

Chapter 4

AMI® BIOS USER'S GUIDE

The system configuration information and chipset register information is stored in the CMOS RAM. This information is retained by a battery when the power is off. Enter the BIOS setup (if needed) to modify this information.

The following pages will describe how to enter BIOS setup, and all about options.

4.1 Enter BIOS Setup

Enter the AMI® setup Program's Main Menu as follows:

1. Turn on or reboot the system. The following screen appears with a series of diagnostic check.

```
AMIBIOS (C) 1999 American Megatrends Inc.  
AGIOMS VXXX XXXXXX
```

```
Hit <DEL> if you want to run setup
```

```
(C) American Megatrends Inc.  
61-XXXX-001169-00111111-071592-i82440FX-H
```

2. When the "Hit " message appears, press key to enter the BIOS setup screen.
3. After pressing key, the BIOS setup screen will appear.

Note: If you don't want to modify CMOS original setting, then don't press any key during the system boot.

AMIBIOS SIMPLE SETUP UTILITY - VERSION 1.30 (C) 1999 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS SETUP	Integrated Peripherals
BIOS Features SETUP	Hardware Monitor Setup
Chipset Features SETUP	Supervisor Password
Power Management SETUP	User Password
PnP/PCI Configuration	IDE HDD Auto Detection
Load Setup Defaults	Save & Exit Setup
Load BIOS Defaults	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, ...	

- 4. Use the <Up> and <Down> key to move the highlight scroll up or down.
- 5. Use the <ENTER> key to select the option.
- 6. To exit, press <ESC>. To save and exit, press <F10>.

4.2 Standard CMOS Setup

- 1. Press <ENTER> on “Standard CMOS Setup” of the main menu screen .

AMIBIOS SETUP - STANDARD CMOS SETUP							
(C)1999 American Megatrends, Inc. All Rights Reserved							
Date (mm/dd/yyyy): Fri Jul 21, 2000							
Time (hh/mm/ss): 01:01:34							
TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE							

Pri Master : Auto							
Pri Slave : Auto							
Sec Master : Auto							
Sec Slave : Auto							
Floppy Drive A: 1.44MB 3 1/2				Base Memory : 0 KB			
Floppy Drive B: Not Installed				Other Memory: 384 Kb			
				Extended Memory : 0 Mb			
				Total Memory : 1 Mb			
Boot Sector Virus Protection Disabled							
Month = Jan-Dec				ESC:Exit			
Day = 01-31				↑↓:Select Item			
Year = 1901-2099				PU/PD/+/- : Modify			
				(Shift) F2: Color			

- 2. Use <Up> and <Down> to choose the item and <PgUp> and <PgDn> keys to modify the highlighted item.
- 3. After you have finished with the Standard CMOS Setup, press <ESC> to go back to the main menu.

4.3 BIOS Features Setup

- 1. Press <ENTER> on “BIOS Features Setup” of the main menu screen.

AMIBIOS SETUP - BIOS FEATURES SETUP			
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Quick Boot	:Enabled		
1st Boot Device	:Floppy	C400, 16K Shadow	:Enabled
2nd Boot Device	:IDE-O	C800, 16K Shadow	:Disabled
3rd Boot Device	:CD-ROM	CC00, 16K Shadow	:Disabled
Try Other Boot Devices	:Yes	D000, 16K Shadow	:Disabled
Initial Display Mode	:Silent	D400, 16K Shadow	:Disabled
Display mode at Add-OnROM	:Force BIOS	D800, 16K Shadow	:Disabled
Floppy Access Control	:Read-Write	DC00, 16K Shadow	:Disabled
S.M.A.R.T. for Hard Disk	:Disable		
BootUp Num-Lock	:On		
Floppy Drive Swap	:Disabled		
Floppy Drive Seek	:Disabled		
PS/2 Mouse Support	:Enabled		
Primary Display	:Absent		
Password Check	:Setup		
Boot to OS/2 > 64M	:No		
CPU Serial Number	:Enable		
Cache Bus ECC	:Disable		
System BIOS Cacheable	:Disabled		
C000, 16k Shadow	:Enabled		
		ESC:Quit ↑↓↔:Select Item	
		F1 :Help PU/PD/+/- : Modify	
		F5 :Old Values (Shift)F2: Color	
		F6 :Load BIOS Defaults	
		F7 :Load Setup Defaults	

- 2. Use <Up> and <Down> to choose the item and <PgUp> and <PgDn> keys to modify the highlighted item.
- 3. After you have finished with the BIOS Features Setup, press <ESC> to go back to the main menu.

