
AMI® BIOS Setup**3**

The mainboard uses AMI® BIOS ROM that provides a Setup utility for users to modify the basic system configuration. The information is stored in a battery-backed CMOS RAM so it retains the Setup information when the power is turned off.

This chapter provides you with the overview of the BIOS Setup program. It contains the following topics:

Entering Setup	3-2
Control Keys	3-2
Getting Help	3-3
The Main Menu	3-4
Standard CMOS Setup	3-6
BIOS Features Setup	3-8
Chipset Features Setup	3-12
Power Management Setup	3-16
PNP/PCI Configuration	3-20
Integrated Peripherals	3-22
Hardware Monitor Setup	3-26
Load Optimized/Fail-Safe Defaults	3-28
Supervisor/User Password	3-29
IDE HDD Auto Detection	3-31
Save & Exit Setup	3-32
Exit without Saving	3-33

Chapter 3

Entering Setup

Power on the computer and the system will start POST (Power On Self Test) process. When the message below appears on the screen, press key to enter Setup.

Hit DEL if you want to run SETUP

If the message disappears before you respond and you still wish to enter Setup, restart the system by turning it OFF and On or pressing the RESET button. You may also restart the system by simultaneously pressing <Ctrl>, <Alt>, and <Delete> keys.

Control Keys

<↑>	Move to the previous item
<↓>	Move to the next item
<←>	Move to the item in the left hand
<→>	Move to the item in the right hand
<Enter>	Select the item
<Esc>	Jumps to the Exit menu or returns to the main menu from a submenu
<+/PU>	Increase the numeric value or make changes
<-/PD>	Decrease the numeric value or make changes
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F6>	Load the default CMOS value from Fail-Safe default table, only for Option Page Setup Menu
<F7>	Load Optimized defaults
<F10>	Save all the CMOS changes and exit

Getting Help

After entering the Setup utility, the first screen you see is the Main Menu.

Main Menu

The main menu displays the setup categories the BIOS supplies. You can use the arrow keys (↑↓) to select the item. The on-line description for the selected setup category is displayed on the bottom of the screen.

Default Settings

The BIOS setup program contains two kinds of default settings: the Optimal and Fail Safe defaults. Optimal defaults provide optimum performance settings for all devices and the system. (The “default” value described in the chapter usually refers to the Optimal defaults unless otherwise specified.) Fail Safe defaults provide the safest set of parameters instead of the optimal system performance for the system.

Chapter 3

The Main Menu

Once you enter AMIBIOS SIMPLE SETUP UTILITY, the Main Menu will appear on the screen. The Main Menu displays twelve configurable functions and two exit choices. Use arrow keys to move among the items and press <Enter> to enter the sub-menu.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.43 (C)2001 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	LOAD FAIL-SAFE DEFAULTS
ADVANCED BIOS FEATURES	LOAD OPTIMIZED DEFAULTS
ADVANCED CHIPSET FEATURES	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	IDE HDD AUTO DETECTION
INTEGRATED PERIPHERALS	SAVE & EXIT SETUP
HARDWARE MONITOR SETUP	EXIT WITHOUT SAVING
ESC : Quit ↑↓←→ : Select Item (Shift)F2 : Change Color	
F5 : Old Values F7 : Load Setup Defaults F10 : Save & Exit	
Time, Date, Hard Disk Type...	

Standard CMOS Setup

Use this menu for basic system configurations, such as time, date etc.

Advanced BIOS Features

Use this menu to setup the items of AMI® special enhanced features.

Advanced Chipset Features

Use this menu to change the values in the chipset registers and optimize your system’s performance.

Power Management Setup

Use this menu to specify your settings for power management.

PNP/PCI Configuration

This entry appears if your system supports PnP/PCI.

Integrated Peripherals

Use this menu to specify your settings for integrated peripherals.

Hardware Monitor Setup

This entry shows your PC's current status, and allows you to adjust CPU clock, core voltage, ratio and DDR voltage.

Load Fail-Safe Defaults

Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate.

Load Optimized Defaults

Use this menu to load factory default settings into the BIOS for optimal system performance operations.

Supervisor Password

Use this menu to set Supervisor Password.

User Password

Use this menu to set User Password.

Save & Exit Setup

Save changes to CMOS and exit setup.

Exit Without Saving

Abandon all changes and exit setup.

Chapter 3

STANDARD CMOS SETUP

The items inside STANDARD CMOS SETUP menu are divided into 9 categories. Each category includes none, one or more setup items. Use the arrow keys to highlight the item you want to modify and use the <PgUp> or <PgDn> keys to switch to the value you prefer.

