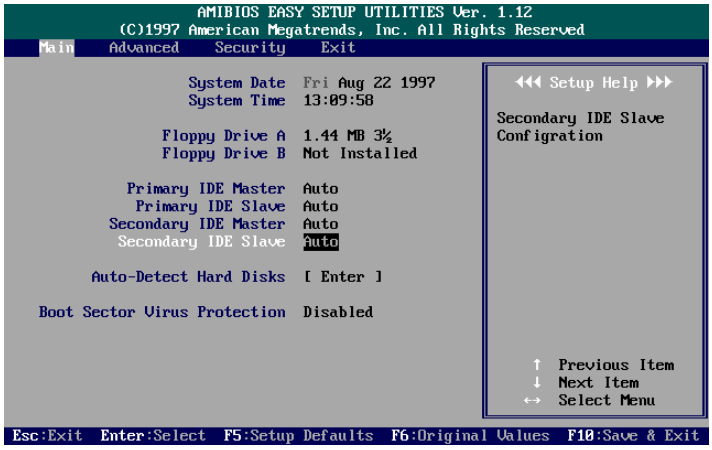
BIOS Setup

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:.

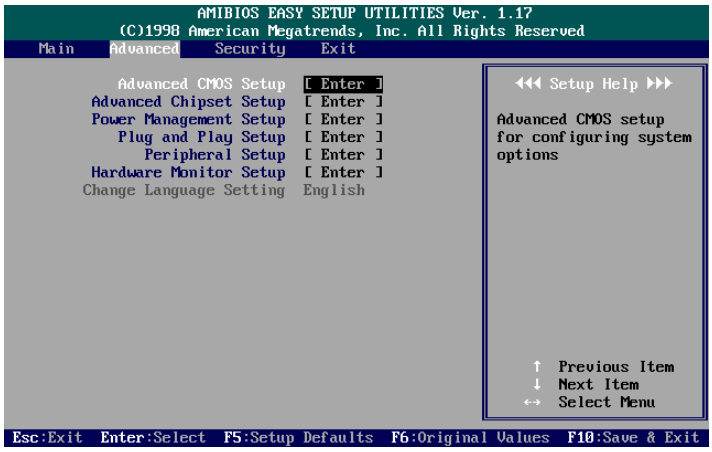
Auto-Detect Hard Disks

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

Boot Sector Virus Protection

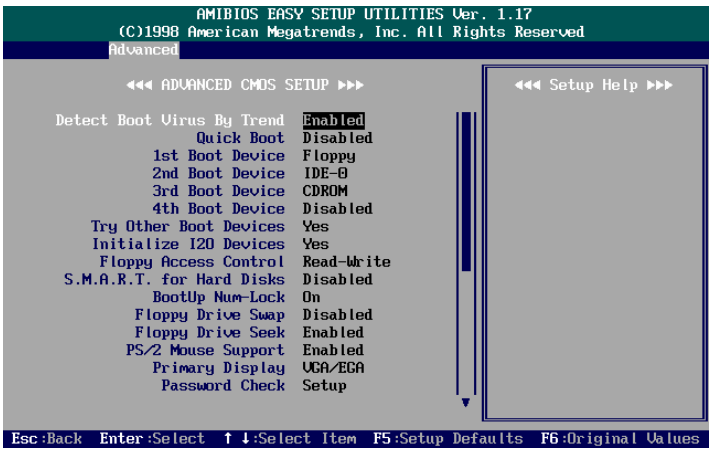
When Enabled, a warning will be giver when any program or virus sends a Disk Format command or tries to write to the boot sector of a hard disk drive.

