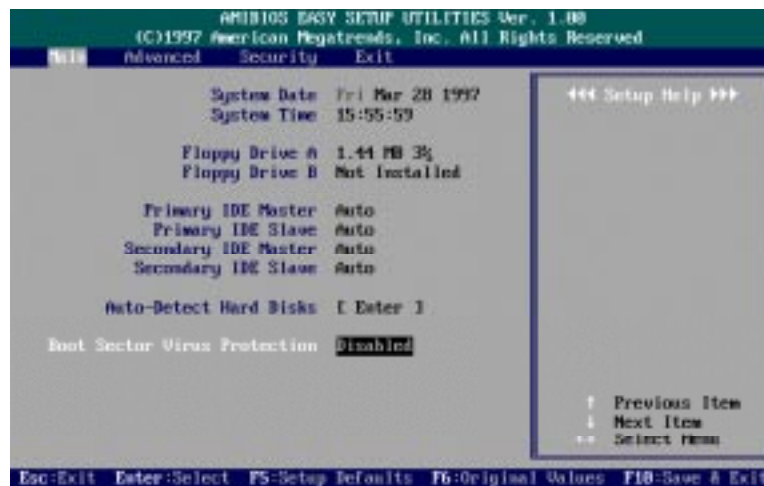


AMI BIOS Setup

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:.

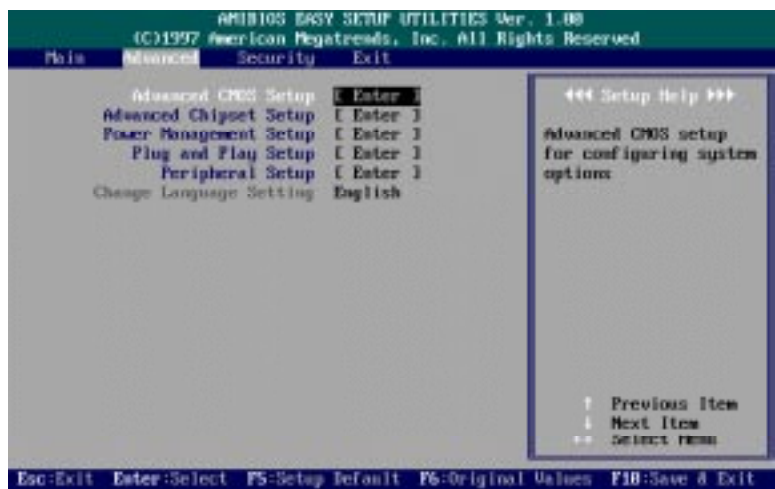
Auto-Detect Hard Disks

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

Boot Sector Virus Protection

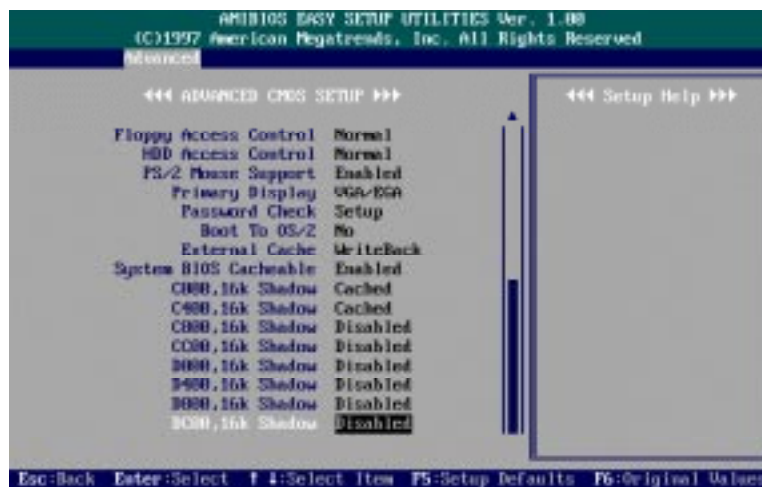
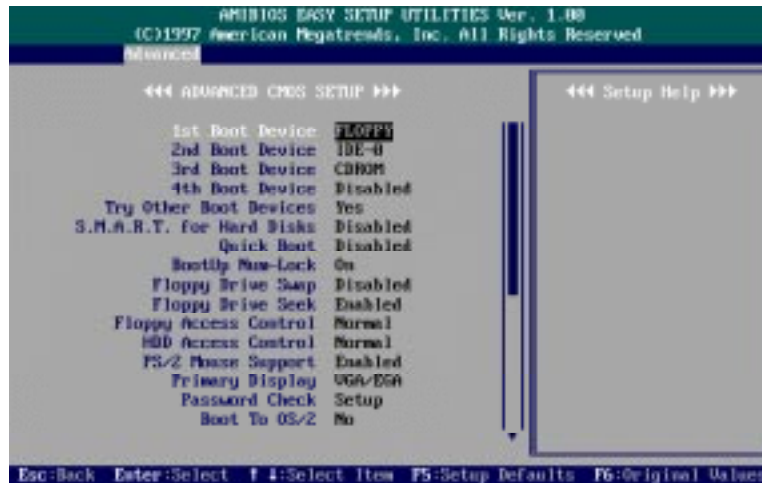
When Enabled, a warning will be given when any program or virus sends a Disk Format command or tries to write to the boot sector of a hard disk drive.

