

USB  
1M Home PNA  
& 10/100  
FAST ETHERNET

*User Manual*

## REGULATORY STATEMENTS

### Part15, Class B

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

1. This device may not cause harmful interface, and
2. This device must accept any interface received, including interface that may cause undesired operation. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning 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 distance between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

 ***Changes or modifications not expressly approved by party responsible for compliance could void the user authority to operate the equipment.***

## FCC Part 68 Registration

This device complies with FCC Part 68 rules, and the use of this device is subject to the following restrictions:

The FCC has established rules which permit this device to be directly connected to the telephone network. Standardized jacks are used for these connections. This equipment should not be used on party lines or coin phones.

If this device is malfunctioning, it may also be causing harm to the telephone network; this device should be disconnected until the source of the problem can be determined and until repair has been made. If this is not done, the telephone company may temporarily disconnect service.

The telephone company may make changes in it's facilities, equipment, operation and procedures; if such changes affect the compatibility or use of this device, the telephone company is required to give adequate notice of the situation with the FCC.

If the telephone company requests information on what equipment is connected to their lines, inform them of:

- a. The telephone number to which this unit is connected.
- b. The Ringer Equivalence Number (REN).
- c. The USOC jack required.
- d. The FCC Registration number.

Items (b) and (d) are indicated on the label. The Ringer Equivalence Number (REN) is used to determine how many devices can be connected to your telephone line. In most areas, the sum of the REN's of all the devices on any one line should not exceed 5.0. If too many devices are attached, they may not ring properly.

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## **INTRODUCTIONS**

The USB 1M HomePNA & 10/100 Fast Ethernet brings the latest technology of instant connectivity to multiple PCs over a home's existing telephone lines. You can network any notebook computer by connecting it to any standard phone line. No switches, hubs, or even any additional cables is needed - the network runs on standard home-grade telephone wires just like the ones you use everyday.

This USB device is equipped with two standard RJ-11 telephone ports and a 10/100 dual-speed Fast Ethernet port. You can connect to any 1Mbps home phone network or any 10BaseT/100BaseTX network without swapping devices or running multiple adapters at once. The adapter connects to your Windows 98 computer via USB (Universal Serial Bus), you can enjoy the advantage of true plug-and-play connections through a single interface.

You can share Internet access via a dial-up, cable modem or DSL connection, as well as files, printers, and CD-ROM drives at 1Mbps without interrupting regular telephone service. The home phone networking runs on regular telephone cables, so there's no extra hardware to buy. Just plug it into any standard wall jack and you're networked!

The USB 1M HomePNA & 10/100 Fast Ethernet complies the HomePNA specification which lets your phone line carry computer data as well as regular telephone voice service. Every standard

telephone jack in the home is capable of hosting a PC - you can connect up to 25 computers, thus transforming the home's telephone wiring into an easily expandable network.

## **Features**

- Connects to a network using your existing telephone Line -- No additional hubs or network cables needed
- Works with any PC with a USB port
- Supports Microsoft Windows 98/2000/ME
- 1Mbps transfer rate over telephone lines
- Dual-speed RJ-45 port automatically detects Ethernet or Fast Ethernet cabling speed
- External USB network adapter with 2 RJ-11 modular telephone ports and 1 RJ-45 auto-sensing 10BaseT/100BaseTX port
- USB cable included – true plug & play
- HomePNA compliant
- Connects up to 25 devices together on your home phone network

## **About Home Phone Networking Technology**

The USB 1M HomePNA & 10/100 Fast Ethernet utilizes a technology known as Frequency Division Multiplexing (FDM) which essentially divides the data travelling over the phone lines into separate frequencies - one for voice, one for high-bandwidth net access such as DSL, and one for the network data. These frequencies can

coexist on the same telephone line without impacting one another.

The 1 Megabit-per-second (one million bits-per-second) data rate is 18 times that of the fastest analog modems available, which run at 56Kbps. Even high-speed modem, DSL, and ISDN connections will perform at full speed on a home network.

*Note: Because of the limitations of standard telephone cables, Home Phone Networking devices require that your cabling does not exceed a total length of 500 feet for your entire network.*

## Specifications

### Network Standard

- HomePNA specification 1.1
- IEEE 802.3 for 10BaseT
- IEEE 802.3u for 100BaseTX
- Standard phone wiring
- CAT 3/CAT 5 UTP, STP cable up to 328ft/100M

### Data Transfer Rate

- Up to 1 Mbps of HomePNA data transfer
- 10/100 Mbps<sup>1</sup> of LAN data transfer

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<sup>1</sup> CAT5 cable is required for 100M data transfer rate