Description of the item on screen follows:

Quick Boot

Set this option to Enabled to permit AMI® BIOS to boot within 5 seconds. This option replaces the old ABOVE 1 MB Memory Test option.

1st Boot Device/2nd Boot Device/3rd Boot Device

This option sets the sequence of boot drives.

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.
LS-120/ZIP	The system will boot from LS-120(120M Floppy).
SCSI	The system will boot from the SCSI.
Network	The system will boot from the Network drive.
CD-ROM	The system will boot from the CD-ROM.
ATAPI ZIP	The system will boot from ATAPI ZIP.
Disabled	Disable this sequence.

Try other Boot Devices

This option sets the device boot, if all the Four Boot Devices failed.

Initial Display Mode

This option sets to display the Micro-Star International (MSI) logo.

Display Mode at Add-On ROM

This option sets the display from the Add-On ROM.

Floppy Access Control

This option sets the Floppy to Read-only or Read-Write.

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

This option sets the SMART function for the hard disk. The hard disk need to have SMART function for this feature to work.

Boot up Num Lock

When this option is set to Off, AMI® BIOS turns off the Num Lock key when the system is powered on. The end user can then use the arrow keys on both the numeric keypad and the keyboard. The settings are On or Off. The optimal default and Fail-Safe default settings are On.

Floppy Drive Swap

Set this option to Enabled to specify that floppy drives A: and B: are swapped. The setting are Enabled and Disabled. The Optimal and Fail-Safe default settings are Disabled.

Floppy Drive Seek

When this option is set to Enabled, AMI® BIOS performs a Seek command on floppy drive A: before booting the system. The settings are Enabled and Disabled. The Optimal and Fail-Safe default settings are Disabled.

PS/2® Mouse Support

When this option is set to Enabled, AMI® BIOS supports a PS/2® mouse. The settings are Enabled and Disabled. The Optimal and Fail-Safe default settings are Enabled.

Primary Display

This option configures the primary display subsystem in the computer.

Password Check

This option specifies the type of AMI® BIOS password protection that is implemented. The Optimal and Fail-Safe default settings are Setup.

Boot To OS/2® > 64MB

Set this option to Enabled to permit the BIOS to run properly, if OS/2® is to be used with > 64MB of DRAM.

CPU Serial Number

This option is for Pentium III processor. During Enabled, this will check the CPU serial number. Disabled this option if you don't want the system to know the serial number.

Cache Bus ECC

This option is for Pentium III processor. During Enabled, this will affect the system performance. Disabled this option if you don't want to affect the system performance.

System BIOS Cacheable

AMI® BIOS always copies the system BIOS from ROM to RAM for faster execution. Set this option to Enabled to permit the contents of the F0000h RAM memory segment to be written to and read from cache memory. The settings are Enabled or Disabled. The Optimal default setting is Enabled. The Fail-Safe default setting is Disabled.

**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 specify how the contents of the adaptor ROM named in the option title are handled. The ROM area that is not used by ISA adapter cards will be allocated to PCI adapter cards. The settings are:

- | | |
|-----------------|--|
| Disabled | The specified ROM is not copied to RAM. |
| Cache | The contents of the ROM for faster execution, it can also be written to or read from the cache memory. |
| Enabled | The contents of the ROM area are copied from ROM to RAM for faster execution. |

4.4 Chipset Features Setup

- 1. Press <ENTER> on “Chipset Features Setup” of the main menu screen.