Advanced Setup



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

Advanced CMOS Setup



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, IDE-3, FLOPPY, FLOPTICAL, 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.

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.

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 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.

Floppy Access Control

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

The settings are Normal or Read Only. The default setting is Normal.

HDD Access Control

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

The settings are Normal or Read Only. The default setting is Normal.

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

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.

External Cache

This feature allows you to disable the external cache function.

The settings are Disabled or Write Back. The default setting is Write Back.

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



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 Legacy Support

This feature enables your system to use a USB keyboard.

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

DRAM Speed

This item allows you to select the DRAM speed.

The settings are Manual, 60ns, or 70ns. The default setting is 60ns.

DRAM Read Burst Timing

Allows you to define the DRAM read burst timing.

The settings are x4EDO, x4FPM; x3EDO, x4FPM; x2EDO, x3FPM. The default setting is Auto.

DRAM Write Burst Timing

Allows you to define the DRAM write burst timing.

The settings are x4EDO x4FPM; x3EDO, x3FPM; x2EDO, x2FPM. The default setting is Auto.

DRAM Lead Off Timing

Allows you to define the ratio of the DRAM read/write leadoff timing, RAS# precharge time, and refresh RAS# assertion.

The settings are 11/7/3, 10/6/3, 11/7/4 or 10/6/4. The default setting is Auto.

SRAM CAS Latency/ RAS to CAS

If any DIMM is installed, this feature allows you to select the ratio of CAS Latency to RAS-to-CAS.

The settings are 3/3 or 2/2. The default setting is 3/3.

Fast EDO Read Cycle Timing

When set at Enabled, it allows the fast timing EDO read cycles for the fast page mode DRAMs.

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

Memory Address Drive Strength

This feature allows technicians to adjust the DRAM driving current strength.

The options are Auto; 10 mA, 10 mA; 10 mA, 16 mA; 16 mA, 10 mA; 16 mA, 16 mA. The default setting is Auto.

Enhanced Paging Disable

When it is enabled, the system will keep the page open until a page/row miss.

When it is disabled, the system will use additional information to keep the DRAM page open when host may be right back.

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

DRAM Refresh RAS Cycles (HCLK's)

Allows you to control the clocks RAS# is asserted for Refresh cycles.

The options are 4 or 5. The default setting is 5.

Memory Hole

When enabled, the memory hole at the 15MB address will be reserved for 512-640KB, 15-16MB, or 14-16MB address range of the ISA add-on cards that request this memory area.

The options are Disabled, 512-640KB, 15-16MB, or 14-16MB. The default setting is Disabled.

Passive Release

The option enables your computer to make use of PCI 2.1 add-on cards when it is set at Enabled. If your PCI add-on card is of 2.0, please set it at Disabled.

The option are: Disabled, Enabled. The default option is Enabled.

Delayed Transaction

Enable this feature to abort the current PCI 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.

8bit I/O Recovery Time

This option specifies the length of the delay (in SYSCLKs) inserted between consecutive 8-bit I/O operations.