AMIBIOS SETUP - STANDARD CMOS SETUP (C)2001 American Megatrends, Inc. All Rights Reserved	
Date (mm/dd/yyyy) : Tue Jan 16, 2001 Time (hh/mm/ss) : 00:00:00	
	TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Pri Master	: Auto
Pri Slave	: Auto
Sec Master	: Auto
Sec Slave	: Auto
Floppy Drive A : 1.44 MB 3½ Floppy Drive B : Not Installed	Base Memory : 640 Kb Other Memory : 384 Kb Extended Memory : 127 Mb Total Memory : 128 Mb
Boot Sector Virus Protection : Disabled	
ESC : Exit ↑ ↓ : Select Item PU/PD/+/- : Modify (Shift) F2 : Color	

Date

This allows you to set the system to the date that you want (usually the current date). The format is <day><month> <date> <year>.

- day** Day of the week, from Sun to Sat, determined by BIOS. Read-only.
- month** The month from Jan. through Dec.
- date** The date from 1 to 31 can be keyed by numeric function keys.
- year** The year depends on the year of the BIOS.

Time

This allows you to set the system time that you want (usually the current time). The time format is <hour> <minute> <second>.

Pri Master/Pri Slave/Sec Master/Sec Slave

Press PgUp/<+> or PgDn/<-> to select the hard disk drive type. The specification of hard disk drive will show up on the right hand according to your selection.

TYPE	Type of the device.
SIZE	Capacity of the device.
CYLS	Number of cylinders.
HEAD	Number of heads.
PRECOMP	Write precompensation.
LANDZ	Cylinder location of Landing zone.
SECTOR	Number of sectors.
MODE	Access mode.

Floppy Drive A/B

This item allows you to set the type of floppy drives installed. Available options are *Not Installed*, *360 KB 5¼*, *1.2 MB 5¼*, *720 KB 3½*, *1.44 MB 3½*, or *2.88 MB 3½*. The default value for Floppy Drive A is *1.44 MB 3½*, and for Floppy Drive B is *Not Installed*.

Boot Sector Virus Protection

The item is to set the Virus Warning feature for IDE Hard Disk boot sector protection. When *Enabled*, BIOS will issue a virus warning message and beep if a write to the boot sector or the partition table of the HDD is attempted. Setting options are *Disabled* and *Enabled*. Default value is *Disabled*.

Note: *This feature only protects the boot sector, not the whole hard disk.*

ADVANCED BIOS FEATURES

AMIBIOS SETUP - ADVANCED BIOS FEATURES (C)2001 American Megatrends, Inc. All Rights Reserved		
Quick Boot	:Enabled	
1st Boot Device	:Floppy	
2nd Boot Device	:IDE-0	
3rd Boot Device	:CDROM	
Try Other Boot Devices	:Yes	
Initial Display Mode	:BIOS	
S.M.A.R.T. for Hard Disks	:Disabled	
BootUp Num-Lock	:On	
Floppy Drive Swap	:Disabled	
Floppy Drive Seek	:Disabled	
Primary Display	:VGA/EGA	
Password Check	:Setup	
Boot To OS/2	:No	
L1 Cache	:Enabled	
L2 Cache	:Enabled	
System BIOS Cacheable	:Enabled	
C000, 32k Shadow	:Cached	
		ESC : Quit ↑↓←→ : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults

Quick Boot

Setting the item to *Enabled* allows the system to boot within 5 seconds since it will skip some check items. Available options are *Enabled* and *Disabled*. The default value is *Enabled*.

1st/2nd/3rd Boot Device

The items allow you to set the sequence of boot devices where AMIBIOS attempts to load the operating system. The settings are:

- IDE0* The system will boot from the first HDD.
- IDE1* The system will boot from the second HDD.
- IDE2* The system will boot from the third HDD.
- IDE3* The system will boot from the fourth HDD.
- Floppy* The system will boot from floppy drive.
- ARMD-ZIP* The system will boot from LS-120/ZIP-100/ZIP-250

	drive.
<i>CDROM</i>	The system will boot from the CD-ROM.
<i>SCSI</i>	The system will boot from the SCSI.
<i>Network</i>	The system will boot from the Network drive.
<i>Disabled</i>	Disable this sequence.

Try Other Boot Devices

Setting the option to *Yes* allows the system to try to boot from other devices if the system fails to boot from the 1st/2nd/3rd boot device.

Initial Display Mode

This item enables you to show the company logo on the bootup screen.

Settings are:

<i>BIOS (default)</i>	Shows the POST messages at boot.
<i>Silent</i>	Shows a still image (logo) on the full screen at boot.

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

This allows you to activate the S.M.A.R.T. (Self-Monitoring Analysis & Reporting Technology) capability for the hard disks. S.M.A.R.T is a utility that monitors your disk status to predict hard disk failure. This gives you an opportunity to move data from a hard disk that is going to fail to a safe place before it becomes offline. Settings are *Enabled* and *Disabled* (default).

BootUpNum-Lock

This item is to set the Num Lock status when the system is powered on. Setting to *On* will turn on the Num Lock key when the system is powered on. Setting to *Off* will allow end users to use the arrow keys on the numeric keypad. Setting options are *On* and *Off*. Default value is *On*.

Floppy Drive Swap

Setting to *Enabled* will swap floppy drives A: and B:.. The default value is *Disabled*.

