EXHIBIT C

User Manual

HN-200 PCnet™-Home user manual

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Systems Software Engineering,

Networking Products Division,

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Table of Contents:

Introduction and Prerequisites:

The PCnet-Home Release software supports the Windows 95 and Windows 98 operating systems. The installation procedure installs the following:

- necessary device drivers,
- networking services,
- print sharing services and
- Internet sharing application software.

It also allows the user to make local disks and printers sharable over the network.

Prerequisites:

1. Windows 95/98 CDROM:
If you had installed Windows 95/98 on your PC from a CD-ROM, during the PCnet-Home software installation process, Windows 95/98 may ask for the Windows 95/98 CD-ROM to copy networking services related files. Please keep the Windows 98 CD-ROM handy.

2. Prerequisites for Internet Sharing:
PCnet-Home installation allows you to share Internet access using a single Internet Service Provider (ISP).

PCnet-Home Installation in a Windows® 98 System

Please follow the following steps carefully to install the PCnet-Home based adapter and software in your Windows 98 system.
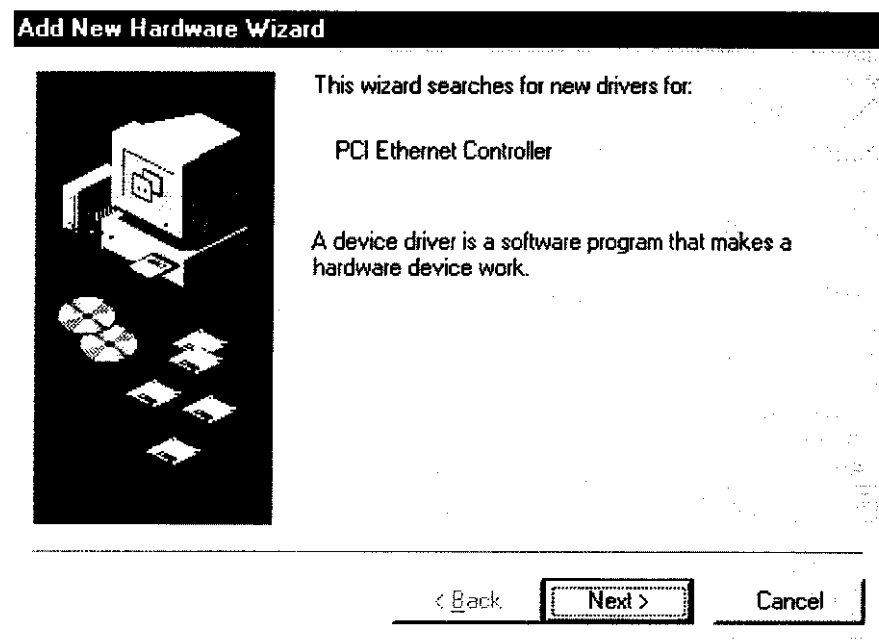
1. **PCnet-Home based Adapter Installation:**

   With the machine turned off, place the AMD PCnet-Home device based adapter in one of the PCI slots and reboot your system.

2. **Add New Hardware Wizard:**

   When Windows 98 boots up, it recognizes that a new hardware has been added to the system and brings up the **dd New Hardware Wizard**" Window.

   - Insert the AMD PCnet-Home CD in the CD-ROM drive.
   - Click **Next** to start the driver installation process.

Add New Hardware Wizard

This wizard searches for new drivers for:

PCI Ethernet Controller

A device driver is a software program that makes a hardware device work.

< Back   **Next >**   Cancel

5. Add New Hardware Wizard:

The Wizard finds the driver for "MD PCnet-Home Based Adapter" and reports that it is ready to install the best driver for this device. Choose **Next**

Add New Hardware Wizard

Windows driver file search for the device:

AMD PCnet-Home Based Adapter

Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.