AMIBIOS SETUP - CHIPSET FEATURES SETUP			
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ClkGen Spread Spectrum	:Enabled	Paging Mode Control	:Closed
CPU Ratio Selection	:3.0X	RAS-to-CAS	:Default
USB Function	:Enabled	CAS Latency	:Slow
CPU Latency Timer	:Enabled	RAS Timing	:Slow
CPU BIST Enable	:Enabled	RAS Precharge Timing	:Slow
ICH Delayed Transaction	:Disabled		
DMA Collection Buffer	:Disabled		
DRAM Page Closing Policy	:Open		
Memory Hole	:Disabled		
System Memory Frequency	:Auto		
DRAM Refresh	:15.6us		
Internal Graphics Mode	:1MB		
DRAM Cycle time (SCLKs)	:6/8		
CAS# Latency (SCLKs)	:3		
RAS to CAS delay (SCLKs)	:3		
SDRAM RAS# Precharge	:3		
Display Cache Window Size	:64MB		
AGP Aperture Window	:64MB		
Local memory Frequency	:100MHz		
Initialize Display Cache	:Enabled		
		ESC:Quit ↑↓ ↔:Select Item	
		F1 :Help PU/PD/+/- : Modify	
		F5 :Old Values (Shift)F2: Color	
		F6 :Load BIOS Defaults	
		F7 :Load Setup Defaults	

- 2. Use <Up> and <Down> to choose the item and <PgUp> and <PgDn> keys to modify the highlighted item.
- 3. After you have finished with the Chipset Features Setup, press <ESC> to go back to the main menu.

Description of the item on screen follows:**CLKGen Spread Spectrum**

This item allows you to select the clock generator Spread Spectrum function for EMI. The default is enabled. Set this to Disabled, if you're gonna overclock the processor.

CPU Ratio Selection

This item allows you to set the CPU ratio.

USB Function

Set this option to Enabled or Disabled the on-chip USB controller.

CPU Latency Timer

During Enabled, A deferrable CPU cycle will only be Deferred after it has been in a Snoop Stall for 31 clocks and another ADS# has arrived. During Disabled, A deferrable CPU cycle will be Deferred immediately after the GMCH receives another ADS#.

CPU BIST Enable

Set this option to Enabled the CPU BIST.

ICH Delayed Transaction

The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select Enabled to support compliance with PCI specification version 2.1.

DRAM Page Closing Policy

This options controls whether the chipset will precharge bank or precharge all, during the service of a page miss.

Memory Hole

This option allows the end user to specify the location of a memory hole. The cycle matching the selected memory hole will be passed to the ISA bus. If Enabled, the selected hole is not remapped.

System Memory Frequency

Select the onboard display cache frequency. The settings are 100MHz, 133MHz, or Auto.

DRAM Refresh

This option is use to set the DRAM refresh.

Internal Graphics Mode

This option is used to set the internal graphics device and select the amount of system memory that is used to support the internal graphics device.

DRAM Cycle Time (SCLKs)

This option controls the number of SCLKs for an access cycle.

CAS# Latency (SCLKs)

This option determines the CAS latency time parameter of SDRAM. The settings are 2 clks or 3 clks. Under 66MHz CPU bus, set this option to either 2 or 3 but for 100MHz CPU, it is recommended that this be set to 3.

RAS# to CAS# Delay (SCLKs)

This operation decide the delay in assertion of CAS#(SCAS#) from assertion of RAS#(SRAS#) in 66MHz. Under 66MHz CPU bus, set this option to either 2 or 3 but for 100MHz CPU, it is recommended that this be set to 3.

SDRAM RAS# Precharge

This option defines the RAS# precharge requirements for the SDRAM memory type in 66MHz clocks. Under 66MHz CPU bus, set this option to either 2 or 3 but for 100MHz CPU, it is recommended that this be set to 3.

Display Cache Window Size

This option determines the display cache window size. The settings are 64MB or 32MB.

AGP Aperture Window Size

Select the size of the Accelerated Graphics Port (AGP) aperture. The aperture is a portion of the PCI memory address range dedicated for graphics memory address space. Host cycled that hit the aperture range are forwarded to the AGP without any translation.

