

Chapter 4 AMI BIOS Setup

THE BIOS

BIOS stands for Basic Input and Output System. It was once called ROM BIOS when it was stored in a Read-Only Memory (ROM) chip. Now manufacturers would like to store BIOS in EEPROM which means Electrically Erasable Programmable Memory. BIOS used in this series of mainboard is stored in EEPROM, and is the first program to run when you turn on your computer.

BIOS performs the following functions:

1. Initializing and testing hardware in your computer (a process called "POST", for Power On Self Test).
2. Loading and running your operating system.
3. Helping your operating system and application programs manage your PC hardware by means of a set of routines called BIOS Run-Time Service.

This Chapter includes the following topics :

4-1 About BIOS Setup

4-2 To Run BIOS Setup

4-3 About CMOS

4-4 The POST (Power On Self Test)

4-5 To Update BIOS

4-6 BIOS Setup

4-1 About BIOS Setup

BIOS setup is an interactive BIOS program that you need to run when:

1. Changing the hardware of your system. (For example: installing a new Hard Disk etc.)
2. Modifying the behavior of your computer. (For example: changing the system time or date, or turning special features on or off etc.)
3. Enhancing your computer's behavior. (For example: speeding up performance by turning on shadowing or cache)

4-2 To Run BIOS Setup

First access BIOS setup menu by pressing < DEL > key after "POST" is complete (before OS is loaded). BIOS will then display the following message:

DEL : SETUP

4-3 About CMOS

CMOS is the memory maintained by a battery. CMOS is used to store the BIOS settings you have selected in BIOS Setup. CMOS also maintains the internal clock. Every time you turn on your computer, the BIOS Looks into CMOS for the settings you have selected and configures your computer accordingly. If the battery runs out of power, the CMOS data will be lost and POST will issue a "CMOS invalid" or "CMOS checksum invalid" message. If this happens, you have to replace the battery and check and configure the BIOS Setup for the new start.

4-4 The POST (Power On Self Test)

POST is an acronym for Power On Self Test. This program will test all things the BIOS does before the operating system is started. Each of POST routines is assigned a POST code, a unique number which is sent to I/O port 080h before the routine is executed.

4-5 To Update BIOS

- System BIOS is incorporated into a Flash memory component. Flash BIOS allows user to upgrade BIOS without the need to replace an EPROM component.
- The Upgrade Utility can be loaded on a floppy diskette for upgrading saving, and verifying the system BIOS. The Upgrade Utility can also be run from a hard disk drive or a network drive.

4-5.1 Before Updating BIOS

- It is highly recommended that you save a copy of the original mainboard BIOS along with a Flash EPROM Programming utility (AMIFLASH.EXE) to a bootable floppy disk so that you can reinstall the BIOS when in need.

4-5.2 Update Process

- Normally, to update BIOS is unnecessary if the system is working fine. Users should only upgrade BIOS when incompatible problems are encountered or new features have to be added to system.
- “AMIFLASH.EXE” is a Flash EPROM Programming utility that updates the BIOS by uploading a new BIOS file to the programmable flash ROM on the mainboard. This program only works in **DOS environment, the utility can not be executed in Win95/98, ME, NT, WINDOWS 2000 or Windows XP environment.**
- Please follow the steps below for updating the system BIOS:

Step 1. Please visit the board maker's website, download the zip file which contains the latest BIOS file and AMI flash utility “AMIFLASH.EXE”. After unzipping, the BIOS file format will be *.ROM, of which “*” stands for the specific BIOS file name.

Step 2. Create a bootable diskette. Then copy the BIOS file and AMI flash utility “AMIFLASH.EXE” into the diskette.

Step 3. Insert the diskette into drive A, reboot your system and boot from the diskette.

Step 4. Type **AMIFLASH *.ROM** and then press <Enter> to run BIOS update program. (*.ROM will vary, depending on your mainboard model and version code. Instead of typing “*”, you should type specific file name for your specific mainboard. For example, you may type “amiflash (space)DR2C005.rom”).

Step 5. When the message “Flash ROM Update Completed - Pass.” appears, please restart your system.

Step 6. You will see a message “CMOS Memory Size Wrong” during booting the system. Press or <F1> to run CMOS setup utility, then reload “LOAD SETUP DEFAULTS” or “**Load Optimal Defaults**” and save this change. BIOS update is complete now.