Location of driver:

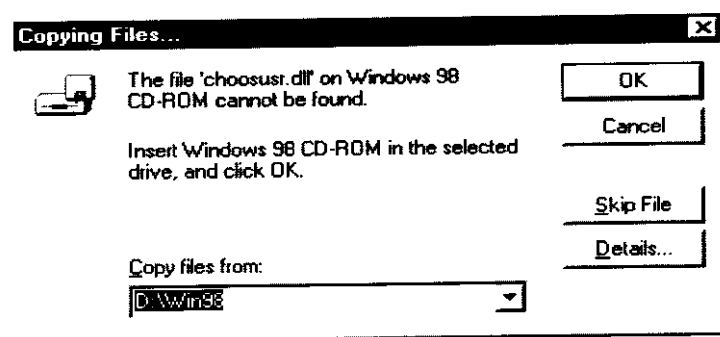D:\NETAMDHL.INF

< Back   Next >   Cancel
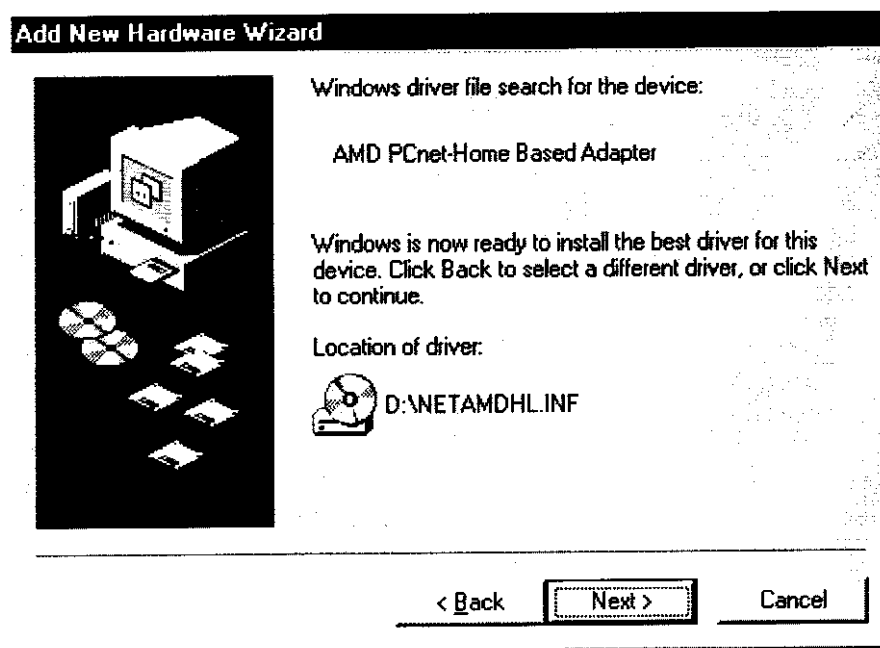
8. File Copy:

Windows 98 may ask you to provide with Windows 98 CD-ROM or a path to the Windows 98 install (CAB) files on your computer. This is required to install the Windows 98 networking services.
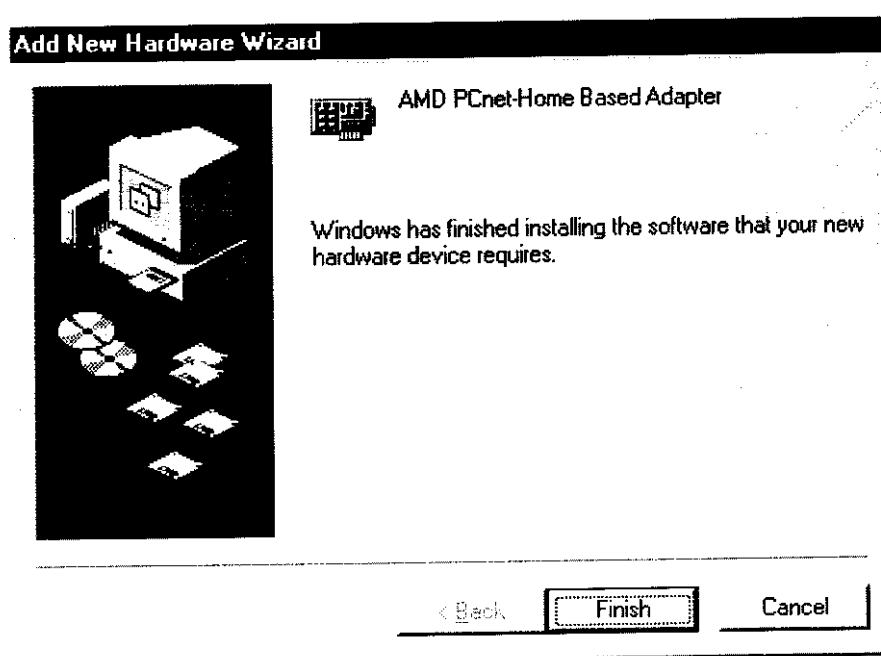
Insert Disk   ☒