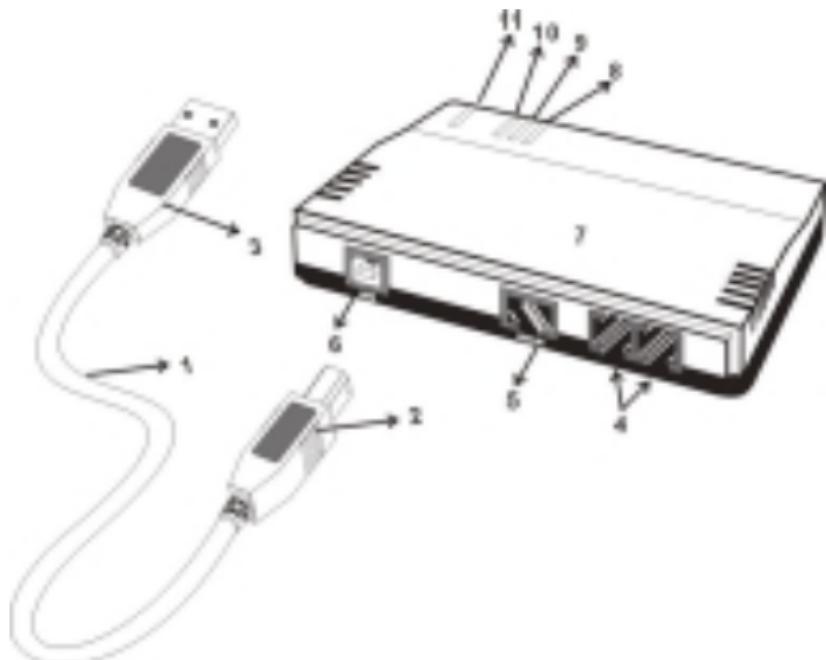
- Doubled data transfer rate in Full duplex mode

## Supported Operating Systems

- Windows 98
- Windows 2000
- Windows ME

## Parts Names and Functions

1. USB Connection Cable: connects the USB 1M HomePNA & 10/100 Fast Ethernet to the USB host port of your computer.



2. **USB B Type Connector**
3. **USB A Type Connector**
4. **RJ-11 telephone port:**

- Phone port: connects to a telephone setting.

- Line port: connects to the phone jack on the wall.

5. **RJ-45 Port**

6. **USB B Type Port**

7. **USB 1M HomePNA & 10/100 Fast Ethernet**

8. **100M LED** indicator: glows green when this adapter is linking to 100 Mbps Fast Ethernet.

9. **10M LED** indicator: glows green when this adapter is linking to 10 Mbps Ethernet.

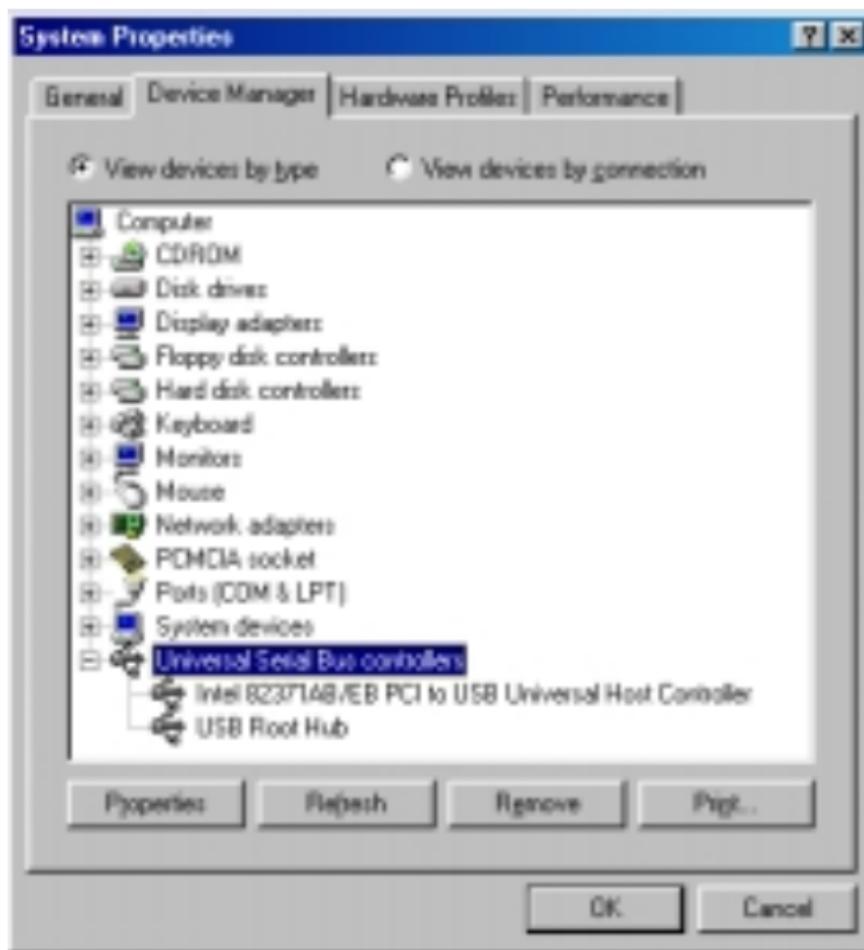
10. **Home LED** indicator: glows green when the adapter is connecting to 1Mbps HomePNA adapter.

11. **ACT LED** indicator: flashes orange when the Fast Ethernet Adapter is transmitting/receiving data via Ethernet or Home PhoneLine Networking.

