

EasyNow

User Manual

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Table of Contents

Congratulations! 1

FEDERAL COMMUNICATIONS COMMISSION (FCC) STATEMENT 2

CANADIAN D.O.C. STATEMENT 3

IMPORTANT SAFETY INFORMATION 3

Chapter 1: Getting Started 5

1.1 SETTING UP 7

1.2 TIPS FOR HEALTHY COMPUTING 7

1.3 STARTING UP 8

1.4 SHUTTING DOWN 8

1.5 POWER SAVING MODE SETTING 9

1.6 COMPUTER VIRUSES 11

1.7 SOFTWARE INSTALLATION 12

Chapter 2: Dialing up the Internet 14

Chapter 3: Using the CD-ROM Drive 16

Chapter 4: Adding USB Peripherals 18

Chapter 5: Connecting Audio Equipment 20

Chapter 6: Setting up a Home Network 21

6.1 PLUGGING IN YOUR NETWORK 22

6.2 SETTING UP AN INTERNET CONNECTION SHARING GATEWAY ..	23
6.3 ASSIGNING IP ADDRESSES MANUALLY	24
6.4 SETTING UP FILE AND PRINT SHARING	25
6.5 USING FILE AND PRINT SHARING	26
6.6 INTERNET CONNECTION SHARING CLIENT REQUIREMENTS.....	26
6.6.1 Verify TCP/IP Protocol.....	27
6.6.2 Verify TCP/IP Settings.....	27
Chapter 7: Troubleshooting	29
7.1 SYSTEM DOES NOT START	29
7.2 KEYBOARD AND MOUSE PROBLEMS	30
7.3 USB DEVICE PROBLEMS	30
7.4 SOFTWARE PROBLEMS.....	31
Appendix: Mainboard	32

Figures

Figure 1.1 Front View.....	5
Figure 1.2 Back View	6
Figure 1.3 Power Management Setting	10
Figure 1.4 Drivers Installation	12
Figure 3.1 CD-ROM Drive	16
Figure 4.1 USB Port	18
Figure 4.2 USB Keyboard.....	19
Figure 6.1 Home Phone Wiring	22
Figure 6.2 Client Cables Figure	22
Figure 6.3 Crossover Cable	22

Congratulations!

Your new computer was designed to enhance your overall computing experience by making your PC easier to set up, easier to use, and easier to upgrade than old-fashioned PCs. Your computer has many common “add-on” features built-in already, so you don’t have to worry about complicated subjects like slots, interrupts, or device addresses. Your PC also includes the Microsoft® Windows® 98 Second Edition operating system and a universal serial bus (USB) interface for easy plug and play expansion.

The following list explains some of your computer’s main features and terminology:

- **AMD-K6®-2 processor with 3DNow!™ technology:** Runs your operating system, games, and application software.
- **Level-2 cache memory:** A very fast scratchpad that holds copies of the most-used instructions and data so the processor can spend less time moving data.
- **Synchronous DRAM (SDRAM) memory:** The processor’s main workspace. It holds a copy of any open documents and the software that is running.
- **IDE hard disk drive:** Holds the computer’s file system where software and saved documents are kept for long-term storage.
- **24x CD-ROM drive:** Lets you listen to audio CDs or use software and multimedia presentations distributed on CD-ROM.
- **Ethernet local-area network (LAN) interface:** Uses special cables and hubs to connect computers so you can exchange files, share printers, or share a dial-up Internet connection.
- **HomePNA LAN interface:** Uses your home’s existing telephone wiring to connect computers more easily than with Ethernet.
- **Five USB ports:** Easily connects additional hardware devices to your computer.
- **24-bit color VGA video and 2D/3D graphics accelerator**
- **16-bit, 64-voice polyphonic sound and 3D audio accelerator**
- **ACPI enhanced USB keyboard and PS/2 mouse** (mouse plugs into keyboard)
- **International AC power adapter**

Federal Communications Commission (FCC) Statement

This device complies with Part 15 of the FCC Rules. Operation of this device 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.

Accessories: This device has been tested and found to comply with the limits of a Class B digital device, the accessories associated with this equipment are as follows:

- Shielded universal serial bus cable. (Can be obtained from multiple retail outlets)
- Shielded video cable. (Can be obtained from multiple retail outlets)
- Shielded power cord. (Provided by manufacturer)

These accessories are required to be used in order to ensure compliance with FCC Rules. It is the responsibility of the user to provide and use these accessories properly.

This equipment has been tested and found to comply with the limits of 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.

Caution: *Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.*

Canadian D.O.C. Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian Department of Communications.

Cet appareil numérique n'émet pas de bruits radioélectriques dépassant les limites appliqués aux appareils numériques de Class B prescrits dans le règlement du brouillage radioélectrique édicté par le ministère Des Communications du Canada.

Important Safety Information

For your own safety, and to help ensure the correct operation of your computer, please observe the following precautions. Save this manual for future reference.

Laser Product: Your system's CD-ROM drive uses invisible laser radiation to read data. An internal switch prevents the laser from operating when the CD-ROM door is open. Do not operate the unit if the CD-ROM door is damaged, and do not attempt to service the unit yourself. Hazardous radiation exposure could result. Have the unit serviced by a qualified service technician.

AC Adapter: Use only the AC adapter supplied with your computer. The AC adapter must be connected to a grounded (three-wire) AC outlet. The supplied AC adapter accepts input power voltages of 100–250 VAC at frequencies from 47–63 Hz. Different countries use a variety of AC outlet styles. The supplied AC adapter accepts standard interchangeable three-wire AC power cables, which can be obtained with AC plug configurations appropriate for most countries.

Be careful to route the AC power and other system cables so that they will not trip anyone, be walked on, or be pinched by heavy objects. When removing a connector, always grasp the plug firmly and do not pull on the cable.

Environment: Do not use your computer outdoors, near water, in damp locations, or where there is excessive smoke, dust, or vibration. If any liquid or other material is spilled or splashed into the unit, unplug the power supply immediately and do not use the unit again until it has been inspected by a qualified service technician.

Do not subject your computer to extreme heat, such as placing it near a heat

source or exposing it to direct sunlight for extended periods. Do not operate your computer with any of its openings covered, or in a cabinet or other confined space without adequate ventilation. Keep the computer away from magnets, large motors, or other devices producing a strong magnetic field. Never touch the CD-ROM lens. Any fingerprints or debris on the lens can keep the CD-ROM from operating. Sometimes atmospheric changes can cause condensation to form on the CD-ROM lens; for example, if a heater is turned on, or if the unit is moved into a warm or humid room. Wait an hour or so for the condensation to evaporate.

Maintenance: Wipe the outside of the computer with a soft cloth that is lightly moistened with water or mild detergent only. Never use abrasive cleaners, scouring pads, or solvents such as alcohol or benzene.

Data Security: Your data can be damaged or erased as a result of hardware or software problems, or even simple mistakes. It is wise to purchase a high-capacity backup device, such as a USB removable-media drive, and make regular backups of your data.

Health: Consult a qualified health specialist if you experience extended pain or discomfort while using your computer. See “1.2 Tips for Healthy Computing” on page 7 for more information.

Packing Material: Keep the packing material for future use or repair needs.

Chapter 1: Getting Started

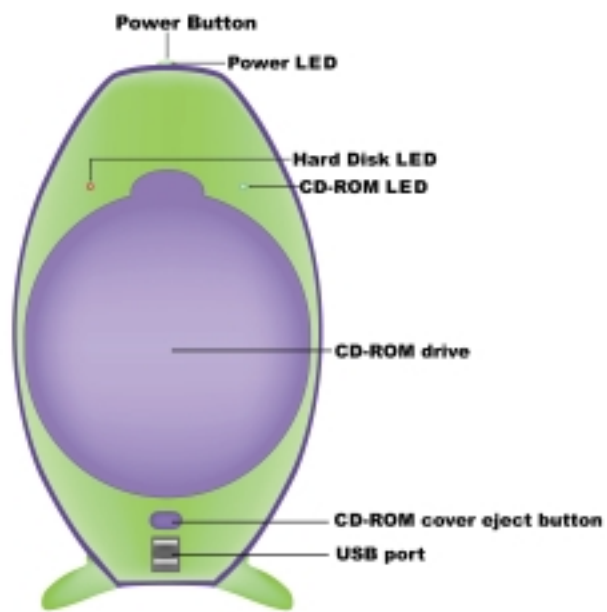


Figure 1.1 Front View

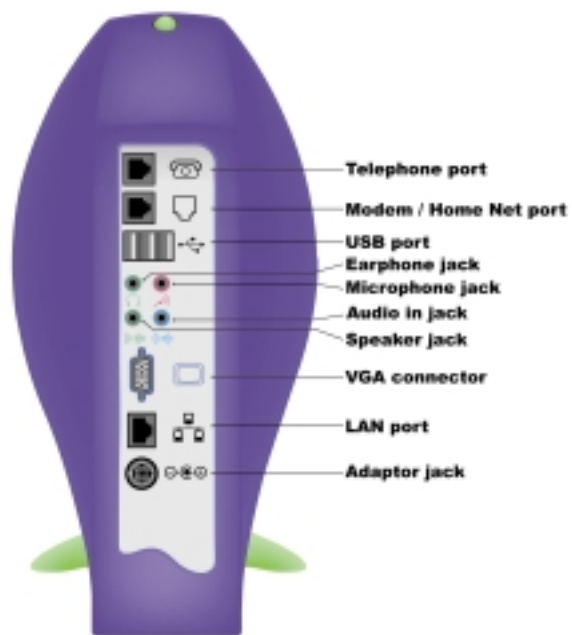


Figure 1.2 Back View

1.1 Setting Up

Using the separate *Quick Guide* card or the figures on this page, connect your system components together. You can connect the devices in any order, but we recommend that you connect the AC adapter last.

