

Minix780G Series
Socket AM2/AM2+ Processor Mainboard

User's Manual

Website: <http://www.jwele.com>

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Chapter 1 Introduction

1.1 Package Checklist

Thank you for choosing our product.

Please check the following packing and accessories, if there is any broken or part missing, please contact with your franchiser.

- HDD Cable X 1
- Rear I/O Panel X 1
- User's Manual X 1
- Driver/Utility CD X 1
- Serial ATA Signal Cable X 1
- Serial ATA Power Cable X 1 (Optional)

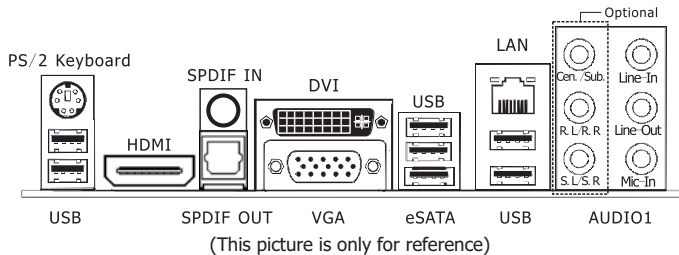
The items listed above are for reference only, and are subject to change without notice.

1.2 Specifications

CPU	<ul style="list-style-type: none"> - Supports AMD® Socket AM2+ / AM2 processors: - AMD Phenom™ / Athlon™ 64 FX / Athlon™ 64 X2 Dual Core / Athlon™ 64 / Sempron™ - Hyper Transport Bus 5200/2000 MT/s (HT 3.0/1.0) - Note: The board can not support 125W TDP processors. For details , please refer to the CPU support list on our homepage.
Main Chipset	<ul style="list-style-type: none"> - AMD® 780G + SB700 - Built in Radeon™ HD 3200 Graphics, DirectX® 10 Ready
Main Memory	<ul style="list-style-type: none"> - Supports 2 x 1.8V DDR2 SODIMM sockets supporting up to 4 GB of system memory - Supports Dual channel memory architecture - Onboard side-port DDR2 memory - Supports for DDR2 1066MHz/800MHz/667MHz memory modules
BIOS	<ul style="list-style-type: none"> - AMI BIOS, supports Plug&Play - Supports BIOS ROM Write Protect - Supports Advanced Power Management ACPI,STR - CPU temperature, Fan speed, System Voltage monitoring
Integrated Ports	<ul style="list-style-type: none"> - 1 x PS/2 Keyboard port - 1 x DVI port - 1 x HDMI port - 1 x VGA port - 1 x RJ45 port - 1 x eSATA port - 1 x COM port - 1 x IR port - 10 x USB 2.0 ports, USB 1.1 is compliant - 4 x SATA ports , Maximum Speed to 3GB/s,support for SATA RAID 0,1,10 - 1 x IDE connector, 2 x IDE devices could be connected, Supports ATA 133/100/66/33
Sound	<ul style="list-style-type: none"> - Onboard 6-channel/8-channel HD Audio Codec (Optional) - Front Panel Jumper, provides stereo MIC port on front panel
Onboard LAN	<ul style="list-style-type: none"> - Onboard 10/100/1000Mbps compatible LAN (Optional)
Expansion Slots	<ul style="list-style-type: none"> - 1 x PCI Express x4 slot(PCI Express 2.0)
Form Factor	Mini ITX (170mm*170mm)
Remark	- 1066 MHz memory support is dependent on the CPU being used

1.4 Connecting Rear Panel I/O Devices

The rear I/O part of these mainboard provides the following I/O ports:



- PS/2 Keyboard: Connect to PS/2 keyboard.
- HDMI: Connects to multimedia devices of HDMI protocol.
- SPDIF IN: This connector provides an S/PDIF-IN connection.
- SPDIF OUT: Connects to digital audio device.
- DVI: Connects to monitor input.
- VGA: Connects to monitor input.
- eSATA: Connect to peripheral SATA devices.
- LAN: Connects to Local Area Network.
- USB: Connects to USB devices such as scanner, digital speakers, monitor, mouse, keyboard, hub, digital camera, joystick etc.
- AUDIO1:
 - Cen./Sub. (Center / Subwoofer): Connect to the center and subwoofer channel in the 7.1 channel audio system.
 - R.L./R.R. (Rear Left / Rear Right): Connect to the rear left and rear right channel in the 7.1 channel audio system.
 - S.L./S.R. (Surround Left / Surround Right): Connect to the surround left and surround right channel in the 7.1 channel audio system.
 - Line-In: Connects to the line out from external audio sources.
 - Line-Out: Connects to the front left and front right channel in the 7.1-channel or regular 2-channel audio system.
 - Mic-In: Connects to the plug from external microphone.

Chapter 2 Hardware Setup

2.1 Choosing a Computer Chassis

- Choose a chassis big enough to install this mainboard.
- As some features for this mainboard are implemented by cabling connectors on the mainboard to indicators and switches or buttons on the chassis, make sure your chassis supports all the features required.
- If there is possibility of adopting some more hard drives, make sure your chassis has sufficient power and space for them.
- Most chassis have alternatives for I/O shield located at the rear panel. Make sure the I/O shield of the chassis matches the I/O port configuration of this mainboard. You can find an I/O shield specifically designed for this mainboard in its package.

2.2 Installing Mainboard

Most computer chassis have a base with many mounting holes to allow the mainboard to be securely attached, and at the same time, prevent the system from short circuits. There are two ways to attach the mainboard to the chassis base:

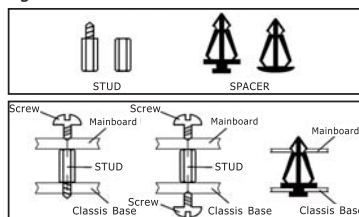
(1) with studs, or (2) with spacers.

Basically, the best way to attach the board is with studs. Only if you are unable to do this should you attach the board with spacers. Line up the holes on the board with the mounting holes on the chassis. If the holes line up and there are screw holes, you can attach the board with studs. If the holes line up and there are only slots, you can only attach with spacers. Take the tip of the spacers and insert them into the slots. After doing this to all the slots,

you can slide the board into position aligned with slots. After the board has been positioned, check to make sure everything is OK before putting the chassis back on.

To install this mainboard:

1. Locate all the screw holes on the mainboard and the chassis base.
2. Place all the studs or spacers needed on the chassis base and have them tightened.
3. Face the mainboard's I/O ports toward the chassis's rear panel.
4. Line up all the mainboard's screw holes with those studs or spacers on the chassis.
5. Install the mainboard with screws and have them tightened.