4-6 BIOS SETUP --- CMOS Setup Utility

4-6.1 CMOS Setup Utility

This mainboard comes with the AMI BIOS from American Megatrends Inc. Enter the CMOS Setup Utility Main Menu by:

1. Turn on or reboot your system. After a series of diagnostic checks, the following message will appear:

PRESS TO RUN SETUP

2. Press the key and the main program screen will appear as follows.

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a		
<ul style="list-style-type: none"> ▶ Standard CMOS Features ▶ Advanced BIOS Features ▶ Advanced Chipset Features ▶ Power Management Features ▶ PNP/PCI Configurations ▶ Integrated Peripherals ▶ Hardware Monitor Status ▶ Frequency/Voltage Control 	<ul style="list-style-type: none"> Set Supervisor Password Load Optimal Defaults Save & Exit Setup Exit Without Saving 	
↑↓ : Select Item ← → : Select Menu	Enter: Select ▶ Sub-Menu F10: Save & Exit	F6: Setup Defaults Esc: Exit
Set System/DRAM Timing ...		

3. Use the arrow keys on your keyboard to select an option, and press <Enter>. Modify the system parameters to reflect the options installed in your system.
4. You may return to the Main Menu anytime by pressing <ESC>.
5. In the Main Menu, "Save & Exit Setup" saves your changes and reboots the system, and "Exit Without Saving" ignores your changes and exits the program.

4-6.2 Standard CMOS Setup

Standard CMOS Setup records some basic system hardware configuration and sets the system clock and error handling. You only need to modify the configuration values of this option if you want to change your system hardware configuration or when the data stored in the CMOS memory get lost or damaged.

Run the Standard CMOS Setup as follows:

1. Choose "Standard CMOS Setup" from the Main Menu and a screen with a list of options will appear:

Standard CMOS Features		Setup Help
System Time	00 19 29	
System Date	Feb 19 2003 Wed	
Floppy Drive A	1.44M, 3.5 in.	
► Primary IDE Master	Maxtor 20560 A4	
► Primary Slave	Not Installed	
► Secondary Master	Not installed	
► Secondary Slave	Not Installed	

↑↓ : Select Item
Esc: Previous Menu

+/- : Change Values
Enter: Select ► Sub-Menu

F6: Setup Defaults
F10: Save & Exit

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys.
3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

System Time The BIOS shows the time of the day in the format: hh:mm:ss. Choose the field with the Arrow keys and change the time with the Page Up/Page Down +/- keys.

System Date The BIOS shows the date of the day in the format: mm:dd:yy :day of the Week. Choose the field with the Arrow keys and change the value with the Page Up/Page Down +/- keys.

Floppy Drive A Select this field to the type(s) of floppy disk drive(s) installed in your system. The choices are:
 1.2MB, 5.25 in.
 720KB, 3.5 in.
 1.44MB, 3.5 in.
 2.88MB, 3.5 in.
 Not Installed

Primary/Secondary IDE Master/Slave Press Enter on any one of these four items will reveal the following submenu for your configuration of the hard Disk you have installed:

Primary IDE Master :Maxtor 82560 A4		Setup Help
Type	Auto	
Cylinders	4962	
Heads	16	
Write Precompensation		
Sectors	63	
Maximum Capacity	2561 Mb	
LBA Mode	On	
Block Mode	On	
Fast Programmed I/O Modes	4	
32 Bit Transfer Mode	On	

↑↓ : Select Item
 Esc: Previous Menu

+/- : Change Values
 Enter: Select ► Sub-Menu

F6: Setup Defaults
 F10: Save & Exit

Type This option shows the types of configuration for the IDE devices:

1-50: Predefined types

USER: set Parameters by User

Auto: Set parameters automatically

CD-ROM: Use for ATAPI CD-ROM drives

Double click [Auto] to set all HDD parameters automatically, including "Cylinders, Heads, Write Precompensation, Sectors, Maximum Capacity and 32 Bit Transfer Mode.

4-6.3 Advanced BIOS Features

Advanced BIOS Features improves your system performance or sets up system features according to your preference.