❌ Please insert the disk labeled 'Windows 98 CD-ROM', and then click OK.

[OK]
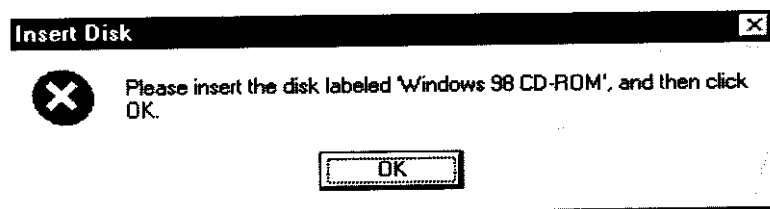
If asked for a path, please specify the correct path to Windows 95 install files on your computer hard disk or the Windows 98 CD-ROM.

Copying Files...   ☒

The file 'choosusr.dll' on Windows 98 CD-ROM cannot be found.   [OK]

                                                          [Cancel]
Insert Windows 98 CD-ROM in the selected drive, and click OK.

                                                          [Skip File]

                                                          [Details...]
Copy files from:

[D:\Win98   ▼]

Note: At this point Windows 98 may take a few minutes to copy all the necessary files. *Please wait for the next Dialog Box to appear.*

9. Device Driver Installation Completed

The user is informed that the PCnet-Home Based Adapter Installation is complete. Click **Finish**.

Add New Hardware Wizard

AMD PCnet-Home Based Adapter

Windows has finished installing the software that your new hardware device requires.

< Back   [Finish]   Cancel
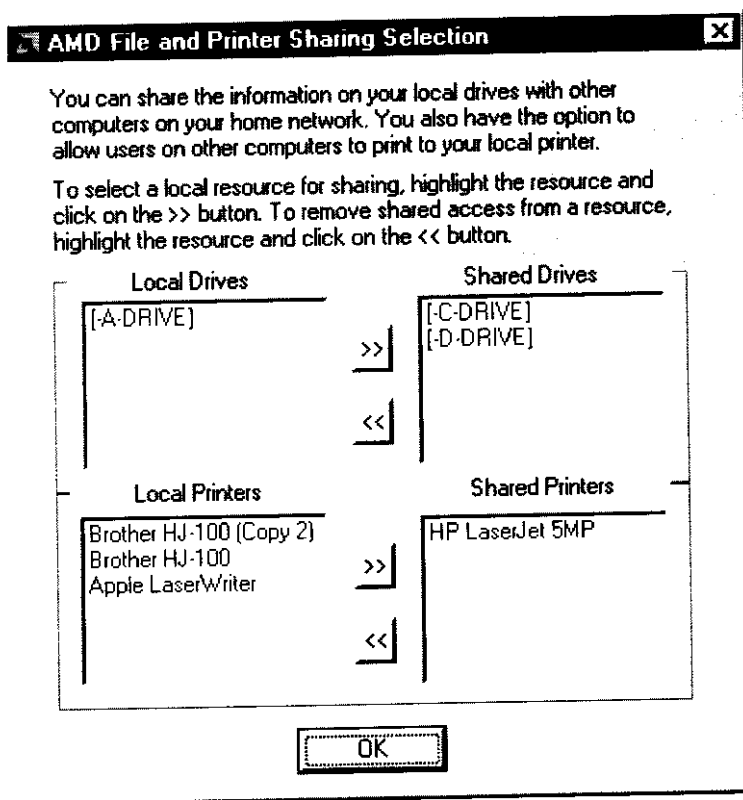
11. File and Printer Sharing:

The installation process will now prompt you to select the local disk drives and printers that you may like to share over the Home network. All local drives and printers are automatically found and displayed by the installation wizard in the following dialog box that will display on your screen.

Choose the drives to share for File sharing.

- To choose, highlight the drive letter by clicking on it and click the >> button. This will place the selected drive letter in the shared drives list.
- To remove a drive from the shared drives list, highlight the drive letter by clicking on it and then click the << button.

Choose the printers to share for Printer sharing.

- To choose, highlight the printer name by clicking on it and click the >> button. This will place the selected printer in the shared printers list.
- To remove a printer from the shared printers list, highlight the printer name by clicking on it and then click the << button.

If you are configured to start an Internet sharing application automatically, this process will start now. Please see the section on *Customizing Your Installation Options* for details on how to setup your Internet sharing application to start automatically.

13. Reboot Message

At this time, your computer may restart.


```
┌─────────────────────────────────────────┐
│  ▐ Reboot Message!              ✕ ▌     │
│  ─────────────────────────────────       │
│  In order to continue your PCnet-Home installation, │
│  the computer needs to restart. Please wait...      │
│                                           │
└─────────────────────────────────────────┘
```
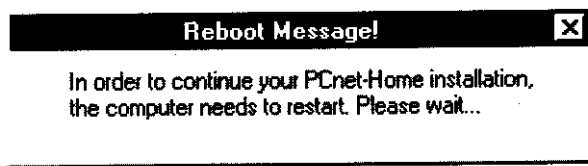
After the restart, the WinGate Internet Sharing installation program will take over.

14. Internet Sharing Installation Program:

The AMD Install program can be customized to use any of the Internet sharing programs in the market (see the section on *Customizing Your Installation Options*). The Demo CD ships with a Beta version of WinGate 3.0 (from Deerfield.Com), one of the leading Internet sharing programs in the market.

- To install **WinGate**, click **Next** to continue. Follow the on-screen directions to install WinGate.

   License Key:

   Following is a special evaluation license for the WinGate program. License key is only required if you setup WinGate as a **Server**.

   License Name: AMD OEM Eval
   License Number: 5B233EFA0901E2D313BE96CB

15. Using WinGate:

If you have the Internet connection already configured on the Server/Gateway machine, all you need to do to access Internet from a client machine is to open a browser or other Internet application and you ll be seamlessly connected to the Internet.

16. WinGate Help:

Further information for WinGate can be found in WinGate Help file.

19. Update Device Driver Wizard:

pdate Device Driver Wizard" finds the following updated driver for the adapter: AMD PCnet-Home Based Adapter.

- Choose **Finish**

Update Device Driver Wizard

Windows found the following updated driver for this device:

AMD PCnet-Home Based Adapter

If you want to use this driver, click Finish. If this is not the correct driver and you want to search for a different driver manually, click Other Locations.

Location of Driver

Other Locations...