2.3 Installation of the CPU and CPU Cooler

Before installing the CPU, please comply with the following conditions:

1. Please make sure that the mainboard supports the CPU.
2. Please take note of the one indented corner of the CPU. If you install the CPU in the wrong direction, the CPU will not insert properly. If this occurs, please change the insert direction of the CPU.
3. Please add an even layer of heat sink paste between the CPU and CPU cooler.
4. Please make sure the CPU cooler is installed on the CPU prior to system use, otherwise overheating and permanent damage of the CPU may occur.
5. Please set the CPU host frequency in accordance with the processor specifications. It is not recommended that the system bus frequency be set beyond hardware specifications since it does not meet the required standards for the peripherals. If you wish to set the frequency beyond the proper specifications, please do so according to your hardware specifications including the CPU, graphics card, memory, hard drive, etc.

2.3.1 Installation of the CPU

1. Unlock the socket by pressing the lever sideways, then lift it up to a 90°.
2. Position the CPU above the socket such that the CPU corner with the gold triangle matches the socket corner with a small triangle.
3. Carefully insert the CPU into the socket until it fits place.

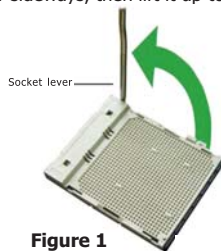


Figure 1

4. When the CPU is in place, push down the socket lever to secure the CPU. The lever clicks on the side tab to indicate that it is locked.



Figure 3

Figure 2



2.3.2 Installation of the CPU Cooler

For proper installation, please kindly refer to the instruction manuals of your CPU Cooler.

⚠ We suggest there should be active cooling to the chipset area in order to let the motherboard function properly, completely enclosed system environment without adequate air flow will result in chipset overheating, which is not recommended.

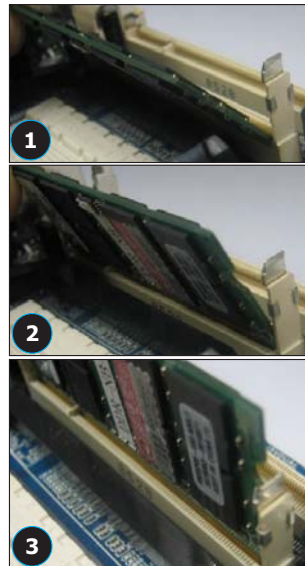
2.4 Installation of Memory Modules

This mainboard provides two 200-pin DDRII (Double Data Rate) SODIMM slots and supports Dual Channel Memory Technology. For dual channel configuration, you always need to install two identical (the same brand, speed, size and chip-type) memory modules in the DDRII DIMM slots to activate Dual Channel Memory Technology. Otherwise, it will operate at single channel mode.

To install system memory:

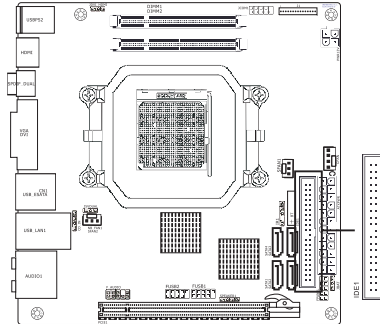
1. Power off the computer and unplug the AC power cord before installing or removing memory modules.
2. Locate the DIMM slot on the board.
3. Insert the SODIMM module at a 45 degree angle.
4. Push the SODIMM module back towards the board until the clips lock the module in place.
5. To remove the DIMM modules, push the two ejector tabs on the slot outward simultaneously, and then pull out the DIMM module.

⚠ Static electricity can damage the electronic components of the computer or optional boards. Before starting these procedures, ensure that you are discharged of static electricity by touching a grounded metal object briefly.



2.5 Connecting Peripheral Devices

2.5.1 IDE Disk Drive Connectors



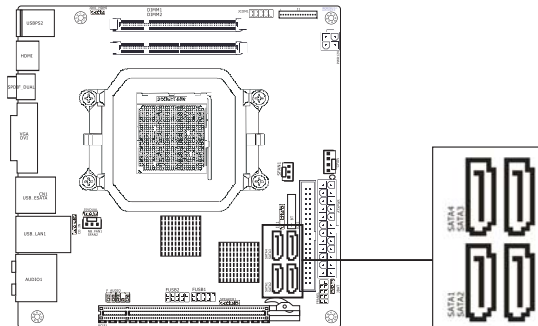
Each of the IDE port connects up to two IDE drives at Ultra ATA 133/100/66/33 mode by one 40-pin, 80-conductor, and 3-connector Ultra ATA/66 ribbon cables.

Connect the single end (blue connector) at the longer length of ribbon cable to the IDE port of this board, the other two ends (gray and black connector) at the shorter length of the ribbon cable to the connectors of your hard drives.

⚠ Make sure to configure the "Master" and "Slave" relation before connecting two drives by one single ribbon cable. The red line on the ribbon cable must be aligned with pin-1 on both the IDE port and the hard-drive connector.

2.5.2 Serial ATA Connectors

Each SATA connector serves as one single channel to connect one SATA device by SATA cable.

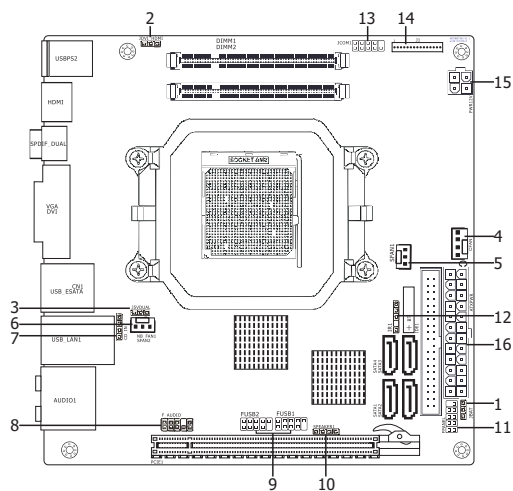


2.5.3 PCI Express slots

PCIE1 is for PCI Express X4 slot.

Chapter 3 Jumpers & Headers Setup

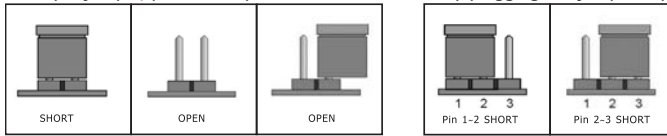
Quick Components Guide



NO.	Layout	Page NO.	No.	Layout	Page NO.
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2	JDVI_HDMI	13	10	SPEAKER1	15
3	J5VDUAL	14	11	FPANEL	15
4	CFAN	14	12	IR1	15
5	SFAN1	14	13	JCOM1	16
6	SFAN2	14	14	J1	16
7	CD_IN	14	15	PWR12V	16
8	F_AUDIO	14	16	ATXPWR	16

Checking Jumper Settings

- For a 2-pin jumper, plug the jumper cap on both pins will make it CLOSE (SHORT). Remove the jumper cap, or plug it on either pin (reserved for future use) will leave it at OPEN position.
- For 3-pin jumper, pin 1~2 or pin 2~3 can be shorted by plugging the jumper cap in.



How to identify the PIN1 jumpers?

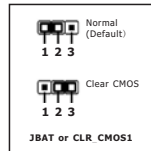
Please check the mainboard carefully, the PIN1 is marked by "1" or white thick line.