Note: *You can plug the keyboard into any of the system's USB connectors. The provided PS/2-style mouse plugs into the keyboard only, or you can use a separately-available USB mouse plugged into any USB port.*

Connect your computer's phone-line to an analog line only. Do not connect directly to a digital phone network.

This system doesn't have an end-user accessible BIOS set-up screen.

1.2 Tips for Healthy Computing

Like any physical activity, working at a computer can affect your health. Here are some tips to help you use your computer without discomfort.

Important: Consult a qualified health specialist if you experience extended pain or discomfort, especially in your arms, wrists, or hands.

Work in a relaxed position, and change positions often. Use a light, relaxed touch when typing or pressing the mouse buttons.

Adjust your chair or desk height so that, with your shoulders relaxed and elbows at your side, your forearms are level or tilted up slightly while you type or use the mouse. Place the mouse close to the keyboard and on the same level.

Adjust your chair height or use a footrest so your feet can rest flat on the floor.

- If possible, use a chair that allows you to adjust the seat and back so your weight is evenly distributed and your back is properly supported.
- Using a sturdy support, adjust your monitor height so the top of the display is even with or slightly below your eye level.
- Make sure your workspace is well lighted. Position lighting to avoid glare. Clean your monitor screen regularly.

-
- To avoid eyestrain, rest your eyes often by looking away from your work to focus on distant objects. Have your eyes examined regularly.
 - If you need to look at papers often while working on the computer, use a copy stand or other support to hold the papers near the same level as the monitor.

1.3 Starting Up

1. Turn on the monitor and any other peripherals connected to your system.
2. Press the power button on top of the system to turn it on.

After a delay, the Welcome to Windows 98 window is displayed. This window offers options such as registering Windows 98, connecting to the Internet, or viewing the Discover Windows 98 online tutorials. Please see Quick Guide for details.

Note: Please put a booting CD in CD-ROM drive if Windows 98 hasn't been installed on hard disk drive yet.

3. Use the mouse or Tab key to highlight different selections and read about what they do. To continue with the highlighted selection, click the left mouse button or press Enter. Each selection contains instructions to guide you.

1.4 Shutting Down

Important: Save any open documents before shutting down the computer. See the Windows 98 Help for information about saving documents.

1. To enter Standby mode:

Press the power button on top of the computer briefly, or press the Sleep key on the keyboard. The system saves its state and stops running. This is the same as selecting **Standby** when you use the Shut Down option in the Start menu. Please see "1.5 Power Saving Mode setting" to setup in advance.

2. To shut down completely:

Press and hold the power button on top of the computer for at least **four seconds**. This is the same as selecting **Shut Down** when you use the Shut Down option in

the Start menu.

The system typically takes longer to start again after it is shut down completely. Starting after a complete shutdown performs a traditional cold start of the system.

1.5 Power Saving Mode Setting

The system supports power saving as well as instant use. You don't need shut down the system completely. The operations are described is below.

1. **Setup:**
Click Start, select Settings, click Control Panel, and double click Power Management. Than select Standby on "when I press the power button on my computer" or "when I press the sleep button on my computer" in "Advanced" window. Please see Figure 1.3.
2. **Enter suspend mode:**
Press Sleep key on keyboard or select Standby when you use the Shut Down option in the Start menu on Windows 98. Also you can press Power button or Power key on keyboard if you have selected Standby on "when I press the power button on my computer" in "Advanced" window.
3. **Wake up:**
Press Power button to wake up your system.



Figure 1.3 Power Management Setting

1.6 Computer Viruses

Computer viruses are self-replicating programs that can “infect” computers. Even viruses meant to be harmless can cause problems, and malicious viruses have been created as acts of vandalism. Real viruses can cause serious problems by destroying important data and damaging software.

However, it is not unusual to see many more *hoax* virus reports than genuine ones. A hoax is a false virus report, usually forwarded in electronic mail by well-meaning individuals. In terms of wasted time and resources, virus hoaxes are sometimes as much of a problem as real viruses.

The following tips can help you avoid, or at least limit, problems with viruses:

- Purchase a high-capacity backup device, such as a USB removable-media drive, and make regular backups of your valuable data.
- Install one of the available virus-detection programs and keep it up to date.
- Disable any feature of your e-mail software that allows attached files to open or start automatically. Simply reading e-mail cannot infect your computer with a virus unless you open or run an infected attachment.
- Be careful using software or documents received from people you do not know.

Take virus reports seriously, but when you receive a report, always check it out before forwarding it. Many virus-detection software publishers maintain web sites with up-to-date information about current viruses and virus hoaxes.

1.7 Software Installation

We provide an installation wizard, driver CD installation utility (START.EXE), located in the root of Driver CD to let you install some commonly used drivers conveniently.



Figure 1.4 Drivers Installation

You can simply put the driver CD into your CD-ROM drive and the installation utility will autorun; or, you can run the driver CD installation utility directly by using your mouse to click the proper option on the page. The utility invokes other applications to complete the rest of installation. *Please be awarded that some softwares in Other Software item are optional.*

The software list is described as following table:

Category	Description	Platform	Location in CD
SiS VGA Driver	VGA driver for SiS chipset	Windows 95/98/ NT40*/ 2000*	\VGA
SmartLink Modem with SiS7018 audio	Combined modem/audio driver for SiS 960	Windows 98*	\Aud_mod
SiS PCI Fast Ethernet Adapter	SiS LAN driver	Windows 98*	\Lan
HighPoint XStore Pro	Install the drivers to support ultra DMA mode hard drive.	Windows 95/98	\Xstore
Award Flash Utility	Used for updating BIOS.	This utility must run under DOS environment.	\Flash
USB keyboard Driver	Supports Internet WWW Browser on keyboard	Windows 98*	\Wwwkey
USB FDD Driver	Used for External USB FDD	Windows 95/98	\USBFDC
DirectX	Microsoft DirectX	Windows 95/98	\DirectX

Note: The mark “ * “ means under the OS environment, you need to install driver manually. Please refer to the OS user’s manual to get more detailed information about driver installation.

Chapter 2: Dialing up the Internet

The *Internet* is the vehicle for many popular computing activities, such as exchanging e-mail, participating in online *chat* conversations, and viewing text, sound, and visual information on the World Wide Web.

All these activities can take place because the Internet acts as the global computer *network*. A network allows users at different computers to share files and computer services with each other. The *Internet* is actually made up of many connected networks, which are usually run by schools, governments, or companies. When you connect your computer to one of these networks, you are also connecting to the global Internet.

You can connect your computer to the Internet by using your computer's built-in modem to dial up an *Internet service provider* (ISP). ISPs maintain the computer servers, high-speed Internet links, and multiple telephone lines needed to connect all their subscribers to the Internet.

Your computer's built-in modem supports the V.90 standard communication supported by most ISPs. It can communicate at speeds up to 56 Kbit/s (receiving) or 31.2 Kbit/s (transmitting). Actual speeds can be lower, depending on the capacity of the telephone system or the remote computer's modem.

You can use the following steps to subscribe to an Internet service and connect your computer to the Internet:

1. Make sure you have plugged in a modular telephone cable (type RJ-11) between your computer's phonenumber jack and your telephone wall outlet.
Note: Connect your computer's phonenumber to an analog line only. Do not connect directly to a digital phone network.
2. Click **Connect to the Internet** in the Welcome to Windows 98 window. The Internet Connection *wizard* opens. Windows 98 has many such wizards: special programs that guide you through various computing tasks.
Note: As an alternative to using this wizard, you can double-click one of the online service sign-up icons that are on the desktop and in the Online Services folder. These are custom sign-up wizards provided by nationwide online service providers.
3. In the Internet Connection wizard, you can click the **Tutorial** button to learn about the Internet. Then select one of the three options before continuing:

-
- **I want to sign up for a new Internet account.** This option uses your built-in modem to call Microsoft's toll-free ISP referral service, which lists major ISPs that serve your area code. After you select a service, the wizard guides you through the process of signing up for an account and making the connection. Some ISPs offer a free trial period, after which a fee is charged.
 - **I want to transfer my existing account to this computer.** This option also presents a list of ISPs, but guides you through the process of connecting to an existing account that you signed up for previously; for example, on another Windows 98 computer.
 - **I want to set up my Internet connection manually, or connect through a local area network (LAN).** This option allows you to set up the connection by entering account information provided by your ISP. This option might be preferred by users who want to use an ISP not listed by the referral service.