# HARDWARE INSTALLATION

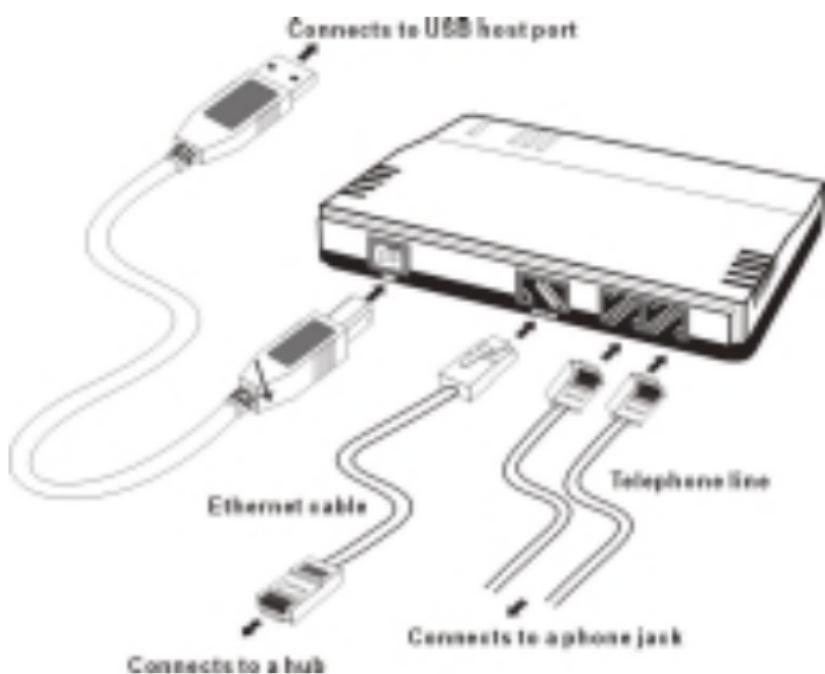
## Precaution

*Before the installation, make sure the USB port exists in your computer and is enabled. To check this, go to **My Computer** → **Control Panel** → **System**. Open the **Device Manager** tab. If the **Universal Serial Bus controller** device is found, it means your USB port is installed and enabled. If not, it means no USB port is installed or the USB bios is not properly enabled. In this case, consult your computer dealer for USB support.*



## Getting Hooked Up

1. Locate the USB host port of your system. Align the USB A-type connector toward the USB host port, push evenly and steadily until it is seated.
2. Connect the USB B-type connector to the device port (**USB B type port**) of your USB 1M HOMEPNA & 10/100 FAST ETHERNET until it clicks.



## Installing Ethernet Cabling

1. Connect the UTP Ethernet cable to the RJ-45 port of the USB 1M HomePNA & 10/100 Fast Ethernet.
2. Plug the other end of the cable into a 10BaseT or 10/100 switching hub<sup>2</sup>.

## Installing Telephone Cabling

1. Attach one end of the RJ-11 telephone line to the **Line** port. Connect the other end of the cable into a telephone jack on the wall.
2. Attach one end of the RJ-11 telephone line to the **Phone** port. Connect the other end of the cable into a telephone setting.

The USB 1M HomePNA & 10/100 Fast Ethernet is now connected to your PC. Perform the following procedures to install the Telephone cabling or Ethernet cabling.

*Remember that if you choose to use the RJ-45 port on your USB 1M HOMEPNA & 10/100 FAST ETHERNET, the RJ-11 Phoneline networking capabilities automatically become disabled. The two cannot operate at the same time.*

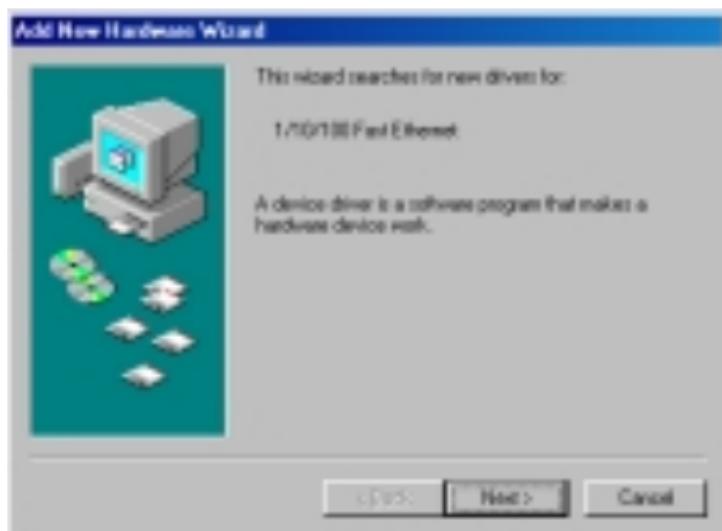
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<sup>2</sup> If you plan to use both 10BaseT and 100Mbps network segments on the same network, you'll need a dual-speed hub or switch that allows segments of different speeds to communicate.

