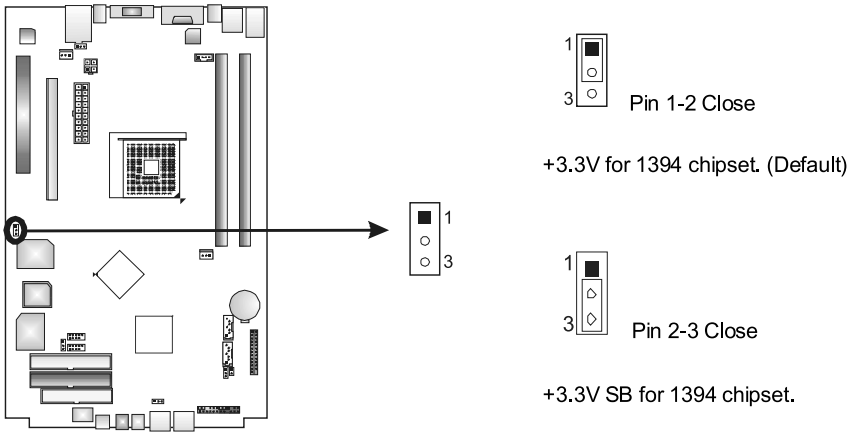
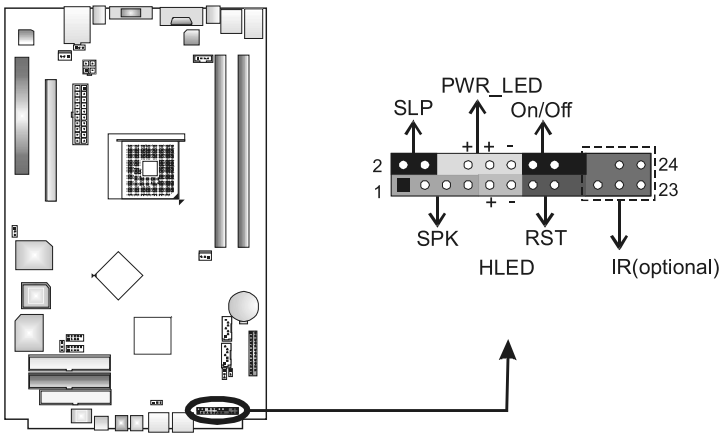
J1394PWR1 (optional): Power Source Header for 1394 Chip



JPANEL1: Front Panel Header

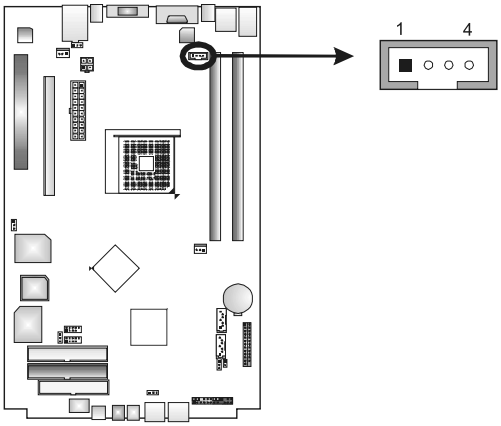
This 24-pin connector includes Power-on, Reset, HDD LED, Power LED, Sleep button, speaker and IrDA Connection. It allows user to connect the PC case's front panel switch functions.



Pin	Assignment	Function	Pin	Assignment	Function
1	+5V	Speaker Connector	2	Sleep control	Sleep button
3	N/A		4	Ground	
5	N/A		6	N/A	N/A
7	Speaker		8	Power LED (+)	Power LED
9	HDD LED (+)	Hard drive LED	10	Power LED (+)	
11	HDD LED (-)		12	Power LED (-)	
13	Ground	Reset button	14	Power button	Power-on button
15	Reset control		16	Ground	
17	N/A		18	N/A	
19	N/A	IrDA Connector (optional)	20	Key	IrDA Connector (optional)
21	+5V		22	Ground	
23	IRTX		24	IRRX	

JCDIN1: CD-ROM Audio-in Connector

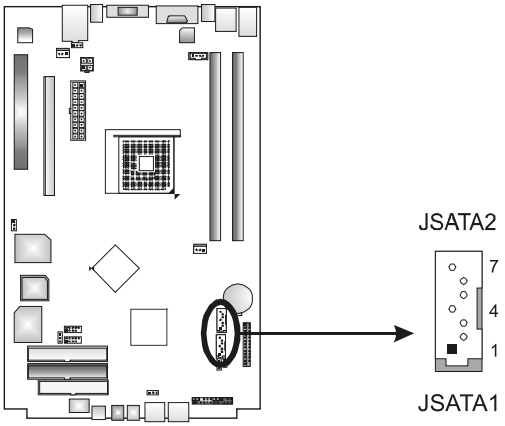
This connector allows user to connect the audio source from the variety devices, like CD-ROM, DVD-ROM, PCI sound card, PCI TV turner card etc..