You can also select this option if you have another Windows 98 Second Edition computer on your LAN that is configured as an Internet Connection Sharing gateway. See "6.2 Setting up an Internet Connection Sharing Gateway".

4. Click the selection you want to highlight; then click the **Next** button to continue using the wizard.
The steps displayed by the wizard depend on the selections you make at each step. Along the way, the wizard displays instructions to help you. Read the instructions, type any requested information, and make selections as needed. When you are done with each step, click the **Next button** to continue to the next one.

When your connection is set up, the wizard's last step lets you select whether to connect to the Internet immediately after the wizard closes. Set this option as desired, then click **Finish** to close the wizard. To connect at another time, double-click the **Internet Explorer** icon on the desktop to get started.

When you connect to the Internet, the first page displayed is a Home page that contains information to help you get started. If you get lost, click the **Home** button in Internet Explorer to return to your Home page.

Chapter 3: Using the CD-ROM Drive

Your computer includes a 24x CD-ROM drive capable of reading compact disc read-only memory (CD-ROM) discs or playing audio CDs.

CD-ROM discs are a high-capacity portable storage medium for computer programs and data. CD-ROMs are often used to distribute software and multimedia presentations. A CD-ROM disc can hold about 640 Mbytes of data or 74 minutes of audio.

Caution: *The CD-ROM drive brake cannot operate if the system is unplugged or power removed while the disc is spinning. If this happens, do not open the CD-ROM drive door until the CD-ROM has stopped spinning.*

To open the CD-ROM drive door, slide its latch button downwards. The door pops open when released. To close the door, gently push it closed and press until it latches.

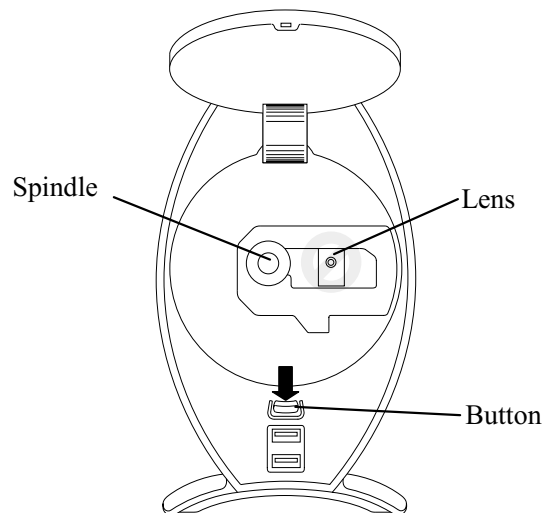


Figure 3.1 CD-ROM Drive

To mount a disc, open the door; then press the disc onto the drive spindle with the disc's label facing outwards (toward you). Then close the door.

Important: *Do not touch the CD-ROM lens. Fingerprints on the lens might prevent the drive from working properly.*

The CD-ROM cannot operate properly unless the system unit is placed in its normal, upright position.

To remove a disc, open the door; then grasp the disk by its edges and pull it gently off of the drive spindle. Then close the door.

If you mount a CD-ROM, the operating system displays the contents of the mounted disc as drive D: in the My Computer window on the desktop.

To control the playing of an audio CD, click **Start**. Then move the mouse pointer to **Programs, Accessories**, and then **Entertainment**, and select **CD Player**.

See the Windows 98 Help for more information about using CDs and CD-ROMs.

Chapter 4: Adding USB Peripherals

Your computer is equipped with five universal serial bus (USB) ports. Three ports are located in the back of the system unit to allow out-of-the-way wiring. Two ports are located in front for easy access.

You can obtain many USB-compatible devices, such as: game controllers, trackballs, disk drives, printers, audio devices, network adapters, scanners, and digital cameras.

You can plug any USB device into any port at any time, even when the system is running. The operating system automatically detects the device and locates the driver software needed to configure it. (If the device came with a driver on a CD-ROM or floppy disk, you might be prompted to insert the disk and indicate where the driver is located.)

USB ports are keyed so you can only plug in a device one way. Some USB devices have a detachable cable, with different USB connectors on each end. One end fits only in a device socket; the other end fits only in a USB port.

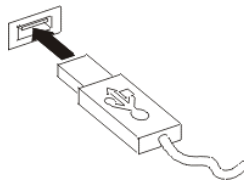




Figure 4.1 USB Port


Some USB devices can act as a USB hub. A hub is a device that adds additional USB ports to your system. A USB hub can stand alone, or be part of another device. For example, a keyboard might have an extra USB port to allow easy connection of a mouse.

Your computer's USB can handle data transfers up to 12 Mbits/s, which is fast enough to transfer a typical text or image document in a few seconds. Actual speeds depend on the USB devices used. If you use many devices at the same time, then some operations might take longer than usual. Also, some USB devices allocate a fixed portion of the USB's data transfer capacity when they are configured. If the attached devices allocate all of the USB capacity, additional devices are not configured when you attach them. If the data transfer capacity is


not exceeded, you can attach up to 127 USB devices to your computer.


Some special functions on keyboard are described as following:

 +  Lock keyboard when click these two at the same time.

 Enter Internet browser when press it.

ACPI Enhanced Keys:

 Power Key: as same as Power Button.

 Sleep Key: as same as Standby on the Shut Down option in the Start menu. .


 Wake Key: Doesn't work currently due to failure on Windows 98. Please press Power Button to wake up.



Figure 4.2 USB Keyboard

Chapter 5: Connecting Audio Equipment

Your computer is equipped with the following audio connectors, which accept standard 1/8-inch audio plugs. See the figure on page 5 for connector locations.

- **Headphone Jack:** Use this jack to connect stereo headphones or amplified speakers to your system. You can control the output volume by clicking the speaker icon near the right end of the task bar and adjusting the slider that is displayed.
- **Microphone Jack:** Use this jack to connect a microphone to use with software, such as the Windows 98 Sound Recorder, that records or otherwise uses audio input.
- **Audio In:** Use this jack to use stereo audio from an external source such as a stereo receiver, tape player, or CD player.
- **Audio Out:** Use this jack to connect the computer's audio output to an external tape recorder, or to the AUX or TAPE inputs of an amplifier. Do not connect this output to an amplifier's PHONO jacks.

Chapter 6: Setting up a Home Network

“Chapter 2: Dialing up the Internet” described how the global Internet connects smaller networks around the world. If you have two or more computers, you can also set up your own local-area network (LAN) to share files and printers within your home or office. You can also designate one computer as an Internet connection sharing (ICS) gateway through which all the computers on your LAN can connect to the Internet.

Computers in a LAN are interconnected with standard cabling, over which the computers communicate. Your computer supports *Ethernet* and *HomePNA* networking.

Ordinary Ethernet networking operates at 10 Mbit/s, which is fast enough to transfer a typical text or image document in a few seconds. Ethernet requires special cables and equipment to connect your network. The optional 100-Mbit/s *Fast Ethernet* is about ten times as fast as ordinary Ethernet. However, Fast Ethernet can operate at top speed only if all of your Ethernet equipment supports 100-Mbit/s operation.

HomePNA uses a networking standard that doesn't require special cables or equipment. HomePNA operates at 1 Mbit/s, so it is not as fast as Ethernet, but it is easy to connect and fast enough for most home networks. When you connect the modem jack to your telephone outlet, you are also networking your computer to any other HomePNA-equipped computers that use the same line. The phoneline can still be used for voice, fax, or modem communication, even while HomePNA activity is going on.

Note: *Connect your computer's phoneline to an analog line only. Do not connect directly to a digital phone network.*

The following sections describe how to connect your network and set up Microsoft Windows 98 Second Edition to share files, printers, and an Internet connection in your LAN. These sections assume you are familiar with the Start menu and using Windows. Use the Windows 98 Help system to get started, or press F1 for help about a particular item. See the Windows 98 online Help index for a complete listing of networking topics.

6.1 Plugging in Your Network

To use HomePNA to connect two or more computers, simply plug the phoneline connection from each of your HomePNA-equipped computers into the same phoneline. All that remains is to set up the software as described in the following sections.