Floppy Drive Seek

Setting to *Enabled* will make BIOS seek floppy drive A: before booting the system. Settings are *Disabled* and *Enabled*. The default value is *Disabled*.

Chapter 3

Primary Display

This configures the primary display subsystem in the computer. Available options are *Mono (monochrome)*, *CGA40x25*, *CGA80x25*, *VGA/EGA* and *Absent*. The default value is *VGA/EGA*.

Password Check

This specifies the type of AMIBIOS password protection that is implemented. Setting options are described below.

Option	Description
Setup (default)	The password prompt appears only when end users try to run Setup.
Always	A password prompt appears every time when the computer is powered on or when end users try to run Setup.

Boot to OS/2 > 64MB

This allows you to run the OS/2® operating system with DRAM larger than 64MB. When you choose the default value *No*, you cannot run the OS/2® operating system with DRAM larger than 64MB. But it is possible if you choose *Yes*. The default value is *No*.

L1/L2 Cache

The items enable or disable the L1 (internal) and L2 (external) cache memory for CPU. Setting to *Enabled* will speed up the system performance.

System BIOS Cacheable

AMIBIOS always copies the system BIOS from ROM to RAM for faster execution. Selecting *Enabled* allows the contents of F0000h RAM memory segment to be written to and read from cache memory. Settings are *Enabled* and *Disabled*. The default value is *Enabled*.


C000, 32k Shadow

This item specifies how the contents of the adapter ROM named in the item are handled. Settings are described below:

Option	Description
Disabled (default)	The specified ROM is not copied to RAM.
Enabled	The contents of specified ROM are copied to RAM for faster system performance.
Cached	The contents of specified ROM are not only copied to RAM, the contents of the ROM area can be written to and read from cache memory.

ADVANCED CHIPSET FEATURES

AMIBIOS SETUP - ADVANCED CHIPSET FEATURES (C)2001 American Megatrends, Inc. All Rights Reserved		
Configure SDRAM Timing by	:SPD	
SDRAM Frequency	:HCLK	
SDRAM CAS# Latency	:2.5	
SDRAM Bank Interleave	:Disabled	
SDRAM 1T Command	:Disabled	
AGP Mode	:4x	
AGP Comp. Driving	:Auto	
Manual AGP Comp. Driving	:CB	
AGP Fast Write	:Disabled	
AGP Read Synchronization	:Disabled	
AGP Aperture Size	:64MB	
AGP Master 1 W/S Write	:Disabled	
AGP Master 1 W/S Read	:Disabled	
Search for MDA Resources	:Yes	
PCI Delay Transaction	:Disabled	
BIOS Protection	:Enabled	
		ESC : Quit ↑↓←→ : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults

 **Note:** Change these settings only if you are familiar with the chipset.

Configure SDRAM Timing by

Selects whether DRAM timing is controlled by the SPD (Serial Presence Detect) device on the DRAM module. Setting to *SPD* enables SDRAM Frequency, SDRAM CAS# Latency and SDRAM Bank Interleave automatically to be determined by BIOS based on the configurations on the SPD. Selecting *User* allows user to configure the three fields manually. The default value is *SPD*.

SDRAMFrequency

Use this item to configure the clock frequency of the installed SDRAM. Settings are:

HCLK The DRAM clock will be equal to the Host Clock.

<i>HCLK+33</i>	The DRAM clock will be equal to the Host Clock plus 33MHz. For example, if the Host Clock is 100MHz, the DRAM clock will be 133MHz.
<i>HCLK-33</i>	The DRAM clock will be equal to the Host Clock minus 33MHz. For example, if the Host Clock is 133MHz, the DRAM clock will be 100MH
<i>SPD</i>	<i>SPD</i> will set the clock frequency by reading the contents of the SPD device.

When the installed CPU is 100MHz, this field has three setting options: *HCLK*, *HCLK+33* and *SPD*. When the installed one is 133MHz, the three setting options will be *HCLK*, *HCLK-33* and *SPD*.

SDRAM CAS# Latency

This controls the time delay (in clock cycles) before SDRAM starts a read command after receiving it. Settings are 2 and 2.5. 2 increases the system performance while 2.5 provides more stable performance. The default value is 2.5.

SDRAM Bank Interleave

This field selects 2-bank or 4-bank interleave for the installed SDRAM. Disable the function if 16MB SDRAM is installed. Settings are *Disabled*, *2-Way* and *4-Way*. The default value is *Disabled*.

SDRAM1T Command

This item controls the SDRAM command rate. Selecting *Enabled* allows SDRAM signal controller to run at 1T (T=clock cycles) rate. Selecting *Disabled* makes SDRAM signal controller run at 2T rate. *1T* is faster than *2T*. The default value is *Disabled*.

AGP Mode

The item sets an appropriate mode for the installed AGP card. Settings are *1x*, *2x* and *4x* (default). Select *4x* if your AGP card can support it.

AGP Comp. Driving

This field is used to adjust the AGP driving force. Selecting *Manual* allows

Chapter 3

you to select an AGP driving force in **Manual AGP Comp. Driving**. It is strongly suggested to select *Auto* to avoid causing any system error.