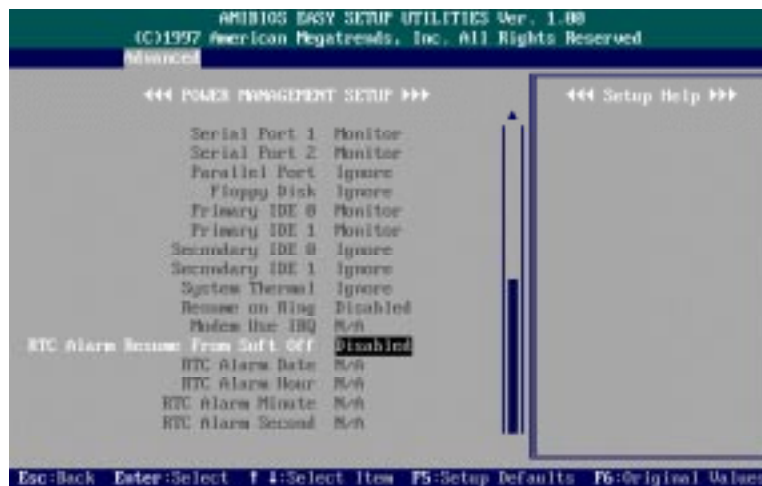
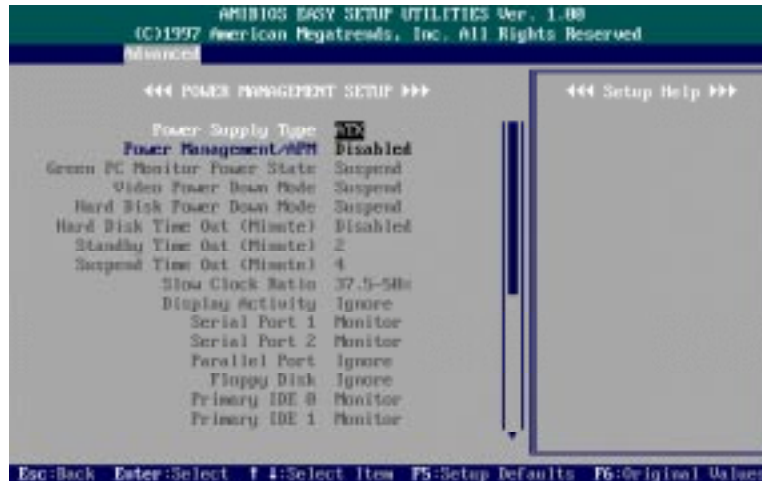
The settings are Disabled, 8, 1, 2, 3, 4, 5, 6, or 7. The default setting is 1.

16bit I/O Recovery Time

This option specifies the length of the delay (in SYSCLKs) inserted between consecutive 16-bit I/O operations.

The settings are Disabled, 4, 1, 2, or 3. The default setting is 1.

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

This option specifies the power management state that the Green PC-compliant video monitor enters after the specified period of display inactivity has expired.

The settings are Suspend, Off, 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 display 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 display inactivity has expired.

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

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 minute, 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, 2, 4, 8, 10, 20, 30, 40, 50, or 60 min. The default setting is 2.

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 Disable, 1, 2, 4, 8, 10, 20, 30, 40, 50, or 60 min. The default setting is Disable.

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 37.5-50 %.

Display Activity; Serial port 1; Serial port 2; Parallel port; Floppy disk; Primary IDE 0; Primary IDE 1; Secondary IDE 0; Secondary IDE 1

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

The settings are Ignore or Monitor. The default setting of Serial port 1, Primary IDE 0, Primary IDE 1 is Monitor. The others are Ignore.

System Thermal

When you install an ATX power supply and this feature is set at Monitor, the system fan will be started where the thermal sensor located under 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.

Resume on Ring

If an ATX power supply is installed and this feature is enabled, the system will be turned on from the power-off by a remote phone call via the modem.

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

MODEM Use IRQ

This feature allows you to select the IRQ# to meet your modem's IRQ#.

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

RTC Alarm Resume From Soft Off

When set at Enabled, it allows you to set the time the system will be turned on from the system power-off status.

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

RTC Alarm Data

This feature allows you to set the day the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.

The settings are Every Day, 1, 2, 3, ..., 31 day.