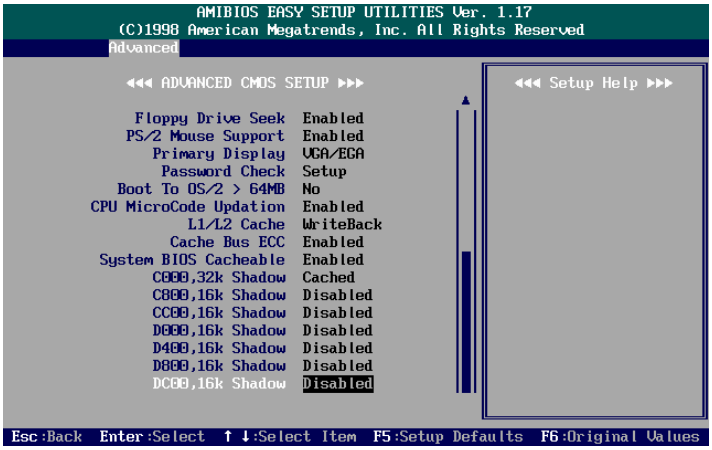
Advanced Setup



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





Detect Boot Virus By Trend

This feature starts the virus scan tool to detect if boot virus in boot sector of the first hard disk.
The options are: Enabled (Default), 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 (Default) or 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 (Default), FLOPTICAL, CDROM, SCSI, or NETWORK.

2nd Boot Device

This item allows you to select the second drive for booting up the system.
The settings are Disabled, IDE-0 (Default), or FLOPTICAL.

3rd Boot Device

This item allows you to select the third drive for booting up the system.
The settings are Disabled, FLOPTICAL, CDROM (Default).

4th Boot Device

This item allows you to select the fourth drive for booting up the system.
The settings are Disabled (Default) or FLOPTICAL.

Try Other Boot Devices

If you select Yes, the BIOS boots up the system from other boot devices if all selected boot devices failed to boot. If No selected, the BIOS boots up the system from only the selected devices.
The settings are Yes (Default) or No.

Initialize I2O Device

If set at Yes, the BIOS will initilize I2O processors, I2O storage devices, and provide INT13 support for I2O storage device.
The settings are Yes (Default), No.

Floppy Access Control

It is effective only if the floppy diskette drive is accessed through BIOS INT40H function.
The settings are Read-Write (Default) or Read-Only.

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 (Default) or Enabled.

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 (Default) or Off.

Floppy Drive Swap

Set this option to Enabled to permit drives A: and B: to be swapped.
The settings are Disabled (Default) or Enabled.

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 (Default).

PS/2 Mouse Support

When this option is set to Enabled, AMI BIOS supports a PS/2-type mouse.
The settings are Enabled (Default) or Disabled.

Primary Display

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

The settings are Absent (Default), VGA/EGA, CGA40x25, CGA80x25, or Mono.

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 (Default) or Always.

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 (Default).

CPU MicroCode Updation

This feature allows technicans to update CPU MicroCode by dedicated utility set at Enabled.

The settings are Disabled or Enabled (Default).

L1/L2 Cache

This feature allows users to select the cache policy. WriteThrough means that memory is updated with data held in the cache whenever the CPU issues a write cycle. On the other hand, WriteBack causes memory to be updated only under certain conditions, such as read requests to the memory whose contents are currently in the cache. WriteBack allows the CPU to operate with fewer interruptions, increasing its efficiency.

The settings are: WriteBack (Default) or WriteThrough.

Cache Bus ECC

This feaure is for enabling the cache ECC function.

The settings are Disabled or Enabled (Default).

System BIOS Cacheable

Enable it to allows 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 (Default).

C000,32K 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.