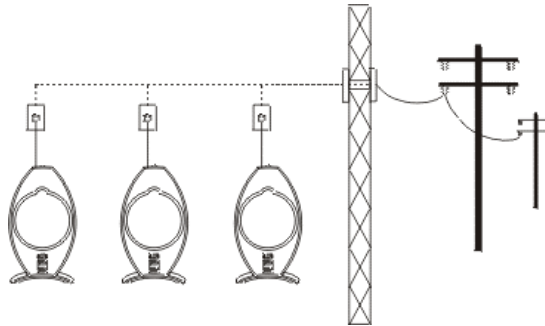


Figure 6.1 Home Phone Wiring

To use Ethernet to connect three or more computers that support it, obtain an Ethernet *hub* device and separate RJ-45-type Ethernet *client* cables for each computer. Connect a cable from each computer's Ethernet jack to one of the hub's outlets. A special *crossover* cable can be used to link only two Ethernet-equipped computers.

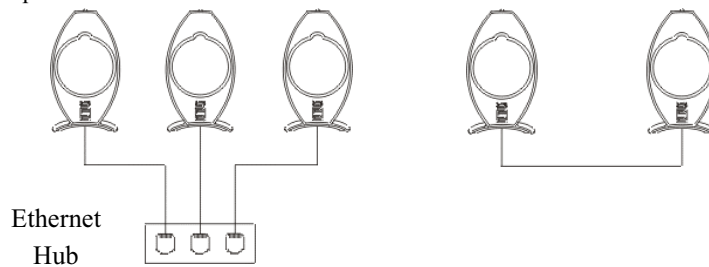


Figure 6.2 Client Cables

Figure 6.3 Crossover Cable

Ethernet hubs and cables are available from computer retailers. Devices designated "10BaseT" support 10-Mbit/s Ethernet connections. Devices designated "100BaseT" support either 10-Mbit/s or 100-Mbit/s Ethernet

connections. If your computer supports 100-Mbit/s Ethernet, it can communicate at 100 Mbit/s only if other devices on your network support 100-Mbit/s operation.

If the system is connected to both HomePNA and Ethernet networks, the Ethernet interface is automatically selected when the computer starts. You can override this selection in the Network control panel by changing Properties for the SiS 0900 PCI Fast Ethernet Adapter and selecting the network type.

6.2 Setting up an Internet Connection Sharing Gateway

An Internet connection sharing (ICS) gateway lets all the computers on your LAN access the Internet using a single phoneline. In addition, having an ICS gateway makes it easier to set up your other computers for file and print sharing.

Perform the following steps with the computer on your LAN that you want to use as an ICS gateway. (Only one computer on the LAN can be an ICS gateway.)

***Note:** Your computer's network adapter is already installed. If you use another computer for your ICS gateway, it might be necessary to install and configure the appropriate network adapter and TCP/IP protocol. See the other computer's documentation for instructions.*

1. Make sure the phoneline is connected and that the computer is also connected to a HomePNA or Ethernet LAN.
2. In the Start menu, open **Settings/Control Panel**.
3. In the Control Panel window, find the **Add/Remove Programs** icon (scroll the window if necessary). Double-click the **Add/Remove Programs** icon to open the Add/Remove Programs Properties window.
4. Click the **Windows Setup** tab. Windows displays a list of installed components.
5. Click **Internet Tools**. (Scroll the list if necessary.)
6. Click the **Details** button. The Internet Tools window opens.
7. Click the **Internet Connection Sharing** check box to select it. (A check mark is displayed when a check box is selected).
Windows 98 starts the Internet Connection Sharing wizard. To use a wizard, follow the instructions displayed and then click **Next** to continue.
8. When Windows 98 asks you to label a disk and insert it, you can click Cancel to skip the step. The disk would contain a wizard to help you set up the other systems on the LAN. However, you can use the steps in "6.6 Internet Connection Sharing Client Requirements" to achieve the same purpose.

-
9. Click **Finish** to close the wizard when all its steps are complete.

You can set up only one computer on your LAN as an ICS gateway. If you have more than one ICS gateway, addressing conflicts occur. If this happens, use the Add/Remove program to remove Internet connection sharing from one of the computers.

6.3 Assigning IP Addresses Manually

If you set up an ICS gateway on your LAN (see the previous section), the gateway automatically assigns private *IP addresses* to other computers on the LAN. An IP address is a number that your computers use to address each other.

If you decide not to set up an ICS gateway, you need to assign IP addresses manually. All this requires is that you make up a number for each computer, using a special private IP address format ignored by the global Internet. You use private IP addresses so the computers on your network can address each other privately, and so you do not need to obtain a registered IP address for your network.

For small networks, a private IP address always looks like this:

192.168.*x.y*

The value *x* can be any value from 0 to 254. The value *x* must be the same number for every computer on your LAN.

The value *y* can be any value from 1 to 254, (except 127). The value *y* must be a different number for every computer on your LAN.

For example, you could assign the following IP addresses if you have three computers on your private LAN.

192.168.0.1

192.168.0.2

192.168.0.3

It is a good idea to write down a list of your computers and their private IP addresses. Have this list with you when you set up your network.

6.4 Setting up File and Print Sharing

Use the following steps to identify your system to the network and enable sharing for each computer on your LAN:

1. Make sure your computer is connected to a HomePNA or Ethernet LAN.
2. In the Start menu, open **Settings/Control Panel**.
3. In the Control Panel window, find the Network icon (scroll the window if necessary). Double-click the **Network** icon to open the Network window.
4. Click the **File and Print Sharing** button in the Network window.
5. In the File and Print Sharing window, select one or both check boxes to share the computer's files, or printers, or both; then click **OK**.
The Network window is displayed again.
6. In the Network window, click the **Identification** tab.
7. Type a **Computer Name** for this computer. The computer name must be different from your other computers.
8. Type a **Workgroup** name. For small networks, it is easiest to make the workgroup name the same for all your computers. (Computers with the same workgroup name are listed together in the Network Neighborhood window.)
9. In the **Computer Description** field, type a brief description to be displayed with the computer name in a detailed listing. This is optional.
10. If you have set up an ICS gateway on your LAN, skip to the last step of this procedure. See "6.2 Setting up an Internet Connection Sharing Gateway" for details.
11. If you have not set up an ICS gateway on your LAN, perform the following steps:
 - a Click the **Configuration** tab in the Network window. The Configuration settings list a separate TCP/IP protocol icon for each network interface.
 - b Select **TCP/IP-> SiS 0900 PCI Fast Ethernet Adapter** from the list and click the **Properties** button.
 - c In the TCP/IP Properties window, select the **IP Address** tab; then select the **Specify an IP address** button.
 - d In the **IP Address** field, type the unique private IP address you made up for this computer. See "6.3 Assigning IP Addresses **Manually**" for details.
 - e In the **Subnet Mask** field, type **255.255.255.0**. Then click **OK**.
The Network window is displayed again.

-
- Click **OK** to exit the Network window.
The computer copies any files that it needs to complete the configuration, then it asks if you want to restart the computer. If you select **Yes**, the computer restarts immediately. If you select **No**, you should close all programs and restart the computer before continuing.

6.5 Using File and Print Sharing

To share an item in your computer:

- Double-click **My Computer** on the desktop.
- Select the item to share and select **Properties** from the window's File menu.
- Select the **Sharing** tab in the Properties window; then select the **Shared As** button and make any changes you like to the other sharing properties. For help on specific items, select the item and press the F1 key. Click **OK** to apply the changes.

To access items shared by other computers:

- Double-click **Network Neighborhood** on the Desktop.
- Double-click a computer's name. A window opens that lists all the printers and directories shared by that computer.
The access you have depends on which items are shared on the other computer, and which sharing properties are set for each item.

See the Windows 98 online Help index for more information about networks and using file and print sharing.

6.6 Internet Connection Sharing Client Requirements

Your computer's Ethernet and HomePNA adapter was set up with default values that allow Internet connection through an ICS gateway computer (see "6.2 Setting up an Internet Connection Sharing Gateway").

If the default configuration has been changed, or if you are setting up another computer to use the ICS gateway, use the following procedures to make sure the

network adapter is properly installed and configured.

6.6.1 Verify TCP/IP Protocol

Use the following steps to make sure the TCP/IP protocol is present for your network adapter:

1. If you are setting up another computer on your LAN with a non-plug-and-play network adapter, double-click the **Add New Hardware** icon in the Control Panel window and follow the instructions on the screen to add the other computer's network adapter. You might be asked to insert a driver disk. Consult the other computer's network adapter documentation for details.
2. In the Control Panel window, double-click the **Network** icon. If a TCP/IP protocol is listed with the correct network adapter name, you can skip to step 6 of this procedure. (Your computer's built-in Ethernet and HomePNA adapter is named "SiS 0900 PCI Fast Ethernet Adapter." The name might be different for other computers on your LAN.)
3. Click the **Add** button; then click **Protocol** in the displayed list; then click **Add** again.
4. Click **Microsoft** in the displayed list of manufacturers.
5. Click **TCP/IP** in the Network Protocols window. Then click **OK**. The Network window is displayed again.
6. Click the network adapter name in the list of components. Then click **Properties**.
7. Click the **Bindings** tab; then click the box next to **TCP/IP** to select it, if it is not already selected.
8. Click **OK**. Then click **OK** again to close the Network window.