RTC Alarm Hour

This feature allows you to set the hour the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.

The settings are 0, 1, 2, ..., 23 hours.

RTC Alarm Minute

This feature allows you to set the minute the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.

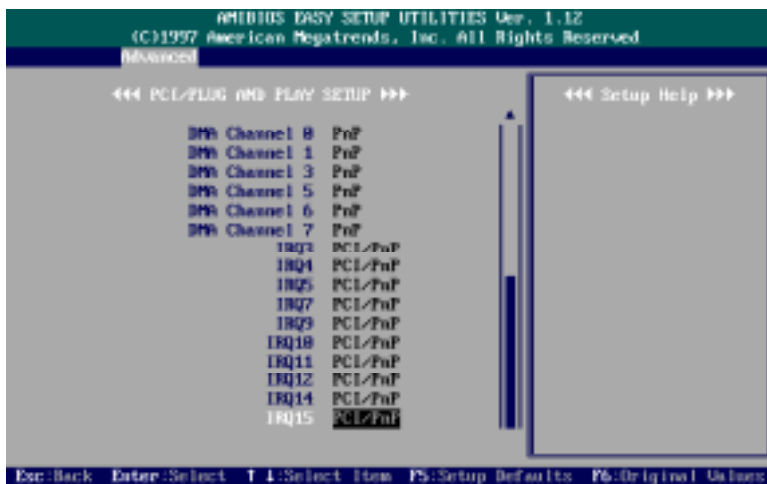
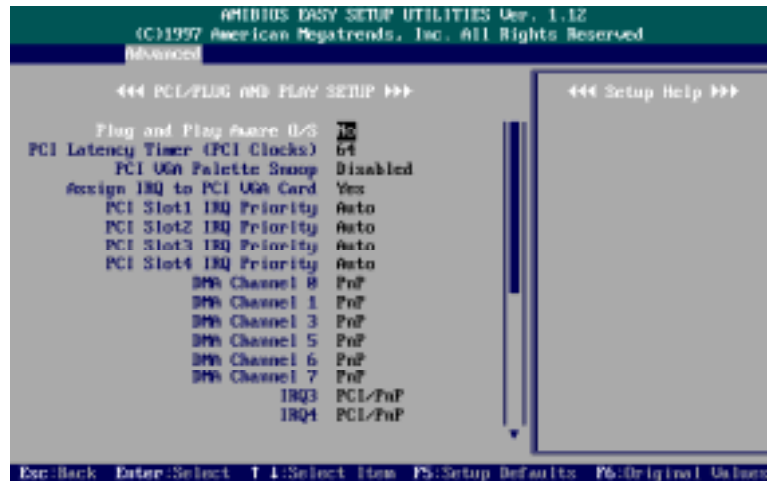
The settings are 0, 1, 2, ..., 59 minutes.

RTC Alarm Second

This feature allows you to set the second the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.

The settings are 0, 1, 2, ..., 59 seconds.

Plug and Play Setup



Plug and Play Aware OS

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 use 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 64.

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.

Assign IRQ to PCI VGA Card

If your VGA card supports hardware MPEG, please set at Yes to enable the BIOS to assign an available IRQ to the card.

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

PCI Slot 1 IRQ Priority,

PCI Slot 2 IRQ Priority,

PCI Slot 3 IRQ Priority,

PCI Slot 4 IRQ Priority

This option allows you to specify the IRQs for the add-on cards.

The settings are Auto, 3, 4, 5, 7, 9, 10, 11, 12. The default setting is Auto.

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, 12, 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 Enabled or Disabled. The default setting is Enabled.

Onboard Serial Port1

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

Onboard Serial Port2

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

Serial Port2 Mode

This option enables serial port 2 on the mainboard and specifies the base I/O port address for serial port 2. The settings are Normal, IrDA. The default setting is Normal.

IR Duplex Mode

Allows you to select the infrared transaction modes.
The options are: Half (Default), Full.

IrDA Protocol

Allows you to select IrDA protocol. The options are: 1.6 uS (Default), 3/10.

OnBoard Parallel Port

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

The settings: 378/LPT1 (Default), 278/LPT2, 3BC/LPT3, Auto, Disabled.