Local Memory Frequency

This option determines the local memory frequency. The settings are 100MHz or 133MHz.

Initialize Display Cache Memory

This option allows you to insert an AIMM display cache memory to AGP slot.

Paging Mode Control

This option decide if the GMCH memory controller will leave pages open or closed.

RAS-to-CAS

This option determine the display cache RAS#-toCAS# delay.

CAS# Latency

This option decide the display cache CAS latency.

RAS# Timing

This option controls RAS# active to precharge, and refresh to RAS# active delay.

RAS# Precharge Timing

This option controls RAS# precharge clocks.

4.5 Power Management Setup

- 1. Press <ENTER> on “Power Management Setup” of the main menu screen.

AMIBIOS SETUP - POWER MANAGEMENT SETUP			
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ACPI Aware O/S	:Yes	PIRQ[B] IRQ Active	:Ignore
ACPI Standby State	:S1/POS	PIRQ[C] IRQ Active	:Ignore
USB KB Wakeup From S3	:Disabled	Pirq[D] IRQ Active	:Ignore
Power Management/APM	:Enabled	System Thermal	:Ignore
Green PC LED Status	:DualColor	Power Button Function	:On/Off
Video Power Down Mode	:Suspend	Restore on AC/Power Loss	:LastState
Hard Disk Power Down Mode	:Standby	Resume On Ring	:Enabled
Standby Time Out (Minute)	:Disabled	LAN Resume From Soft Off	:Disabled
Suspend Time Out (Minute)	:Disabled	PME Function Support	:Enabled
Throttle Slow Clock Ratio	:50%	Resume On RTC Alarm	:Disabled
Keyboard & PS/2 Mouse	:Monitor	RTC Alarm Date	:15
FDC/LPT/COM Ports	:Monitor	RTC Alarm Hour	:12
SB & MSS Audio Ports	:Ignore	RTC Alarm Minute	:30
MIDI Ports	:Ignore	RTC Alarm Second	:30
ADLIB Ports	:Ignore		
Primary Master IDE	:Monitor		
Primary Slave IDE	:Ignore		
Secondary Master IDE	:Monitor		
Secondary Slave IDE	:Ignore		
PIRQ [A] IRQ Active	:Ignore		
ESC:Quit ↑↓←→:Select Item			
F1 :Help PU/PD/+/- : Modify			
F5 :Old Values (Shift)F2: Color			
F6 :Load BIOS Defaults			
F7 :Load Setup Defaults			

- 2. Use <Up> and <Down> to choose the item and <PgUp> and <PgDn> keys to modify the highlighted item.
- 3. After you have finished with the Power Management Setup, press <ESC> to go back to the main menu.

Description of the item on screen follows:**ACPI Aware O/S**

This option sets the ACPI Power Management to be active or not. The settings are yes or no.

ACPI Standby State

This option sets the ACPI Power Management Standby State.

USB KB Wake-Up From S3

This option is used to Enabled/Disabled USB keyboard wake up with suspend to RAM.

Power Management/APM

Set this option to Enabled to enable the chipset's power management features and APM(Advanced Power Management). The settings are Enabled, Inst-On(instant-on) or Disabled.

Green PC LED Status

This item determines which state the Power LED will use. The settings are Blinking, Dual and Single. During blinking, the power LED will blink when the system enters the suspend mode. When the mode is in Dual, the power LED will change its color. Choose the single and the power LED will always remain lit.

Video Power Down Mode

This option specifies the power conserving state that the VESA VGA video subsystem enters after the specified period of display inactivity has expired. The settings are Disabled, Standby or Suspend.

Hard Disk Power Down Mode

This option specifies the power conserving state that the hard disk drive enters after the specified period of hard drive inactivity has expired. The settings are Disabled, Standby or Suspend.

Standby Time Out (Minute)

This option specifies the length of a period of system inactivity while in Standby state. When this length of time expires, the computer enters Suspend power state. The settings are Disabled, 1 min, 2 min, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min or 15 min.