Manual AGP Comp. Driving

This item specifies an AGP driving force.

AGP Fast Write

The field enables or disables the AGP Fast Write feature. The Fast Write technology allows CPU to write directly to the graphics card without passing anything through the system memory and improves the AGP 4X speed. Select *Enabled* only when the installed AGP card supports the function. The default value is *Disabled*.

AGP Read Synchronization

The field allows you to enable or disable the AGP Read Synchronization feature. Settings are *Enabled* and *Disabled*.

AGP Aperture Size

The field selects the size of the Accelerated Graphics Port (AGP) aperture. Aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycles that hit the aperture range are forwarded to the AGP without any translation. Settings are *4MB*, *8MB*, *16MB*, *32MB*, *64MB*, *128MB* and *256MB*.

AGP Master 1 W/S Write

The field allows users to insert one wait state into the AGP master write cycle. Settings are *Enabled* and *Disabled* (default).

AGP Master 1 W/S Read

The field allows users to insert one wait state into the AGP master read cycle. Settings are *Enabled* and *Disabled* (default).

Search for MDA Resources

MDA stands for Mono Display Adapter. Select *Yes* only when you install and use mono display adapter card.

PCIDelay Transaction

The chipset has an embedded 32-bit posted write buffer to support delayed transactions cycles. Select *Enabled* to support compliance with PCI specification version 2.1. Settings are *Enabled* and *Disabled* (default).

BIOS Protection

Setting to *Enabled* will prevent BIOS from performing any BIOS update/flash utility. Settings are *Enabled* (default) and *Disabled*.

POWER MANAGEMENT SETUP

AMIBIOS SETUP - POWER MANAGEMENT SETUP (C)2001 American Megatrends, Inc. All Rights Reserved			
IPCA Function	:Yes	Wake Up On Ring	:Disabled
ACPI Standby State	:S1/POS	Wake Up On PME#	:Disabled
USB Wakeup From S3-S5	:Disabled	Resume By Alarm	:Disabled
Power Management/APM	:Enabled	Alarm Date	:15
Green PC LED Status	:Dual Color	Alarm Hour	:12
Suspend Time Out (Minute)	:Disabled	Alarm Minute	:30
Display Activity	:Ignore	Alarm Second	:30
IRQ3	:Monitor		
IRQ4	:Monitor		
IRQ5	:Ignore		
IRQ7	:Monitor		
IRQ9	:Ignore		
IRQ10	:Ignore		
IRQ11	:Ignore		
IRQ13	:Ignore		
IRQ14	:Monitor		
IRQ15	:Ignore		
CPU Critical Temperature	:Disabled	ESC : Quit	↑↓←→ : Select Item
Power Button Function	:On/Off	F1 : Help	PU/PD/+/- : Modify
Restore on AC/Power Loss	:Last State	F5 : Old Values (Shift) F2 : Color	
		F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

IPCA Function

This item is to activate the ACPI (Advanced Configuration and Power Management Interface) Function. If your operating system is ACPI-aware, such as Windows 98SE/2000/ME, select *Yes*. Available options are *Yes* and *No*. The default value is *Yes*.

ACPIStandbyState

This item specifies the power saving modes for ACPI function. Options are:

<i>S1/POS</i>	The S1 sleep mode is a low power state. In this state, no system context is lost (CPU or chipset) and hardware maintains all system context.
<i>S3/STR</i>	The S3 sleep mode is a lower power state where the information of system configuration and open applications/files is saved to main memory that remains

powered while most other hardware components turn off to save energy. The information stored in memory will be used to restore the system when an “wake up” event occurs.

The default value is *SI/POS*.

USB Wakeup From S3-S5

This item allows the activity of the USB device to wake up the system from S3, S4 or S5 sleep states. S3, S4 and S5 are three system states for ACPI, which saves different amount of system power. S3 is STR (Suspend to RAM) mode, S4 is Suspend to Disk mode and S5 is Soft-Off state. Settings are *Enabled* and *Disabled*. The default value is *Disabled*.

Power Management/APM

Setting to *Enabled* will activate the Advanced Power Management (APM) features to enhance power saving modes. Settings are *Enabled* and *Disabled*. The default value is *Enabled*.

Green PC LED Status

This item configures how the system uses sleep state LED on the case to indicate the sleep state. Available options are:

- Blinking* The sleep state LED blinks to indicate the sleep state.
- Not Changed* The sleep state LED remains the same color.
- Dual Color* The sleep state LED changes its color to indicate the sleep state.

The default value is *Dual Color*.