# SOFTWARE INSTALLATION

## Installation for Windows 98

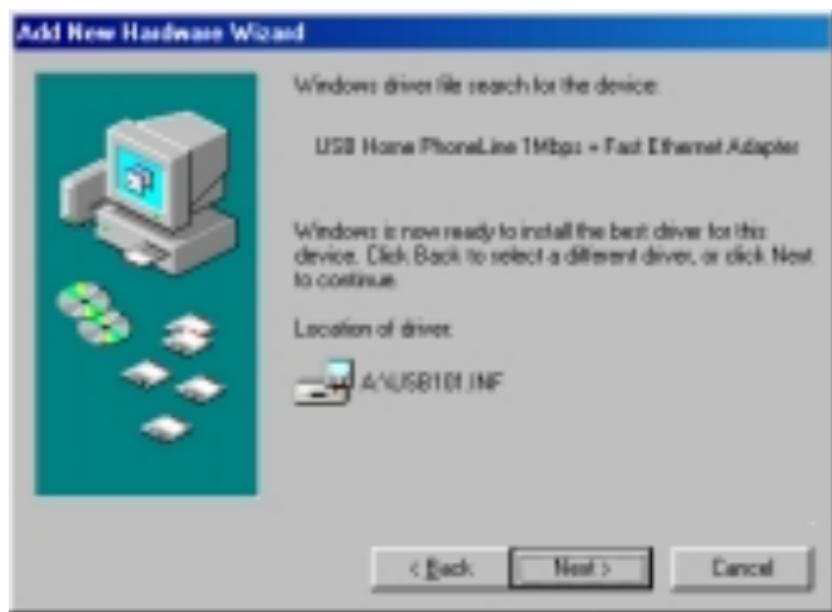
1. Once the USB 1M HomePNA & 10/100 Fast Ethernet is connected to your computer, Windows will automatically detect the new hardware device as shown below. Click **Next**.



2. Insert the device driver diskette into your floppy drive. When Windows prompts you **What do you want Windows to do?** Select **Search for the best driver for your device. (Recommended)**. Click **Next**.
3. Follow the on-screen instruction to proceed.



4. The installation program will proceed automatically.



5. Windows will finish copying all the necessary files to your system. When the following window appears, click **Finish**.



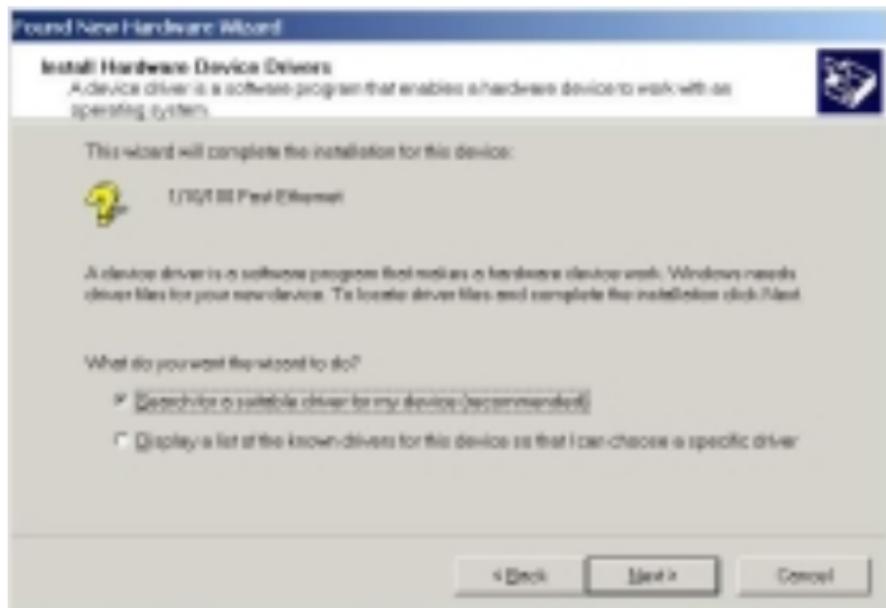
6. When asked if you want to restart your computer, click **No**

## Installation for Windows 2000

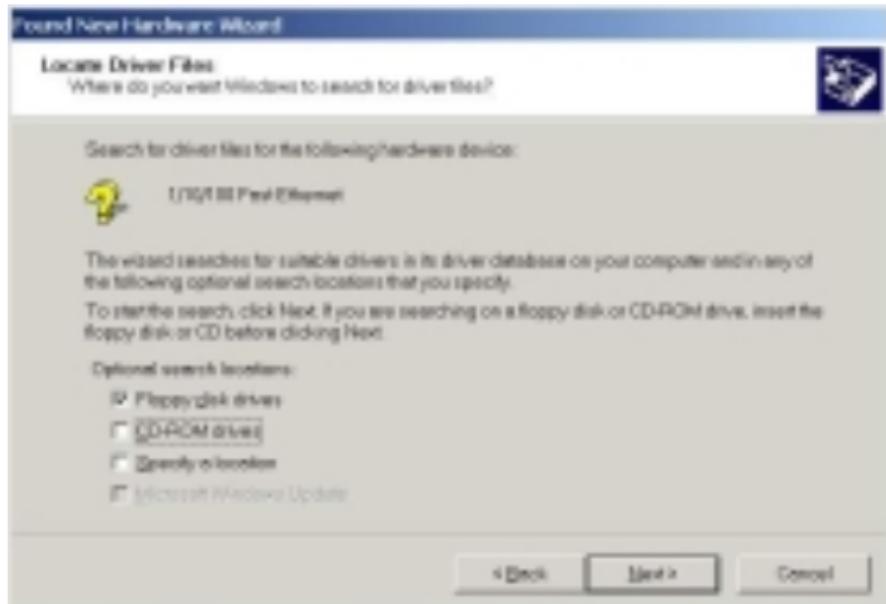
1. Once the USB 1M HomePNA & 10/100 Fast Ethernet is well connected to your computer as described in the previous section, Windows will appear the following picture. Click **Next**.