Suspend Time Out (Minute)

This option specifies the length of a period of system inactivity while in Standby state. When this length of time expires, the computer enters Suspend power state. The settings are Disabled, 1 min, 2 min, 3 min, 4 min, 5 min, 6 min, 7 min, 8 min, 9 min, 10 min, 11 min, 12 min, 13 min, 14 min or 15 min.

Throttle Slow Clock Ratio

This option specifies the speed at which the system clock runs in power saving states. The settings are expressed as a ratio between the normal CPU clock speed and the CPU clock speed when the computer is in the power-conserving state.

Keyboard & PS/2 Mouse / FDC/LPT/COM Ports / SB & MSS Auto Ports / MIDI Ports / ADLIB Ports / Primary Master IDE / Primary Slave IDE / Secondary Master IDE / Secondary Slave IDE / PIRQ[A] IRQ Active / PIRQ[B] IRQ Active / PIRQ[C] IRQ Active / PIRQ[D] IRQ Active / System Thermal

When set to Monitor, these options enabled event monitoring on the specified hardware interrupt request line. If set to Monitor and the computer is in a power saving state, AMI® BIOS watches for activity on the specified IRQ line. The computer enters the full on power state if any activity occurs.

AMI® BIOS reloads the Standby and Suspend timeout timers if activity occurs on the specified IRQ line.

Power Button Function

During Suspend, if you push the switch once, the system goes into suspend mode and if you push it more than 4 seconds, the system will be turned off. During On/Off, the system will turn off once you push the switch.

Restore on AC/Power Loss

The settings are power on or last status. During power on, after every AC power loss, the system will be turned on. During last status, after every AC power loss, whatever the system status, it will be the same when the AC power returns.

Note: If you set this option to last status, the Power Button Function must be set to On/Off, or this function will not work.

Resume On Ring

During Disabled, the system will ignore any incoming call from the modem. During Enabled, the system will boot up if there's an incoming call from the modem.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system. Then, power off the system. This function will work the next time you power on.

LAN Resume from Soft-Off

During Disabled, the system will ignore any incoming signal from the LAN network card. During Enabled, the system will boot up if there's an incoming signal from the LAN network card.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system. Then, power off the system. This function will work the next time you power on. incoming signal from the LAN network card.

PME Function Support

During Disabled, the system will ignore any event on PME (Power Management Event). During Enabled, the system will boot up if there's an event on PME.

Resume on RTC Alarm

This function is for setting the Date, Hour, Minute, and Second for your computer to boot up.

RTC Alarm Date	Choose which day the system will boot up.
RTC Alarm Hour	Choose which hour the system will boot up.
RTC Alarm Minute	Choose which minute the system will boot up.
RTC Alarm Second	Choose which second the system will boot up.

Note: If you have change the setting, you must let the system boot up until it goes to the operating system. Then, power off the system. This function will work the next time you power on.

4.6 PNP/PCI Configuration

- 1. Press <ENTER> on “PNP/PCI Configuration” of the main menu screen.

AMIBIOS SETUP - PNP/PCI CONFIGURATION			
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Plug and Play Aware O/S	:No	Reserved Memory Size	:Disabled
Clear NVRAM	:No	Reserved Memory Address	:C8000
PCI Latency Timer	:64		
PCI VGA Palette Snoop	:Disabled		
PCI IDE BusMaster	:Disabled		
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		
IRQ14	:PCI/PnP		
IRQ15	: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	

- 2. Use <Up> and <Down> to choose the item and <PgUp> and <PgDn> keys to modify the highlighted item.
- 3. After you have finished with the PNP/PCI Configuration, press <ESC> to go back to the main menu.

Description of the item on screen follows:

Plug and Play Aware O/S

Set this option to Yes, if the operating system in this computer is aware of and follows the Plug and Play specification. Currently, only Windows 95/98 is PnP-Aware. The settings are Yes or No. The optimal fail-safe default settings is No.

Clear NVRAM

During Yes, this will clear NVRAM data on every boot.