You must restart the computer before any changes to these settings can take effect.

6.6.2 Verify TCP/IP Settings

Use the following steps to verify that your TCP/IP settings are correct for connecting to the Internet through an ICS gateway:

1. In the Control Panel window, double-click the **Network** icon.
2. In the Network window, click the TCP/IP protocol that is listed with the correct network adapter name. (Your computer's built-in Ethernet and HomePNA adapter is named "SiS 0900 PCI Fast Ethernet Adapter." The name might be different if you are configuring a different computer.)
3. Click the **Properties** button.

-
4. Click the **Obtain an IP address automatically** check box to select it, if it is not already selected.
 5. Click the **WINS Configuration** tab.
 6. Click the **Use DHCP for WINS Resolution** check box to select it if it is not already selected.
 7. Click the **Gateway** tab. Remove any installed gateways that are listed.
 8. Click the **DNS Configuration** tab.
 9. Click the **Disable DNS** check box to select it if it is not already selected.
 10. Click **OK**. Then click **OK** again to close the Network window.

You must restart the computer before any changes to these settings can take effect.

Chapter 7: Troubleshooting

The following are some tips to help you solve problems should they arise.

Important: *Your data can be damaged or erased as a result of hardware or software problems, or even simple mistakes. It is wise to purchase a high-capacity backup device, and make regular backups of your valuable data.*

7.1 System Does Not Start

No LEDs light and no sound can be heard from the system unit:

1. Make sure the power cable and AC adapter plugs are plugged in securely. Inspect the cables and adapter to make sure there is no visible damage.
2. Plug another, known-working appliance into the AC outlet to make sure the outlet is functioning. If available, try using a different power cable.
 - If the power cable and wall socket are OK, there may be a power supply failure. Contact technical support.

Keyboard and power LEDs light, and sound comes from the system unit, but the monitor remains blank:

1. Make sure the monitor is turned on and its power cable is securely plugged into a working AC outlet.
2. Make sure the monitor display cable is plugged securely into the back of the system unit. If available, try a different monitor, or try the monitor on a different VGA-compatible computer.
 - If the monitor is powered on and known to be working, there may be a problem with the system unit's main circuit board. Contact technical support.

Messages are displayed on the monitor, but Windows 98 does not start:

- Follow the instructions on the screen. If the problem persists, contact technical support.

7.2 Keyboard and Mouse Problems

Keyboard doesn't take input, but mouse pointer moves when mouse is moved:

- Make sure the keyboard and mouse are connected when you start the computer.
- 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, or unplug the AC adapter for a few seconds.
- Press and hold the Fn+ key above the numeric keypad while pressing F11 (LOCK). Pressing this combination alternately locks and unlocks the keyboard.

Mouse pointer moves erratically when mouse is moved:

- Use the mouse on a smooth surface, such as a mouse pad. Make sure the mouse pad is clean, on a level surface, and that nothing is underneath it.
- Open the cover on the bottom of the mouse. Remove the ball and use a soft lint-free cloth to clean off any dust or debris. The ball may be washed with warm water and mild detergent, but dry it thoroughly before replacing. Gently blow any lint or dust from inside the mouse, and use a moist cotton swab to thoroughly clean the rollers. Rotate the rollers to make sure the entire surface is clean.

Keyboard doesn't take input; mouse pointer does not move:

- See “7.4 Software Problems”.
- Insert mouse into keyboard when plugging in keyboard or booting system.

7.3 USB Device Problems

USB device works when first plugged in, but does not work after system is woken from Standby mode:

- Force the device to configure by unplugging and then plugging it back in.
- 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.

-
- Contact the manufacturer and ask if a driver upgrade is available to make the device support “ACPI S3 mode” operation. This support is required for the device to configure upon waking from your computer's Standby mode.
 - When buying USB devices, ask the manufacturer if the device supports “ACPI S3 mode” operation.

7.4 Software Problems

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 program behaves erratically or refuses to accept user input:

- Wait a while. The program might be busy processing data or waiting for some event, such as network activity.
- If possible, use the task bar to switch to other programs, save any documents that might be open, and close other programs. Then attempt to close the program that is misbehaving.
- If a program does not close, press the Ctrl+Alt+Del keys together *only once*. The computer will give you the option of ending the task (program) or waiting longer. If you press Ctrl+Alt+Del a second time, the computer restarts if it can.
- As a last resort, if the computer totally ignores the mouse, keyboard, and power button, you can unplug the AC adapter cable from the back of the computer; wait a moment; and then plug the adapter back in. This forces the computer to restart.
- If the problem persists, contact technical support for the software that is causing the problem.

The screen goes blank after a period of disuse:

- Press a key or move the mouse. Windows 98 has a screen saver feature that blanks the screen when the computer is inactive. You can adjust the screen saver settings in the Display control panel. See Windows 98 Help for more details.

Appendix

Motherboard

Contents

Introduction	1
1 Motherboard Description	2
1.1 FEATURES	2
1.1.1 Hardware	2
1.1.2 Firmware and Software	4
1.1.3 Accessories.....	4
1.2 MOTHERBOARD INSTALLATION.....	5
1.2.1 Layout of Motherboard	5
1.3 MOTHERBOARD CONNECTORS	6
1.3.1 Back Panel Connectors.....	8
1.3.2 Hard Disk Connectors (P16/P17).....	8
1.3.3 MDC (Modem Daughter Card) Connector (JP11/P9).....	9
1.4 CPU INSTALLATION/JUMPER SETTING.....	10
1.4.1 CPU Installation Procedure	10
1.4.2 CPU Voltage Selection (JP19)	11
1.4.3 CPU / SDRAM and PCI Frequency Selection (JP4)	14
1.4.4 CPU BUS Frequency Ratio Selection (JP1).....	15
1.5 JUMPER SETTINGS	16
1.5.1 IDE1 LED Connector (J1).....	16
1.5.2 IDE2 LED Connector (J2).....	16
1.5.3 Speaker Connector (JP6).....	17
1.5.4 CD_IN Connector (JP7).....	17
1.5.5 RJ11 Connector to MDC (JP11)	17

Contents

1.5.6 System Fan Connector (JP12)	17
1.5.7 CPU Fan Connector (JP13)	18
1.5.8 CMOS Function Selection (JP17)	18
1.5.9 Power button Connector (JP20)	19
1.5.10 Power LED Connector (JP21)	19
1.5.11 Reset Connector (JP23)	19
1.6 DRAM INSTALLATION	20
1.6.1 DIMM	20
1.6.2 How to install a DIMM Module	21
2. Trouble Shooting	1

Introduction

System Overview

Thank you buying this product! This manual was written to help you start using this product as quickly and smoothly as possible. Inside you will find adequate explanations to solve most problems. For help in finding topics of interest, refer to Table of Contents.

This board incorporates the system board, IDE, LAN, modem, sound controller and VGA video into one board that provides a total PC solution. The motherboard, an AMD Super Socket-7 processor-based Flex ATX system, supports a 512Kbyte cache. This board is ideal for multitasking and fully supports MS-DOS, Windows, Windows NT, Novell, OS/2, Windows9x, UNIX, SCO UNIX, etc. This manual explains how to install the motherboard for operation.

1 Motherboard Description

1.1 Features

1.1.1 Hardware

CPU

- Supported CPUs: AMD-K5[®], AMD-K6[®], AMD-K6[®]-2, and K6-III AMD-K6[®] microprocessors.
- Provides 321-pin ZIF socket (Socket 7).

Speed

- Supports 66, 75, 83, 90, 95, and 100MHz CPU bus clock frequencies.

DRAM Memory

- Supports SDRAM 168-pin DIMM modules.
- Supports SDRAM memory from 32 Mbytes to 256 Mbytes.
- Supports symmetrical and asymmetrical SDRAM.
- Supports 3.3V unbuffered SDRAM.

Cache Memory

- Supports 512Kbyte pipelined burst SRAM.

Flash Memory

- Supports Plug and Play (PnP) functionality for better system compatibility.
- Enables you to easily upgrade system BIOS.

Shadow RAM

- Supports shadowing of system BIOS into RAM for faster performance.

Green PC Power Management Functionality

- BIOS supported power management.
- Power management timer from 10 seconds to 4 hours.
- Auto wakeup on device activity including keyboard, mouse, etc.
- Supports auto wake on LAN.
- Supports resume on internal modem.
- Supports ACPI.