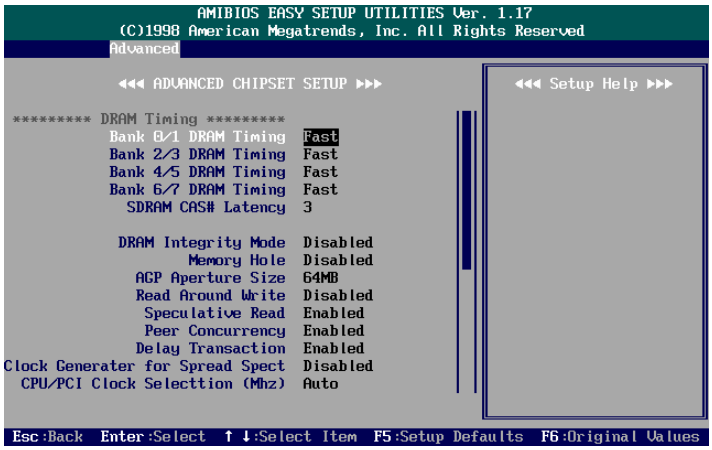
[Enabled] The contents of C0000h - DC00h are written to the same address in system memory (RAM) for faster execution.

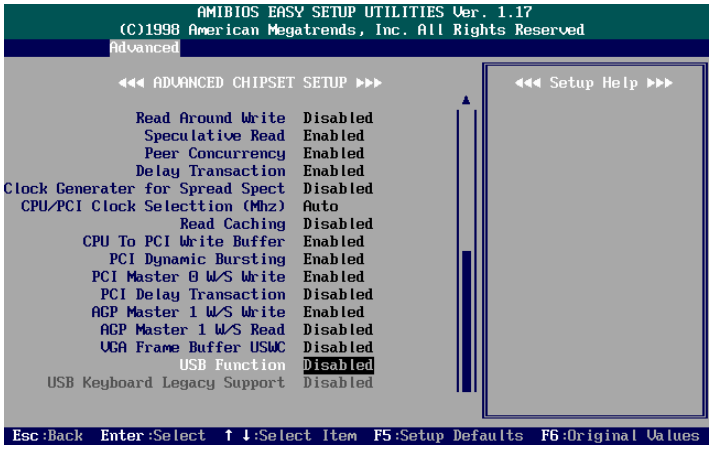
[Cached] The contents of the named ROM area are written to the same address in system memory (RAM) for faster execution, if an adapter ROM will be using the named ROM area. Also, the contents of the RAM area can be read from and written to cache memory.

The settings are Disabled, Enabled, Cached.

The default setting of “C000, 32K Shadow; C400, 16K Shadow” is Cached; the others are Disabled.

Advanced Chipset Setup





Bank 0/1 DRAM Timing; Bank 2/3 DRAM Timing; Bank 4/5 DRAM Timing; Bank 6/7 DRAM Timing;

This feature allows you to select the DRAM read/write speed. The settings are: Normal, Fast (Default), Turbo.

SDRAM CAS# Lattency

If any DIMM is installed, this feature allows you to select the CAS Latency.
The settings are 2 or 3 (Default).

DRAM Integrity Mode

This feature provides software configurablity of selecting between ECC (ECC generation and checking/correction) mode, or disable non-ECC mode of operation of the DRAM interface.
The settings are Disabled (Default), ECC.

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 (Default), 512KB-640KB, or 15MB-16MB.

AGP Aperture Size

It allows you to select the main memory frame size fo AGP use.
The options are 4, 8, 16, 32, 64 (Default), 128, 256MB.

Read Around Write

This feature speeds up data read performance when it stays at Enabled. The settings are: Disabled (Default), Enabled.

Speculative Read

If a sequential data read occur, the chipset will generate a speculative read cycle to preread data before the CPU request.
The settings are: Enabled (Default), Disabled.

Peer Concurrency

Peer concurrency means: if not the same bus, the system can active different bus master cycle at the same time.
The settings are: Enabled (Default), Disabled.

Delayed Transaction

Enable this feature to force the current PCI bus master retry the current PCI bus master cycle and to accept the new PCI master request, it reaccepts the original PCI bus master and returns the PCI data to the original PCI master. It will enhance the system performance.
The options are Disabled (Default) or Enabled.

Clock Generator for Spread Spect

Set at Enable for allowing spread spectrum in order to solve the EMI solution of the clock generator.
The options are Disabled (Default) or Enabled.