1-JBAT(CMOS Memory Clearing Header)

The time to clear the CMOS memory occurs when (a) the CMOS data becomes corrupted, (b) you forgot the supervisor or user password preset in the BIOS menu, (c) you are unable to boot-up the system because the CPU ratio/clock was incorrectly set in the BIOS menu, or (d) whenever there is modification on the CPU or memory modules.

This header uses a jumper cap to clear the CMOS memory and have it reconfigured to the default values stored in BIOS.

- Pins 1 and 2 shorted (Default): Normal operation.
- Pins 2 and 3 shorted: Clear CMOS memory.



2-JDVI_HDMI(DVI/HDMI Setting Header)

1-2 (Default)	Auto	While JDVI_HDMI jumper be shorted #pin 1-2, it will auto detect HDMI or DVI device, but if some DVI or HDMI device can't be detected, please be shorted #pin 2-3.
2-3	DVI/HDMI EN	

3-J5VDUAL(5VDUAL Setting Header)

1-2 (Default)	Enable	2-3 pin can not support the keyboard post function,need to set 1~2 pin enable the function.
2-3	Disable	

4/5/6-CFAN/SFAN1/SFAN2(Fan Power Connectors)

CFAN:

Pin No.	Definition
1	GND
2	+12V
3	RPM
4	Control

SFAN1/SFAN2:

Pin No.	Definition
1	GND
2	+12V
3	RPM

⚠ These fan connectors are not jumpers.
DO NOT place jumper caps on these connectors.

7-CD_IN(Internal Audio Connectors)

Pin No.	Definition
1	CD-L
2	GND
3	GND
4	CD-R

8-F_AUDIO(Front Panel Audio Connection Header)

Pin No.	Definition	Pin No.	Definition
1	PROT1L	6	SENSE1_RETURN
2	AGND	7	SENSE_SEND
3	PROT1R	8	NC
4	PRESENCE#	9	PORT2L
5	PORT2R	10	SENSE2_RETURN



9-FUSB1/FUSB2(Additional USB Port Headers)

Pin No.	Definition	Pin No.	Definition
1	VCC	2	VCC
3	Data 0-	4	Data 1-
5	Data 0+	6	Data 1+
7	Ground	8	Ground
		10	NC

**10/11-SPEAKER1/FPANEL(Speaker Headers & Front Panel Switches)**

HDD_LED (Hard Driver LED Header)

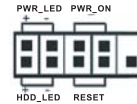
Connect the HDD LED cable to these PINs, in order to see the HDD status RESET (Reset Control)

This connector connects to the case-mounted reset switch for rebooting your computer without having to turn off your power switch. This is a preferred method of rebooting in order to prolong the life of the system's power supply.

PWR-ON (Power Button)

SPEAKER (Speaker)

This 4-pin connector connects to the case-mounted speaker. You should follow the instruction of the speaker cable.



SPEAKER1:

Pin No.	Definition
1	SPK +
2	NC
3	NC
4	SPK -

12-IR1(IR Connection Header)

Connect the IrDA cable (if available) to this IR connector.

Pin No.	Definition
1	VCC
2	NC
3	IRRX
4	GND
5	IRTX



13-JCOM1(Serial Port Header)

This JCOM1 header supports a serial port module.

Pin No.	Definition	Pin No.	Definition
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	CTS	8	RTS
9	RI		

**14-J1(Multifunctional device connector) (Optional)**

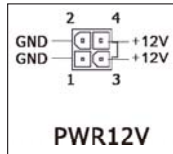
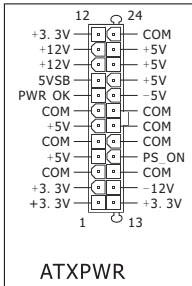
The connector may connect external multifunctional device, about detail connect way and definition, please refer to external connect device's manual.

15/16-PWR12V/ATXPWR(4-pin 12V Power Connector/ATX 24-pin Power Connector)

This mainboard provides two power connectors to connect power supplier.

This connector allows you to connect an ATX 24-pin power supply. To connect the ATX 24-pin power supply, make sure the plug of the power supply is inserted in the proper orientation and the pins are aligned. Then push down the power supply firmly into the connector.

You may use the 20-pin ATX power supply as you like. If you'd like to use the 20-pin ATX power supply, please plug your power supply along with pin 1 & pin 13.



Chapter 4 BIOS Setup Utility

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.

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 <F1> key after "POST" is complete (before OS is loaded). After the first BIOS be setupped(or loaded default values) and save, the key will be pressed if you will enter BIOS setup menu.

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 BIOS Setup — CMOS Setup Utility



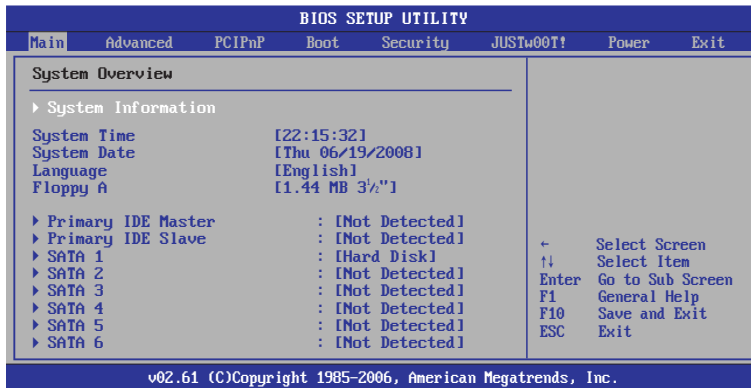
- In order to increase system stability and performance, our engineering staff is constantly improving the BIOS menu. The BIOS setup screens and descriptions illustrated in this manual are for your reference only, and may not completely match with what you see on your screen.
- Do not change the BIOS parameters unless you fully understand its function.

4.5.1 CMOS Setup Utility

After powering up the system, the BIOS message appears on the screen, when the first time or when CMOS setting wrong, there is following message appears on the screen, but if the first BIOS be setuped (or loaded default values) and save, the key will be pressed if you will enter BIOS setup menu.

Press F1 to Run SETUP

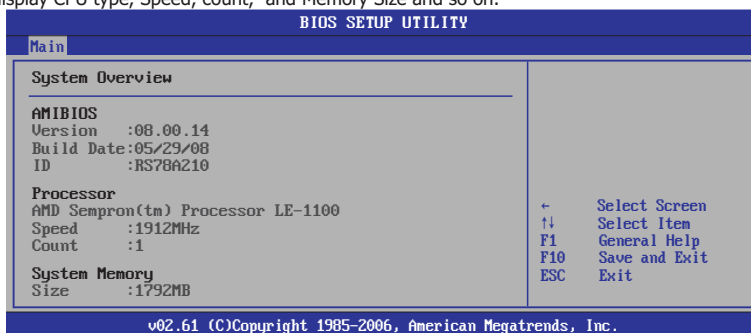
If this message disappears before you respond, restart the system by pressing <Ctrl> + <Alt> + keys, or by pressing the reset button on computer chassis. Only when these two methods should be fail that you restart the system by powering it off and then back on. After pressing <F1> or key, the main menu appears.