Pin	Assignment
1	Left Channel Input
2	Ground
3	Ground
4	Right Channel Input

JSATA1~JSATA2: Serial ATA Connectors

The motherboard has a PCI to SATA Controller with 2 channels SATA interface, it satisfies the SATA 2.0 spec and with transfer rate of 3Gb/s.



Pin	Assignment
1	Ground
2	TX+
3	TX-
4	Ground
5	RX-
6	RX+
7	Ground

USEFUL HELP

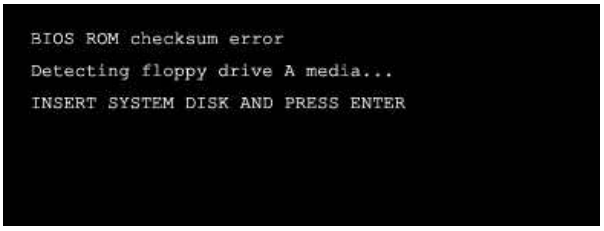
AWARD BIOS BEEP CODE

Beep Sound	Meaning
One long beep followed by two short beeps	Video card not found or video card memory bad
High-low siren sound	CPU overheated System will shut down automatically
One Short beep when system boot-up	No error found during POST
Long beeps every other second	No DRAM detected or install

EXTRA INFORMATION

A. BIOS Update

After you fail to update BIOS or BIOS is invaded by virus, the Boot-Block function will help to restore BIOS. If the following message is shown after boot-up the system, it means the BIOS contents are corrupted.



In this Case, please follow the procedure below to restore the BIOS:

1. Make a bootable floppy disk.
2. Download the Flash Utility "AWDFLASH.exe" from the Biostar website: www.biostar.com.tw
3. Confirm motherboard model and download the respectively BIOS from Biostar website.
4. Copy "AWDFLASH.exe" and respectively BIOS into floppy disk.
5. Insert the bootable disk into floppy drive and press Enter.
6. System will boot-up to DOS prompt.
7. Type "*Awdflash xxxx.bf/sn/py/r*" in DOS prompt.
   (*xxxx* means BIOS name.)
8. System will update BIOS automatically and restart.
9. The BIOS has been recovered and will work properly.

B. CPU Overheated

If the system shutdown automatically after power on system for seconds, that means the CPU protection function has been activated.

When the CPU is over heated, the motherboard will shutdown automatically to avoid a damage of the CPU, and the system may not power on again.

In this case, please double check:

1. The CPU cooler surface is placed evenly with the CPU surface.
2. CPU fan is rotated normally.
3. CPU fan speed is fulfilling with the CPU speed.

After confirmed, please follow steps below to relief the CPU protection function.

1. Remove the power cord from power supply for seconds.
2. Wait for seconds.
3. Plug in the power cord and boot up the system.

Or you can:

1. Clear the CMOS data.
   (See Close CMOS Header: JCMOS1 section)
2. Wait for seconds.
3. Power on the system again.

TROUBLESHOOTING

Problem	Solution
1. No power to the system at all Power light don't illuminate, fan inside power supply does not turn on. 2. Indicator light on keyboard does not turn on.	1. Make sure power cable is securely plugged in. 2. Replace cable. 3. Contact technical support.
System inoperative. Keyboard lights are on, power indicator lights are lit, and hard drive is spinning.	Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.
System does not boot from hard disk drive, can be booted from optical drive.	1. Check cable running from disk to disk controller board. Make sure both ends are securely plugged in; check the drive type in the standard CMOS setup. 2. Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.
System only boots from optical drive. Hard disk can be read and applications can be used but booting from hard disk is impossible.	1. Back up data and applications files. 2. Reformat the hard drive. Re-install applications and data using backup disks.
Screen message says "Invalid Configuration" or "CMOS Failure."	Review system's equipment. Make sure correct information is in setup.
Cannot boot system after installing second hard drive.	1. Set master/slave jumpers correctly. 2. Run SETUP program and select correct drive types. Call the drive manufacturers for compatibility with other drives.

3.1 Overview

Your computer offers the following connectors for peripheral devices. As these devices are provided by third-parties, be sure that they function correctly when connected to your computer before you purchase them.