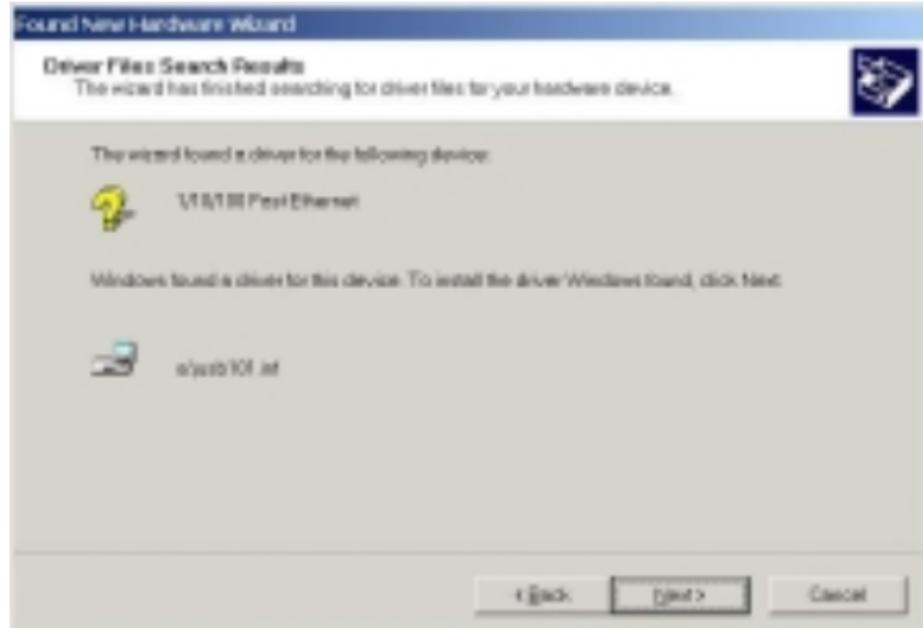
2. Load the device driver disk onto your disk drive. Select **Search for a suitable driver for my device (recommended)**. Click **Next**.



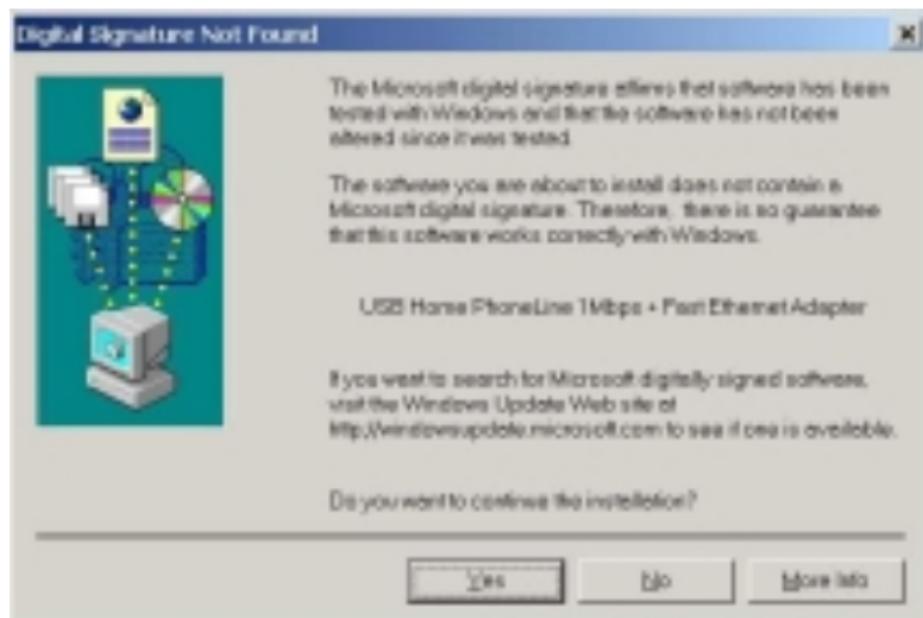
3. When the following window appears, select **Floppy disk drives**. Click **Next**.



