

Chapter 3

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.

3.1 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 HIFLEX SETUP UTILITIES - VERSION 1.21 (C) 1999 American Megatrends, Inc. All Rights Reserved	
STANDARD CMOS Feature	Integrated Peripherals
BIOS Features Setup	Hardware Monitor Setup
Chipset Features Setup	Supervision Password
Power Management Setup	User Password
PnP/PCI Configuration	IDE HDD Auto Detection
Load BIOS Defaults	Save & Exit Setup
Load Setup Defaults	Exit Without Saving
Esc: Quit ↑↓←→: Select Item (Shift) F2: Change Color F5: Old Values F6: Save & Exit Setup 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>.

3.2 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 Other Memory: 384 Kb Extended Memory : 0 Mb Total Memory : 1 Mb				
Floppy Drive B: Not Installed									
Boot Sector Virus Protection Disabled									
Detecting drive parameters:					ESC:Exit				
Press ESC to Abort					↑↓:Select Item				
					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.

3.3 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	System BIOS Cacheable	:Disabled
1st Boot Device	:Floppy	C000, 16k Shadow	:Enabled
2nd Boot Device	:IDE-O	C400, 16K Shadow	:Enabled
3rd Boot Device	:CD-ROM	C800, 16K Shadow	:Disabled
Try Other Boot Devices	:Yes	CC00, 16K Shadow	:Disabled
Initial Display Mode	:Silent	D000, 16K Shadow	:Disabled
Floppy Access Control	:Read-Write	D400, 16K Shadow	:Disabled
BootUp Num-Lock	:On	D800, 16K Shadow	:Disabled
Floppy Drive Swap	:Disabled	DC00, 16K Shadow	:Disabled
Floppy Drive Seek	:Disabled		
PS/2 Mouse Support	:Enabled		
Primary Display	:Absent		
Password Check	:Setup		
Boot to OS/2 > 64M	:No		
L1 Cache	:WriteBack		
L2 Cache	:WriteBack		
		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.
F(optical)	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.
Disable	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.

Floppy Access Control

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

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. The settings are Enabled or Disabled. The Optimal and Fail-safe default settings are Disabled.

L1 Cache

Choose Write Back or Write Through or Disabled the level 1 cache memory.

L2 Cache

Choose Write Back or Write Through or Disabled the level 2 cache memory.

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.

3.4 Chipset Features Setup

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

AMIBIOS SETUP - CHIPSET FEATURES SETUP			
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USB Function	:Enabled	RAS-to-CAS	:Default
Keyboard Legacy Support	:Disabled	CAS Latency	:Slow
CPU Latency Timer	:Enabled	RAS Timing	:Slow
ICH Delayed Transaction	:Disabled	RAS Precharge Timing	:Slow
DMA Collection Buffer	:Disabled		
Memory Hole	:Disabled		
DRAM Cycle time (SCLKs)	:6/8		
CAS# Latency (SCLKs)	:3		
RAS to CAS delay (SCLKs)	:3		
SDRAM RAS# Precharge	:3		
Primary Graphics Adapter	:Auto		
Display Cache Window Size	:64MB		
AGP Aperture Window	:64MB		
Local memory Frequency	:100MHz		
Initialize Display Cache	:Enabled		
Paging Mode Control	:Closed		
		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:**USB Function**

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

Keyboard Legacy Support

Set this option to Enabled or Disabled USB keyboard.

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#.

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.

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.

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.

Primary Graphics Adapter

This option is used to auto-detect the primary graphics adapter.

Internal Graphics Mode

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

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.