PCI Latency Timer (PCI Clocks)

This option specifies the latency timings (in PCI clocks) for all PCI devices on the PCI bus. The settings are 32, 64, 96, 128, 160, 192, 224 or 248. The Optimal and Fail-Safe default setting is 64.

PCI VGA Palette Snoop

When this option is set to Enabled, multiple VGA devices operating on different buses can handle data from the CPU on each set of palette registers on every video device. Bit 5 of the command register in the PCI device configuration space is the VGA Palette Snoop bit (0 is disabled). For example, if there are two VGA devices in the computer (one PCI and ISA) and the Bit settings are:

Disabled-Data read and written by the CPU is only directed to the PCI VGA device's palette registers.

Enabled- Data read and written by the CPU is directed to both the PCI VGA device's palette registers and the ISA VGA device palette registers, permitting the palette registers of both devices to be identical.

This option must be set to Enabled if an ISA adapter card requires VGA palette snooping. The settings are Enabled or Disabled.

PCI IDE BusMaster

This options is used to Enabled/Disabled the PCI IDE BusMaster.

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

These options specify the bus that the specified DMA channel is used. These options allow you to reserve DMAs for legacy ISA adapter cards.

These options determine if AMI® BIOS 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 use these options to reserve the DMA by assigning an ISA/EISA setting to it.

IRQ3/IRQ4/IRQ5/RQ7/IRQ9/IRQ10/IRQ11/IRQ14/IRQ15

These options specify the bus that the specified IRQ line is used on. These options allow you to reserve IRQs for legacy ISA adapter cards.

These options determine if AMI® BIOS 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 pool, the end user can use these options to reserve the IRQ by assigning an ISA/EISA setting to it. Onboard I/O is configured by AMI® BIOS. All IRQs used by onboard I/O are configured as PCI/PnP. If all IRQs are set to ISA/EISA and IRQ14 and 15 are allocated to the onboard PCI IDE, IRQ9 will still be available for PCI and PnP devices, because at least one IRQ must be available for PCI and PnP devices. The settings are ISA/EISA or PCI/PnP. The Optimal and Fail-Safe default settings are IRQ3 through 7 are ISA/EISA. The Optimal and Fail-Safe default settings PCI/PnP.

Reserved Memory Size

This options allows the user to reserved the memory size for old add-on card. The settings are 16K/23K/64K/Disabled.

Reserved Memory Address

This options allows the user to reserved the memory size of the old add-on card in the reserved memory address. The default setting is C8000.

4.7 Integrated Peripherals

- 1. Press <ENTER> on “Integrated Peripherals” of the main menu screen.

AMIBIOS SETUP - INTEGRATED PERIPHERALS	
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AC97 Audio Controller	:Enabled
OnBoard LAN	:Enabled
OnBoard FDC	:Auto
OnBoard Serial PortA	:Auto
IR Mode	:1-6us
IR Duplex Mode	:Half Duplex
IR Pin Select	:IRRX/IRTX
OnBoard Parallel Port	:Auto
Parallel Port Mode	:ECP
EPP Version	:N/A
IRQ	:Auto
DMA Channel	:Auto
OnBoard Midi Port	:290
Midi IRQ Select	:9
OnBoard Game Port	:200
Mouse PowerOn Function	:Disabled
Keyboard PowerOn Function	:Disabled
Specific Key for PowerOn	:N/A
OnBoard IDE	:Both
ESC:Quit ↑↓←→:Select Item	
F1 :Help PU/PD/+/- : Modify	
F5 :Old Values (Shift)F2: Color	
F6 :Load BIOS Defaults	
F7 :Load Setup Defaults	

- 2. Use <up> and <down> to choose the item and <PgUp> and <PgDn> keys to modify the highlighted item.
- 3. After you have finished with the Integrated Peripherals, press <ESC> to go back to the main menu.

Description of the item on screen follows:

AC97 Audio Controller

This item allows you to decide to enable/disable the 815 chipset family to support AC97 Audio. The settings are Enabled, Disabled.