This is the System Overview, The System Time, System Date, Primary IDE information, SATA port information.

▶ **System Information**

Please Enter this submenu, this will be display BIOS version, build date, ID number, also will display CPU type, Speed, count, and Memory Size and so on.



- **Back to Main Setup Menu**
- **System time**
This item sets the time you specify(usually the current time)in the format of [Hour],[Minute]and [Second].
- **System date**
This item sets the date you specify(usually the current date in the format of [Month],[Date],and [Year].
- **Floppy A**
Allows you to selects the type of floppy disk drive installed in your system. If you do not install a floppy disk drive, set this item to None.
- **Language**
Allows you to selects the current default language used by the BIOS.
- ▶ **Primary IDE Master/Slave**
This item sets the status of auto detection of IDE devices while entering setup, and BIOS will auto detects the presence of IDE devices.
- ▶ **SATA Port 1 /2/3/4/5/6**
This item sets the status of auto detection of SATA devices while entering setup, and BIOS will auto detects the presence of SATA devices.

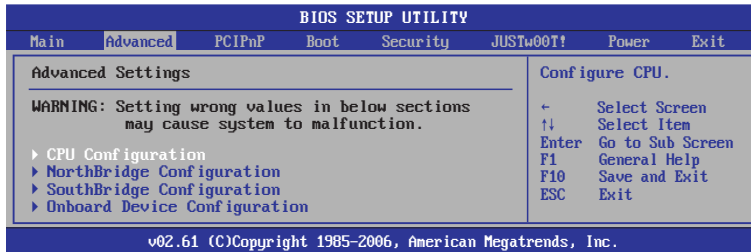
4.5.2 Control Keys

Press F1 to pop up a small help window that describes the appropriate keys to use and the possible selections for the highlighted item.

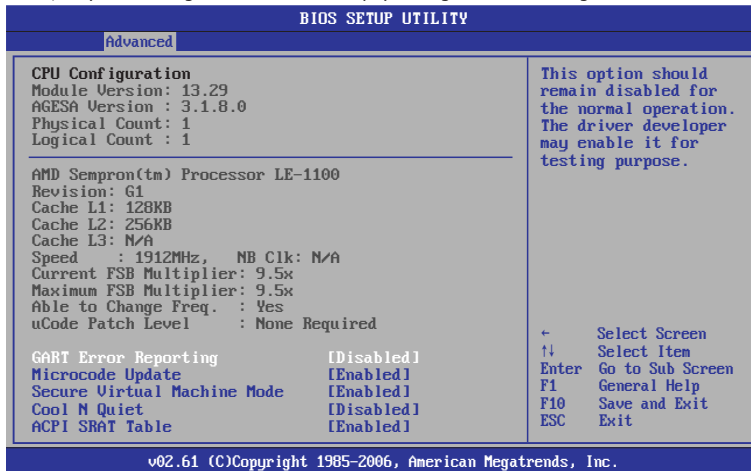
Please check the following table for the function description of each control key.

Control Key(s)	Function Description
← / →	Move cursor left or right to select Screens
↑ / ↓	Move cursor up or down to select items
+ / - / PU / PD	To Change option for the selected items
<Enter>	To bring up the selected screen
<ESC>	Main Menu - Quit and not save changes into CMOS Status Page Setup Menu and Option Page Setup Menu - Exit current page and return to Main Menu
<F1>	General help
<F2/F3>	Change Colors
<F5>	Restore the previous CMOS value from CMOS, only for Option Page Setup Menu
<F7>	Discard Changes
<F8>	Load Failsafe Defaults
<F9>	Load Optimal Defaults
<F10>	Save configuration changes and exit setup

4.5.3 Advanced Setting



This submenu including these configurations, such as CPU, Northbridge, Southbridge, Onboard Device, only CPU Configuration submenu display dialog box as following.



This is CPU related parameter and CPU setting.

▶ **CPU Configuration**

Click <Enter> key to enter its submenu, it will be display configured CPU information, including Module Version, Manufacturer , CPU type, Frequency, FSB Speed, Cache L1 , Cache L2 and so on.

• **Cool N Quiet**

Enabled :Lets the AMD Cool N Quiet driver dynamically adjust the CPU clock and VIA to reduce heat output from your computer and its power consumption.

Disabled: Disables this function(Default).

▶ **North Bridge Configuration**

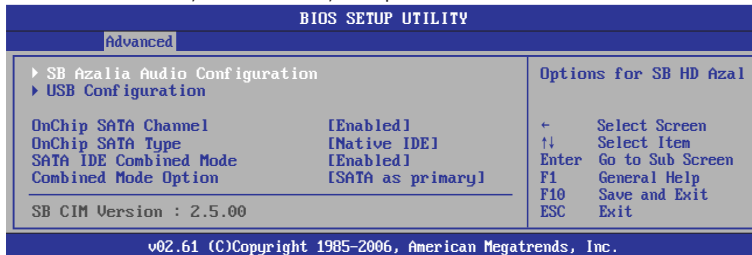
Click <Enter> key to enter its submenu, it will be display north bridge chipset configuration, this item sets the initiate graphic adapter, internal graphics mode select and PEG port selection.

Under this option, there is HDMI function setting for Enabled or Disabled.

NorthBridge Configuration -- >RS780 Configuration -- >Internal Graphics Configuration--> NB Azalia(or HDMI Audio) sets as Enabled or Disabled(Default).

▶ **South Bridge Configuration**

Click <Enter> key to enter its submenu, it will be display south bridge chipset configuration, this item sets USB functions, audio controller, PCIE ports selection.



▶ **SB Azalia Audio Configuration**

Click <Enter> key to enter its submenu.

• **HD Audio Azalia Device**

Sets the HD Audio has Enabled or Disabled state.

• **HD Onboard PIN Config**

Enabled : Display the option for Azalia Front Panel in BIOS.

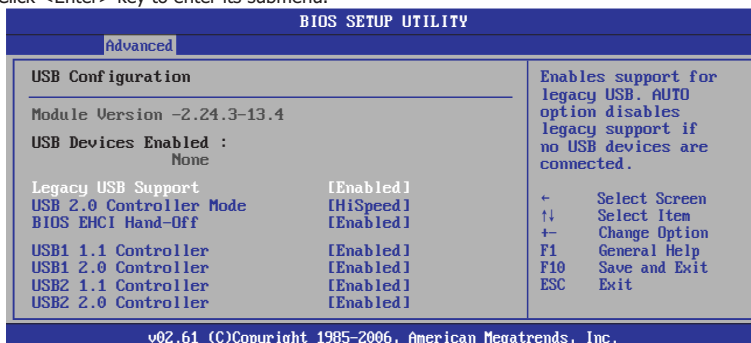
Disabled: Disabled the option for Azalia Front Panel in BIOS.

• **Azalia Front Panel**

Sets the sound function for front panel Enabled or Disabled.