Front Panel Connectors :

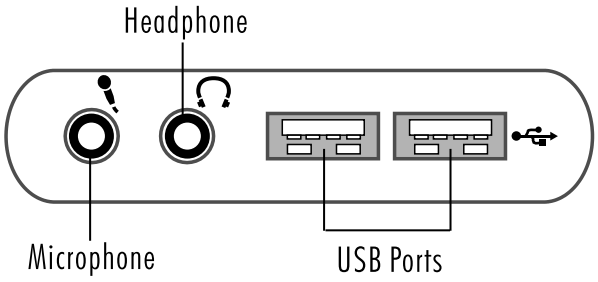
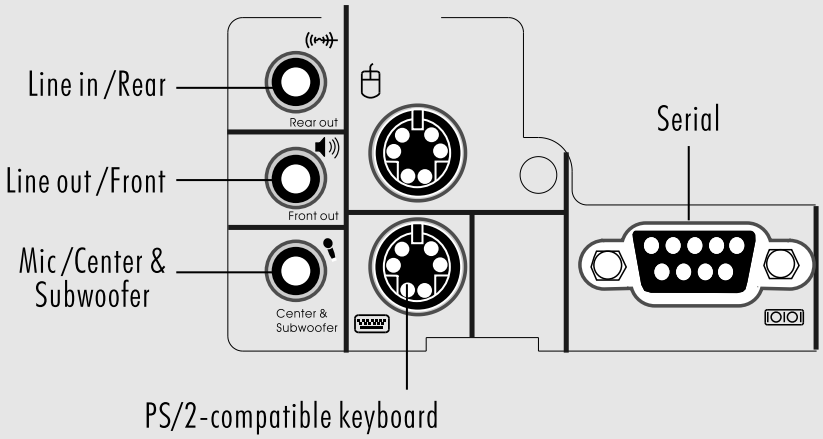


Figure 3.1



3.2 Connecting Peripheral Devices

Before you connect any peripherals, observe the following instructions.

- Turn off the computer and the peripheral device.
- Read the instructions on the manual or guide provided by the device manufacturer carefully.
- Insert the connector that comes from the device manufacturer to the proper I/O port.
- Install the drivers or other software that's required by the device so they can operate correctly. Make sure you turn off the computer and the peripheral device before connecting them.
- Restart the computer if you are being asked to.

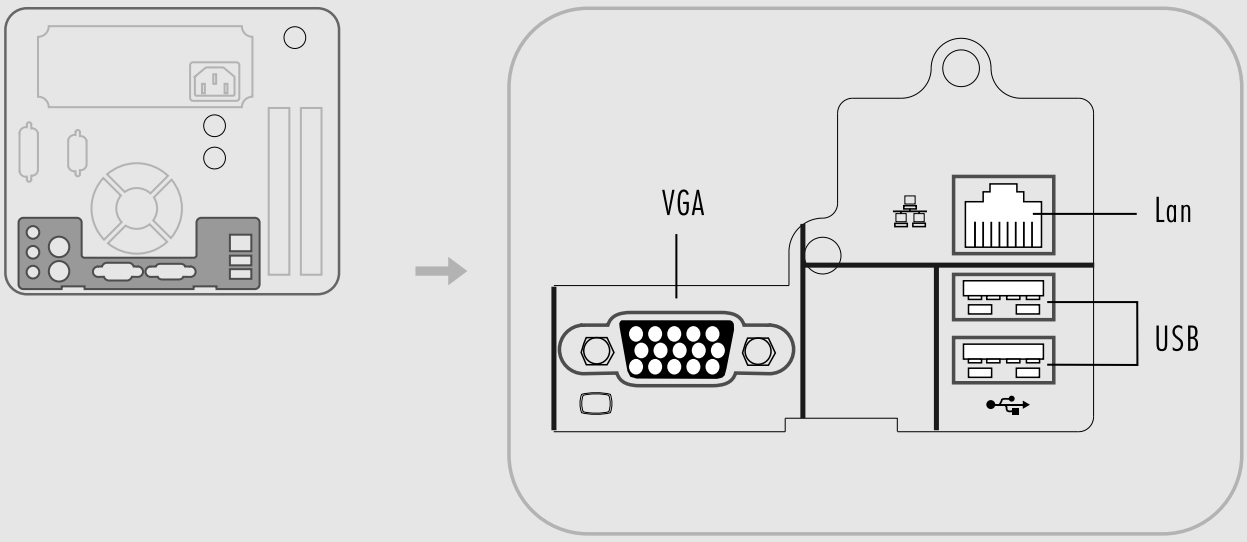


Figure 3.2

Connecting monitor

To connect a monitor, plug the monitor cable into the VGA port located on the rear panel of your computer.

