VG33

MAINBOARD
MANUAL

Handling Precautions

Warning:
1. Static electricity may cause damage to the integrated circuits on the motherboard. Before handling any motherboard outside of its protective packaging, ensure that there is no static electric charge in your body.
2. There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer.
3. Discard used batteries according to the manufacturer's instructions.
4. Never run the processor without the heatsink properly and firmly attached. PERMANENT DAMAGE WILL RESULT!

Observe the following basic precautions when handling the motherboard or other computer components:

- Wear a static wrist strap which fits around your wrist and is connected to a natural earth ground.

- Touch a grounded or anti-static surface or a metal fixture such as a water pipe.

- Avoid contacting the components on add-on cards, motherboards, and modules with the *golden fingers* connectors plugged into the expansion slot. It is best to handle system components by their mounting brackets.

The above methods prevent static build-up and cause it to be discharged properly.

Trademark

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Handling Precautions

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Chapter 3   BIOS Setup

Overview

The new microATX 1stMainboard® VG33 supports a full range of the latest generation Intel® Pentium®4 CPUs. The leading edge chipset Intel® 845GE MCH was designed for coworking with Pentium® 4 in the mPGA478 CPU socket based on VRM 9.X spec. and 533 MHz FSB. Being built by the leading edge technology, the Intel Pentium® 4 processors provide a significant performance over previous Pentium® III processors. Onboard two DDR SDRAM sockets support DDR333 SDRAM for up to 2GB memory capacity. The ICH4 brings the ATA100 IDE performance and its high-speed interface further ensures that data transfer speeds are improved, especially for six USB 2.0 peripheral devices. The board also features onboard audio with either 2-channel or 5.1-channel.

The board comes with a versatile range of I/O features such as 2 serial ports, three optional 1394 ports (pinheaders onboard), 1 parallel port, 1 LAN, 1 IR, 1 PS/2 mouse and keyboard connector, 6 USB 2.0 ports (two of them are in one pinheader), 1 media connector (front audio pinheader, Line-in, Line-out and Mic-in). Ample expansion is available through 3 PCI, 1 AGP slot to meet the requirement for fully making use of the P4 CPU benefits in internet applicatons, video/3D graphics performance, and so forth.

Other key features are Remote On/Off, Auto Power Failure Recovery, integrated temperature monitoring and system fan control. Included also is a CD, 1st Utilities, with enhanced drivers.

Package Checklist

If you discover any item below was damaged or lost, please contact your vendor.

☑ The mainboard   ☑ This user manual

☑ One FDD cable   ☑ Software CD

☑ One ATA/100 cable   ☑ I/O shilding

NOTE: lst Utilities CD that contains patch files, onboard video/audio chip drivers, related online help and other useful information can be found in your mainboard package.

*Please install it right after your Windows operating system installation is done.*Place your **lst Utilities** CD in the drive, an operating menu will appears in your monitor. Please select *Auto Installation*. It will automatically detect which software tools (patch files, drivers) that the mainboard needs. Press **OK** button to go through the whole installation procedure in a very straight forward and easy way. It also provides you with a custom way to select wanted patch files and software drivers that for onboard chips use. **The top menu of the lst Utilities CD lists all the functions that allowed by this board.**

NOTE: About the USB 2.0 driver.
if you use-
Windows XP + Sevice Pack 1: it offers the driver.
Windows XP: download it from Microsoft web site.
Windows 2000/98SE/ME:
driver in **lst Utilities** CD, please manually installed it.

The VG33 Mainboard

3 PCI Slots   AGP Slot   Integrated I/O Connectors

1394 Ports (optional)   Intel 82801DB (ICH4)   Intel 845GE   Primary/ Secondary IDE Connector   2 DDR DIMM Sockets   478-Pin CPU Socket

Floppy Drive Connector
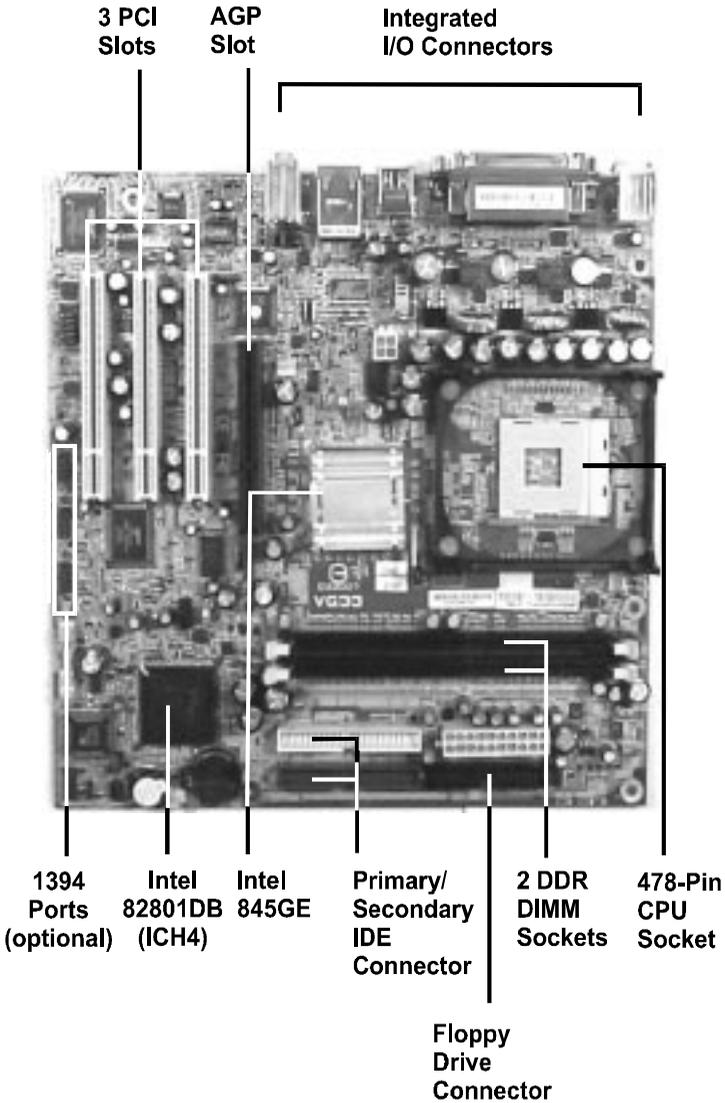
Main Features

■ Easy Installation

BIOS with support for Plug and Play, auto detection of IDE hard drives, LS-120 drives, IDE ZIP drives, Windows 98SE, Windows ME, Windows NT, Windows 2000, Windows XP, and OS/2.

■ Leading Edge Chipset

Intel® 845GE supports integrated graphic (UMA only) features that of 32 bpp true color and flat panel monitors. The ICH4 provides SMBus 2.0 support, 20-bit AC97 audio, 6 USB 2.0 ports, and Ultra ATA100 IDE performance between mainboard and peripheral devices.

