

# 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 upgrade 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 Update 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 latest BIOS file and AMI flash utility “AMIFLASH.EXE”. 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).

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 <Del> 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 <Del> TO RUN SETUP**

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

AMIBIOS EASY SETUP UTILITY - VERSION 2.01a		
<ul style="list-style-type: none"> <li>▶ Standard CMOS Features</li> <li>▶ Advanced BIOS Features</li> <li>▶ Advanced Chipset Features</li> <li>▶ Power Management Features</li> <li>▶ PNP/PCI Configurations</li> <li>▶ Integrated Peripherals</li> <li>▶ Hardware Monitor Status</li> <li>▶ Frequency/Voltage Control</li> </ul>	<ul style="list-style-type: none"> <li>Set Supervisor Password</li> <li>Load Optimal Defaults</li> <li>Save &amp; Exit Setup</li> <li>Exit Without Saving</li> </ul>	
↑↓ : 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	Dec 05 2001 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	Enabled
Delay for Hard Drive (Sec.)	2
1st	Floppy: 1.44 MB 3.5
2nd	CD-ROM
3rd	IDE-0 :Maxtor 20560 A4 -
Try Other Boot Devices	Yes
Initial Display Mode	Silent
Display Mode at Add-On ROM Init	Force BIOS
S.M.A.R.T for Hard Disks	Disabled
Bootup Num-lock	On
Floppy Drive Swap	Disabled
Floppy Drive Seek	Disabled
Primary Display	VGA/EGA
Password Check	Setup
Boot To OS/2	No
L1 Cache	Enabled
L2 Cache	Enabled
System BIOS Cacheable	Enabled
C000,32K Shadow	Cached
C800,16K Shadow	Disabled
CC00,16K Shadow	Disabled
D000,16K Shadow	Disabled
D400,16K Shadow	Disabled
D800,16K Shadow	Disabled
DC00,16K Shadow	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.

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<b>Quick Boot</b>	Allows you to enable / disable quick boot of your system.
<b>Delay for Hard Drive (Sec.)</b>	Allows you to set the delay time for hard drive access. Choices: Disabled; 1~10 sec. (Default: 2)
<b>1st/2nd/3rd Boot Device</b>	Allows you to set floppy or IDE devices already installed to be the 1st/2nd/3rd boot device. Choices: Disabled; Device(s) installed
<b>Try Other Boot Devices</b>	Allows you to enable/disable system to try to boot with other boot devices. Choices: Yes; No
<b>Initial Display Mode</b>	This item allows user to choose the initial display screen at startup. If "Silent" is chosen, the initial display will be the vendor's logo screen. If "BIOS" is chosen, the initial display will be the normal "POST" display.
<b>Display Mode at Add-On ROM Init</b>	If the item "Initial Display Mode" is set to "Silent", two sub-modes are provided for the initial display mode. If "Force BIOS" 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
- BootUp Num-Lock** Allows you to Toggle between On or Off to control the state of the NumLock key 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** Choices: Disabled (default); Enabled
- Floppy Drive Seek** Choices: Disabled (default); Enabled
- 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 re-starting system.  
Choices: Setup; Always
- Boot to OS/2** Allows you to set your system to OS/2 operating system.  
Choices: Yes; No (default)
- L1 /L2 Cache** Allows you to set the Internal/External Cache Mode.  
Choices: WriteBack (default); WriteThru; Disabled
- System BIOS Cacheable** Allows you to enable / 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
DRAM Timing  SDRAM Frequency                      Auto Configure SDRAM timing by SPD      Disabled SDRAM CAS# Latency                  2.5 Clocks SDRAM RAS# Precharge                3 Clocks SDRAM RAS# to CAS# Delay            3 Clocks SDRAM Precharge Delay               7 Clocks SDRAM Read Thermal Management    Disabled DRAM Integrity Mode                  Disabled Memory Hole                          Disabled APIC interrupt Mode                  Disabled AGP Aperture Size                    64MB USB Controller                        All USB Port USB Device Legacy Support          Disabled Port 64/60 Emulation                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.

- SDRAM Frequency** Allows you to set the SDRAM frequency.  
Choices: Auto; 200MHz; 266MHz
- Configure SDRAM Timing by SPD** Choices: Enabled; disabled (default)
- SDRAM CAS# Latency** With SDRAM Timing by SPD disabled, you can select the SDRAM CAS# (Column Address Strode) latency.  
Choices: 2Clocks; 2.5 Clocks
- SDRAM RAS# Precharge** With SDRAM Timing by SPD disabled, you can select the SDRAM RAS# (Row Address Strode) Precharge cycle.  
Choices: 2Clocks; 3 Clocks
- SDRAM RAS# to CAS# Delay** With SDRAM Timing by SPD disabled, you can select the SDRAM RAS# to CAS# delay cycle.  
Choices: 2Clocks; 3 Clocks
- SDRAM Precharge Delay** With SDRAM Timing by SPD disabled, you can select the SDRAM Precharge Delay cycle.  
Choices: 7 Clocks; 6 Clocks; 5 Clocks
- SDRAM Read Thermal management** Allows you to enable / disable 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 memory (15~16MB) reserved for the peripherals.
- 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 Devices; Disabled

**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	
Power Management/APM Enabled	
Video Power Down Mode Suspend	
Hard Disk Power Down Mode Suspend	
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

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.

- ACPI Standby State** This item allows you to see the supported ACPI Standby state S1 (POS) for Power on Suspend under Windows 98 ACPI mode. This Mainboard does not support S3 (STR).
- Power Management/ APM** Allows you to enable / 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
- Hard Disk Power Down Mode** Allows you to select the Hard Disk Power Down Mode.  
Choices: Disabled; Standby; 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; Suspend
- Restore on AC/Power Loss** Allows you to set the restore state from AC/Power Loss.  
Choices: Last State; Power Off; Power On
- Resume on Ring** Allows you to enable / disable 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 the Resume on LAN function.
- Resume on PME#** Allows you to enable / disable the Resume on PME function.
- Resume On RTC Alarm** Allows you to enable / disable 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      +/- : Change Values      F6 : Setup Defaults  
 Esc : Previous Menu      Enter : Select ▶ Sub-Menu      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.  
The 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.  
The 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 allows you to set the Parallel Port IRQ.  
Choices: 5; 7
- Parallel Port DMA Channel** If Parallel Port Mode is set at ECP, this item allows you to set the DMA Channel.  
Choices: 0; 1; 3
- Primary/Secondary Master/Slave Prefetch** Allows you to enable / disable the PCI IDE prefetch function of the PCI IDE channels. Default: Enabled
- OnBoard MIDI Port** Allows you to configure onboard MIDI port .  
The 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.  
The choices: 3; 4; 5; 7; 10; 11
- OnBoard Game Port** Allows you to configure Onboard Game port address.  
The choices: Disabled; 200h; 208h
- PS/2 Keyboard Power On Function** Allows you to configure the Keyboard PowerOn Function.  
Choices: Disabled; Any key; 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; Any Action; 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    -55 °C/-131 °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

+/- :Change Values

F6 :Setup Defaults

Esc :Previous Menu

Enter :Select ▶ Sub-Menu

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 Overclocing** **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 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 this auto detection function.

**Spread Spectrum Selection** Allows you to enable / disable this Spread Spectrum Selection function.

#### 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.