Onboard LAN

This item allows you to decide to enable/disable the onboard LAN chipset. The settings are Enabled, Disabled.

Onboard FDC

Choose Auto, for the BIOS to automatically detect the device

If the ISA add-on card has	Onboard FDC to be set at
FDC exist	Disabled
none FDC exist	Enabled

Choose Enabled to enable the onboard FDC.

Choose Disabled to disable the onboard FDC.

Onboard Serial Port A

Choose 3F8, for the BIOS to automatically detect the device.

If the ISA add-on card has				Onboard Serial port to be set at			
COM1 (I/O:3F8H)	COM2 (I/O:3F8H)	COM3 (I/O:3E8H)	COM4 (I/O:2E8H)	PORT1	IRQ ASSIGNED	PORT2	IRQ ASSIGNED
✓	✓	✓	✓	DISABLED	X	DISABLED	X
✓	✓	X	X	COM3	4	COM4	3
X	X	✓	✓	COM1	4	COM2	3
✓	X	X	✓	COM2	3	COM3	4
X	✓	✓	X	COM1	4	COM4	3
✓	✓	✓	X	COM4	3	DISABLED	X
✓	✓	X	✓	COM3	4	DISABLED	X
✓	X	✓	✓	COM2	3	DISABLED	X
X	✓	✓	✓	COM1	4	DISABLED	X
X	X	X	X	COM1	4	COM2	3
✓	X	X	X	COM2	3	COM3	4
X	✓	X	X	COM1	4	COM3	4
X	X	✓	X	COM1	4	COM2	3
X	X	X	✓	COM1	4	COM2	3

Note: If the onboard serial port interrupt and ISA add-on card interrupt are in conflict, the serial port will not work properly. Please disable one of the devices.

IR Duplex Mode

Can be set as either Half or Full duplex.

IR Pin Select

Set this option to IRRX/IRTX when using an internal IR device which is connected to IR1 connector.

Onboard Parallel Port

Choose Auto, the BIOS automatically assigned onboard parallel port to the available parallel port or disabled.

If the ISA add-on card has			Onboard parallel port to be set as	
LPT1 I/O:378H	LPT2 I/O:278H	LPT3 I/O:3BCH	PORT ASSIGNED	IRQ ASSIGNED
✓	✓	✓	Disabled	X
✓	✓	X	LPT3	5
✓	X	✓	LPT2	5
X	✓	✓	LPT1	7
✓	X	X	LPT2	5
X	✓	X	LPT1	7
X	X	✓	LPT1	7
X	X	X	LPT1	7

Note: If the onboard parallel port interrupt and ISA add-on card interrupt are in conflict, the parallel port will not work properly. Please disable one of the devices.

Parallel Port Mode

This option allows user to choose the operating mode of the onboard parallel port. The settings are Normal, SPP/EPP or ECP mode.

EPP Version

This option is for setting which EPP version will be used. The settings are 1.7 and 1.9.

IRQ

If the onboard parallel mode is not on auto mode, the user can select the interrupt line for onboard parallel port. We suggest that the user select the interrupt for the onboard parallel port as shown below:

Onboard parallel port set at	Parallel Port IRQ
LPT1(378H)	7
LPT2(278H)	5
LPT3(3BCH)	5

DMA Channel

This option allows user to choose DMA channel 1 to 3 for the onboard parallel port on ECP mode.

OnBoard MIDI Port

Choose 290H, 292H, 300H, 330H to support MIDI devices.

MIDI IRQ Select

Choose 5, 7, 9, 10 to support MIDI device interrupt.

OnBoard Game Port

Choose 200H, 208H to support Joystick device.

Note: If Hardware Audio is onboard, the three items above in the peripheral setup will not be shown.

Mouse PowerOn Function

This function allows you to Disabled, Left-button or Right-button the Mouse PowerOn. The default setting is Disabled.

Keyboard PowerOn Function

This function allows you to Enabled or Disabled the Keyboard PowerOn.

OnBoard IDE

Set this option to Enabled or Disabled the OnBoard IDE controller.