▶ **USB Configuration**

Click <Enter> key to enter its submenu.



• **Legacy USB Support**

Enabled or Disabled Legacy USB option, and Auto option disables legacy support if no USB devices are connected.

• **USB 2.0 Controller Mode**

Allow you to selects the HiSpeed(480Mbps) or FullSpeed(12Mbps).

• **BIOS EHCI Hand-Off**

This is a workaround for OSES without EHCI hand-off support. The EHCI ownership change should claim by EHCI driver.

• **USB1 1.1 Controller**

Allow you to Enable/Disable USB1 1.1 Controller.

• **USB1 2.0 Controller**

Allow you to Enable/Disable USB1 2.0 Controller.

• **USB2 1.1 Controller**

Allow you to Enable/Disable USB2 1.1 Controller.

• **USB2 2.0 Controller**

Allow you to Enable/Disable USB2 2.0 Controller.

• **Back to South Bridge Configuration Setup Menu**

• **OnChip SATA Channel**

This item allows users to enable or disable the SATA controller.

• **OnChip SATA Type**

Enables or disables RAID for the SATA controller or configures the SATA controller to AHCI mode.

IDE: Disables RAID for the SATA controller and configures the SATA controller to PATA mode.
 AHCI: Configures the SATA controller to AHCI mode. Advanced Host Controller Interface(AHCI) is an interface specification that allows the storage driver to enable advanced Serial ATA features such as Native Command Queuing and hot plug.

RAID/IDE: Enables RAID for the SATA controller. (The IDE controller still operates in PATA mode.)

- **SATA IDE Combined Mode**

Available options: Disabled, Enabled

- **Combined Mode Option**

Available options: SATA as primary, SATA as secondary

- **Back to Advanced Setup Menu**

- ▶ **Onboard Device Configuration**

Click <Enter> key to enter its submenu.

BIOS SETUP UTILITY		
Advanced		
Onboard Device Configuration		
Onboard PCI IDE Controller	[Both]	DISABLED: disables the integrated IDE Controller. PRIMARY: enables only the Primary IDE Controller. SECONDARY: enables only the Secondary IDE Controller. BOTH: enables both IDE Controllers.
Hard Disk Write Protect	[Disabled]	
IDE Detect Time Out (Sec)	[35]	
ATA(P1) 80Pin Cable Detection	[Host & Device]	
Onboard Floppy Controller	[Enabled]	
Serial Port1 Address	[3F8/IRQ4]	+ Select Screen
Serial Port2 Address	[2F8/IRQ3]	↑↓ Select Item
Serial Port2 Mode	[IrDA]	+ Change Option
IR I/O Pin Select	[SINB/SOUTB]	F1 General Help
IR Duplex Mode	[Half Duplex]	F10 Save and Exit
Onboard Lan Control	[Enabled]	ESC Exit
Onboard Lan Boot Rom	[Disabled]	

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These options allow you to Enabled/Disabled for IDE,Floppy Controller, onboard LAN Control set the addresses for Serial Port1& Port2.

- **Serial Port 1/2 Address**

Enables or disables the first serial port and specifies its base I/O address and corresponding interrupt.

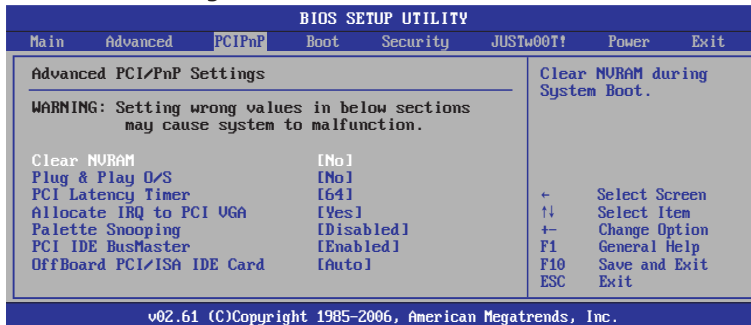
- **Onboard Lan Control**

This option allows you whether enable the onboard LAN.

- **Onboard Lan Boot Rom**

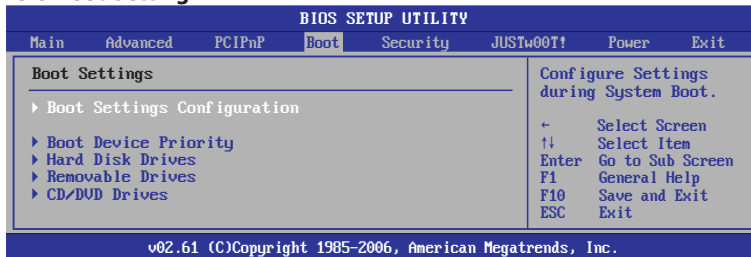
These items can change Boot ROM of the LAN chipset.

4.5.4 PCIPnP Setting



- **Clear NVRAM**
This item for clearing NVRAM during system boot.
- **Plug & Play O/S**
This item lets the BIOS configure all the devices in the system or lets the operating system configure plug and play (PnP) devices not required for boot if your system has a Plug and Play operating system.
- **PCI Latency Timer**
This item sets value in units of PCI clocks for PCI device latency timer register.
- **Allocate IRQ to PCI VGA**
This item assigns IRQ to PCI VGA card if card requests IRQ or doesn't assign IRQ to PCI VGA card even if card requests an IRQ.
- **Palette Snooping**
This item informs the PCI devices that an ISA graphics device is installed in the system so the card will function correctly.
- **PCI IDE BusMaster**
This item uses PCI busmastering for BIOS reading / writing to IDE drives.
- **OffBoard PCI/ISA IDE Card**
This item works for most PCI IDE cards, some PCI IDE cards may require this to be set to the PCI slot number that is holding the card.

4.5.5 Boot Setting



▶ Boot Settings Configuration

Click <Enter> key to enter its submenu.



- **Quick Boot**

This item allows you to speed up Power On Self Test (POST) after you power on the computer. If this is set to [Enabled], BIOS will shorten or skip some check items during POST.

- **Quiet Boot**

It's for sets post menu and detect device.

- **AddOn ROM Display Mode**

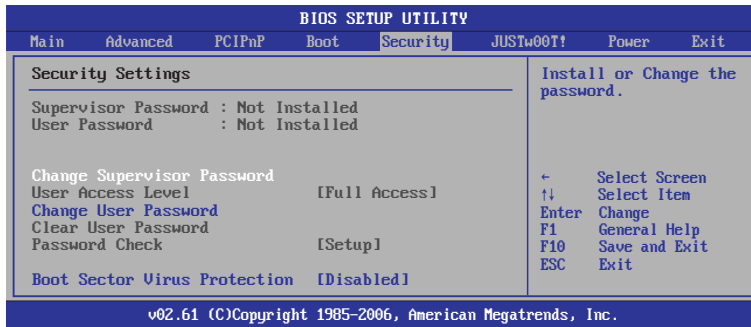
Sets the display mode for option ROM.