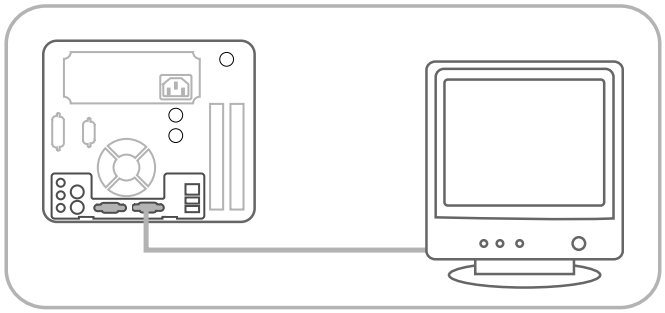


Figure 3.3

Connecting mouse and keyboard

Most of mouse and keyboard are PS/2 compliant. However, lots of the latest keyboard and mouse use the USB connectors instead of PS/2. Before connecting mouse and keyboard, make sure the connector is USB compliant or PS/2 compliant.

- Plug the mouse cable into the USB port (if your mouse uses the PS/2 connector, plug the cable into the green PS/2 port located on the rear panel of your computer).
- Plug the keyboard cable into the USB port (if your keyboard uses the PS/2 connector, plug the cable into the purple PS/2 port located on the rear panel of your computer).

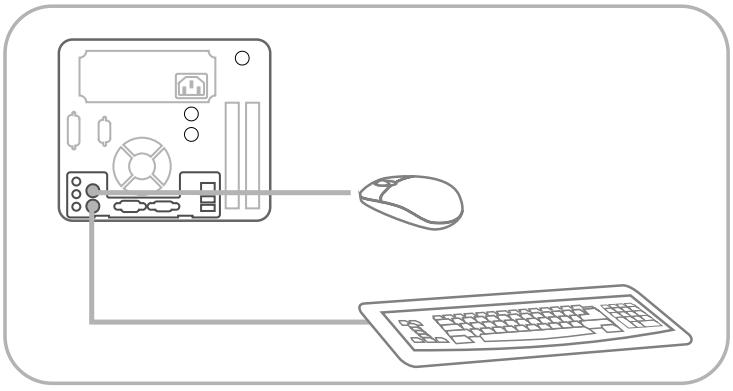


Figure 3.4

Connecting USB Devices

Your computer is equipped with four standard USB 2.0 ports as the figure 3.5 shown. The USB 2.0 connector is backward compatible with the USB1.1. You can obtain USB-compatible devices such as USB mouse, USB keyboard, digital camera, scanner, flash disk…etc. Any device that supports this standard can be connected to this port.

- Have the symbol of USB connector facing up.
- Insert the connector to the USB port.
- The OS will automatically detect the device and install the driver for the device.
- If the OS does not have the driver for your device, install the driver from the driver CD that is provided by the device manufacturer.