Display Activity/IRQ3/IRQ4/IRQ5/IRQ7/IRQ9/IRQ10/IRQ11/IRQ13/IRQ14/IRQ15

These items specify if the BIOS will monitor the activity of the specified hardware peripheral or component. If set to *Monitor*, any activity detected on the specified hardware peripheral or component will wake up the system or prevent the system from entering the power saving modes. Settings are *Monitor* and *Ignore*. The default values for different items are listed below:

Chapter 3

Display Activity	<i>Ignore</i>
IRQ3	<i>Monitor</i>
IRQ4	<i>Monitor</i>
IRQ5	<i>Ignore</i>
IRQ7	<i>Monitor</i>
IRQ9	<i>Ignore</i>
IRQ10	<i>Ignore</i>
IRQ11	<i>Ignore</i>
IRQ13	<i>Ignore</i>
IRQ14	<i>Monitor</i>
IRQ15	<i>Ignore</i>

Note: *IRQ (Interrupt Request) lines are system resources allocated to I/O devices. When an I/O device needs to gain attention of the operating system, it signals this by causing an IRQ to occur. After receiving the signal, when the operating system is ready, the system will interrupt itself and perform the service required by the I/O device.*

CPU Critical Temperature

This item is used to specify a thermal limit for CPU. If CPU temperature reaches the specified limit, the system will issue a warning to prevent the CPU overheat problem. Settings are *Disabled*, *70°C/158°*, *75°C/167°F*, *80°C/176°F*, *85°C/185°F*, *90°C/194°F* and *95°C/203°F*.

Power Button Function

This feature sets the function of the power button. Settings are:

<i>On/Off</i>	The power button functions as normal on/off button.
<i>Suspend</i>	When you press the power button, the computer enters the suspend/sleep mode, but if the button is pressed for more than four seconds, the computer is turned off.

Restore on AC/Power Loss

This item specifies whether you system will reboot after a power failure or interrupt occurs. Available options are:

<i>Power Off</i>	Leaves the computer in the power off state.
<i>Power On</i>	Reboots the computer.
<i>Last State</i>	Restores the system to the former status before the power failure or interrupt occurred.

Wake Up On Ring/PME#

When setting to *Enabled*, the features allow your system to be awakened from the power saving modes through an incoming call from the modem or any event on PME (Power Management Event). Settings are *Enabled* and *Disabled* (default).

Note: You need to install a modem supporting power on function for Wake Up On Ring function.

Resume By Alarm

This is used to enable or disable the feature of booting up the system on a scheduled time/date from the soft off (S5) state. Settings are *Enabled* and *Disabled*.

Alarm Date/Hour/Minute/Second

If **Resume By Alarm** is set to *Enabled*, the system will automatically resume (boot up) on a specific date/hour/minute/second specified in these fields.

Available settings for each item are:

Alarm Date	01 ~ 31, Every Day
Alarm Hour	00 ~ 23
Alarm Minute	00 ~ 59
Alarm Second	00 ~ 59

Note: If you change these settings, you must reboot the system until it enters the operating system and then power off the system. By doing so, the changed settings will come into effect next time you power on the system.

PNP/PCI CONFIGURATION

This section describes configuring the PCI bus system and PnP (Plug & Play) feature. PCI, or Personal Computer Interconnect, is a system which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

AMIBIOS SETUP - PNP/PCI CONFIGURATION (C)2001 American Megatrends, Inc. All Rights Reserved		
Plug and Play Aware O/S	:No	
Clear NVRAM	:No	
Primary Graphics Adapter	:PCI	
DMA Channel 0	:PnP	
DMA Channel 1	:PnP	
DMA Channel 3	:PnP	
DMA Channel 5	:PnP	
DMA Channel 6	:PnP	
DMA Channel 7	:PnP	
IRQ3	:PCI/PnP	
IRQ4	:PCI/PnP	
IRQ5	:PCI/PnP	
IRQ7	:PCI/PnP	
IRQ9	:PCI/PnP	
IRQ10	:PCI/PnP	
IRQ11	:PCI/PnP	ESC : Quit ↑↓←→ : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults
IRQ14	:PCI/PnP	
IRQ15	:PCI/PnP	

Plug and Play Aware O/S

When set to *YES*, BIOS will only initialize the PnP cards used for booting (VGA, IDE, SCSI). The rest of the cards will be initialized by the PnP operating system like Windows® 98, 2000 or ME. When set to *NO*, BIOS will initialize all the PnP cards. Select *Yes* if the operating system is Plug & Play aware.

ClearNVRAM

The ESCD (Extended System Configuration Data) NVRAM (Non-volatile Random Access Memory) is where the BIOS stores resource information for both PNP and non-PNP devices in a bit string format. When the item is set to *Yes*, the system will reset ESCD NVRAM right after the system is booted up and then set the setting of the item back to *No* automatically. The default value is *No*.

Primary Graphics Adapter

This item specifies which VGA card is your primary graphics adapter. Settings are *AGP* and *PCI*. The default value is *PCI*.

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

These items specify the bus that the system DMA (Direct Memory Access) channel is used.

The settings determine if AMIBIOS should remove a DMA from the available DMAs passed to devices that are configurable by the system BIOS. The available DMA pool is determined by reading the ESCD NVRAM. If more DMAs must be removed from the pool, the end user can reserve the DMA by assigning an *ISA/EISA* setting to it. The default value is *PnP*.