- **Bootup Num-Lock**


Allows you to select the power-on state for the NumLock.

- **Wait For 'F1' If Error**
When set to Enabled, the system waits for the F1 key to be pressed when error occurs.
- **Hit 'Del' Message Display**
When set to Enabled, the system displays the message "Press DEL to run Setup" during POST.
- **Interrupt 19 Capture**
When set to Enabled, this function allows the option ROMs to trap Interrupt 19.
- **Back to Boot Setup Menu**
- ▶ **Boot Device Priority**
Click <Enter> key to enter submenu, it will be display specifies the boot sequence from the available devices.
- ▶ **Hard Disk Drives**
Click <Enter> key to enter submenu, it will be display specifies the boot device priority sequence from available hard disk drives.
- ▶ **Removable Drives**
Click <Enter> key to enter submenu, it will be display specifies the boot device priority sequence from available removable drives.
- ▶ **CD/DVD Drives**
Click <Enter> key to enter submenu, it will be display specifies the boot device priority sequence from available CD/DVD drives.

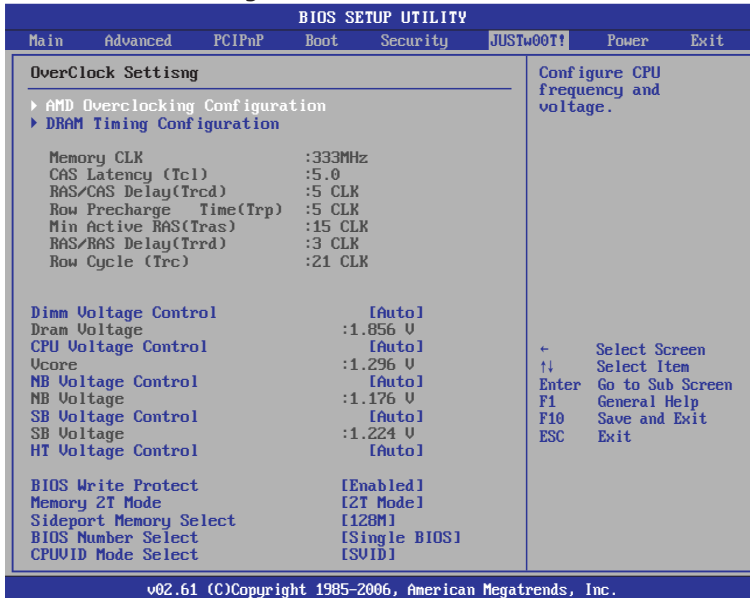
4.5.6 Security Setting



This item allows you to Chage Supervisor/User Password, Type the password, up to eight characters, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked toconfirm the password. Type the password again and press <Enter>.

 **Note:** Don't forget your password. If you forget the password, you will have to open the computer case and clear all information in the CMOS before you can start up the system. But by doing this, you will have to reset all previously set options.

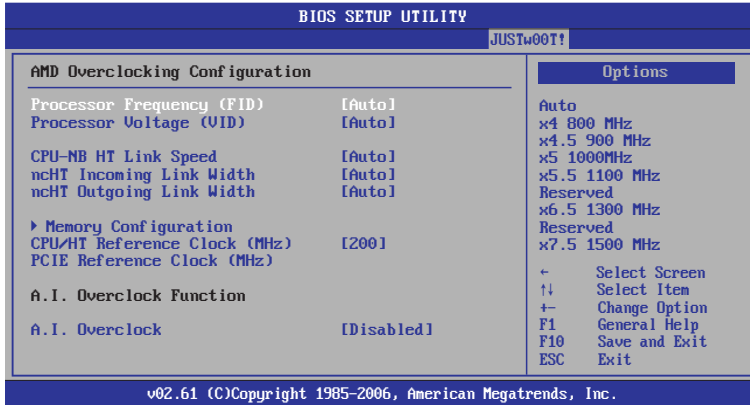
4.5.7 JUSTw00T! Setting



▶ AMD Overclocking Configuration

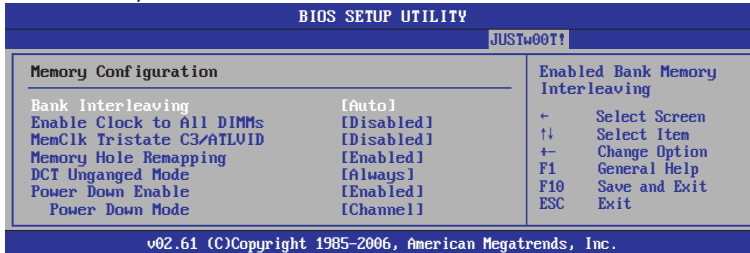
This item allows you to set processor frequency, processor voltage, CPU-NB HT link speed, nCHT incoming link width, nCHT outgoing link width, memory configuration and CPU/HT reference clock.

The option of CPU/HT Reference Clock allows you to overclock CPU clock, the Min is 200MHz, the Max is 400, keyin "+" / "-" to select clock.



▶ **Memory Configuration**

Click <Enter> key to enter its submenu.



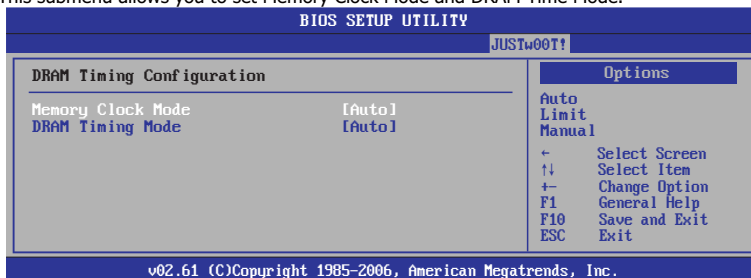
• **Bank Interleaving**

Sets the bank interleaving feature.

• **Enable Clock to All DIMMs**


This item is to enable or disable the unused clocks to DIMMs even the memory slots are not populated.

- **Bank Interleaving**
Sets the bank interleaving feature.
- **Enable Clock to All DIMMs**
This item is to enable or disable the unused clocks to DIMMs even the memory slots are not populated.
- **MemClk Tristate C3/ATLVID**
Enables or disables the MemClk Tri-Stating during C3 and Alt VID.
- **Memory Hole Remapping**
Enables or disables the memory remapping around the memory hole.
- **DCT Unganged Mode**
This item allows the selection of the unganged DRAM mode (64-bit width).
- **Power Down Enable**
This item is to enable or disable the DDR power down mode.
- **Power Down Mode**
Available options: Channel, Chip Select
- **Back to JUSTw00T! Setup Menu**
- **PCIE Reference Clock (MHz)**
It's for adjust PCIE frequency.
- **A.I. Overclock**
CPU frequency intelligent setting.
- ▶ **DRAM Timing Configuration**
This submenu allows you to set Memory Clock Mode and DRAM Time Mode.