CPU/PCI Clcok Selection (Mhz)

This feature allows you to set the ratio of CPU external clock to PCI bus clock.
When CPU external frequency is at 66MHz. The options are: Auto (Default), 75/37.5, 83.3/41.6, 66.8/33.4,.
When CPU external frequency is at 100MHz. The options are: Auto (Default), 124/41.33, 112/37.3, 133.3/44.43, 100/33.3.

Read Caching

This feature is for cache read performance better.
The settings are: Disabled (Default), Enabled.

CPU To PCI Write Buffer

When enabled, it allows data and address access to the internal buffer of VT82C596 so that the CPU can be released from the waiting state.
The settings are: Enabled (Default), Disabled.

PCI Dynamic Bursting

When set at Enabled, the PCI controller allows bursting PCI transfer if the consecutive PCI cycles come with the address falling in the same 1KB space.
The settings are: Enabled (Default), Disabled.

PCI Master 0 W/S Write

When set at Enabled, it allows a zero-wait-state-cycle delay if the PCI master drive writes data to DRAM.
The settings are: Enabled (Default), Disabled.

PCI Delay Transaction

Enabling this feature will abort the current PCI master cycle and will accept a new PCI master request, it reaccepts the original PCI master and returns the PCI data phase to the original PCI master.
The settings are: Enabled (Default), Default.

AGP Master 1 W/S Write

When set at Enabled, it allows a one-wait-state-cycle delay if the AGP master drive writes data to DRAM.
The settings are: Enabled (Default), Disabled.

AGP Master 1 W/S Read

When set at Enabled, it allows a one-wait-state-cycle delay if the AGP master drive reads data from DRAM.
The settings are: Disabled (Default), Enabled.

VGA Frame Buffer USWC

When set at Enabled, it enables CPU write to video frame buffer using USWC (Unspeculative Write-Combined) way. Stay with the default setting, Disabled, when installed some older VGA card drivers. The settings are: Disabled (Default), Enabled.

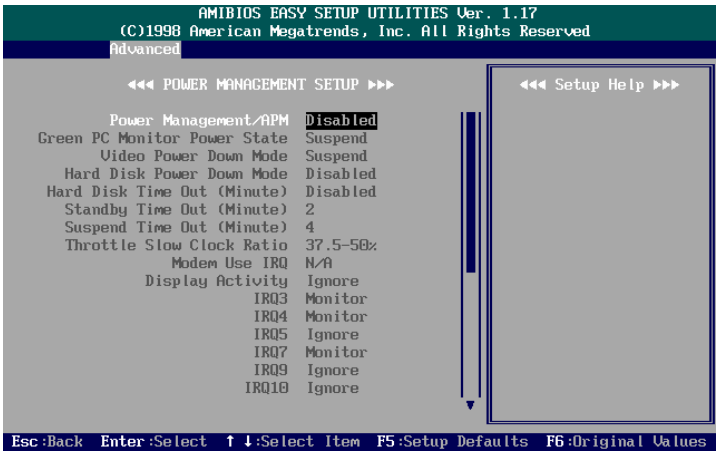
USB Function

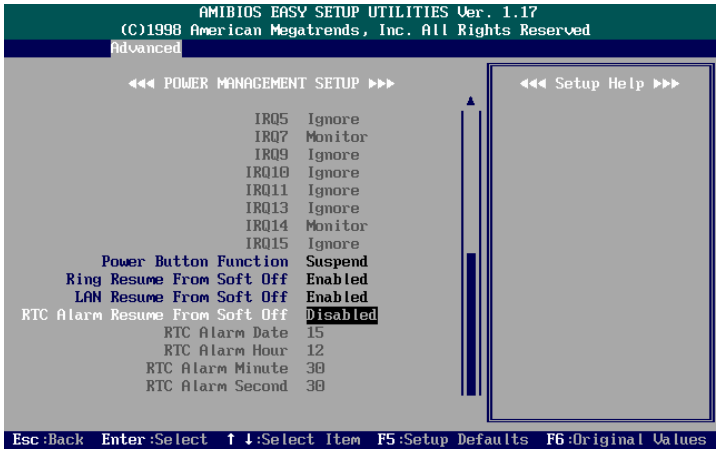
This option allows users to enable the Universal Serial Bus (USB) feature.
The options are Disabled (Default) or Enabled.