Parallel Port Mode

This option allows you to select the IRQs of the parallel port.

The settings are Normal, SPP/EPP, 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 parallel port IRQ.

The default setting is 5 or 7. The default setting is 7.

Parallel Port DMA Channel

This option allows you to select the parallel port DMA channel.

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

OnBoard IDE

This option allows you to enable the primary and secondary onboard IDE features. The settings are Disabled, Primary, Secondary, Both (Default).

PCI IDE BusMaster

Set this option to Enabled to specify that the IDE controller on the PCI local bus has bus mastering capability. The settings are Disabled or Enabled. The default setting is Disabled.

OffBoard PCI IDE Card

The option specifies if an offboard PCI IDE controller adapter card is used in the computer. You must also specify the PCI slot on the mainboard where the offboard PCI IDE controller card is installed. If an offboard PCI IDE controller is used, the onboard IDE controller on the mainboard is automatically disabled.

The settings are Disabled, Auto, Slot1, Slot2, Slot3, or Slot4. The default setting is Auto.

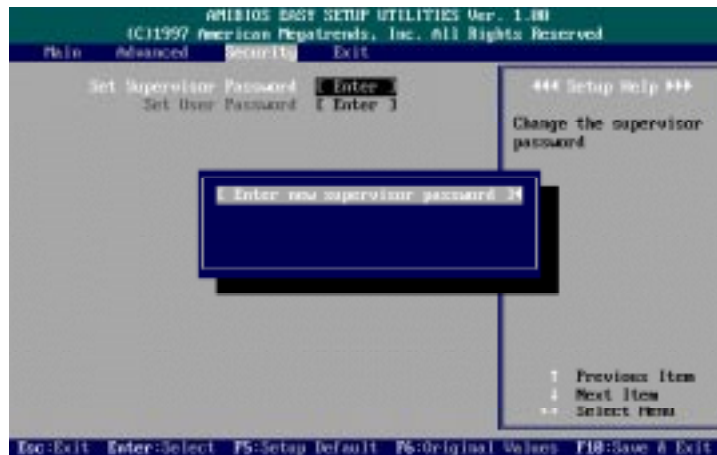
OffBoard PCI IDE Primary IRQ

This options allow you to select the IRQs 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 IRQs if you use an offboard secondary PCI IDE card. The settings are Disabled, INTA, INTB, INTC, INTD, Hardwired. The default setting is Disabled.

Security



Set Supervisor and User Passwords

AMI BIOS Password Support AMI BIOS Setup has a password feature. The system can be configured so that all users must enter a password every time the system boots or when AMI BIOS Setup is executed. 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). The password is stored in CMOS RAM.

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. Make sure you write it down. If you forget it, please read Clear Password Section on the next page.

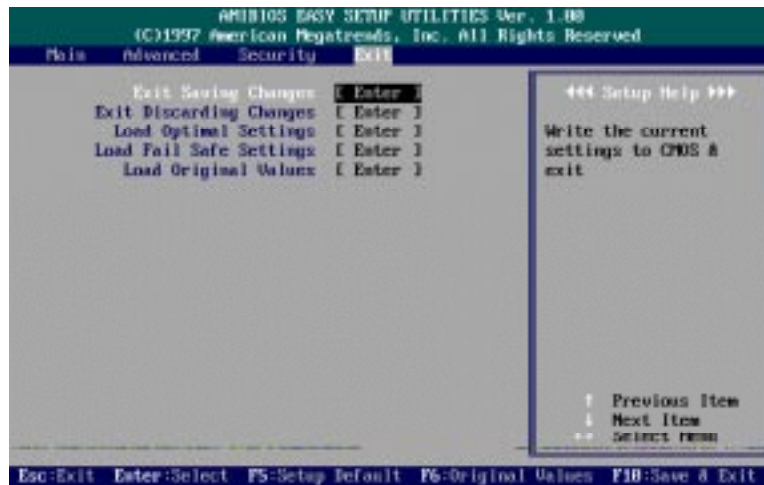
Changing a Password

Enter the password and press **Enter**. The screen does not display the characters entered. 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. The password is stored in CMOS RAM after AMI BIOS completes. The next time the system boots, you are prompted for the password if the password function is present and is enabled.

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.