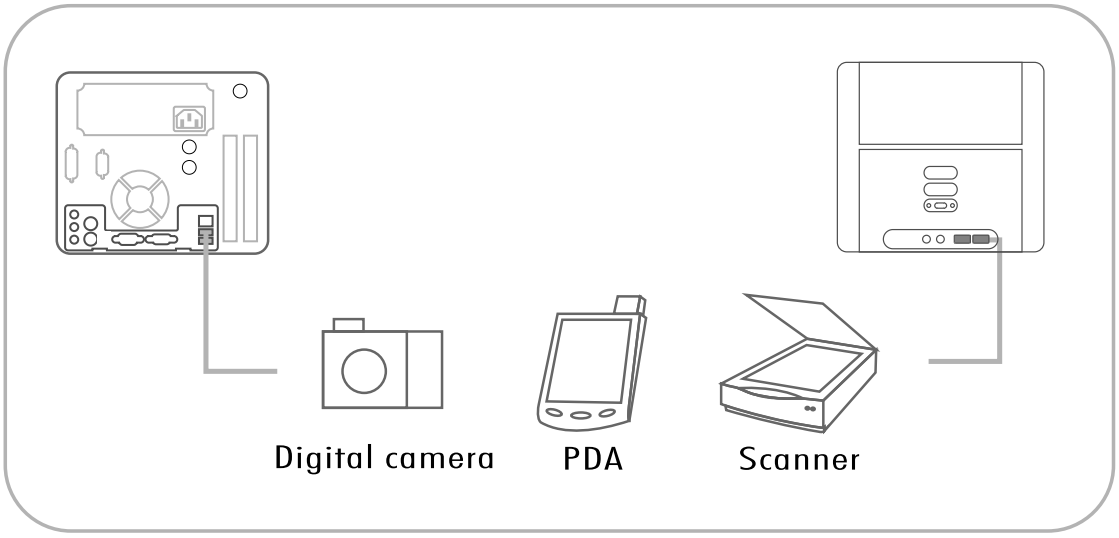


Figure 3.5

Note: The USB devices support "hot plugging," eliminating the need to power down or restart the computer when attaching a new peripheral. You can plug any USB device into any port at any time, even when the system is running.

Connecting Audio Equipment

Your computer is equipped with the following audio ports, which offer wide-range applications.

- "Headphone" jack: Use this jack to connect stereo headphone or amplified speakers to your computer.
- "Microphone" jack: Use this jack to connect microphone.
- "Line-in" jack: Use this jack to enjoy stereo audio from the external source such as CD/Tape player and other audio appliance.
- "Line-out" jack: Use this jack to connect the computer's audio output to an external tape recorder, or to the inputs of speakers.

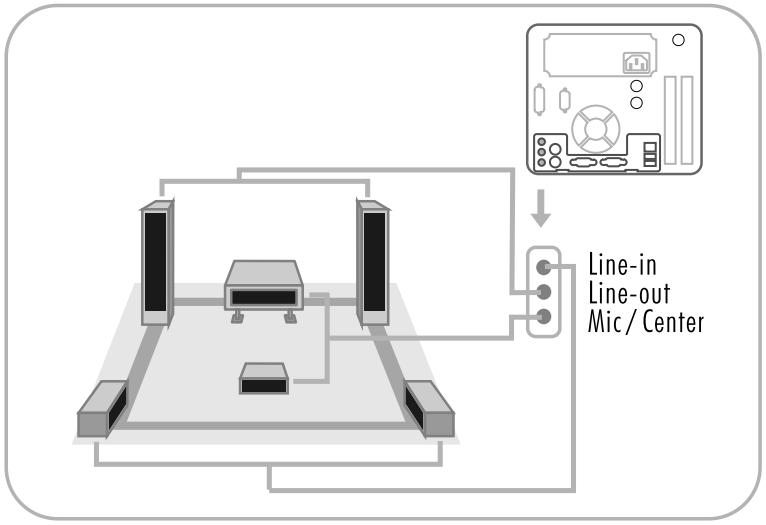


Figure 3.8

Connecting Printer

Your computer provides the expansion port for parallel cable on the rear panel. If users would like to attach the printer through the parallel port, please contact your dealer to purchase the cable kits. However, many printers are now using USB as their input connector.

Connecting the printer port:

- Match the pins and the shape of the printer connector to the printer port.
- Plug it in firmly.
- Tighten it up with the locking screw on the connector.
- Install the driver from the driver CD or diskette provided by the printer manufacturer.
- Restart the computer if asked to by the OS.

Connecting the printer via USB port:

- Plug the USB connector to one of the USB port on your computer.
- Your OS should start running and install the printer driver for you.
- However, if your OS does not have the driver, please install it from the driver CD or diskette that is provided by the printer manufacturer.

Note: To install the printer driver, please refer to the guide your printer manufacturer provides for you.

Connecting LAN

You can connect your computer with another computer system or get on broadband Internet connection by using the LAN port.

Connect your computer to a network as follows:

- The LAN jack is located on the back of your computer.
- Plug an RJ-45 network cable in the LAN jack.
- The other end should be connected to a network hub or switch, or to a peer computer.

Section 4

Software Utility

4.1 Installing Drivers and Utilities

Driver Setup

We provide an installation wizard, Driver CD Installation Utility (SETUP.EXE), located in the root of Driver CD to let users install some common used drivers conveniently.

The Wizard can automatically detect OS and switch to the proper page, so you don't need to worry about installing the wrong drivers. You can simply put Driver CD into the optical drive (CD-ROM, DVD ROM, or Combo depends on your configuration) and the Installation Utility will auto run or you can launch the Driver CD Installation Utility manually.

Figure 4.1

There are two kinds of Installation Procedure:

* Automatically install drivers from CD by using CD installation utility:
  1. Simply put Driver CD into your optical drive.
  2. The Installation wizard will auto run and show the name of the main board on the upper left of the menu (See figure 4.1).
  3. Use the mouse cursor to click the Driver option on the page.
  4. Driver setup utility will search for the devices you have.