IRQ 3/4/5/7/9/10/11/14/15

These items specify the bus where the specified IRQ line is used.

The settings determine if AMIBIOS should remove an IRQ from the pool of available IRQs passed to devices that are configurable by the system BIOS. The available IRQ pool is determined by reading the ESCD NVRAM. If more IRQs must be removed from the IRQ pool, the end user can use these settings to reserve the IRQ by assigning an *ISA/EISA* setting to it. Onboard I/O is configured by AMIBIOS. All IRQs used by onboard I/O are configured as *PCI/PnP*. If all IRQs are set to *ISA/EISA*, and IRQ 14/15 are allocated to the onboard PCI IDE, IRQ 9 will still be available for PCI and PnP devices. Available settings are *ISA/EISA* and *PCI/PnP*. The default value is *PCI/PnP*.

Chapter 3

INTEGRATED PERIPHERALS

AMIBIOS SETUP- INTEGRATED PERIPHERALS (C)2001 American Megatrends, Inc. All Rights Reserved			
FDC Function	:Auto	USB Controller	:All USB Port
Serial Port1	:Auto	USB Legacy Support	:Disabled
Serial Port2	:Auto	USB Port 64/60 Emulation	:Disabled
Serial Port2 Mode	:Normal		
IR Duplex Mode	:Half Duplex		
IR Pin Select	:IRRX/IRTX		
Parallel Port	:Auto		
Parallel Port Mode	:ECP		
EPP Version	:N/A		
Parallel Port IRQ	:Auto		
Parallel Port DMA	:Auto		
OnBoard Midi Port	:Disabled		
Midi IRQ Select	:5		
OnBoard Game Port	:200		
Keyboard PowerOn Function	:Disabled		
Specific Key for PowerOn	:N/A		
Mouse PowerOn Function	:Disabled	ESC : Quit	↑↓←→ : Select Item
IDE Function	:Both	F1 : Help	PU/PD/+/- : Modify
OnChip AC'97 Audio	:Enabled	F5 : Old Values (Shift) F2 : Color	
OnChip MC'97 Modem	:Auto	F6 : Load BIOS Defaults	
		F7 : Load Setup Defaults	

FDCFunction

This is used to enable or disable the onboard Floppy controller.

Option	Description
Auto (default)	BIOS will automatically determine whether to enable the onboard Floppy controller or not.
Enabled	Enables the onboard Floppy controller.
Disabled	Disables the onboard Floppy controller.

Serial Port1/2

These items specify the base I/O port addresses of the onboard Serial Port 1 (COM A)/Serial Port 2 (COM B). Selecting *Auto* allows AMIBIOS to

automatically determine the correct base I/O port address. Settings are *Auto*, *3F8h/COM1*, *2F8h/COM2*, *3E8h/COM3*, *2E8h/COM4* and *Disabled*. The default value is *Auto*.

Serial Port2 Mode

This item sets the operation mode for Serial Port 2. Settings are *Normal*, *1.6uS*, *3/16 Baud* and *ASKIR* (*the last three operation modes are setting options for IR function*). The default value is *Normal*.

IR Duplex Mode

This field specifies a duplex value for the IR device connected to COM B. Full-Duplex mode permits simultaneous two-direction transmission. Half-Duplex mode permits transmission in one direction only at a time. Settings are *Half Duplex* and *Full Duplex*. The default is *Half Duplex*.

IR Pin Select

Set to *IRRX/IRTX* when using an internal IR module connected to the IR (**J6**) connector. Set to *SINB/SOUTB*. when connecting an IR adapter to COM B.

Parallel Port

This field specifies the base I/O port address of the onboard parallel port. Selecting *Auto* allows AMIBIOS to automatically determine the correct base I/O port address. Settings are *Auto*, *378*, *278*, *3BC* and *Disabled*. The default value is *Auto*.

Parallel Port Mode

This item selects the operation mode for the onboard parallel port: *ECP*, *Normal*, *Bi-Dir* or *EPP*. The default is *ECP*.

EPP Version

The item selects the EPP version used by the parallel port if the port is set to *EPP* mode. Settings are *1.7* and *1.9*.

Parallel Port IRQ

When **Parallel Port** is set to *Auto*, the item shows *Auto* indicating that BIOS

Chapter 3

determines the IRQ for the parallel port automatically.

Parallel Port DMA

This feature needs to be configured only when **Parallel Port Mode** is set to the *ECP* mode. When **Parallel Port** is set to *Auto*, the field will show *Auto* indicating that BIOS automatically determines the DMA channel for the parallel port.

OnBoard Midi Port

The field specifies the base I/O port address of the onboard Midi Port. Settings are *Disabled*, *330*, *300*, *310* and *320*.

Midi IRQ Select

The item is used to select the IRQ line for onboard Midi port.

OnBoard Game Port

This item is used to specify the address for the onboard Game Port.