■ Versatile Main Memory Support

Accepts up to 2 GB DDR SDRAM using two memory sockets for allowing that from 64, 128, 256, 512MB, 1GB with support for lightenning-fast DDR SDRAM (DDR 200/266/333 MHz).

■ Intel P4 Processors Support

1.4 G to 2.5 GHz and up* (FSB 400) / Celeron 1.7 -2.0 GHz and up* (FSB 400)
2.0 G to 3.06 GHz and up* (FSB 533)
(*: not tested yet)

■ AGP and PCI Expansion Slots

One AGP Bus that supports AGP (only 1.5V AGP 4X card allowed) and three PCI Bus expansion slots provided the room to install a full range of add-on cards.

■ Super Multi Input/Output (I/O) Support

Integrated Plug and Play multi-I/O chipset features two high-speed UART 16550 compatible serial ports, one parallel port and one FDD connector.

■ Integrated Audio Subsystem

Onboard audio features included one SPDIF pinheader for digital audio resource output use. The onboard AC97 Codec chip has two options: either supports 2-channel or optional 5.1-channel audio feature. If the latter one onbaord, the Microphone/Line_In/Line_Out can be used as audio output.

■ Convenient Rear Panel USB Connection Support

Four USB ports integrated in the rear I/O panel and one USB pinheader for two USB ports to allow the connecting with either front or rear panel jacks in a convenient way and high-speed Plug and Play connection to the USB 2.0 compliant peripheral devices on the market.

■ Enhanced PCI Bus Master IDE Controller with Ultra DMA 33/66/100 Support

Integrated Enhanced PCI Bus Master IDE controller features two dual-channel connectors that up to four Enhanced IDE devices, including CD-ROM and Tape Backup Drives, as well as Hard Disk Drives supporting the new Ultra ATA 100 protocol. Standard PIO Mode 3, PIO Mode 4, DMA Mode 2, DMA Mode 4, UltraDMA-100 Mode 5 devices are also supported.

■ LAN Support

Onboard optional LAN controller with one optional RJ45 jack integrated with other rear panel I/O connectors pvovides users with a convenient connection with network environment.

■ 1394 Support (optional)

One optional 1394 controller with three optional 2x5 pinheaders of 1394 ports (Intel spec.) for more efficient peripheral device connection and data transaction.

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Installation Procedures

The mainboard has several user-adjustable jumpers on the board that allow you to configure your system to suit your requirements. This chapter contains information on the various jumper settings on your mainboard.

To set up your computer, you must complete the following steps:

Step 1 - **Set system jumpers**

Step 2 - **Install memory modules**

Step 3 - **Install the Central Processing Unit (CPU)**

Step 4 - **Install expansion cards**

Step 5 - **Connect ribbon cables, cabinet wires, and power supply**

Step 6 - **Set up BIOS software**

Step 7 - **Install supporting software tools**

WARNING: Excessive torque may damage the mainboard. When using an electric screwdriver on the mainboard, make sure that the torque is set to the allowable range of 5.0 ~ 8.0kg/cm.

Mainboard components contain very delicate Integrated Circuit (IC) chips. To prevent static electricity from harming any of the sensitive components, you should follow the following precautions whenever working on the computer:

1. Unplug the computer when working on the inside.
2. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
3. Wear an anti-static wrist strap which fits around the wrist.
4. Place components on a grounded anti-static pad or on the bag that came with the component whenever the components are separated from the system.

Quick Reference (from Page 2-2 to 2-4)

Mainboard Layout
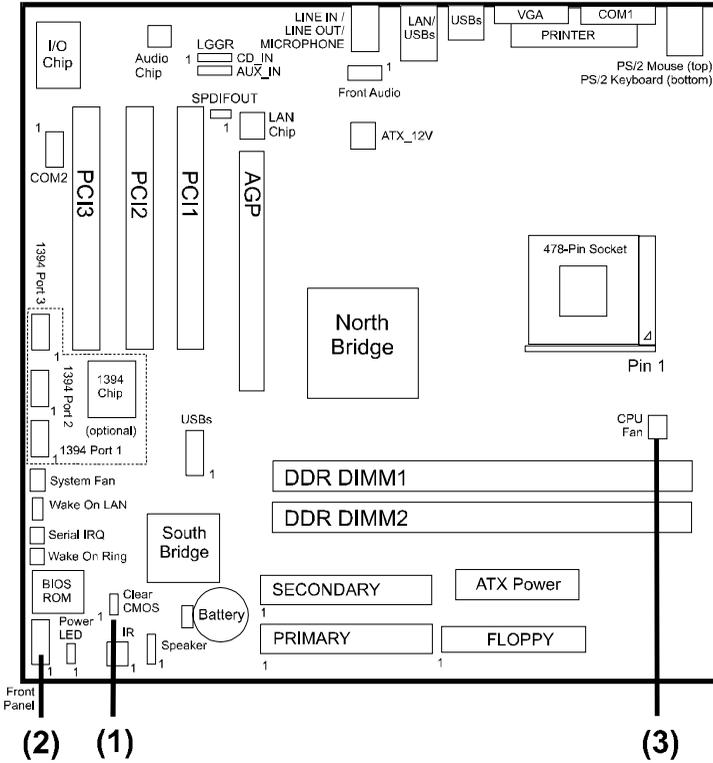
* When link to Line_Out jack, please use a speaker that with amplifier.
* Connector Serial IRQ is for system integration use.

(1). Clear CMOS

JP3
(Clear CMOS)

Enable
(Clear CMOS)   **Disable**
                          (Default)
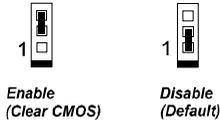
(2). Front Panel Block Cable Connection

F_PNL
(Intel spec.)   9

(4)   (1)

(3)   (2)

2   1

IR
(Intel spec.)

IRRX   IRTX
GND   5V
              NC

2   1

(4). **Power Button**   (1). **Reset Button**

(3). **Dual Power LED**   (2). **HDD LED**
(If use dual power LED,
green: Pin2, yellow: Pin4;
otherwise, Pin2 is positive,
Pin4 is negative.)
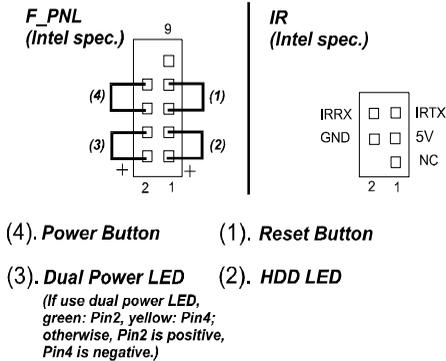
PW_LED
(Power LED, 2/3 pins)

SPK
(Speaker)

5V
GND
GND
Speaker

1

GND
GND
Power LED

1
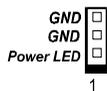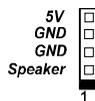
(3). CPU Fan Installation

This connector is linked to the CPU fan. When the system is in some power saving mode, the CPU fan will turn off; when it reverts back to full on mode, the fan will turn back on. Without sufficient air circulation, the CPU may overheat resulting in damage to both the CPU and the mainboard.