Run the Advanced BIOS Features as follows:

- 1. Choose “Advanced BIOS Features” from the Main Menu and a screen with a list of options will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a

Advanced BIOS Features	Setup Help
Quick Boot Delay for Hard Drive (Sec.) 1st Boot Device 2nd Boot Device 3rd Boot Device Try Other Boot Devices Initial Display Mode Display Mode at Add-On ROM Init S.M.A.R.T for Hard Disks Bootup Num-lock Floppy Drive Swap Floppy Drive Seek Primary Display Password Check Boot To OS/2 L1 Cache L2 Cache System BIOS Cacheable C000,32K Shadow C800,16K Shadow CC00,16K Shadow D000,16K Shadow D400,16K Shadow D800,16K Shadow DC00,16K Shadow	Enabled 2 Floppy: 1.44 MB 3.5 CD-ROM IDE-0 :Maxtor 20560 A4 - Yes Silent Force BIOS Disabled On Disabled Disabled VGA/EGA Setup No Enabled Enabled Enabled Cached Disabled Disabled Disabled Disabled Disabled Disabled Disabled

↑↓ : Select Item
Esc: Previous Menu

+/- : Change Values
Enter: Select ► Sub-Menu

F6: Setup Defaults
F10: Save & Exit

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F6>: Setup BIOS default values.

<F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide.

Quick Boot	Allows you to enable (default)/ disable quick boot of your system.
Delay for Hard Drive (Sec.)	Allows you to adjust the time of detecting hard disk on board at booting system. Choices: Disabled; 1~10 sec. in 1 sec. stepping.
1st/2nd/3rd Boot Device	Allows you to set floppy or IDE devices already installed to be the 1st/2nd/3rd boot device. Choices: Disabled; Device(s) installed
Try Other Boot Devices	Allows you to enable/disable system to try to boot with other boot devices. Choices: Yes (default); No
Initial Display Mode	If option is "Silent", it allows user to add logo to initial screen. If option is "BIOS", the normal BIOS display mode will be shown. Choices: Silent (default); BIOS
Display Mode at Add-On ROM Init	If the item "Initial Display Mode" is set to "Silent", two sub-modes are provided for the initial display mode. If "Force BIOS" (default) is chosen, the vendor's logo screen will be followed by the "Add-on ROM" initial screen (the screen showing the add-on card BIOS message). If "Keep Current" is chosen, no "Add-On ROM" screen is followed.

- S.M.A.R.T. for Hard Disks** Allows you to enable / disable the Self Monitoring Analysis and Reporting Technology for the hard disk.
Choices: Enabled; Disabled (default)
- Bootup Num-lock** Allows you to toggle between On (default) or Off to control the state of the NumLock keys when the system boots. If On, the numeric keypad is in numeric mode. If off, the numeric keypad is in cursor control mode.
- Floppy Drive Swap** Disabled (default), Floppy Drive A will not be changed to B, nor B to A. Enabled, Floppy Drive a and B will change position.
- Floppy Drive Seek** Disabled (default), Floppy Drives will not be checked and diagnosed at system bootup; Enabled, Floppy Drives will be checked and diagnosed at system bootup.
- Primary Display** Allows you to choose the primary display for the system.
Choices: VGA/EGA (default); CGA40x25; CGA80x25; Mono; Absent
- Password Check** Allows you to set BIOS to check up password with a password prompt at BIOS Setup or whenever restarting system.
Choices: Setup (default); Always
- Boot to OS/2** Allows you to set your system to OS/2 operating system.
Choices: Yes; No (default)
- L1 /L2 Cache** Use this item to enable/disable the L1/L2 cache.
Choices: Enabled (default); Disabled
- System BIOS Cacheable** Allows you to enable (default)/ disable the System BIOS Cacheable function.
- C000, 32K Shadow** Allows you to set these addresses cached, Enabled or Disabled. Default: Cached
- C800,CC00,D000,D400, D800,DC00 16K Shadow** Allows you to set these addresses cached, Enabled or Disabled. Default: Disabled

4-6.4 Advanced Chipset Features

Advanced Chipset Features is used to modify the values of chipset buffers. These buffers control the system options.