Keyboard PowerOn Function

This controls how and whether the PS/2 keyboard is able to power on the system. Settings are *Disabled*, *PowerKey*, *Any Key* and *Specific Key*.

Specific Key for PowerOn

This item allows you to specify a password for powering on the system when the **Keyboard PowerOn Function** is set to *Specific Key*.

Mouse PowerOn Function

This controls how and whether the PS/2 mouse is able to power on the system. Settings are *Disabled*, *Left-button* and *Right-button*.

IDEFunction

This allows you to enable or disable on-chip IDE controller. Settings are *Disabled*, *Primary*, *Secondary* and *Both*. The default value is *Both*.

OnChip AC'97 Audio

This item is used to enable or disable the onboard AC'97 (Audio Codec'97)

feature. Disable the function if you want to use other controller cards to connect an audio device. Settings are *Disabled* and *Enabled*. The default value is *Enabled*.

OnChip MC'97 Modem

This item is used to enable or disable the onboard MC'97 feature. Selecting *Auto* allows the mainboard to detect whether a modem is used. If a modem is detected, the onboard MC'97 (Modem Codec'97) controller will be enabled; if not, the controller is disabled. Disable the controller if you want to use other controller cards to connect modems. Settings are *Auto*, *Disabled* and *Enabled*. The default value is *Auto*.

USB Controller

This is used to enable or disable the USB ports. Settings are *All USB Port*, *Disabled*, *USB 1*, *USB 2*, *USB 1&2*, *USB 3*, *USB 1&3* and *USB 2&3*. The default is *All USB Port*.

USB Legacy Support

Set to *Keyboard* if your system installs and uses an USB keyboard. Set to *Keyb+Mouse* if the system installs and uses the USB keyboard and mouse. Default is *Disabled*.

USB Port 64/60 Emulation

This field allows you to enable or disable the USB Port 64/60 Emulation function. When the function is enabled, the USB keyboard is allowed to type some special combination keys.

HARDWARE MONITOR SETUP

This section describes how to set the Chassis Intrusion feature, CPU FSB frequency, monitor the current hardware status including CPU/system temperatures, CPU/System Fan speeds, Vcore etc. Monitor function is available only if there is hardware monitoring mechanism onboard.

AMIBIOS SETUP - HARDWARE MONITOR SETUP (C)2001 American Megatrends, Inc. All Rights Reserved		
Spread Spectrum	:±0.25%	
CPU FSB/PCI Clock	:By H/W	
CPU Ratio	:Auto	
CPU Vcore (V)	:Auto	
DDR Voltage (V)	:Auto	
Chassis Intrusion	:Disabled	
CPU Temperature		
System Temperature		
CPU Fan Speed		
System Fan Speed		
Power Fan Speed		
Vcore		
Vtt		
Vio		
+ 5.0V		
+12.0V		
-12.0V		
- 5.0V		
Battery		ESC : Quit ↑↓←→ : Select Item F1 : Help PU/PD/+/- : Modify F5 : Old Values (Shift) F2 : Color F6 : Load BIOS Defaults F7 : Load Setup Defaults
+5V SB		

Spread Spectrum

This item allows you to configure the clock generator’s Spread Spectrum feature. When overclocking the processor, always set it to *Disabled*.

CPU FSB/PCI Clock

This item is used to set clock frequencies (in MHz) for CPU FSB (Front Side Bus) and PCI bus. Selecting *By H/W* will enable the CPU FSB to follow the hardware configurations. If the installed CPU is **100MHz**, you are allowed to adjust the clock frequency from **100 to 120MHz**. If the installed one is **133MHz**, you are allowed to bring its frequency down to **100~120MHz** or adjust it up to **133~153MHz**. The item makes overclocking possible.

***Note:** Changing CPU FSB frequency could result in unstable system; therefore, it is not recommended to change the default setting for long-term purpose.*

CPU Ratio/Vcore (V)

The items are used to adjust the CPU frequency multiplier (ratio) and CPU voltage (Vcore). The items make overclocking possible.

***Note:** Changing CPU Ratio/Vcore could result in unstable system; therefore, it is not recommended to change the default setting for long-term purpose.*

DDR Vcore (V)

The item is to adjust the DDR voltage (DDR Vcore) to increase the DDR rate. Modifying the setting may lead to unstable system, so changing the DDR Vcore for long-term use is not recommended.

Chassis Intrusion

The field enables or disables the feature of recording the chassis intrusion status and issuing a warning message if the chassis is opened. To clear the warning message, set the field to *Reset*. The setting of the field will automatically return to *Enabled* later on. Settings are *Enabled*, *Reset* and *Disabled*. The default value is *Disabled*.

CPU Temperature/System Temperature/CPU Fan Speed/System Fan Speed/Power Fan Speed/Vcore/Vtt/Vio/+5.0V/+12.0V/-12.0V/-5.0V/Battery/+5V SB

These items display the current status of all of the monitored hardware devices/components such as system voltages, temperatures and fan speeds.