Damage may occur to the mainboard and/or the CPU fan if these pins are used incorrectly. These are not jumpers, do not place jumper caps over these pins.

1). Set System Jumper

Clear CMOS: JP3

The CMOS RAM is powered by the onboard button cell battery. To clear the RTC data: (1) Turn off your computer (2) Place the jumper cap onto the pinpair 2-3 at least 6 seconds to enable CMOS clearance (3) Place the jumper cap onto the pinpair 1-2 to disable the effect of CMOS clearance (4) Turn on your computer until CMOS checksum error appears (5) Hold down the **Delete** key when boots (6) Enter the BIOS Setup to re-enter user preferences.

**Enable
(Clear CMOS)**

**Disable
(Default)**
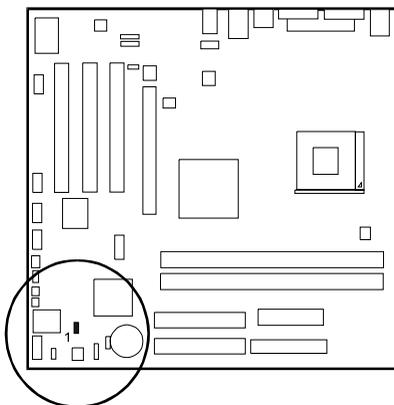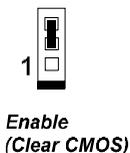
2). Install Memory Modules

1. Locate the DIMM slots on the mainboard.
2. Install the DIMM straight down into the DIMM slot using both hands.
3. The clip on both ends of the DIMM slot will close up to hold the DIMM in place when the DIMM reaches the slot bottom.
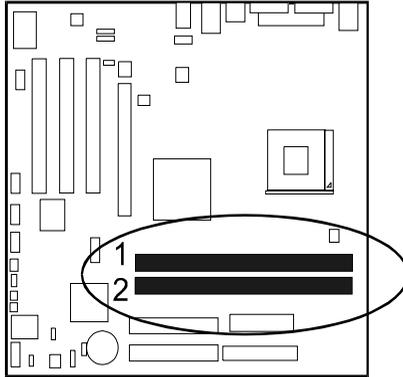
Press the clips with both hands to remove the DIMM.

3). Install the CPU

The mainboard has built-in Switching Voltage Regulator to support CPU Vcore autodetection. That is, it has the ability to detect and recognize the CPU voltage, clock and ratio.

Chapter 2 Installation Procedures
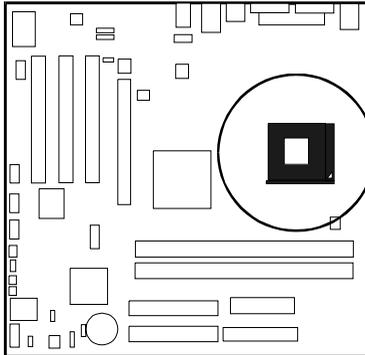
When you install your CPU on this mainboard, please use a power supply that designed and manufactured only for CPU use. Your CPU fansink combined with its retention module must be completely closed and firmly attached on the top of the processor.

To install the CPU, do the following:
1. Lift the lever on the side of the CPU socket.
2. Handle the chip by its edges and try not to touch any of the pins.
3. Place the CPU in the socket. Do not force the chip. The CPU should slide easily into the socket.
4. Swing the lever to the down position to lock the CPU in place.
5. Place the cooling fan with heatsink on top of the installed CPU.

NOTE: Users The CPU installing procedures should be:
1. Insert the CPU (with its fansink and retention module) on the socket.
2. Connect the 4-pin plug of the power supply.
3. Connect the 20-pin plug of the power supply
To remove the processor, please do it in reverse order.

4). Install Expansion Cards

This section describes how to connect an expansion card to one of your system expansion slots. Expansion cards are printed circuit boards that, when connected to the mainboard, increase the capabilities of your system. For example, expansion cards can provide video and sound capabilities. The mainboard features one AGP and three PCI bus expansion slots.
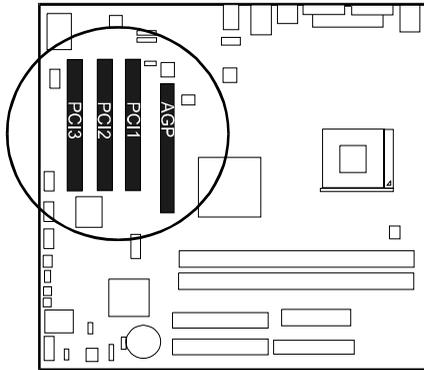
CAUTION: Make sure to unplug the power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both the mainboard and expansioncards.
Always observe static electricity precautions.
Please read Handling Precautions at the start of this manual.

To install an expansion card, follow the steps below:

1. Remove the computer chassis cover and select an empty expansion slot.
2. Remove the corresponding slot cover from the computer chassis. Unscrew the mounting screw that secures the slot cover and pull the slot cover out from the computer chassis. Keep the slot cover mounting screw nearby.

3. Holding the edge of the peripheral card, carefully align the edge connector with the expansion slot.

4. Push the card firmly into the slot. Push down on one end of the expansion card, then the other. Use this rocking" motion until the add on card is firmly seated inside the expansion slot.

5. Secure the board with the mounting screw removed in Step 2. Make sure that the card has been placed evenly and completely into the expansion slot.

6. Replace the computer system cover.

7. Setup the BIOS if necessary.

8. Install the necessary software drivers for the expansion card.

5). Connect Devices

Floppy Diskette Drive Connector

This connector provides the connection with your floppy disk drive.
The red stripe of the ribbon cable must be the same side with the Pin 1.
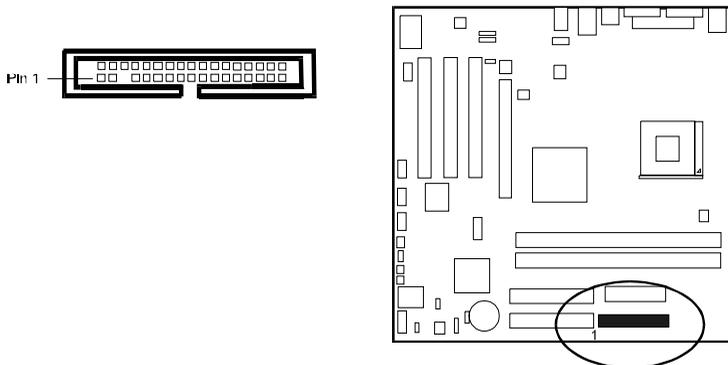
IDE Device Connectors