Run the Advanced Chipset Features as follows:

1. Choose "Advanced Chipset Features" from the Main Menu and a list of option will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a

Advanced Chipset Features	Setup Help
<p>DRAM Timing</p> <p>SDRAM Frequency Auto</p> <p>Configure SDRAM timing by SPD Disabled</p> <p>SDRAM CAS# Latency 2.5 Clocks</p> <p>SDRAM RAS# Precharge 3 Clocks</p> <p>SDRAM RAS# to CAS# Delay 3 Clocks</p> <p>SDRAM Precharge Delay 7 Clocks</p> <p>SDRAM Read Thermal Management Disabled</p> <p>DRAM Integrity Mode Disabled</p> <p>Memory Hole Disabled</p> <p>(Hyper-threading Function) (Enabled)</p> <p>APIC interrupt Mode Disabled</p> <p>AGP Aperture Size 64MB</p> <p>USB Controller All USB Port</p> <p>USB Device Legacy Support Disabled</p> <p>Port 64/60 Emulation Disabled</p>	

↑↓ : Select Item
Esc: Previous Menu

+/- : Change Values
Enter: Select ► Sub-Menu

F6: Setup Defaults
F10: Save & Exit

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F6>: Setup BIOS default values.

<F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

- SDRAM Frequency** Allows you to set the SDRAM frequency.
Choices: Auto; 200MHz; 266MHz
- Configure SDRAM Timing by SPD** SPD (Serial presence detect) is a device in memory module for storing the module information such as DRAM timing and chip parameters. If this option is enabled, BIOS will access SPD automatically to configure module timing. If disabled, DRAM timing can be configured manually.
Default: Enabled
- SDRAM CAS# Latency** With SDRAM Timing by SPD disabled, you can select the SDRAM CAS# (Column Address Strode) latency manually.
Choices: 2 Clocks; 2.5 Clocks
- SDRAM RAS# Precharge** With SDRAM Timing by SPD disabled, you can select the SDRAM RAS# (Row Address Strode) Precharge cycle manually.
Choices: 2 Clocks; 3 Clocks
- SDRAM RAS# to CAS# Delay** With SDRAM Timing by SPD disabled, you can select the SDRAM RAS# to CAS# delay cycle manually.
Choices: 2 Clocks; 3 Clocks
- SDRAM Precharge Delay** Allows you to set the SDRAM Precharge Delay cycle.
Choices: 5 clocks; 6 clocks; 7 clocks
- SDRAM Read Thermal management** Allows you to enable / disable (default) the function.
Choices: Enabled; Disabled
- DRAM Integrity Mode** Allows you to enabled / disabled (default) this function.
- Memory Hole** Allows you to enabled / disabled (default) the support of Memory Hole which is reserved for ISA card.
Choices: Disabled; 15MB-16MB
- (Hyper-threading Function)** If hyper-threading CPU is running on board, this item appears to show the enabled status.
Choices: Enabled; Disabled

- APIC Interrupt Mode** Allows you to enabled / disabled (default) the extended interrupt control for the multi-processor system. In this single processor system, this item is disabled.
- AGP Aperture Size** Allows you to set the AGP Aperture Size.
Choices: 4MB; 8MB; 16MB; 32MB; 64MB; 128MB; 256MB;
- USB Controller** Allows you to set the USB Controller on the USB port(s).
Choices: All USB; USB Port 0&1; USB Port 2&3; disabled
- USB Device Legacy Support** Allows you to select the USB Device Legacy support.
Choices: No Mice; All Device; Disabled (default)
- Port 64/60 Emulation** Allows you to enable / disable (default) the Port 64/60 Emulation.

4-6.5 Power Management Features

Power Management Features allows you to set the system's power saving functions.

Run the Power Management Features as follows:

- 1. Choose "Power Management Features" from the Main Menu and a list of options will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a

Power Management Features		Setup Help
ACPI Standby State	S1/POS	
Power Management/APM	Enabled	
Video Power Down Mode	Suspend	
Hard Disk Power Down Mode	Standby	
Standby Time Out (Minute)	Disabled	
Suspend Time Out (Minute)	Disabled	
Power Button Function	On/Off	
Restore on AC/Power Loss	Last State	
Resume On Ring	Disabled	
Resume On LAN	Disabled	
Resume On RTC Alarm	Disabled	
RTC Alarm Date	15	
RTC Alarm Hour	12	
RTC Alarm Minute	30	
RTC Alarm Second	30	
↑↓ : Select Item		F6: Setup Defaults
Esc: Previous Menu		
+/- : Change Values		F10: Save & Exit
Enter: Select ► Sub-Menu		

- 2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

- <F1>: "Help" gives options available for each item.
- <F6>: Setup BIOS default values.
- <F10>: Save and Exit Setup.