4. Click **Next** to continue the installation.



5. Windows will finish copying all the necessary files to your system. When the following window appears, click **Yes**.



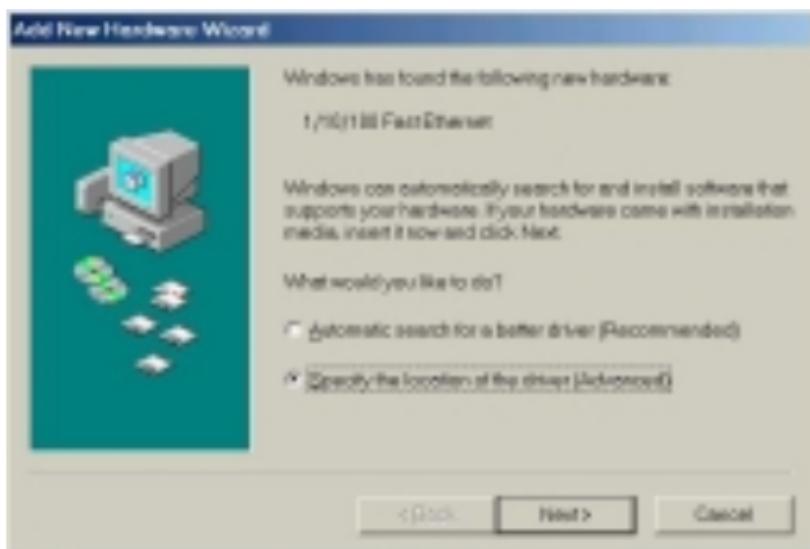
6. Click **Finish**. Then the installation will be fully completed.



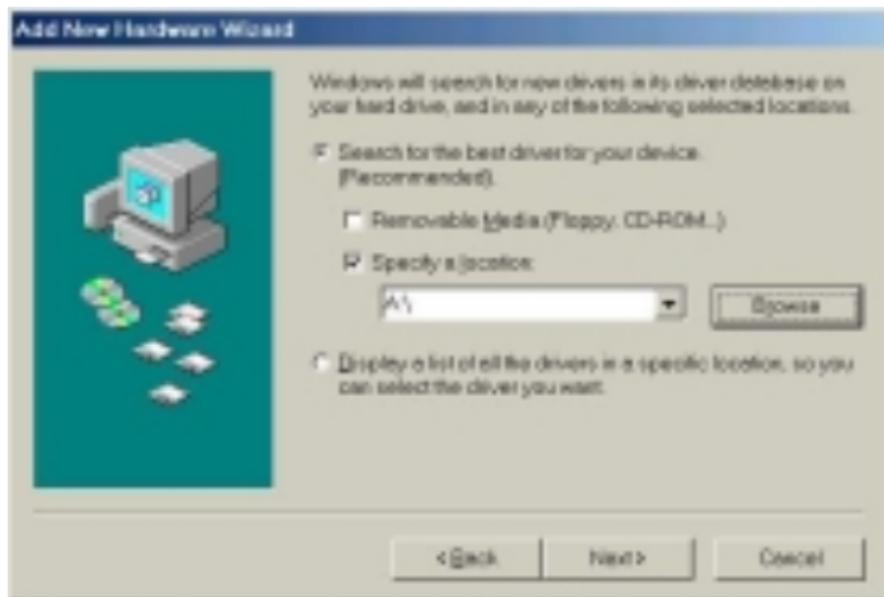
7. When asked if you want to restart your computer, click **No**

## Installation for Windows ME

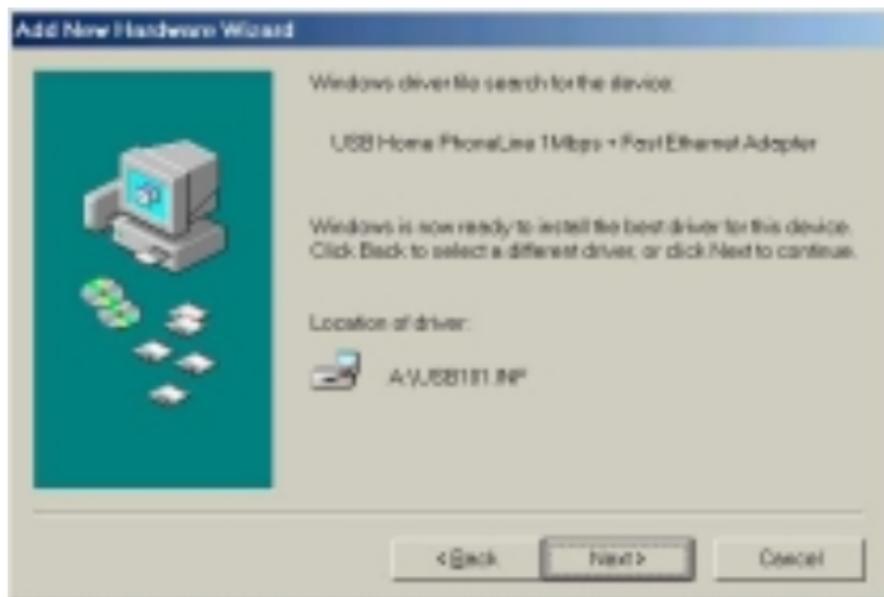
1. Once the USB 1M HomePNA & 10/100 Fast Ethernet is well connected to your computer as described in the previous section, Windows will appear the following picture. Select **Specify the location of the driver (Advanced)**.