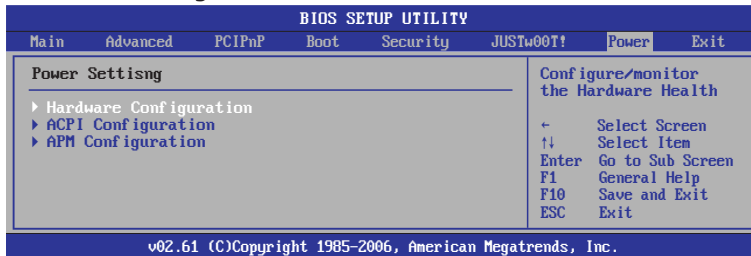


- **Memory Clock Mode**
This item is to select the memory clock mode.
- **DRAM Timing Mode**
This item is to select the DRAM Timing mode.

- **Back to JUSTw00T! Setup Menu**
- **Dimm Voltage Control**
This item allows you to adjust the DRAM Voltage.
- **Dram Voltage**
This field displays the current voltage of DRAM.
- **CPU Voltage Control**
This item allows you to adjust the CPU Voltage.
- **Vcore**
This field displays the current voltage of CPU.
- **NB Voltage Control**
This item allows you to adjust the NB Voltage.
- **NB Voltage**
This field displays the current voltage of NB.
- **SB Voltage Control**
This item allows you to adjust the SB Voltage.
- **SB Voltage**
This field displays the current voltage of SB.
- **HT Voltage Control**
This item allows you to adjust the HT Voltage.
- **BIOS Write Protect**
This is for BIOS write function, when this option set as Enabled state, then it won't going on flash bios, or backup BIOS. then it's need to sets disabled(Default).
Enable: BIOS ROM Write Protect. Disable: BIOS ROM Not Write Protect.
- **Memory 2T Mode**
Available options: Auto, 1T Mode, 2T Mode
- **Sideport Memory Select**
Buide in sideport memory setting.
- **BIOS Number Select**
Single BIOS and double BIOS switch.
- **CPUID Mode Select**
Available options: SVID, PVID

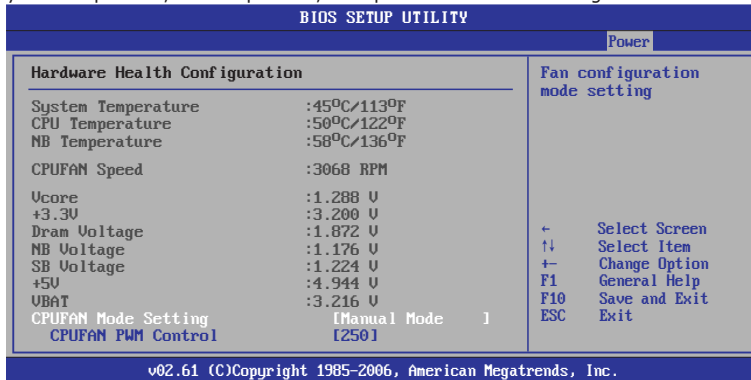
 **Incorrectly using these features may result in system instability or corruption. Doing a overclock or overvoltage on CPU, chipsets and memory modules may result in damages or shortened life expectancy to these components. Please be aware that the menu items are for power users only.**

4.5.8 Power Setting



▶ Hardware Health Configure

Click <Enter> key to enter its submenu, it will be display hardware health configuration, including System temperature, CPU temperature, FAN speed and all kinds of voltages.



- **CPUFAN Mode Setting**

Available options: Manual Mode, Thermal Cruise Mode, Speed Cruise Mode

- **CPUFAN PWM Control**

According to PWM out configuration adjustable CPU Fan speed.

▶ **ACPI Configuration**

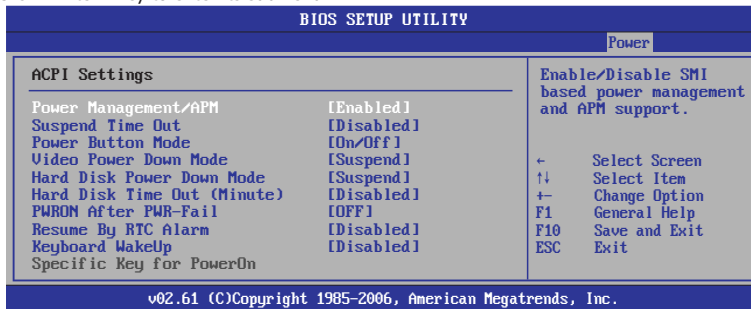
These options allow you to manage General/Advanced/Chipset ACPI Configuration, for the General ACPI Advanced Configuration, Suspend mode there are three mode for selection, S1(POS), S3(STR),and AUTO, the function explains to following:

S1(POS): Enables the system to enter the ACPI S1(Power on Suspend)sleep state(default), In S1 sleep state, the system appears suspended any stays in a low power mode The system can be resumed at any time.

S3(STR): Enables the system to enter the ACPI S3(Suspend to RAM)sleep state. In S3 sleep state. When signaled by a wake-up device or event, the system resumes to its working state exactly where it was left off.

▶ **APM Configuration**

Click <Enter> key to enter its submenu.



• **Power Management/APM**

Enable or disable APM.

• **Suspend Time Out**

All device will be turn off include CPU if system has not to activated in setting time.

• **Power Button Mode**

Allows the system to go into On/Off mode or suspend mode when the power button is pressed.

• **Video Power Down Mode**

Available options: Disabled, Standby, Suspend

• **Hard Disk Power Down Mode**

Available options: Disabled, Standby, Suspend

• **Hard Disk Time Out (Minute)**

Available options: Disabled, 1~15

- **PWRON After PWR-Fail**

This item selects the system action after an AC power failure.

[Off]: When power returns after an AC power failure, the system's power remains off.

You must press the Power button to power-on the system.

[On]: When power returns after an AC power failure, the system's power will be powered on automatically.

[Former-Sts]: When power returns after an AC power failure, the system will return to the state where you left off before power failure occurred. If the system's power is off when AC power failure occurs, it will remain off when power returns. If the system's power is on when AC power failure occurs, the system will power-on when power returns.

- **Resume By RTC Alarm**

Allows you to enable or disable RTC to generate a wake event. When this item is set to Enabled, the items RTC Alarm Date, RTC Alarm Hour, RTC Alarm Minute, and RTC Alarm Second appear with set values.

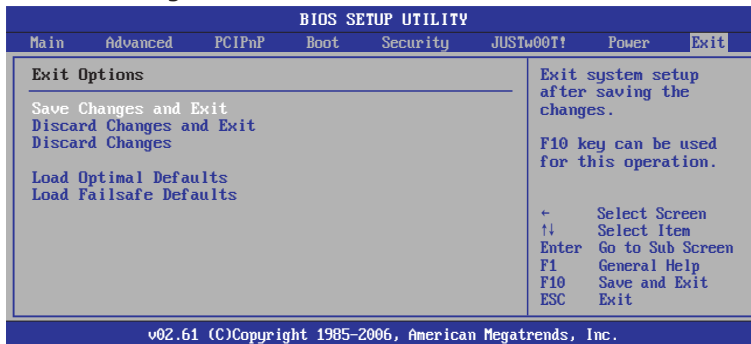
- **Keyboard WakeUp**

PS/2 keyboard activity wakes the computer from an ACPI S1 or S3 state.