5. The utility will start a page with the drivers you may need.
6. Click on the driver you want to install.
7. The utility will invoke other applications to complete the rest of installation.
8. Follow the installing instructions to finish the installation.
9. Click on the next driver you want to install.
10. Repeat steps 6 to 8 until you have installed all the drivers the utility has for you.

* If the Driver and utility installation CD does not auto run, please follow the next steps after you place the CD into the optical drive.
  1. Place the Driver CD into the optical drive.
  2. Double click on My Computer.
  3. Double click on your optical drive to browse the CD.
  4. Double click the Setup.exe file to run the utility manually.
  5. Use the mouse cursor to click the Driver option on the page.
  6. Driver setup utility will search for the devices you have.
  7. The utility will start a page with the drivers you may need.
  8. Click on the driver you want to install.
  9. The utility will invoke other applications to complete the rest of installation.
  10. Follow the installing instructions to finish the installation.
  11. Click on the next driver you want to install.
  12. Repeat steps 8 to 10 until you have installed all the drivers the utility has for you.

Installing Utilities

We also provide you some very useful utilities to enhance the experience of your computer. Just like installing drivers for your computer, you can follow the steps for installing driver until the menu of figure 4.1 shows up. Then, please go through the following steps.

1. Click Software and Update Utility option.
2. Click on the software you want to install.
3. The installation utility will start the installation wizard for the software you choose.
4. Follow the instruction steps of the wizard.
5. Repeat steps 2 to 4 if you want to install more.
6. When you are done, simply close the Installation Utility.

Trouble Shooting

Section 5

This section attempts to provide some tips for troubleshooting problems,
as well as answer some frequently asked questions

5.1 System Does Not Start

* No LEDs light and no sound can be heard from the computer:
  1. Make sure the power cable is plugged in securely. Inspect the cables to make sure there is no visible damage.
  2. Plug another, known-working appliance into the outlet to make sure the outlet is functioning. If available, try to use a different power cable.
  3. If the power cable and wall socket are OK, there may be a power supply failure. Contact your computer dealer for technical support and service.

* Keyboard and power LEDs light, and sound comes from the computer, but the monitor remains blank:
  1. Make sure the monitor is turned on and its power cable is securely plugged into a working outlet.
  2. Make sure the monitor display cable is plugged securely into the back of the computer. If available, try a different monitor, or try the monitor on a different VGA-compatible computer.
  3. If the monitor is powered on and known to be working, there may be a problem with the computer Main circuit board. Contact your computer dealer for technical support and service.

5.2 Keyboard and Mouse Problems

- Keyboard doesn't take input, but mouse pointer moves when mouse is moved:
  1. Make sure the keyboard, mouse or receiver is connected when you start the computer.
  2. If you inadvertently start the system with the keyboard disconnected, shut down the system by pressing and holding the power button on the system unit for at least four seconds.
- Keyboard doesn't take input; mouse pointer does not move:
  1. Make sure the mouse plug is inserted in the mouse connector on your computer and the keyboard plug is inserted into the keyboard connector on your computer.

5.3 USB Device Problems

* Plug in any USB device but the display shows up as an unknown device in the Device Manager
  1. Install the driver for your USB device.
  2. Then plug in your USB device.

* USB device works when first plugged in, but does not work after system is woken from Standby mode:
  1. Force the device to configure by unplugging and then plugging it back in.
  2. Use a complete shutdown (hold the power button for four seconds) whenever you stop the system. This forces all devices to be reconfigured the next time the system starts.