2. Click **Next** and load the device driver disk onto your disk drive. Click **Specify a location** when you see the following picture. You may click the **Browse** button to select the drive: \A. Click **Next**.

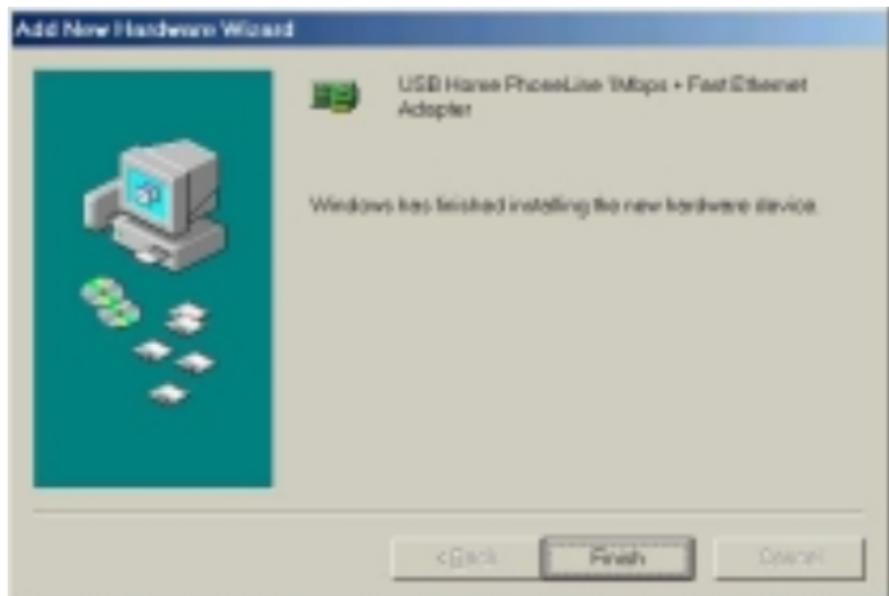


3. Click **Next** to continue.

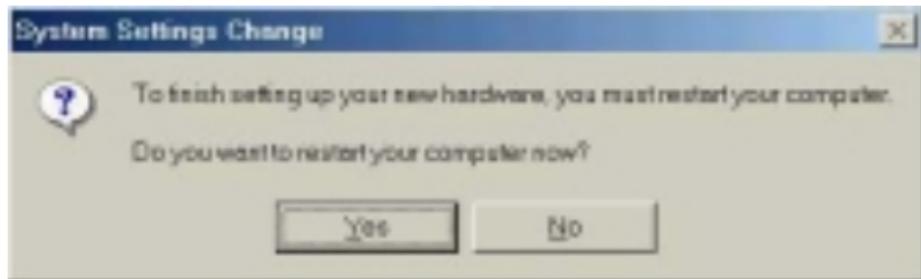


4. The installation program will proceed automatically.

5. Windows will finish copying all the necessary files to your system. When the following window appears, click **Finish**.



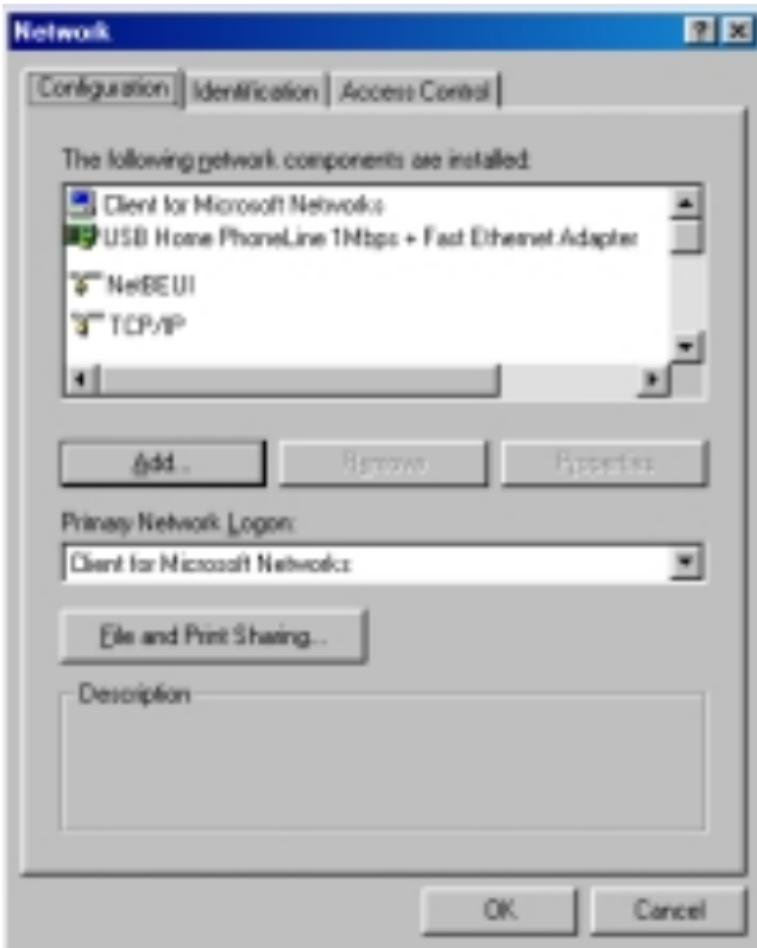
6. When asked if you want to restart your computer, click **No**.