PCI Enhanced IDE Built-in onboard

- Supports up to four IDE hard disk drives.
- Supports mode 4, bus master mode.
- Supports ultra DMA33/66 bus master mode.
- Supports IDE CD-ROM drives.
- Supports high-capacity, high-performance hard disk drives.
- Supports LBA mode.

Advanced PCI Audio

- Advanced wavetable synthesizer.
- 3D sound effects.
- Supports high quality audio and AC97/98.

LAN

- Supports 10/100 Base-T, 1-Mbit/s home PNA.
- Optimized for home networking applications over existing telephone wire.
- Fully integrated 10 /100 Mbits Ethernet transceiver.
- IEEE 802.3u-compliant MII.
- Optimized for 100Base-T applications.

Mobile Daughter Card (MDC) Connector

- Supports MDC connector equipped internal modems.
- RJ-11 connector on board.

Universal Serial Bus

- Supports five USB ports.
- Supports 48 MHz USB.
- Supports over-current detection.
- USB 1.1 compliant

Platform

- FlexATX form factor.

Dimension

- 22.9 cm x 19.0 cm (W x L).

1.1.2 Firmware and Software

BIOS

- AWARD BIOS.
- Supports PnP functionality.

Operating Systems

- Offers the highest performance for MS-DOS OS/2, Microsoft Windows NT, Windows 31 / 95 / 98 / 2000, Novell, UNIX, SCO UNIX, and others.

Backup CD

- Includes drivers for all onboard devices including:
 - Onboard AGP video.
 - Onboard Ethernet controller.
 - Onboard audio.
 - MDC modem.
- BIOS Flash programming utility.

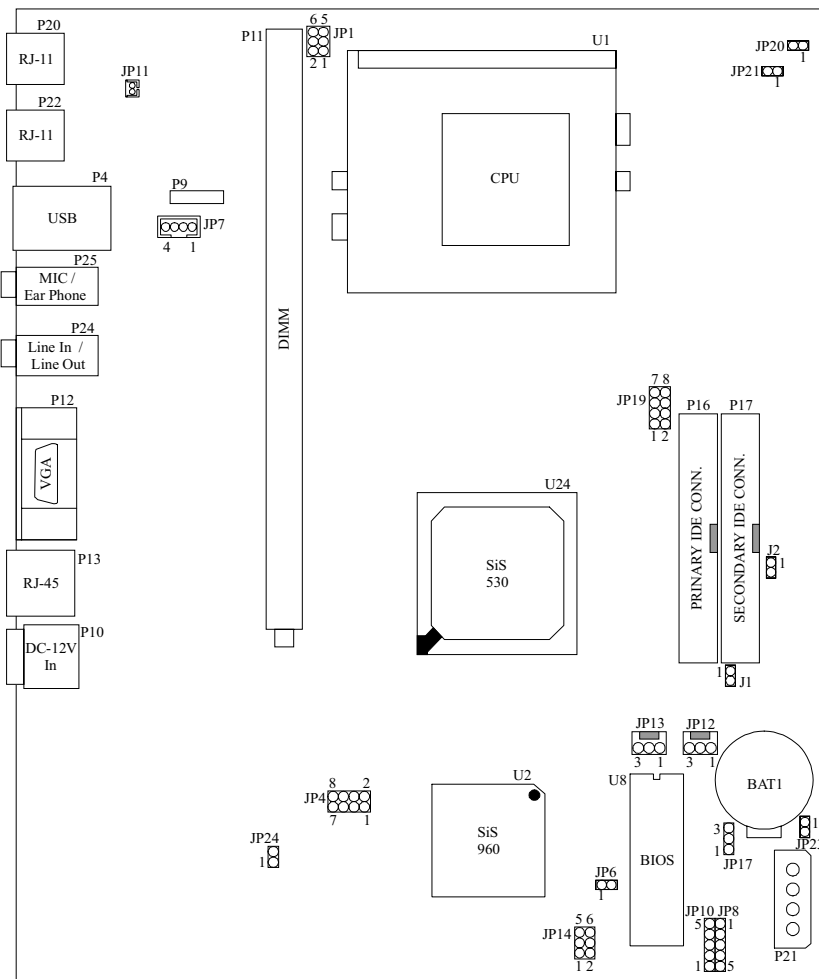
1.1.3 Accessories

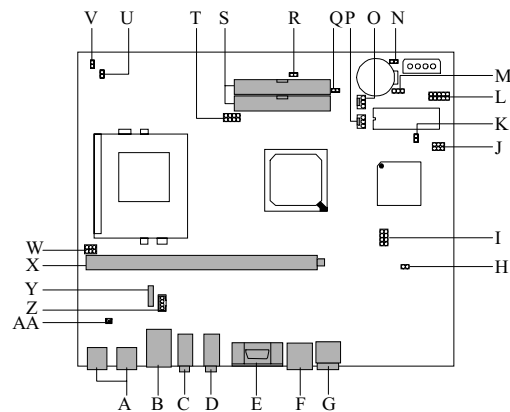
- HDD cable.
- USB cable.

1.2 Motherboard Installation

1.2.1 Layout of Motherboard

Model No. M5SAF Ver:1.1

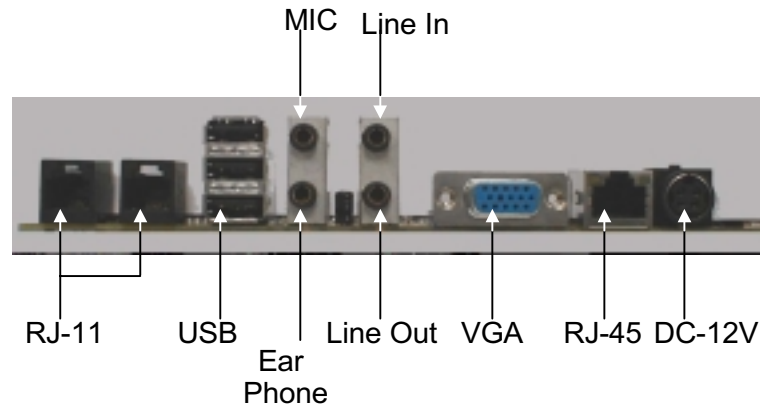




1.3 Motherboard Connectors

- | | |
|---|---|
| A. RJ-11 (P20/P22) | N. Reset connector (JP23) |
| B. USB connector (P4) | O. System Fan connector (JP12) |
| C. MIC & Ear Phone connector (P25) | P. CPU Fan connector (JP13) |
| D. Line In & Line Out connector (P24) | Q. IDE1 LED connector (J1) |
| E. VGA connector (P12) | R. IDE2 LED connector (J2) |
| F. RJ-45 (P13) | S. IDE connectors (P16/P17) |
| G. DC-12V In (P10) | T. CPU voltage Selector (JP19) |
| H. Voltage Micro Adjuster (Debug use only) (JP24) | U. Power LED connector (JP21) |
| I. CPU/SDRAM and PCI Frequency Selection (JP4) | V. Power button connector (JP20) |
| J. GPIO Port (Debug use only) (JP14) | W. CPU BUS Frequency Ratio Selector (JP1) |
| K. Speaker connector (JP6) | X. DIMM (P11) |
| L. Front USB connectors (JP8/JP10) | Y. MDC connector (P9) |
| M. CMOS Function Selection (JP17) | Z. CD_IN connection (JP7) |
| | AA. RJ11 connector to MDC (JP11) |

1.3.1 Back Panel Connectors



1.3.2 Hard Disk Connectors (P16/P17)

The motherboard has a 32-bit enhanced PCI IDE controller that provides PIO mode 0~4, bus master, and ultra DMA 33/66 functionality. It has two HDD connectors IDE1 (primary) and IDE2 (secondary). You can connect up to four drives, including hard drives, CD-ROMs, or LS-120Mbyte floppy drives (reserved for future BIOS) or any other IDE-compatible devices to IDE1 and IDE2. These connectors support the IDE hard disk cable provided.

P16 (Primary IDE Connector)

The first hard drive should always be connected to IDE1. IDE1 can connect a master and a slave drive. You must configure a second hard drive on IDE1 to slave mode by setting the jumper on the drive accordingly.

P17 (Secondary IDE Connector)

The IDE2 controller can also support a master and a slave drive. The configuration is similar to IDE1. The second drive on this controller must be set to slave mode.