3.5 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	Power Button Function	:On/Off
ACPI Standby State	:S1/POS	Restore on AC/Power Loss	:LastState
USB KB Wakeup From S3	:Disabled	Resume On Ring	:Enabled
Power Management/APM	:Enabled	LAN Resume From Soft Off	:Disabled
Green PC LED Status	:DualColor	PME Function Support	:Enabled
Video Power Down Mode	:Suspend	Resume On RTC Alarm	:Disabled
Hard Disk Power Down Mode	:Standby	RTC Alarm Date	:15
Standby Time Out (Minute)	:Disabled	RTC Alarm Hour	:12
Suspend Time Out (Minute)	:Disabled	RTC Alarm Minute	:30
Throttle Slow Clock Ratio	:50%	RTC Alarm Second	:30
FDC/LPT/COM Ports	:Monitor		
Primary Master IDE	:Monitor		
Primary Slave IDE	:Ignore		
Secondary Master IDE	:Monitor		
Secondary Slave IDE	: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.

FDC/LPT/COM Ports / Primary Master IDE / Primary Slave IDE / Secondary Master IDE / Secondary Slave IDE

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.

3.6 PNP/PCI Configuration

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

AMIBIOS SETUP - PNP/PCI CONFIGURATION		
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Clear NVRAM	:No	
PCI Latency Timer	:64	
PCI VGA Palette Snoop	: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:**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 settings are 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. The Optimal and Fail-Safe default settings are Disabled.

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.

3.7 Integrated Peripherals

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

AMIBIOS SETUP - INTEGRATED PERIPHERALS		
(C) 1999 American Megatrends, Inc. All Rights Reserved		
AC97 Audio Controller	:Enabled	OnBoard IDE :Both
AC97 Modem Controller	:Disabled	
OnBoard FDC	:Auto	
OnBoard Serial PortA	:Auto	
OnBoard Serial PortB	:Auto	
Serial PortB Mode	:Normal	
IR Duplex Mode	:Full Duplex	
IR Pin Select	:IRRX/IRTX	
OnBoard CIR Port	:Disabled	
CIR IRQ Select	:10	
OnBoard Parallel Port	:Auto	
Parallel Port Mode	:ECP	
EPF Version	:N/A	
IRQ	:Auto	
DMA Channel	:Auto	
OnBoard Midi Port	:290	
Midi IRQ Select	:9	
OnBoard Game Port	:200	
Keyboard PowerOn Function	:Disabled	
Specific Key for PowerOn	:N/A	
Mouse PowerOn Function	:Disabled	
		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****AC97 Modem Controller**

This item allows you to decide to enable/disable the 815 chipset family to support AC97 Audio/Modem. 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/Onboard Serial Port B

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.

Serial PortB Mode

Choosing Normal will set the Serial Port B for normal use, not for IR device. Choosing IrDA or Ask IR will set it for use with IR device using these protocols.

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.

Keyboard PowerOn Function

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

Mouse PowerOn Function

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

OnBoard IDE

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

3.8 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		
CPU Ratio Selection	2.0x(Safe)	-5.000V
ClkGen Spread Spectrum	Disabled	Battery
CPU Clock (MHz)	133	+5V SB
System memory Frequency	100MHz	Display H/W Monitor Info. Yes
CPU Voltage Adjust	No	
CPU Vcore	1.65V	
Chassis Intrusion	Disabled	
CPU Temperature	80°C/176°F	
System Temperature	39°C/102°F	
Top Tech. III	80°C/176°F	
CPU Fan Speed		
Chassis Fan Speed		
Power Fan Speed		
CPU VID	1.65V	
Vcore		
Vtt		
Vio		
+ 5.000V		
+12.000V		
-12.000V		
		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:**CPU Ratio Selection**

This option is use to set the CPU ratio. If your CPU ratio setting is locked, then this option will be shown as “Locked”.

ClkGen Spread Spectrum

This item allows you to select the clock generator Spread Spectrum function. When overclocking the processor, always set this item to Disabled.

CPU Clock (MHz)

Check your processor and set this function accordingly. If you set this to Manual, you can set the CPU Clock accordingly.

System Memory Frequency

This is use to set the system memory frequency. Check your processor and set this function accordingly.

CPU Voltage Adjust

This is use to set/adjust the CPU system voltage.

CPU Vcore

This item shows the current CPU system voltage.

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.

3.9 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.

3.10 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			