- 3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

- ACPI Standby State** This item allows you to see the supported ACPI Standby state S1 (POS) for Power on Suspend under ACPI mode. This Mainboard does not support S3 (STR).
- Power Management/ APM** Allows you to enable(default) / disable the Power management / Advanced Power Management function.
- Video Power Down Mode** Allows you to select the Video Power Down Mode.
Choices: Disabled; Standby; Suspend (optional)
- Hard Disk Power Down Mode** Allows you to select the Hard Disk Power Down Mode.
Choices: Disabled; Standby (default); Suspend
- Standby Time Out (Minute)** To set the duration of Standby Time Out.
Choices: 1; 2; 4; 8; 10; 20; 30; 40; 50; 60
- Suspend Time Out (Minute)** To set the duration of Suspend Time Out.
Choices: 1; 2; 4; 8; 10; 20; 30; 40; 50; 60
- Power Button Function** Allows you to set power Button function.
Choices: On/Off (default); Suspend
- Restore on AC/Power Loss** Allows you to set the restore state from AC/Power Loss.
Choices: Last State(default); Power Off; Power On
- Resume on Ring** Allows you to enable / disable (default) the Resume On Ring Signal function.
An input signal on the serial Ring Indicator (RI) Line (in other words, an incoming call on the modem) Awakens the system from a soft off state.
- Resume on LAN** Allows you to enable / disable (default) the Resume On LAN function.
- Resume On RTC Alarm** Allows you to enable / disable (default) the Resume On RTC Alarm function.
- RTC Alarm Date / Hour / Minute / Second** If resume On RTC Alarm is enabled, this field allows you to set the Alarm date Hour, Minute and second.
Date Choices: Every Day; 01 ~ 31
Hour Choices: 00 ~ 23
Minute Choices: 00 ~ 59
Second Choices: 00 ~ 59

4-6.6 PNP / PCI Configurations

PNP/PCI Configuration allows you to modify the system’s power saving functions.

Run the PNP/PCI Configurations as follows:

- 1. Choose “PNP/PCI Configurations” from the Main Menu and a screen with a list of options will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a	
PNP/PCI Configurations	Setup Help
Plug and Play Aware O/S PCI Latency Timer (PCI Clocks) Primary Graphics Adapter PCI IDE Busmaster PCI Slot1 IRQ Priority PCI Slot2 IRQ Priority PCI Slot3 IRQ Priority PCI Slot4 IRQ Priority PCI Slot5 IRQ Priority PCI Slot6 IRQ Priority	No 32 AGP Enabled Auto Auto Auto Auto Auto Auto
↑↓ : Select Item Esc: Previous Menu	+/- : Change Values Enter: Select ▶ Sub-Menu F6: Setup Defaults F10: Save & Exit

- 2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

- <F1>: “Help” gives options available for each item.
- <F6>: Setup BIOS default values.
- <F10>: Save and Exit Setup.

- 3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

Plug & Play Aware O/S Select Yes for Windows systems supporting Plug and Play function. Select No for systems not supporting PNP.

PCI Latency Timer)PCI Allows you to set the PCI Latency Time.
Clocks) Choices: 32; 64; 96; 192; 128; 160; 192; 224; 248;

Primary Graphics Allows you to select the Graphics Adapter.
Adapter Choices: AGP; PCI

PCI IDE BusMaster Allows you to enable / disable the PCI IDE Bus Master function.

PCI Slot1/2/3/4/5/6 IRQ Allows you to specify the IRQ for the PCI slot.
Priority Choices: Auto; 3; 4; 5; 7; 9; 10; 11

4-6.7 Integrated Peripherals

Integrated Peripherals option allows you to get some information inside your system when it is working.

Run the Integrated Peripherals as follows:

1. Choose "Integrated Peripherals" from the Main Menu and a list of options will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a

Integrated Peripherals		Setup Help
Onboard IDE	Both	
Onboard AC'97 Audio	Auto	
Onboard MC'97 Modem	Disabled	
Onboard FDC	Auto	
Onboard Serial Port A	Auto	
Onboard Serial Port B	Auto	
Serial Port B Mode	Normal	
IR Duplex Mode	Half Duplex	
IR Pin Select	IRRX/IRTX	
Onboard Parallel Port	Auto	
Parallel Port Mode	Normal	
EPP Version	N/A	
Parallel Port IRQ	Auto	
Parallel Port DMA Channel	N/A	
Onboard MIDI Port	Disabled	
MIDI IRQ Select	5	
Onboard Game Port	200	
PS/2 Keyboard PowerOn Function	Disabled	
Specific Key for PowerOn	N/A	
PS/2 Mouse PowerOn Function	Disabled	

↑↓ : Select Item
Esc: Previous Menu

+/- : Change Values
Enter: Select ► Sub-Menu

F6: Setup Defaults
F10: Save & Exit

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F6>: Setup BIOS default values.