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 options are Disabled (Default) or Enabled.

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 (Default)

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 (Default), Off, Blank, or Standby.

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 (Default).

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 (Default), Standby, or 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 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 37.5-50 %.

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: N/A (Default), 3, 4, 5, 7, 9, 10, 11.

Display Acitivity, Device 6 (Serial port 1), Device 7 (Serial port 2), Device 8 (Parallel port), Device 5 (Floppy disk), Device 0 (Primary master IDE), Devcie 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 Monitor.

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 (Default).

Ring Resume From Soft Off

An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.
The options are Disabled or Enabled (Default).

LAN Resume From Soft Off

An input signal from the LAN card (via WOL connector) awakens the system from a soft off state.
The options are Disabled or Enabled (Default).

RTC Alarm Resume From Soft Off

When set at Enabled, it allows you to set the time when the system to 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 of 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. The default setting is 15.

RTC Alarm Hour

This feature allows you to set the hour of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The settings are 0, 1, 2, ..., 23 hours. The default setting is 12.

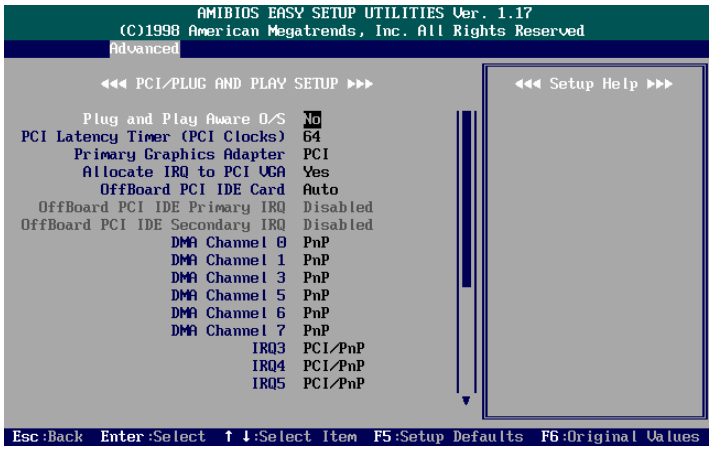
RTC Alarm Minute

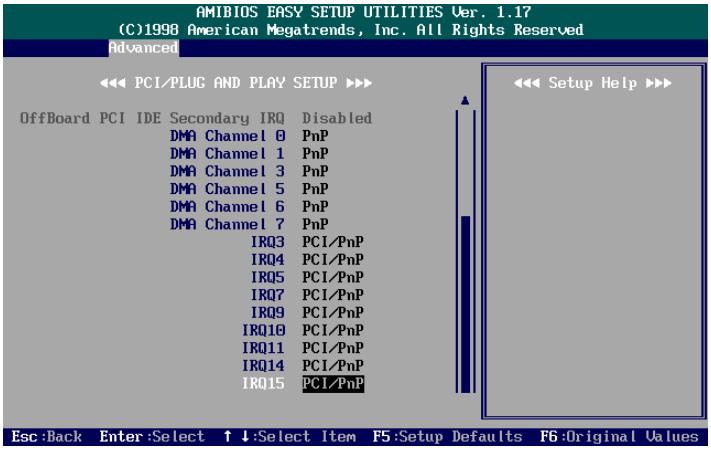
This feature allows you to set the minute of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The settings are 0, 1, 2, ..., 59 minutes. The default setting is 30.