1.3.3 MDC (Modem Daughter Card) Connector (JP11/P9)

P9 (MDC Connector)

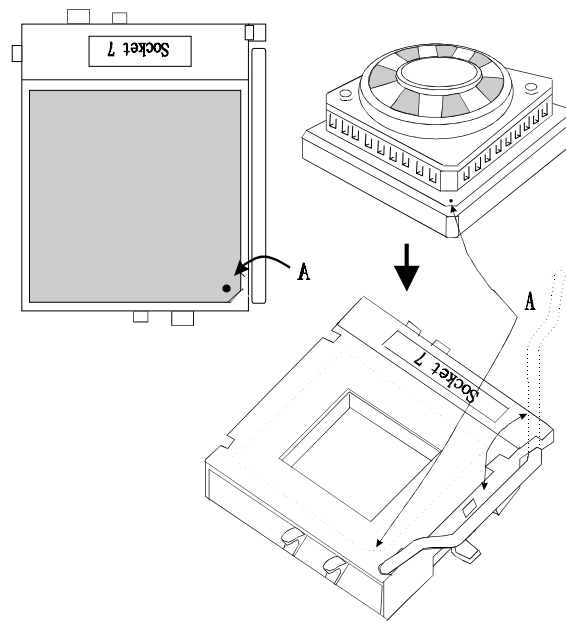
The mobile audio/modem daughter card specification provides mobile form-factor module and interface for audio and modem solutions based upon AC'97 Rev 2.1.

JP11 (RJ11 to MDC Connector)

This connector provides a connection between the MDC and the RJ11 phone jack.

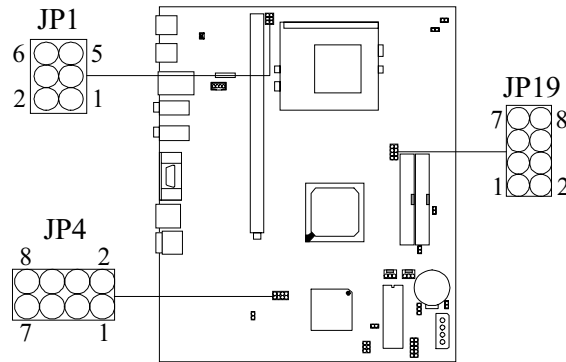
1.4 CPU Installation/Jumper Setting

1.4.1 CPU Installation Procedure



1. Pull the lever sideways away from the socket then raise the lever up to a 90-degree angle.
2. Locate Pin A in the socket and look for the white dot or cut edge in the CPU. Match Pin A with the white dot/cut edge then insert the CPU.
3. Press the lever down to complete the installation.

1.4.2 CPU Voltage Selection (JP19)



CPU TYPE	CPU Voltage		Vcc_core
	CORE	I / O	
Dual Voltage AMD K6/ K6-2/ K6-III	2.0V	3.3V	1-2 OPEN 3-4 OPEN 5-6 OPEN 7-8 OPEN
	2.1V	3.3V	1-2 CLOSED 3-4 OPEN 5-6 OPEN 7-8 OPEN
	2.2V	3.3V	1-2 OPEN 3-4 CLOSED 5-6 OPEN 7-8 OPEN
	2.3V	3.3V	1-2 CLOSED 3-4 CLOSED 5-6 OPEN 7-8 OPEN

CPU TYPE	CPU Voltage		Vcc_core
	CORE	I / O	
Dual Voltage AMD K6/ K6-2/ K6-III	2.4V	3.3V	1-2 OPEN 3-4 OPEN 5-6 CLOSED 7-8 OPEN
	2.5V	3.3V	1-2 CLOSED 3-4 OPEN 5-6 CLOSED 7-8 OPEN
	2.6V	3.3V	1-2 OPEN 3-4 CLOSED 5-6 CLOSED 7-8 OPEN
	2.7V	3.3V	1-2 CLOSED 3-4 CLOSED 5-6 CLOSED 7-8 OPEN
	2.8V	3.3V	1-2 OPEN 3-4 OPEN 5-6 OPEN 7-8 CLOSED
	2.9V	3.3V	1-2 CLOSED 3-4 OPEN 5-6 OPEN 7-8 CLOSED
	3.0V	3.3V	1-2 OPEN 3-4 CLOSED 5-6 OPEN 7-8 CLOSED

CPU TYPE	CPU Voltage		Vcc_core
	CORE	I / O	
Dual Voltage AMD K6/ K6-2/ K6-III	3.1V	3.3V	1-2 CLOSED 3-4 CLOSED 5-6 OPEN 7-8 CLOSED
	3.2V	3.3V	1-2 OPEN 3-4 OPEN 5-6 CLOSED 7-8 CLOSED
	3.3V	3.3V	1-2 CLOSED 3-4 OPEN 5-6 CLOSED 7-8 CLOSED
	3.4V	3.3V	1-2 OPEN 3-4 CLOSED 5-6 CLOSED 7-8 CLOSED
	5.5V	3.3V	1-2 CLOSED 3-4 CLOSED 5-6 CLOSED 7-8 CLOSED

1.4.3 CPU / SDRAM and PCI Frequency Selection (JP4)

CPU	SDRAM	PCI	7-8	5-6	3-4	1-2
90 MHz	90 MHz	33 MHz	Open	Closed	Closed	Closed
95 MHz	63.3 MHz	31.7 MHz	Closed	Open	Closed	Closed
100 MHz	66.7 MHz	33.3 MHz	Open	Open	Closed	Closed
100 MHz	75 MHz	30 MHz	Closed	Closed	Open	Closed
66.7 MHz	66.7 MHz	33.3 MHz	Closed	Closed	Closed	Open
75 MHz	75 MHz	30 MHz	Open	Closed	Closed	Open
83.3 MHz	83.3 MHz	33.3 MHz	Closed	Open	Closed	Open
95 MHz	95 MHz	31.7 MHz	Open	Open	Closed	Open
100 MHz	100 MHz	33.3 MHz	Closed	Closed	Open	Open

JP4 (1-2):

OPEN: CPU & SDRAM running at the same clock frequency.

CLOSE: SDRAM CPU and SDRAM running at independent clock frequencies.

1.4.4 CPU BUS Frequency Ratio Selection (JP1)

(a) AMD-K5 CPU

CPU Speed	JP1			JP4			
	1-2	3-4	5-6	7-8	5-6	3-4	1-2
PR-133	Closed	Open	Open	Closed	Closed	Closed	Open
PR-166	Closed	Closed	Open	Closed	Closed	Closed	Open
PR-200	Open	Closed	Open	Closed	Closed	Closed	Open

(b) AMD-K6 CPU

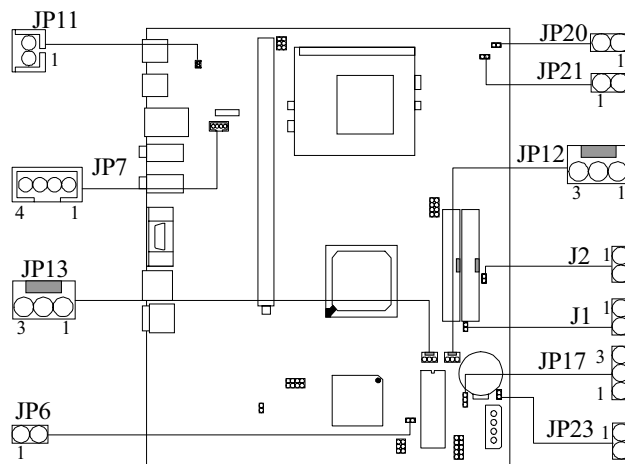
CPU Speed	Bus Clock & Multiplier	JP1			JP4			
		1-2	3-4	5-6	7-8	5-6	3-4	1-2
166MHz	66 x 2.5	Closed	Closed	Open	Closed	Closed	Closed	Open
200MHz	66 x 3	Open	Closed	Open	Closed	Closed	Closed	Open
233MHz	66 x 3.5	Open	Open	Open	Closed	Closed	Closed	Open
266MHz	66 x 4	Closed	Open	Closed	Closed	Closed	Closed	Open
300MHz	66 x 4.5	Closed	Closed	Closed	Closed	Closed	Closed	Open

(c) AMD-K6-2 and K6-III CPU

CPU Speed	Bus Clock & Multiplier	JP1			JP4			
		1-2	3-4	5-6	7-8	5-6	3-4	1-2
266MHz	66 x 4	Closed	Open	Closed	Closed	Closed	Closed	Open
300MHz	66 x 4.5	Closed	Closed	Closed	Closed	Closed	Closed	Open
300MHz	100 x 3	Open	Closed	Open	Closed	Closed	Open	Open
333MHz	66 x 5	Open	Closed	Closed	Closed	Closed	Closed	Open
333MHz	95 x 3.5	Open	Open	Open	Open	Open	Closed	Open
350MHz	100 x 3.5	Open	Open	Open	Closed	Closed	Open	Open
366MHz	66 x 5.5	Open	Open	Closed	Closed	Closed	Closed	Open
380MHz	95 x 4	Closed	Open	Closed	Open	Open	Closed	Open
400MHz	100 x 4	Closed	Open	Closed	Closed	Closed	Open	Open
450MHz	100 x 4.5	Closed	Closed	Closed	Closed	Closed	Open	Open
500MHz	100 x 5	Open	Closed	Closed	Closed	Closed	Open	Open

1.5 Jumper Settings

A jumper is two or more pins that can be covered by a plastic jumper cap, enabling you to select different system options.