These two connectors are used for your IDE hard disk drives, CD drives, LS-120 drives, or IDE ZIP drives. The red stripe of the ribbon cable must be the same side with the Pin 1.
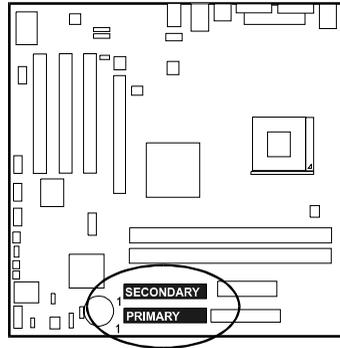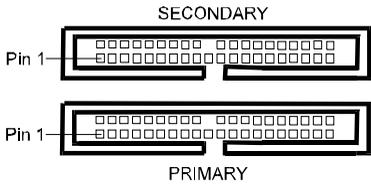
Power Connectors

The 20-pin male block connector is connected to the ATX power supply. The 4-pin male block connector is for the 12V power use. The connectors are linked with your ATX power supply. The plug from the power supply will only insert in one orientation because of the different hole sizes. Find the proper orientation and push down firmly making sure that the pins are aligned.
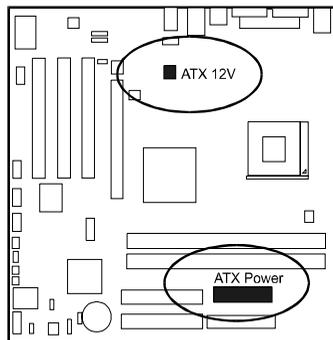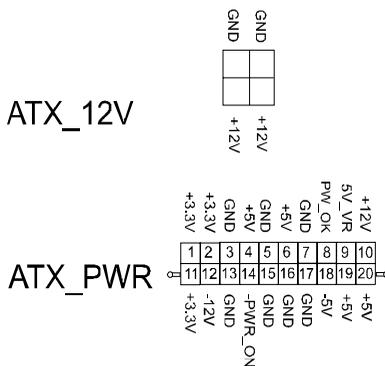
CD Audio-In Connectors

The connectors, CD_IN and AUX_IN, are for CD-ROM drive audio analog input use.
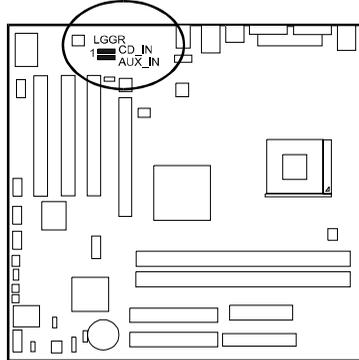
Front Panel Block, Power LED, IR, and Speaker Connector

This block connector includes the connectors for linking with Power LED (3-pin), HDD LED, power button, power/sleep/message waiting button, reset buttonon the front panel of the system case. Please identify polarities of plug wires for the case speaker and LEDs. Please ask vendor about this information when you buy them and install the system by yourself. The plug wires polarities of these buttons will not affect the function.
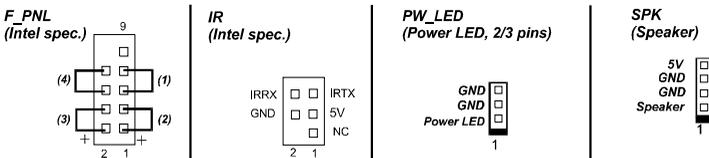
NOTE: Users that want to use IR port must set BIOS feature **UART Mode Select** to set COM2 at *IrDA* or *ASKIR* mode depending request.
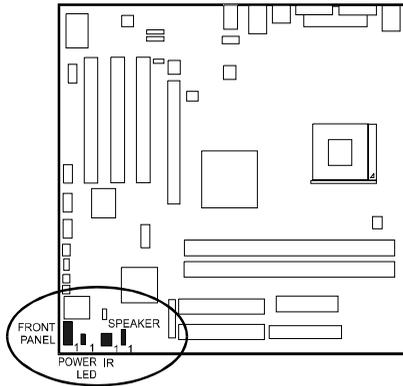
(1) Reset Switch is connected to the reset button. Push this switch to reboot the system instead of turning the power button off and on.

(2) HDD LED is connected to the IDE device indicator. This LED will blink when the hard disk drives are activated.

(3) Power (Single and Dual) /Sleep LED
Please refer to the tables below for the representations of LED states.
There is another 3-Pin Power LED connector on board for some cases that with a 3-pin plug.

Single-Color (2, 3 Pins)

LED	Meaning	State
Off	Off	S4/S5
On	Full On	S0
Flash	Sleep	S1/S3

Dual-Color

LED	Meaning	State
Off	Off	S4/S5
Green	Full On	S0
Other Colors	Sleep	S1/S3

(4) Power Button is connected with power button. Push this switch allows the system to be turned on and off rather than using the power supply button.

IR is a pinheader that is used for linking with your ID device to allow transmission of data to another system that also supports the IR feature.

Speaker is connected with the case speaker.

Fan Connectors

The two connectors, CPU_FAN, SYS_FAN are linked to the CPU fan, case fan, respectively.

Sensor
Signal
+12V
GND
Pin 1

CPU FAN
SYSTEM FAN
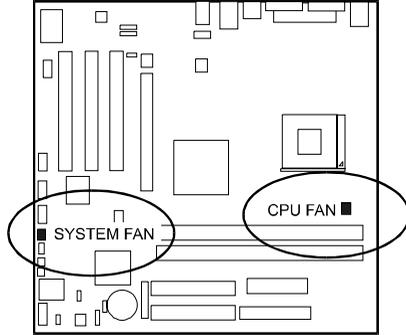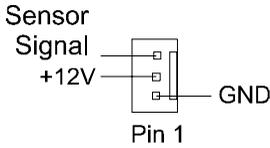
Wake-On-Lan Connector

This 3-pin connector allows the remove servers to manage the system that installed this mainboard via your network adapter which also supports WOL.

LAN_WAKE
GND
SB5V
Pin 1
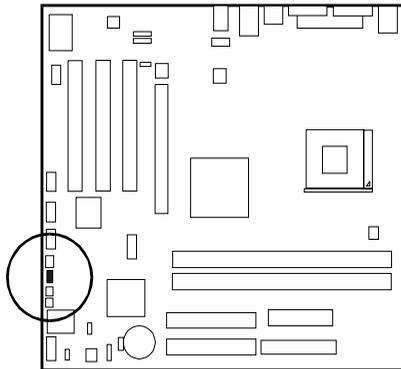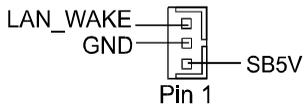
Wake-On-Ring Connector

The 2-pin connector allows you to link with your modem card which outputs a WOR singal; the system can be turned on from the power-off status by a remote phone call via the modem card.

RI —
GND —
Pin 1
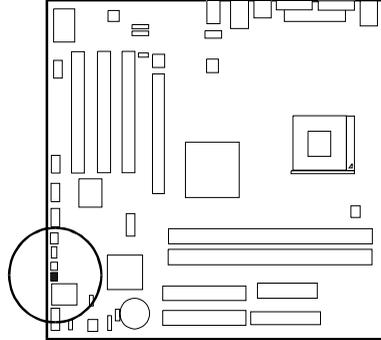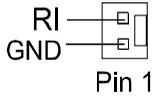
CAUTION: Improper orientation of SPDIF connection may cause damage of your device.