RTC Alarm Second

This feature allows you to set the minute of the alarm starts when the RTC Alarm Resume From Soft Off is set to be Enabled.
The settings are 0, 1, 2, ..., 59 seconds. The default setting is 30.

PCI/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 (Default) or Yes.

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 (Default), 96, 128, 160, 192, 224, or 248.

Primary Graphics Adapter

When an AGP VGA and PCI VGA card installed at the same time. They will be selected to be the primary display by this feature.
The settings are PCI or AGP (Default).

Allocate IRQ to PCI VGA

When set at Yes, allows users to assign IRQs for PCI/AGP VGA cards.
The settings are No or Yes (Default).

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.

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.

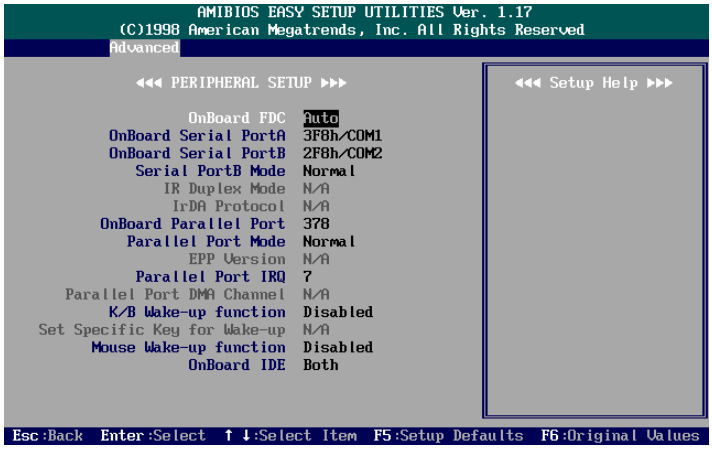
IRQ3, 4, 5, 7, 9, 10, 11, 14, 15

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.

Serial PortB Mode

Select an operating mode for the second serial port. Stay with the default setting, Normal, if you use COM2 as the serial port as the serial port, instead as an IR port.
The options are: Normal (Default), IrDA, ASK IR.

IR Duplex Mode

When the option IrDA of the above feature selected, this feature appears on the display to allow users to select the duplex mode.
The options are: Full Duplex, Half Duplex (Default).

IrDA Protocol

When the option IrDA or ASK IR of the feature Serial PortB Mode selected, this field allows users to select the protocol of IrDA.
The options are: 1.6 micro second, 3/16 (Default).

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 378 (Default), 278, 3BC, Auto, or Disabled.

Parallel Port Mode

This option allows you to select the mode of the parallel port. The settings are Normal (Default), Bi-Dir, EPP, or ECP.

EPP Version

This option allows you to select the EPP version.
The settings are 1.9 (Default), 1.7.

Parallel Port IRQ

This option allows you to select the IRQ of the parallel port.
The settings are 5 or 7 (Default).

Parallel Port DMA Channel

This option allows you to select the DMA channel of the parallel port.
The settings are 1 or 3 (Default).

K/B Wake-up function

This feature allows users to wake up the system by keyboards from the soft-off status.

The options are: Disable (Default), Specifc key, Any key, Password.

Set Sepecific Key for Wake-up

When the feature of K/B Wake-up function set at Specific key, this field allows you to select a set of specific key to power on your computer.

The options are: Ctrl-F1 (Default), Ctrl-F2, Ctrl-F3, Ctrl-F4, Ctrl-F5, Ctrl-F6, Ctrl-F7, Ctrl-F8, Ctrl-F9, Ctrl-F10, Ctrl-F2, Ctrl-F11, Ctrl-F12.

Mouse Wake-up function

This feature allows you to select mouse to power on the computer system by double clicking either on the left button or right button of your mouse.