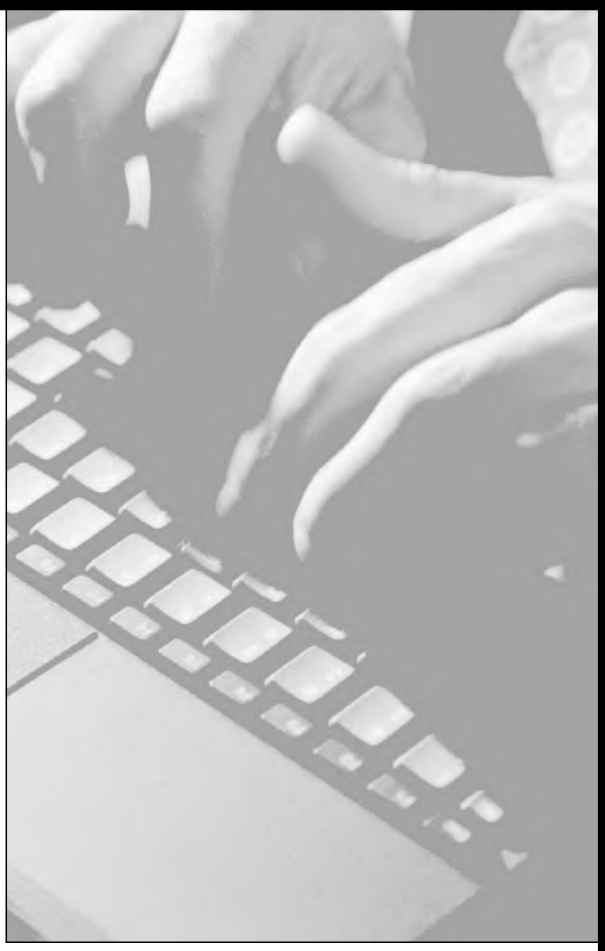
5.4 Software Problem

Good software is tested thoroughly before you receive it. However, software developers are human, and sometimes software encounters a situation that the programmers did not anticipate

* A problem behaves erratically or refuses to accept user input:
  1. Wait a while. The problem might be busy processing data or waiting for some event, such as network activity.
  2. If possible, use the task bar to switch to other problems, save any documents that might be open, and close other programs. Then attempt to close the program that is misbehaving.
  3. If a problem does not close, press the Ctrl + Alt + Del keys together only once. The computer will give you the option of ending the task or waiting longer. If you press Ctrl + Alt + Del a second time, the computer restarts if it can.
  4. Check for patches to fix from the software developer. Download the file/files and execute to update your software.
  5. As a last resort, if the computer totally ignores the mouse, keyboard and power button, you can unplug the power cable; wait a moment; and then plug the power cable back in. This forces the computer to restart.
  6. If the problem persists, contact your computer dealer for technical support and service.

Section 6

Taking care of Your Computer



6.1 General Maintenance

Before you install any computer component, we recommend that you read the following instructions.

- Electrostatic discharge can damage the components of your computer. Do not remove a component from its protective packaging until you are ready to install it.
- Avoid transporting or using your computer in dirty or dusty environments. Use a clean container when you transport the computer.
- Avoid getting dirt and dust in the optical drive.
- Avoid spilling liquids on the computer.
- You can occasionally use a vacuum to clean the ports.
- Make sure that the computer is turned off before unplugging it.
- When you disconnect cords, remember to pull them by the plugs and not by the cords themselves. This will prevent damage to the cords, plugs, ports, and jacks.
- Maintain your OS environment by doing scan disk, virus scan, and defragment regularly.

6.2 Safe Use of The System

To ensure that you can use your computer safely and correctly and increase the working lifetime of your computer, please read the following instructions. You will also reduce the chance of damage to your computer and personal injury to yourself.

- Be aware of all cautions and follow the instructions that may be marked on the computer.
- Except as described elsewhere in this manual, refer all servicing to qualified personnel. Immediately shut off the computer and refer for servicing under the following conditions:
  1. When the power cord or plug is damaged or frayed.
  2. If liquid spills on the computer.
  3. If the computer is dropped or the chassis is damaged.
- Never push any objects of any kind into chassis openings. They may touch dangerous voltage points or short parts, which could result in fire or electrical shock.
- Turn off the computer before installing or removing a peripheral device, except USB, or IEEE 1394 devices.
- Turn off the computer and unplug it before cleaning.
- Do not expose the computer to direct sunlight.
- Keep the computer away from any magnetic devices or TVs.
- Do not use the computer in a dusty or dirty working area. Dust can damage and/or cause contamination of the unit, which can result in malfunction.
- Do not use your computer on an unstable working surface to prevent your computer from being knocked over and damaged.
- Keep all liquids away from the computer and its accessories.

A.1 Installing Mainboard

Before installing mainboard, users have to remove the two-side and top cover panels. Then remove the front cover panel for inserting the mainboard into the chassis.

Removing The Front Cover Panel

* There are four quick joints on the reverse side of front panel bezel as figure A.2. Press the quick joint hooks outward to release the front panel bezel.