SPDIF Out Connector

The mainboard equipped one 1x4 pinheader. It is used for SPDIF digital audio output.

GND
SPDIF
5V
Pin 1
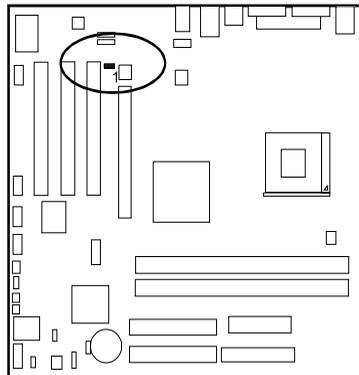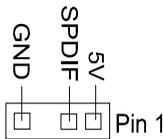
Serial IRQ Connector

This 2-pin connector is used for some system integration use.
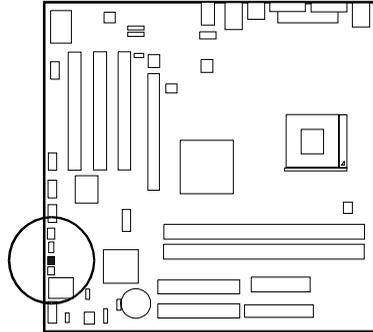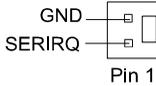
PS/2 Keyboard and Mouse Connector

These two 6-pin female (PS/2 keyboard is purple color and PS/2 mouse is green color) connectors are used for your PS/2 keyboard and PS/2 mouse.
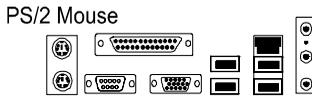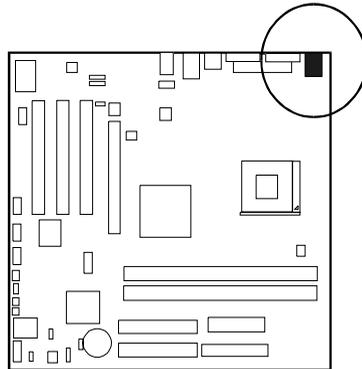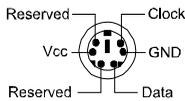
Universal Serial Bus Connectors

These two black connectors integrated on the edge of the board are used for linking with USB peripheral devices. This board also provides two extra USB ports for either linking with front or rear USB sockets of system cases. Please note that your operating system must support USB features.

4 USBs
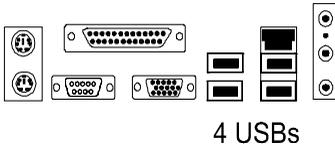
The figure below is the pin assignment of the USB pinheader.
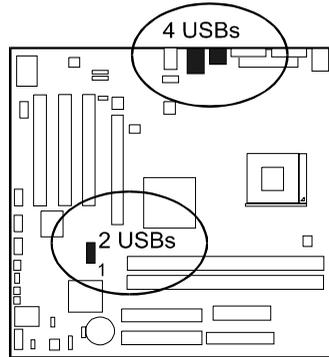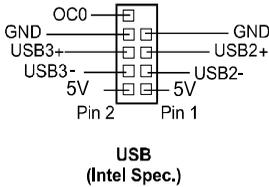
```
OC0 ──
GND ──              ── GND
USB3+ ──            ── USB2+
USB3- ──            ── USB2-
5V ──               ── 5V
   Pin 2      Pin 1
```

**USB
(Intel Spec.)**

2 USBs

NOTE: About the USB 2.0 driver.
if you use-
Windows XP + Sevice Pack 1: it offers the driver.
Windows XP: download it from Microsoft web site.
Windows 2000/98SE/ME:
driver in **Ist Utilities** CD, please manually installed it.

Serial Port Connectors

COM1 (9-pin D-sub male connector with teal color) and COM2 (2x5 pinheader) allow you to connect with your devices that use serial ports, such as a serial mouse or an external modem.

COM1

COM2

```
PIN1 -  DCD   1 □□ 2   PIN2 -  DSR
PIN3 -  RXD     □□      PIN4 -  RTS
PIN5 -  TXD     □□      PIN6 -  CTS
PIN7 -  DTR     □□      PIN8 -  RI
PIN9 -  GND     □
```
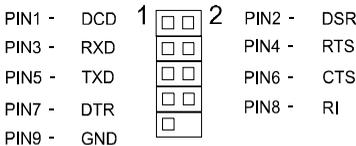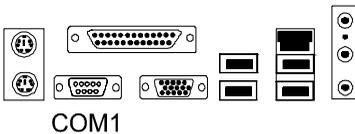
COM2
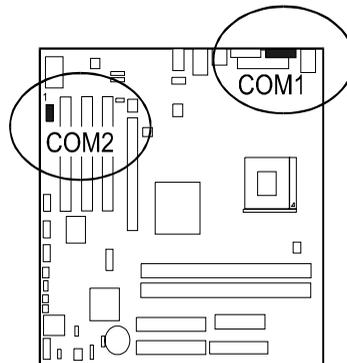
Printer Connector

This 25-pin D-Sub female burgundy-colored connector is attached to your printer.
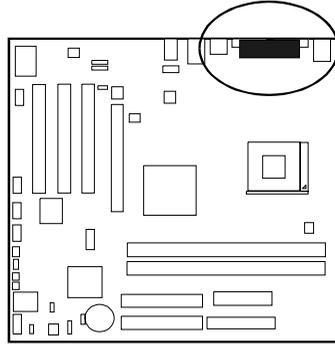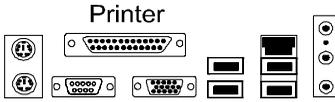
Audio I/O Jacks

LINE_OUT (lime) can be connected to headphones or preferably powered speakers. LINE_IN (light blue) allows tape players or other audio sources to be recorded by your computer or played through the LINE_OUT. MIC_IN (pink) allows microphones to be connected for voice input. The mainboard offers a front panel audio connector (Intel spec.). Its pin definitions were presented far below left.
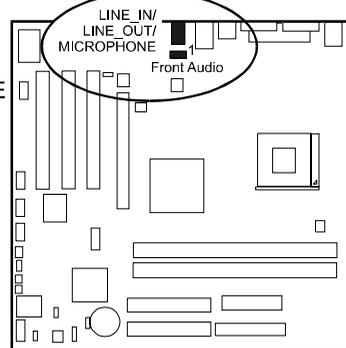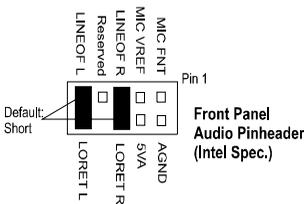
NOTE: If you do not use front audio pinheader, please keep the pinpair 5-6, 9-10 short as default; also, when the front headphone is plugged in, the rear audio output will be disabled.

NOTE: If your mainboard has 5.1-channel audio option, use LINE_IN, LINE_OUT, MICROPHONE jacks can be the 5.1-channel audio output.