1.5.1 IDE1 LED Connector (J1)

Pin No.	Assignment
1	+5V
2	HDDLED1

1.5.2 IDE2 LED Connector (J2)

Pin No.	Assignment
1	+5V
2	HDDLED2

1.5.3 Speaker Connector (JP6)

Pin No.	Assignment
1	+5V
2	Speaker

1.5.4 CD_IN Connector (JP7)

Pin No.	Assignment
1	GND
2	Left Channel Input
3	GND
4	Right Channel Input

1.5.5 RJ11 Connector to MDC (JP11)

Pin No.	Assignment
1	TIP
2	RING

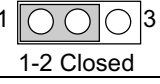
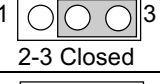
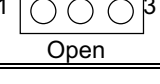
1.5.6 System Fan Connector (JP12)

Pin No.	Assignment
1	GND
2	+12V
3	Sense Input

1.5.7 CPU Fan Connector (JP13)

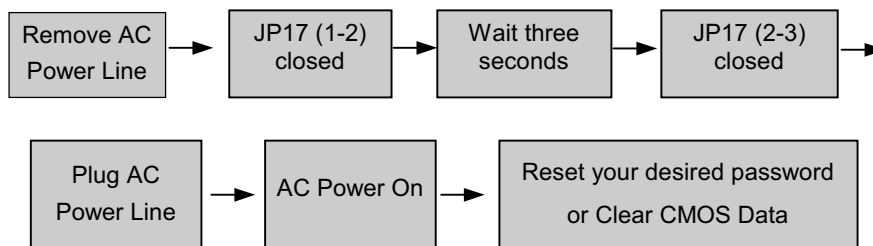
Pin No.	Assignment
1	GND
2	+12V
3	Sense Input

1.5.8 CMOS Function Selection (JP17)

JP17	Assignment
 1-2 Closed	Clear CMOS data (* See Note)
 2-3 Closed	Normal operation (default)
 Open	Onboard battery disabled

Note: Please follow the procedure as below to clear CMOS Data.

Note: Please follow the procedure as below to clear BIOS Password if your password is lost or forgotten.



1.5.9 Power button Connector (JP20)

Pin No.	Assignment
1	PWRBTN#
2	GND

1.5.10 Power LED Connector (JP21)

Pin No.	Assignment
1	+5V
2	ACPILED

1.5.11 Reset Connector (JP23)

Pin No.	Assignment
1	PWROK
2	GND

1.6 DRAM Installation

1.6.1 DIMM

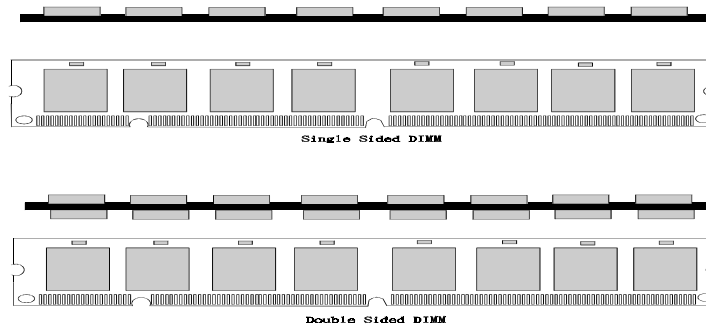
DRAM Access Time : 3.3V unbuffered SDRAM PC100 type required.

DRAM Type: 8Mbyte, 16Mbyte, 32Mbyte, 64Mbyte, 128Mbyte, or 256Mbyte,
DIMM Module (168pin)

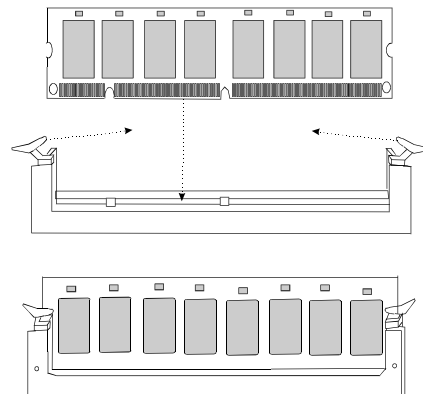
Total	Bank
Memory Size (MB)	DIMM
8 M	8M x 1 pc
16 M	16M x 1 pc
32 M	32M x 1 pc
64 M	64M x 1 pc
128 M	128M x 1 pc
256 M	256M x 1 pc

*The list shown above for DRAM configuration is only for reference.

1.6.2 How to install a DIMM Module



1. The DIMM socket has a Plastic Safety Tab and the DIMM memory module has an asymmetrical notch, so the DIMM memory module can only fit into the slot in one direction.
2. Push the tabs out. Insert the DIMM memory modules into the socket at a 90-degree angle then push down vertically to fit the modules into place.
3. The mounting holes and plastic tabs should fit over the edge and hold the DIMM memory modules in place.



2. Trouble Shooting

PROBLEM

No power inputs to the system at all. Power light does not illuminate, fan inside power supply does not turn on. Indicator light on keyboard does not turn on.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Power cable is unplugged.	Visually inspect power cable.	Make sure power cable is securely plugged in.
Defective power cable.	Visually inspect the cable; try another cable.	Replace cable.
Power supply failure.	Power cable and wall socket are OK, but system is still dead.	Contact technical support.
Faulty wall outlet; circuit Breaker or fuse blown.	Plug in device known to work in socket and test.	Use different socket, repair outlet, reset circuit breaker or replace fuse.

PROBLEM

System is inoperative. Keyboard lights are on, power indicator lights are lit, hard drive is spinning.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Memory DIMM is partially dislodged from the slot on the motherboard.	Turn off computer. Take cover off system unit. Check the DIMM to ensure it is securely seated in the slot.	Using even pressure on both ends of the DIMM, press down firmly until the module snaps into place.

PROBLEM

System does not boot from hard disk drive, can be booted from CD-ROM drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Connector between hard drive and system board unplugged.	When attempting to run the FDISK utility you get a message, INVALID DRIVE SPECIFICATION.	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.
Damaged hard disk or disk controller.	Format hard disk; if unable to do so the hard disk may be defective.	Contact technical support.
Hard disk directory or FAT is scrambled.	Run the FDISK program, format the hard drive. Copy data that was backed up onto hard drive.	Backing up the hard drive is extremely important. All hard disks are capable of breaking down at any time.

PROBLEM

System only boots from CD-ROM. Hard disk can be read and applications can be used but booting from hard disk is impossible.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Hard disk boot program has been destroyed.	A number of causes could be behind this.	Back up data and applications files. Reformat the hard drive. Re-install applications and data using backup disks.

PROBLEM

Error message reading "SECTOR NOT FOUND" or other error messages not allowing certain data to be retrieved.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
A number of causes could be behind this.	Use a file-by-file backup instead of an image backup to backup the hard disk.	Back up any salvageable data. Then, low-level format, partition, and high-level format the hard drive. Re-install all saved data when completed.

PROBLEM

Screen message says "Invalid Configuration" or "CMOS Failure."

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Incorrect information entered into the configuration (setup) program.	Check the configuration program. Replace any incorrect information.	Review system's equipment . Make sure correct information is in setup.

PROBLEM

Screen is blank.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
No power to monitor.		Check the power connectors to monitor and to system. Make sure monitor is connected to display card.
Monitor not connected to computer.		See instructions above.

PROBLEM

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Memory problem.		Reboot computer. Reinstall memory, make sure that all memory modules are installed in correct sockets.
Computer virus.		Use anti-virus programs to detect and clean viruses.

PROBLEM

Screen goes blank periodically.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Screen saver is enabled.		Disable screen saver.

PROBLEM

Keyboard failure.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keyboard is disconnected.		Reconnect keyboard. Check keys again, if no improvement replace keyboard.

PROBLEM

No display on screen.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Faulty Monitor.		If possible, connect monitor to another system. If no color replace monitor.
CMOS incorrectly set up.		Call technical support.

PROBLEM

C: drive failure.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Hard drive cable not connected properly.		Check hard drive cable.

PROBLEM

Cannot boot system after installing second hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Master/slave jumpers not set correctly.		Set master/slave jumpers correctly.
Hard drives not compatible / different manufacturers.		Run SETUP program and select correct drive types. Call drive manufacturers for compatibility with other drives.

PROBLEM

Missing operating system on hard drive.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
CMOS setup has been changed.		Run setup and select correct drive type.

PROBLEM

Certain keys do not function.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keys jammed or defective.		Replace keyboard.

PROBLEM

Keyboard is locked, no keys function.

PROBABLE CAUSE	DIAGNOSIS	SOLUTION
Keyboard is locked.		Unlock keyboard.

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