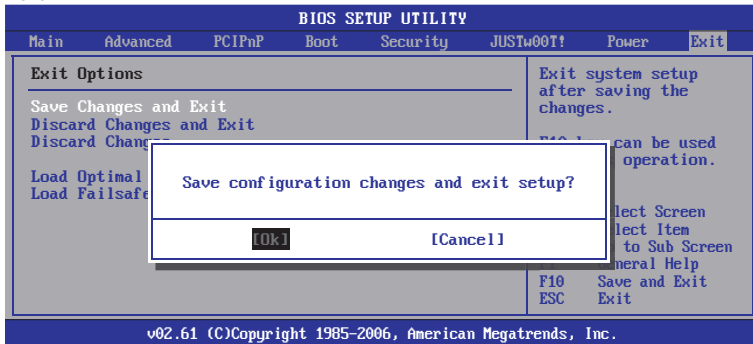
- **Specific Key for PowerOn**

When the Power On function is set to Password, use this item to set the password.

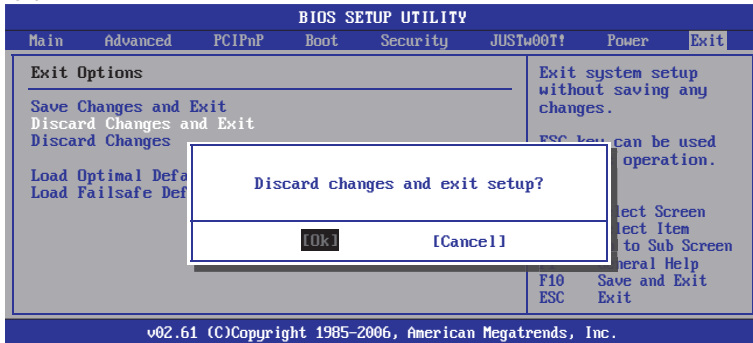
4.5.9 Exit Setting



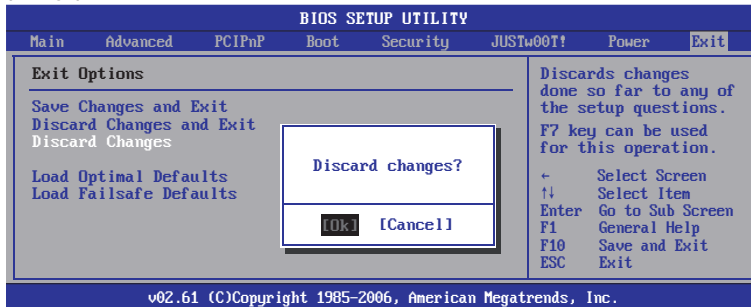
Highlight this item and select <Ok>,then press <Enter> to save the changes that you have made in the Setup Utility and exit the Setup Utility. Or press <Cancel> to return to the main menu.



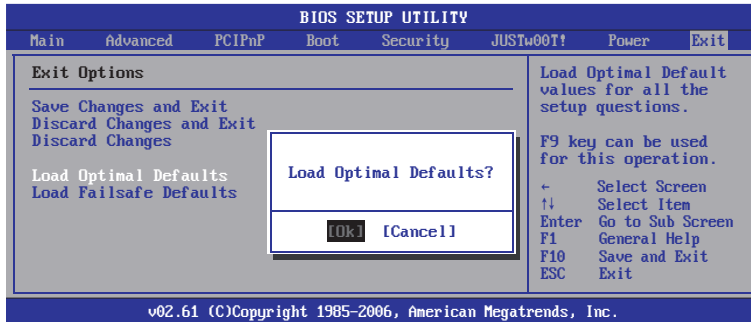
Highlight this item and select <Ok>,then press <Enter> to discard any changes that you have made in the Setup Utility and exit the Setup Utility. Or press <Cancel> to return to the main menu.



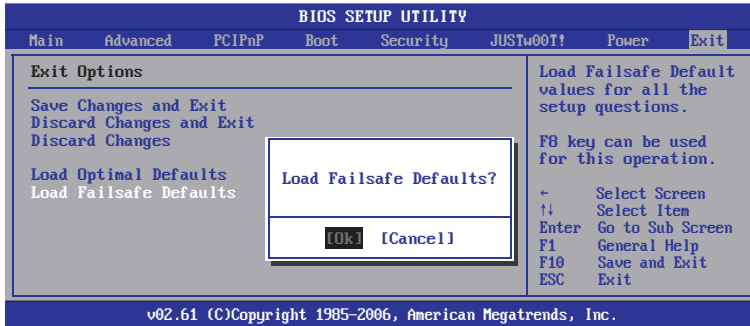
Select <Ok> and press <Enter> to discard changes and exit, or press <Cancel> to return to the main menu.



This option opens a dialog box that let you install optimized defaults for all appropriate items in the Setup Utility. Select <Ok> and then <Enter> to install the defaults. select <Cancel> and then <Enter> to not install the defaults. The optimized defaults place demand on the system that may be greater than the performance level of the components, such as the CPU and the memory. You can cause fatal errors or instability if you install the optimized defaults when your hardware does not support them. If you only want to install setup defaults for a specific option, select and display that option, and then press <F9>.



This option opens a dialog box that lets you install fail-safe defaults for all appropriate items in the Setup Utility: Select <Ok> and the <Enter> to install the defaults. Select <Cancel> and then <Enter> to not install the defaults. The fail-safe defaults place no great demand on the system and are generally stable. If your system is not functioning correctly, try installing the fail-safe defaults as a first step in getting your system working properly again. If you only want to install fail-safe defaults for a specific option, select and display that option, and then press <F8>.



Chapter 5 Driver Installation

Check your package and there is Driver CD included. This CD consists of all drivers you need. In addition, this CD also include an auto detect software which can tell you which hardware is installed, and which drivers needed so that your system can function properly.

Insert CD into your CD-ROM drive and the menu should appear as below. If the menu does not appear, double-click My Computer / double-click CD-ROM drive or click Start / click Run / type X:\AUTORUN.EXE (assuming X is your CD-ROM drive).



(This picture is only for reference)

From the Main MENU you may make 4 selections:

1. +Mainboard Driver Installation Utility: Click to enter the driver installation menu.
2. +Useful Software Utility: Click to enter the utilities installation menu.
3. >Browse CD: Click to browse the contents of this "Driver & Utility CD".
4. Exit: Click to exit this installation menu.

When you choose **Mainboard Driver installation Utility**, the drivers menu should appear as below:



(This picture is only for reference)

From the Drivers MENU you may make 3 selections:

1. **ATI Chipset Installation Utility (Such as ATI Graphic Card)**
2. **Onboard LAN Driver**
3. **Audio Driver**

FCC WARNING

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: The manufacturer is not responsible for and radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.