Figure A.1

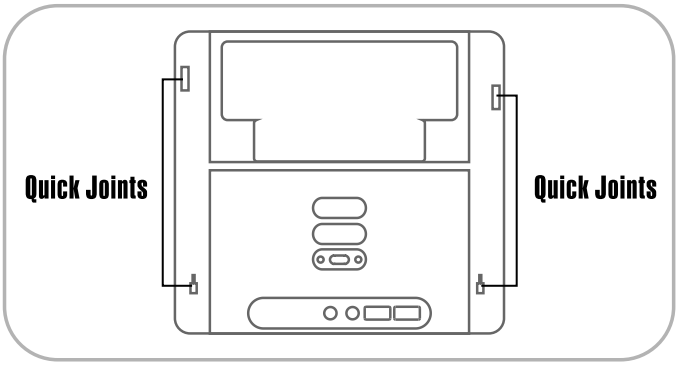


Figure A.2

* Use the screwdriver to remove the two screws on the base of chassis.

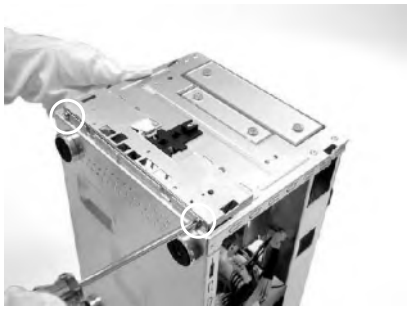


Figure A.3

* Then use the screwdriver to remove the two screws on the top of front cover panel.

Figure A.4

Installing Mainboard

* Insert the mainboard from the side into the base of the chassis and place it close to the Back panel.

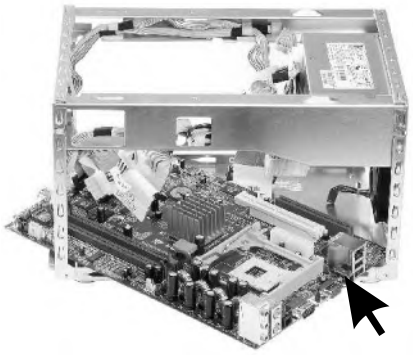


Figure A.5

* After fixing the mainboard on the base of the chassis, you will find there are six mounting holes of screws on the computer chassis and the mainboard. Use the screwdriver to fasten the screws.

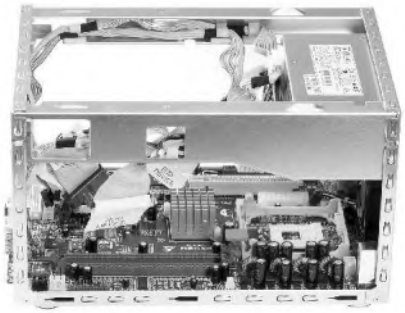


Figure A.6

* Connect the cable of LEDs indicator and front-panel switches to "JPANEL1" connector on the Mainboard.

Figure A.7

* Connect the cable of system fan to "JSFAN1" connector on the mainboard.

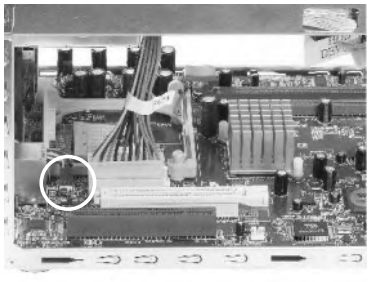


Figure A.8

* Connect the cable to the floppy, CD-ROM and HDD.

Figure A.9

* Place the CD-ROM bracket and fix it with 2 screws.

Figure A.10

* Place HDD bracket.

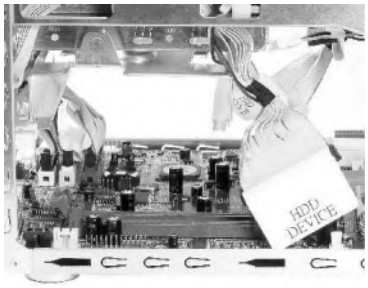


Figure A.11

* Fix it with one screw.

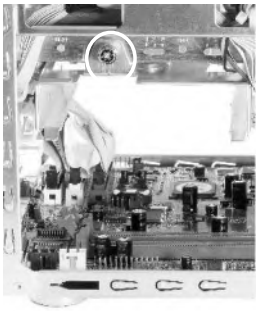


Figure A.12

Completing The Installation

* Place the front panel back and fix it with four screws to complete the installation of mainboard.

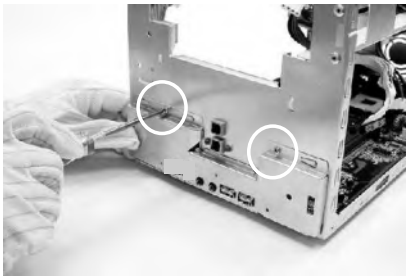


Figure A.13

Note: The figures show the locations of connectors on P4SBA mainboard. Please refer to section 2 -- the mainboard layout of P4ABS for the correct locations of the connectors.