2 - 16

Video Graphics Accelerator Connector

This 15-pin female D-sub blue connector is connected to your display monitor.

VGA
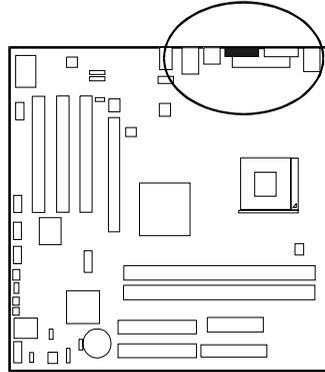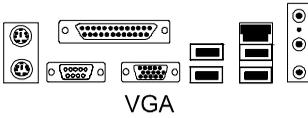
LAN Connector

The RJ45 LAN jack is used for the LAN cable plug.

LAN
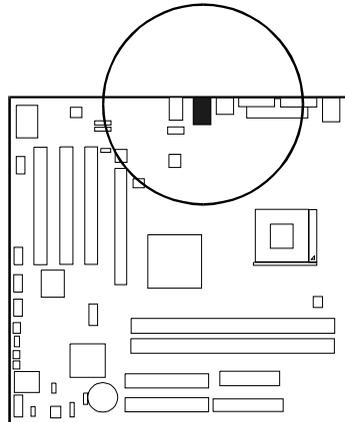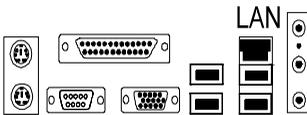
IEEE 1394 Connectors (mfg. optional)

The board has three pinheaders of IEEE 1394 port to connect with their compatible peripheral devices for higher system performance.

```
GND          □     Key (No Pin)
+12V (Fused) □ □   +12V (Fused)
TPB-         □ □   TPB+
GND          □ □   GND
TPA-         □ □   TPA+
            2   1
```

1394 Port 3
1394 Port 2
1394 Port 1
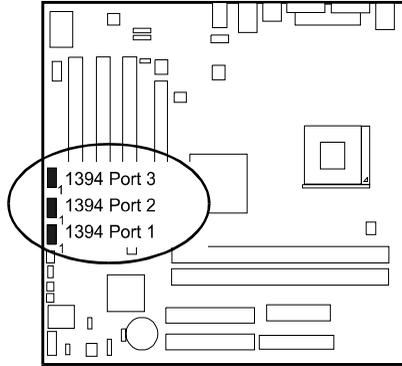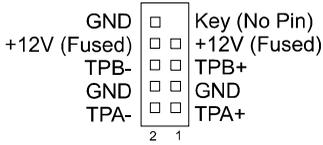
BIOS Setup

The mainboard comes with the chip that BIOS that contains the ROM Setup information of your system. (This chip serves as an interface between the processor and the rest of the mainboard components.) This section explains the information contained in the Setup program and tells you how to modify the settings according to your system configuration.

The Setup utility program allows updates to the mainboard configuration settings. The BIOS setup values will be saved in the CMOS. It is executed when the user changes system configuration; user changes system backup battery; or the system detects a configuration error and asks the user to run the Setup program. Use the arrow keys to select and press **Enter** to run the selected program.

> **WARNING:** While booting, press *Delete* key will allows users to enter setting menus that for end users. Press *F9* key will enter menus that for manufacturer use only. End users are not encouraged to configure attributes under this mode.

Main Features Setup

```
                    Pheonix - Award WorkstationBIOS CMOS Setup Utility
    Main  Advanced  Power  Boot  Exit
                                                           Item Help
      Date (mm:dd:yy)          Mon, Oct. 14  2002
      Time (hh:mm:ss)          12: 24: 15              Menu Level   ►
      Floppy Diskette A        [1.44M, 3.5 IN.]
      Floppy 3 Mode Support    [Disabled ]            <TAB>, or [Enter]
                                                      select field.
    ►  Primary Master
    ►  Primary Slave
    ►  Secondary Master
    ►  Secondary Slave

      Installed Memory
      Memory Bank 0
      Memory Bank 1

      BIOS Version
      BIOS Release Date
      BIOS Interrupt Guide


    F1:Help    F5:Reload default    F10:Save and Exit   ESC:Exit without Saving
```

The CMOS Setup screen is displayed above. Each item may have one or more option settings. The system BIOS automatically detects memory size, thus no changes are necessary. Use the arrow keys to highlight the item and then press Enter key to select the value you want in each item.

Date

To set the date, highlight the *Date* field and then press TAB keys to select items and +/- keys to set the current date. Follow the month, day and year format.

Time

To set the time, highlight the *Time* field and then press TAB keys to select items and +/- keys to set the current time. Follow the hour, minute, and second format.

Hard Disks

This field records the specifications for all non-SCSI hard drives installed in the system. The onboard PCI IDE connectors provide Primary and Secondary channels for connecting up to four IDE hard disks or other IDE devices. Each channel can support up to two hard disks, the first of which is the *Master* and the second is the *Slave*.

Hard Disk Configurations

Capacity:	The hard disk size. The unit is Bytes.
Cylinder:	The cylinder number of the hard disk.
Head:	The read/write head number of hard disk.
Precomp:	The cylinder number at which the disk drive changes the write current.
Landing Zone:	The cylinder number that the disk drive heads (read/write) are seated when the disk drive is parked.
Sector:	The sector number of each track defined on the hard disk.

Floppy Diskette A

This field records the types of floppy drives installed in the system. To enter the configuration value for a particular drive, highlight its corresponding field and then select the drive type using the **+/-** key.

Floppy 3 Mode Support

This is a Japanese standard floppy type drive. The standard stores 1.2MB in a 3.5 inch diskette.

Installed Memory/Memory Bank

These three items tell users the information about the installed memory modules, type, and sizes.

BIOS Version/BIOS Relese Date/BIOS Implement Guide

These three items tell users the information about the BIOS of the computer system.

Advanced Features Setup
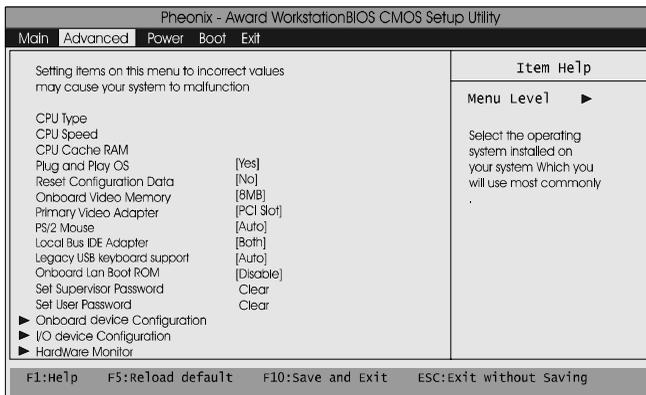
CPU Type/CPU Speed/CPU Cache RAM

The three items present the working data about the installed CPU.

Plug and Play OS

The item is set at Yes when you use Plug and Play operating system.
The options are: Yes, No.