## Network Connection

1. Once you are back at the Windows desktop, go to **Start**→**Settings**→**Control Panel**.
2. Double-click the **Network** icon. The Network window will appear. Click the **Configuration** tab.
3. Make sure that the following network components are installed:

Client for Microsoft Networks  
USB Home PhoneLine 1Mbps + Fast  
Ethernet Adapter  
NetBEUI  
TCP/IP



4. If you are missing required components, you'll need to install them manually. If you need to install the TCP/IP Protocol, contact your system administrator or refer to the Windows 98 documentation.
5. In the **Primary Network Logon** box, select **Client for Microsoft Networks**.
6. Click the **Identification** tab. Enter the required information appropriately.

7. Click the **Access Control** tab. Make sure that **Shared-level access control** is selected.



8. When finished, remember to restart your computer to activate the new device.

Once the computer has restarted and Windows 98 has booted up, the **Link** light will be on. And a **Logon** window will appear requiring you to enter a username and password. Make up a username and password, enter them, and click **OK**.

When you are at the Windows desktop, double-click the **Network Neighborhood** icon. You should see the name of the network, and/or the names of the other PCs on the network.

## **Client Setup**

If you are not using Windows operation system with an NT or NetWare file server, skip the next two paragraphs. Perform the following procedures to prepare your computer to be used with any file servers that may be on the network.

### **Connecting to a NetWare File Server**

1. Click **My Computer**, **Control Panel**, and **Network**.
2. Change the **Network Logon** to **Client for NetWare Network**.
3. Double-click the **Client for NetWare networks**. Put your server's name in the Preferred Server box. Click in the **Enable Logon Script Processing** box.



4. Click **OK** and restart your PC.

### **Connecting to a Windows NT Domain**

1. Click **My Computer**, **Control Panel**, and **Network**. Change the **Primary Network Logon** to **Client for Microsoft Network**.
2. Double-click the **Client for Microsoft networks**.
3. Select the **Log on to Windows NT domain** box. Put your NT domain name in the Windows NT domain area.
4. Click **OK** and restart your PC.



5. When finished, restart your computer.

## Using File and Printer Sharing

1. Click **Start, Settings, Control Panel**. Double-click **Network**.
2. Click the **Configuration** tab, followed by the **File and Printer Sharing** button. The **File and Printer Sharing** window will appear.

## File and Print Sharing



I want to be able to give others access to my files.  
 I want to be able to allow others to print to my printer(s).

**OK**

**Cancel**

- If you'd like others to be able to access the files on your PCs hard drive, select I want to be able to give others access to my files.
- If you'd like to share your printer with other users on the network, select I want to be able to allow others to print to my printer.

3. Click the **OK** button. File and Printer Sharing for Microsoft Networks should now appear in the list of installed components. Click **OK**. When asked to restart your PC, choose to do so.

## Enabling File Sharing

1. Double-click **My Computer**. A window of available disk drives will appear.
2. Right-click once the drive or folder that you want to make available to other users.
3. Click **Sharing**, followed by the Sharing tab. Click **Share As**. In the Share Name box, enter a name for the drive or folder you are sharing, (e.g.: C-Drive, CD-ROM, Leela, etc.).

## My Documents Properties



General

Sharing

Not Shared

Shared As:

Share Name:

MY DOCUMENTS

Comment:

[Empty text box]

Access Type:

Read-Only

Full

Depends on Password

Passwords:

Read-Only Password:

[Empty text box]

Full Access Password:

[Empty text box]

OK

Cancel

Apply

Next, decide on the type of access that you want to give other users.

- Read-Only access lets other users view the files on your PC.
- Full access lets users create, change, or delete files on your PC.
- Depends on Password lets users have Read-Only and/or Full access, depending on the password that you decide to give them.

Use your mouse to select the type of file sharing access that you want other users to have. If you want to assign access password(s), type them into the Password box(es).

If you are sharing a cable modem or DSL broadband connection that you will be using to access the Internet, you should protect all of your shared drives and printers with private passwords.

When finished, click **Apply**, followed by **OK**.

### **Enabling Printers Sharing**

Click **Start**→**Setting**→**Printers**. A window of available printers will appear.

Right-click the printer that you want to share with other users. Click **Sharing**, followed by the Sharing tab. Click **Share As**. In the Share Name box, give a name to the printer you're about to share (Jack's HP4, for example). If you want to assign a password to the printer so only certain users can access it, type a password in the Password box. When you're done, click **Apply**, followed by **OK**. Your printer(s) are now shared.