4.8 Hardware Monitor Setup

The Hardware Monitor Setup is used to set the CPU speed and monitor the current CPU Temperature, CPU Fan speed, Chassis Fan Speed, Power fan speed, Vcore, etc. This is only available if there is Hardware Monitor onboard.

- 1. Press <ENTER> on “Hardware Monitor Setup” of the main menu screen.

AMIBIOS SETUP - HARDWARE MONITOR SETUP		
(C) 1999 American Megatrends, Inc. All Rights Reserved		
Chassis Intrusion	Disabled	
CPU Temperature	80°C/176°F	
System Temperature	39°C/102°F	
CPU Fan Speed	5000RPM	
Chassis Fan Speed	2500RPM	
CPU VID	1.65V	
Vcore	1.616V	
Vtt	1.456V	
Vio	3.360V	
+ 5.000V	5.140V	
+12.000V	11.984V	
-12.000V	-12.071V	
Battery	3.184V	
+5V SB	4.993V	
		ESC:Quit ↑↓↔:Select Item
		F1 :Help PU/PD/+/- : Modify
		F5 :Old Values (Shift)F2: Color
		F6 :Load BIOS Defaults
		F7 :Load Setup Defaults

- 2. Use <Up> and <Down> to choose the item and <PgUp> and <PgDn> keys to modify the highlighted item.
- 3. After you have finished with the Hardware Monitor Setup, press <ESC> to go back to the main menu.

Description of the item on screen follows:**Chassis Intrusion**

Set this option to Enabled, Reset, or Disabled the chassis intrusion detector. During Enabled, any intrusion on the system chassis will be recorded. The next time you turn on the system, it will show a warning message. To be able to clear those warning, choose reset. After clearing the message it will go back to Enabled.

CPU/System Temperature

This items shows current CPU and System temperature.

CPU Fan/Chassis Fan Speed

This items shows current CPU Fan speed and Chassis Fan speed.

**CPU VID/Vcore/Vtt/Vio/+5.000V/+12.000V/-12.000V/Battery/
+5VSB**

This items shows current system voltages.

4.9 Supervisor/User Password

This Main Menu item lets you configure the system so that a password is required each time the system boots or an attempt is made to enter the Setup program. Supervisor Password allows you to change all CMOS settings but the User Password setting doesn't have this function. The way to set up the passwords for both Supervisor and User are as follow:

1. Choose "Supervisor/User Password" in the Main Menu and press <Enter>. The following message appears:

"Enter New Supervisor/User Password:"

2. The first time you run this option, enter your password up to 6 characters only and press <Enter>. The screen will not display the entered characters. For no password, just press <Enter>.
3. After you enter the password, the following message appears prompting you to confirm the password:

"Retype New Supervisor/User Password:"

4. Enter exactly the same password you just typed in to confirm the password and press <Enter>.
 5. Move the cursor to Save and Exit Setup to save the password.
 6. If you need to delete the password you entered before, choose the Supervisor/User Password and press <Enter>. It will delete the password that you had before.
 7. Move the cursor to Save and Exit Setup to save the option you did. Otherwise, the old password will still be there when you turn on your machine next time.
-

4.10 IDE HDD Auto Detection

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

AMIBIOS SETUP - STANDARD CMOS SETUP							
(C)1999 American Megatrends, Inc. All Rights Reserved							
Date (mm/dd/yyyy): Fri Jul 21, 2000							
Time (hh/mm/ss): 01:01:34							
TYPE SIZE CYLS HEAD PRECOMP LANDZ SECTOR MODE							

Pri Master :							
Pri Slave :							
Sec Master :							
Sec Slave :							
Floppy Drive A: Not Installed				Base Memory : 0 KB			
Floppy Drive B: Not Installed				Other Memory: 384 Kb			
				Extended Memory : 0 Mb			
				Total Memory : 1 Mb			
Boot Sector Virus Protection Disabled							
Detecting drive parameters:				ESC:Exit			
Press ESC to Abort				↑↓:Select Item			
				PU/PD/+/- : Modify			
				(Shift) F2: Color			