LOAD OPTIMIZED/FAIL-SAFE DEFAULTS

The two options on the main menu allow users to restore all of the BIOS settings to the default Optimized or Fail-Safe defaults. The Optimized Defaults are the default values set by the mainboard manufacturer specifically for the optimized performance of the mainboard. The Fail-Safe Defaults are the default values set by the BIOS vendor for the most stable system performance.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.43 (C)2001 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	LOAD FAIL-SAFE DEFAULTS
ADVANCED BIOS FEATURES	LOAD OPTIMIZED DEFAULTS
ADVANCED CHIPSET FEATURES	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	IDE HDD AUTO DETECTION
INTEGRATED PERIPHERALS	SAVE & EXIT SETUP
HARDWARE MONITOR SETUP	EXIT WITHOUT SAVING
ESC : Quit ↑↓←→ : Select Item (Shift)F2 : Change Color	
F5 : Old Values F7 : Load Setup Defaults F10 : Save & Exit	
Time, Date, Hard Disk Type...	

SUPERVISOR/USER PASSWORD

When you select this function, a message as below will appear on the screen:

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.43 (C)2001 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	LOAD FAIL-SAFE DEFAULTS
ADVANCED BIOS FEATURES	LOAD OPTIMIZED DEFAULTS
ADVANCED CHIPSET FEATURES	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	ENTER PASSWORD
INTEGRATED PERIPHERALS	
HARDWARE MONITOR SETUP	EXIT WITHOUT SAVING
ESC : Quit ↑↓←→ : Select Item (Shift)F2 : Change Color F5 : Old Values F7 : Load Setup Defaults F10 : Save & Exit	
Time, Date, Hard Disk Type...	

Type the password, up to six characters in length, and press <Enter>. The password typed now will clear any previously set password from CMOS memory. You will be prompted to confirm the password. Retype the password and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To clear a set password, just press <Enter> when you are prompted to enter the password. A message will show up confirming the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup without entering any password.

When a password has been set, you will be prompted to enter it every time you

Chapter 3

try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also have AMIBIOS to request a password each time the system is booted. This would prevent unauthorized use of your computer. The setting to determine when the password prompt is required is the PASSWORD CHECK option of the BIOS FEATURES SETUP menu. If the PASSWORD CHECK option is set to *Always*, the password is required both at boot and at entry to Setup. If set to *Setup*, password prompt only occurs when you try to enter Setup.

About Supervisor Password & User Password:

Supervisor password : Can enter and change the settings of the setup menu.

User password: Can only enter but do not have the right to change the settings of the setup menu.

IDE HDD AUTO DETECTION

You can use this utility to AUTOMATICALLY detect the characteristics of most hard drives.

AMIBIOS SETUP - STANDARD CMOS SETUP (C)2001 American Megatrends, Inc. All Rights Reserved	
Date (mm/dd/yyyy) : Tue Jan 16, 2001 Time (hh/mm/ss) : 00:00:00	
TYPE	SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE
Pri Master	: Auto
Pri Slave	: Auto
Sec Master	: Auto
Sec Slave	: Auto
Floppy Drive A : 1.44 MB 3½ Floppy Drive B : Not Installed	Base Memory : 640 Kb Other Memory : 384 Kb Extended Memory : 127 Mb Total Memory : 128 Mb
Boot Sector Virus Protection : Disabled	
ESC : Exit ↑ ↓ : Select Item PU/PD/+/- : Modify (Shift) F2 : Color	

Chapter 3

SAVE & EXIT SETUP

When you want to quit the Setup menu, you can select this option to save the changes and quit. A message as below will appear on the screen.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.43	
(C)2001 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	LOAD FAIL-SAFE DEFAULTS
ADVANCED BIOS FEATURES	LOAD OPTIMIZED DEFAULTS
ADVANCED CHIPSET FEATURES	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	EXIT WITHOUT SAVING
SAVE to CMOS and Exit(Y/N)? Y	
Time, Date, Hard Disk Type...	

Typing *Y* will allow you to quit the Setup Utility and save the user setup changes to RTC CMOS.

Typing *N* will return to the Setup Utility.

EXIT WITHOUT SAVING

When you want to quit the Setup menu, you can select this option to abandon the changes. A message as below will appear on the screen.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.43 (C)2001 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	LOAD FAIL-SAFE DEFAULTS
ADVANCED BIOS FEATURES	LOAD OPTIMIZED DEFAULTS
ADVANCED CHIPSET FEATURES	SUPERVISOR PASSWORD
POWER MANAGEMENT SETUP	USER PASSWORD
PNP/PCI CONFIGURATION	SECTION
INTEGRATED PERIPHERALS	P
HARDWARE MONITOR SETUP	EXIT WITHOUT SAVING

ESC : Quit	↑↓←→ : Select Item	(Shift)F2 : Change Color
F5 : Old Values	F7 : Load Setup Defaults	F10 : Save & Exit

Time, Date, Hard Disk Type..

Typing *Y* will allow you to quit the Setup Utility without saving any changes to RTC CMOS.

Typing *N* will return to the Setup Utility.