Reset Configuration Data

Enabling it to reset the system Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on card and the system reconfiguration has caused such a serious conflict that the operating system can not boot. The options are: No, Yes.

Onboard Video Memory

The feature allows users to select the video memory size in the core chip for VGA use.
The options are: 8MB, 1MB

Primary Video Adapter

The feature allows users to select which display device full on first if two display device onboard.
The options are: PCI Slot, Onboard.

PS/2 Mouse

The feature allows users to select Auto to auto detect PS/2 mouse. Select Disabled prevents any installed PS/2 mouse from functioning and free up IRQ 12. The options are: Disabled, Enabled, Auto.

Local Bus IDE Adapter

The feature allows users to select or disable the IDE controller function. If disabled, the IDE device will not be detected.
The options are: Disabled, Primary, Secondary, Both.

USB Legacy Mode Support

The features allows users to decide which way that the attached USB keyboard was supported under legacy mode of operating system. When set at Auto, the BIOS will detect if a USB keyboard being connected while booting; if it is, BIOS will accept it under legacy mode, if not, the BIOS will not release the related resourece.
The options are: Auto, Enabled, Disabled.

Onboard Lan Boot ROM

Allows you to enable or disable the onboard Lan boot ROM.
The options are: Disabled, Enabled.

Set Supervisor Password/Set User Password

The two features allow users to set the supervisor/user password. To set supervisor password is a must. To set user password is not allowed if supervisor password is clean. It is common to set both passwords.

Once it is set, the option will become *Set* automatically. Its default value is *Clear*. The options are: Clear, Set

Onboard device Configuration
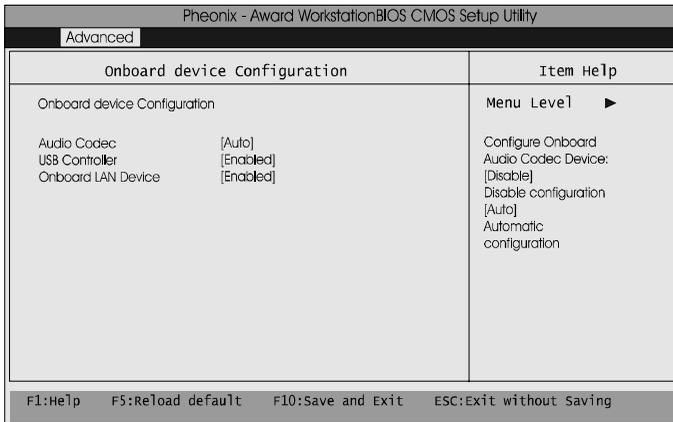
Audio Codec

Allows you to disable the onboard audio codec function.
The options are: Auto, Disabled.

USB Controller

Disable this option if you are not using the onboard USB feature.
The options are: Disabled, Enabled.

Onboard LAN Device

Allows you to enable or disable the optional LAN function.
The options are: Enabled, Disabled.

Onboard 1394 Device (optional)

Allows you to enable or disable the optional 1394 function.
The options are: Enabled, Disabled.

I/O device Configuration

```
             Pheonix - Award WorkstationBIOS CMOS Setup Utility
  ┌─────────────┐
  │  Advanced   │
  ┌──────────────────────────────────────────────┬──────────────────────┐
  │        Onboard device Configuration           │      Item Help       │
  ├──────────────────────────────────────────────┼──────────────────────┤
  │ Onboard device Configuration                  │ Menu Level    ▶      │
  │                                               │                      │
  │ Serial Port A              [Enabled]          │ Configure Serial Port│
  │ Onboard Serial Port 1      [3F8/IRQ4]         │ A using options.     │
  │ Interrupt                  [IRQ4]             │ [Disabled] No config- │
  │                                               │ uratons              │
  │ Serial Port B              [Enabled]          │ [Enabled] Enable     │
  │ Interrupt                  [IRQ3]             │ configurations       │
  │ Onboard Serial Port 2      [2F8/IRQ3]         │                      │
  │ UART Mode Select           [Normal]           │                      │
  │                                               │                      │
  │ Parallel Port              [Enabled]          │                      │
  │ Onboard Parallel Port      [378/IRQ7]         │                      │
  │ Parallel Port Mode         [ECP]              │                      │
  │ Interrupt                  [IRQ7]             │                      │
  ├──────────────────────────────────────────────┴──────────────────────┤
  │ F1:Help    F5:Reload default    F10:Save and Exit   ESC:Exit without Saving │
  └──────────────────────────────────────────────────────────────────────┘
```

Serial Port A/B

Allows you to disable the COM1/2 port when it is needed to do so.
The options are: Enabled, Disabled.

Onboard Serial Port 1/2

If the serial port 1/2 uses the onboard I/O controller, you can modify your serial port parameters.
The options are: 3F8/IRQ4, 2F8/IRQ3, 3E8/IRQ4, 2E8/IRQ3.

Interrupt

It allows users to select the IRQ for COM1/2 port.
The options are: IRQ4, IRQ3.

UART Mode Select

If you want to use IR port, set at IrDA or ASKIR; otherwise, stay at *Normal* to use COM2 as a serial port.
The options are: Normal, IrDA, ASKIR.

Parallel Port

Allows you to disable the parallel port when it is needed to do so.
The options are: Enabled, Disabled.

Onboard Parallel Port

Allows you to select from a given set of parameters if the parallel port uses the onboard I/O controller.
The options are: 378/IRQ7, 278/IRQ5, 3BC/IRQ7.

Parallel Port Mode

Allows you to connect with an advanced printer via the port mode it supports. The options are: SPP, EPP1.9+SPP, ECP, EPP1.9+ECP, EPP1.7+SPP, EPP1.7+ECP.

Interrupt

It allows users to select the some IRQ for parallel port.
The options are: IRQ7, IRQ5.

Hardware Monitor

```
                Pheonix - Award WorkstationBIOS CMOS Setup Utility
 ┌──────────┐
 │ Advanced │
 └──────────┘
 ┌─────────────────────────────────────────────┬──────────────────────┐
 │        Hardware Monitor                      │      Item Help        │
 ├─────────────────────────────────────────────┼──────────────────────┤
 │  CPU Temperature                             │  Menu Level    ▶      │
 │  Current CPU Fan Speed                       │                       │
 │  Current SYS Fan Speed                       │                       │
 │                                              │                       │
 │                                              │                       │
 │                                              │                       │
 │                                              │                       │
 │                                              │                       │
 │                                              │                       │
 │                                              │                       │
 ├─────────────────────────────────────────────┴──────────────────────┤
 │  F1:Help    F5:Reload default    F10:Save and Exit   ESC:Exit without Saving │
 └─────────────────────────────────────────────────────────────────────┘
```
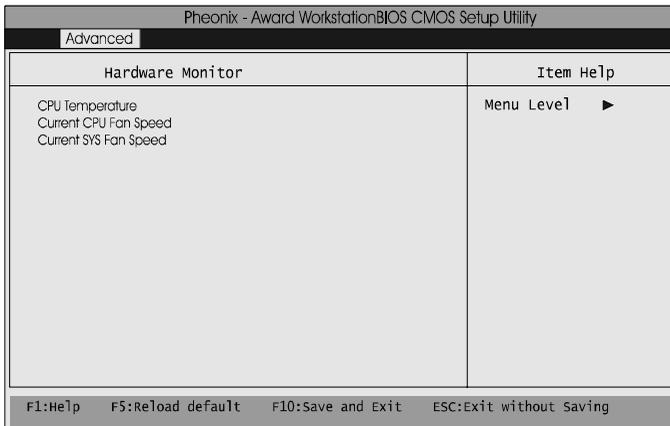
CPU Temperature / Current CPU FAN Speed / Current SYS FAN Speed

These items allow end users and technicians to monitor data provided by the BIOS on this mainboard. It is not user-configurable.