<F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

- Onboard IDE** Allows you to choose the Onboard IDE Mode.
Choices: Disabled; Primary; Secondary; Both
- Onboard AC'97 Audio** Allows you to enable / disable the Onboard AC'97 Audio.
Choices: Auto; Disabled
- Onboard MC'97 Modem** Allows you to enable / disable the Onboard MC'97 Modem. If a modem card is inserted in CNR slot, this item should not be disabled.
Choices: Auto; Disabled
- OnBoard FDC** Allows you to enable / disable the Onboard FDC.
Choices: Auto; Enabled; disabled
- Onboard Serial Port A** Allows you to set the Onboard Serial Port A.
Choices: Auto; Disabled; 3F8/COM1; 2F8/COM2; 3E8/COM3; 2E8/COM4;
- Onboard Serial Port B** Allows you to set the Onboard Serial Port B.
Choices: Auto; Disabled; 3F8/COM1; 2F8/COM2; 3E8/COM3; 2E8/COM4;
- Serial Port B Mode** Allows you to set the Serial Port B Mode.
Choices: Normal; 1.6 uS; 3/16 Baud; ASKIR;
- IR Duplex Mode** If Serial Port B is not at Normal mode, this item allows you to set the Serial Port B to Half or Full Duplex.
- IR Pin Select** If Serial Port B is not at Normal mode, this item allows you to set the Serial Port B Pin to IRRX/IRTX or SINB/SOUTB.
- OnBoard Parallel Port** Allows you to configure onboard Parallel port .
Choices: Auto; Disabled; 378; 278; 3BC;
- Parallel Port Mode** If Parallel Port is not disabled, this item allows you to configure port mode.

- EPP Version** If Parallel Port Mode is EPP, this item allows you to set the EPP Version.
Choices: 1.9; 1.7
- Parallel Port IRQ** If Parallel Port Mode is set at EPP, this item will set the Parallel Port IRQ automatically.
- Parallel Port DMA Channel** If Parallel Port Mode is set at ECP, this item will set the DMA Channel automatically.
- OnBoard MIDI Port** Allows you to configure onboard MIDI port .
Choices: Disabled; 300h; 310h; 320h; 330h
- MIDI IRQ Select** If the onboard MIDI port is set at 300h or 380h, this item appears to allow you to configure the MIDI Port IRQ.
Choices: 3; 4; 5; 7; 10; 11
- OnBoard Game Port** Allows you to configure Onboard Game port address.
Choices: Disabled; 200h; 208h
- PS/2 Keyboard Power On Function** Allows you to configure the Keyboard PowerOn Function.
Choices: Disabled; Specific Key.
- Specific Key for PowerOn** If Keyboard PowerOn function is set at Specific Key, this item allows you to type a password with the keyboard for Power On.
- PS/2 Mouse PowerOn Function** Allows you to disable or use the mouse to power on system.
Choices: Disabled; Right Botton; Left Button

4-6.8 Hardware Monitor Status

This menu helps you to read only and get more information on the working CPU temperature, FAN speed and voltage.

1. Choose “Hardware Monitor Status” from the Main Menu and a screen with a list of current status of your working system will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a

Hardware Monitor Status	Setup Help
CPU1 Temperature 44 °C/111 °F CPU2 Temperature 29 °C/84 °F System Temperature 0°C/32 °F CPU Fan Speed 4891 RPM Case Fan Speed 0 RPM Vcore 1.680 V +1.5V 1.520 V +3.3V 3.408 V Battery 3.312 V +5V SB 5.126 V	

↑↓ : Select Item
Esc: Previous Menu

+/- : Change Values
Enter: Select ► Sub-Menu

F6: Setup Defaults
F10: Save & Exit

2. Press <ESC> to return to the Main Menu. in case any irregular reading appears about your system, it indicates that a problem exists therein. To solve the problem, a hardware professional or your dealer is recommended.