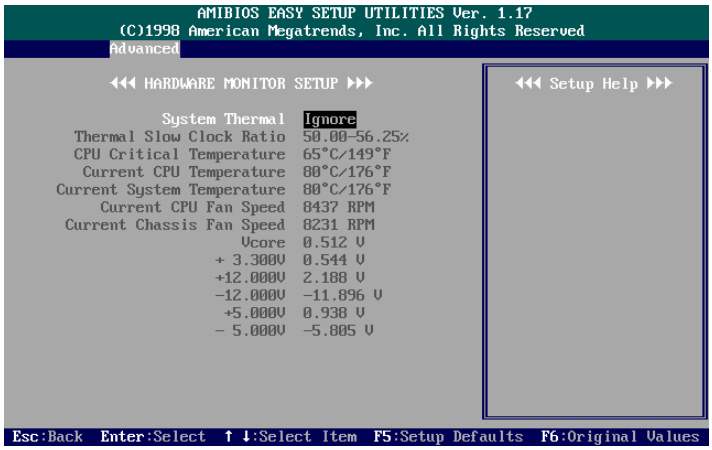
The options are: Disable (Default), Left-button, Right-button.

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 (Default).

Hardware Monitor Setup



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

System Thermal, Thermal Slow Clock Ratio, CPU Critcal Temperature

When System Thermal set at Monitor, the system will slow down the CPU clock by the setting of Thermal Slow Clock Ratio when the system temperature approches the setting of CPU Critical Temperature.

The optons of System Thermal are: Ignore (Default), Monitor.

The options of Thermal Slow Clock Ratio are: 0-12.5%, 12.5-25%, 25-37.5%, 37.4-50%, 50-62.5% (Default), 62.5-75%, 75-87.5%.

The options of CPU Critical Temperature are: Disabled, 45°C/113°F, 50°C/122°F, 55°C/131°F, 60°C/140°F, 65°C/149°F (Default), 70°C/158°F, 75°C/167°F.

Security Setup

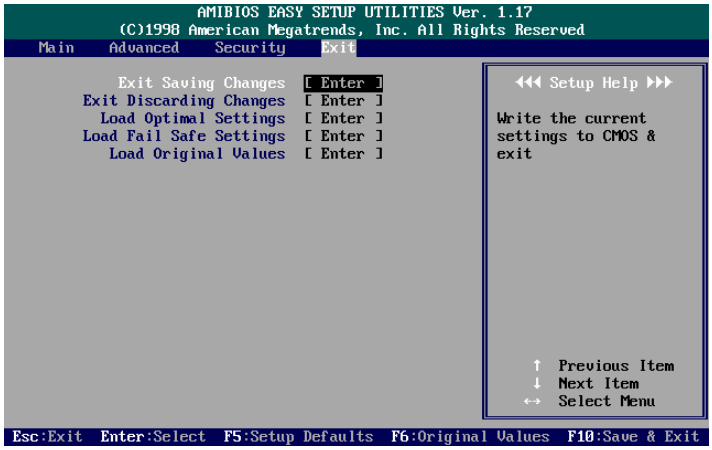
Set Supervisor and User Passwords: You can set either a Supervisor password or a User password. If you do not use a password, Just press **Enter** when the password prompt appears. The password check option is enabled in Advanced Setup by choosing either Always (the password prompt appears every time 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 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.

Set Keyboard Wake Up Password: It allows When set at Password, it allows you to set a password to power the system. Press the Enter key when you are prompted to set the power-on password. Type it up to five characters and press the Enter key; then confirm it by typing the password again and pressing the Enter key to complete the setting procedures. To disable the power-on password, press the Enter key when it is disabled. When the power-on password is set, the system can not be powered on by power button. Once the power-on password is set, you can power on the system simply by entering the password. This feature offers the security on your computer system.

Exit Setup



Exit Saving Changes allows you to write the current settings to CMOS and exit.

Exit Discarding Changes allows you to exit without writing the current settings to CMOS.

Load Optimal Settings is selected for settings which provide the best system performance.

Load Fail Safe Settings 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 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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