Power Features Setup

```
                    Pheonix - Award WorkstationBIOS CMOS Setup Utility
   Main   Advanced  Power   Boot   Exit

                                                          Item Help
   After AC Power Failure      [Auto]
                                                       Menu Level    ▶

                                                       Set the mode of
                                                       Operation if an AC
                                                       Power Loss occurs.
                                                       [Stay Off] keeps the
                                                       Power off until the
                                                       Power button is
                                                       pressed. [Power On]
                                                       restores power as
                                                       soon as AC is
                                                       applied.


   F1:Help    F5:Reload default    F10:Save    ESC:Exit
```
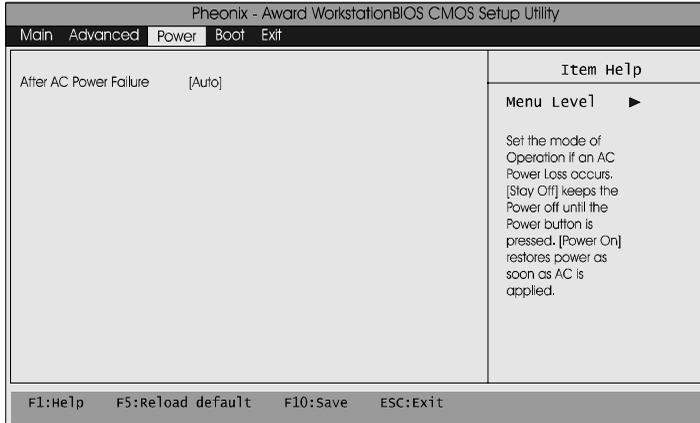
After AC Power Failure

When the system is shut down owing to the power failure, the system will not be back to power on by itself. This feature allows you to set the system back to which power status of the system when the system power is resumed. The system always be back to off if set at Stay Off. It always will be back to on. It will be back to on.

The options are Auto, Power On, Stay Off.

Boot Features Setup

```
                    Pheonix - Award WorkstationBIOS CMOS Setup Utility
  Main   Advanced   Power   Boot   Exit

                                                          Item Help
    Boot-time Diagnostic Screen    [Disabled]
    Quick Boot Mode                [Enabled]       Menu Level    ▶
  ▶ Boot Device Priority
                                                   Display the
                                                   diagnostic
                                                   screen during
                                                   boot




    F1:Help    F5:Reload default    F10:Save and Exit    ESC:Exit without Saving
```
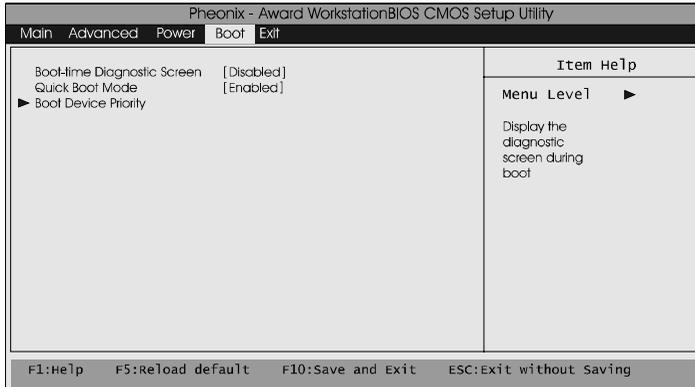
Boot-time Diagnostic Screen

This feature allows to be enabled for troubleshooting or other reason. The options are Disabled, Enabled.

Quick Boot Mode

This feature allows users to disable the quick boot mode for troubleshooting or other reason. The options are Disabled, Enabled.

Boot Device Priority

This feature will auto detect all hard disks of bootable device on the system. It also allows users to select the device booting priority.

First/Second/Third/Fourth Boot Device

This feature allows user to select the boot device priority. The options are: Removable, CDROM, Hard Disk, LAN, Disabled.

Removable Device Priority

This feature allows user to select the removable device boot priority. The options are: Floppy, ZIP100, LS120, USB-Floppy, USB-ZIP, USB-CDROM, USB-HDD.

Hard Disk Boot Priority

This feature allows user to select the hard disk boot priority.

Exit Features Setup

```
                 Pheonix - Award WorkstationBIOS CMOS Setup Utility
   Main   Advanced   Power   Boot   Exit

   Exit Saving Changes                              Item Help
   Exit discarding Changes
   Load Setup Default                     Menu Level    ▶
   Discard Changes
   Save Changes                          Exit system Setup and
                                         saves your changes to
                                         CMOS.




   F1:Help     F5:Reload default    F10:Save and Exit    ESC:Exit without Saving
```
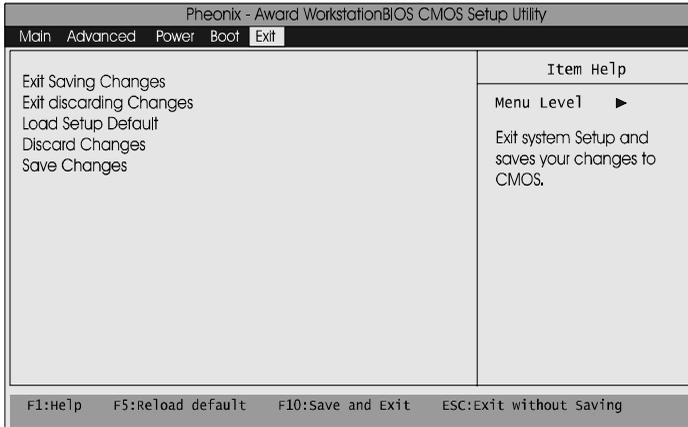
Exit Saving Changes

After you have made changes under Setup, press Esc to return to the main menu. Move highlight bar to this item and press Enter key, then press Y to change the CMOS Setup.

Exit discarding Changes

Select this feature to allow you to exit the setup utility without saving CMOS modifications.

Load Setup Defaults

This item is selected to place all manufacturing default settings. These settings do not give optimal performance.

Discarding Changes

This feature allows you to discard the current CMOS modifications.

Saving Changes

This feature allows you to save the current CMOS modifications.