CPU1Temperature Shows current temperature of the CPU body.

CPU 2 Temperature Shows current temperature round the CPU.

System Temperature Shows current system temperature.

CPU Fan Speed Displays the current speed of CPU Fan.

Case Fan Speed Shows current Case Fan Speed.

Vcore Shows CPU core actual voltage value.

+1.5V Shows current voltage against the +1.5V power supply.

+3.3V Shows current voltage against the +3.3V power supply.

Battery Shows current voltage against battery power supply.

+5V SB Shows current voltage against the +5V SB power supply.

4-6.9 Frequency/Voltage Control

Run the "Frequency/Voltage Control" as following:

1. Choose "Frequency/Voltage Control" from the Main Menu and a screen with a list of options will appear:

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a

Frequency/Voltage Control	Setup Help
Redstorm Overclocking Tech (optional) Press Enter CPU Linear Freq Disabled CPU Clock 100 MHz CPU Ratio Selection Locked PCI Clock Auto Detection Disabled Spread Spectrum Selection Disabled	

↑↓ : Select Item
Esc: Previous Menu

+/- : Change Values
Enter: Select ► Sub-Menu

F6: Setup Defaults
F10: Save & Exit

2. Use one of the arrow keys to move between options and modify the selected options by using PgUp / PgDn / + / - keys. An explanation of the <F> keys follows:

<F1>: "Help" gives options available for each item.

<F6>: Setup BIOS default values.

<F10>: Save and Exit Setup.

3. Press <ESC> to return to the Main Menu when you finish setting up all items. The following item descriptions are provided as a quick guide to your setup.

- (optional)** Press <Enter> to start *RED STORM OVERCLOCKING TECH*. This option gives user an easy way to
Redstorm Overclocking
Tech overclocking. It will raise CPU clock automatically. When CPU clock is raised to an unacceptable value, BIOS will restart your system, then running at an acceptable higher CPU clock.
- CPU Linear Frequency** This item allows you to enable / disable (default) this setting function.
- CPU Clock** If CPU Linear Frequency is set at Enabled, this item allows you to set CPU Clock.
Choices: 100MHz ~200MHz in 1MHz stepping.
- CPU Ratio Selection** If CPU onboard is one with an adjustable CPU ration, this item allows you user to adjust the CPU Ratio.
- PCI Clock Auto Detection** Allows you to enable / disable (default) this auto detection function.
- Spread Spectrum Selection** Allows you to enable / disable (default) this Spread Spectrum Selection function.
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4-6.10 Set Supervisor Password

This option allows you to set a Supervisor password for the system:

1. Choose "Set Supervisor Password" in the Main Menu and press <Enter>. Then the following message appears:

[Enter new supervisor password]

2. The first time you run this option, enter your password up to 8 characters and press <Enter>. (The screen does not display the entered characters.)
3. After you enter the password, the following message appears prompting you to confirm the password:

[Retype new supervisor Password]

4. Enter the same password "exactly" the same as you have just typed to confirm the password and press <Enter>.
5. The following message appears to confirm the new password setup.

[New supervisor password installed]

Any Key to Continue

6. Then press any key to continue your CMOS Setup. To save the password setup, you should press "Save & Exit Setup" and choose "yes" to exit and save setup.

NOTE: If you forget or lose the password, the only way to access the system is to clear the CMOS RAM. All setup informations will be lost and you need to run the BIOS setup program again.

4-6.11 Load Optimized Defaults

When you press <Enter> on this item, you will get a confirmation dialog box with a message similar to:

[Load Optimal Defaults]

**Press [Enter] to continue
or [ESC] to abort**

Press <Enter> now to load Optimal values for all the Setup options.

4-6.12 Save & Exit Setup

Save & Exit Setup allows you to save all modifications you have specified into the CMOS memory. Highlight this option on the Main Menu and press <Enter>. The following message appears:

[Saving current settings and exit]

**Press [Enter] to continue
or [ESC] to abort**

Press <Enter> key to save the configuration changes and exit CMOS Setup to restart your system.

4-6.13 Exit Without Saving

Exit Without Saving option allows you to exit the Setup Utility without saving the modifications that you have specified. Highlight this option on the Main Menu and the following message appears:

[Quit Without Saving Changes]

**Press [Enter] to continue
or [ESC] to abort**

Follow the message and press <Enter> key to exit CMOS Setup and restart system.