< Back   Finish   Cancel
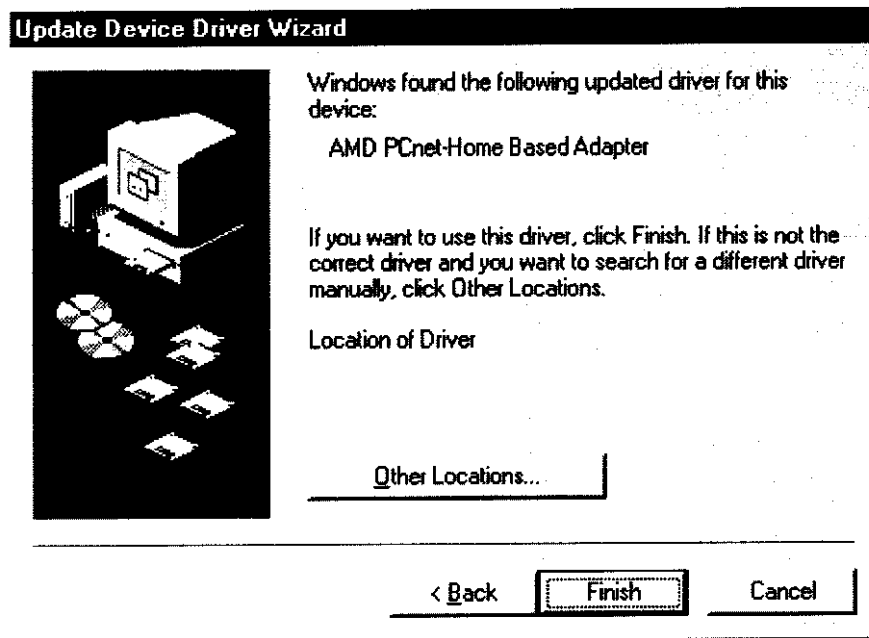
20. Insert PCnet-Home CDROM

Windows 95 will prompt you to insert the AMD PCnet-Home CDROM.

Insert Disk

The disk labeled 'AMD PCnet-Home CD-ROM Drive' is now required.

This disk is provided by your computer manufacturer.

Click OK to continue.

OK
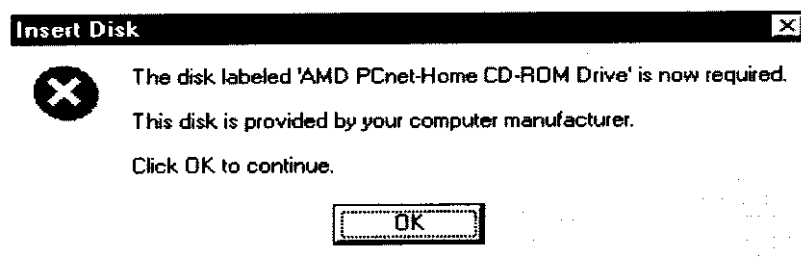
Click OK after ensuring that the CDROM is in the CDROM drive.

If these services are not already installed, you will be prompted to insert the Windows 98 CDROM as indicated in the next step. If the services are already installed on your computer, the installation procedure will skip next step.

24. Windows 95 CD-ROM:

Windows 95 may ask you to provide with Windows 95 CD-ROM or a path to the Windows 95 install (CAB) files on your computer. This is required to install the Windows 95 networking services.

```
┌────────────────────────────────────────────────┐
│ Insert Disk                                 [X] │
├────────────────────────────────────────────────┤
│                                                 │
│   ⊗   Please insert the disk labeled 'Windows   │
│       95 CD-ROM', and then click OK.            │
│                                                 │
│              ┌──────────────┐                   │
│              │      OK       │                  │
│              └──────────────┘                   │
│                                                 │
└────────────────────────────────────────────────┘
```
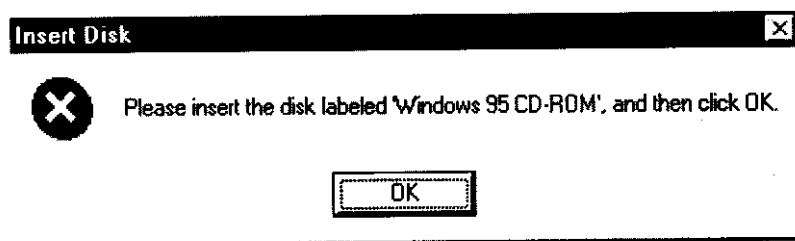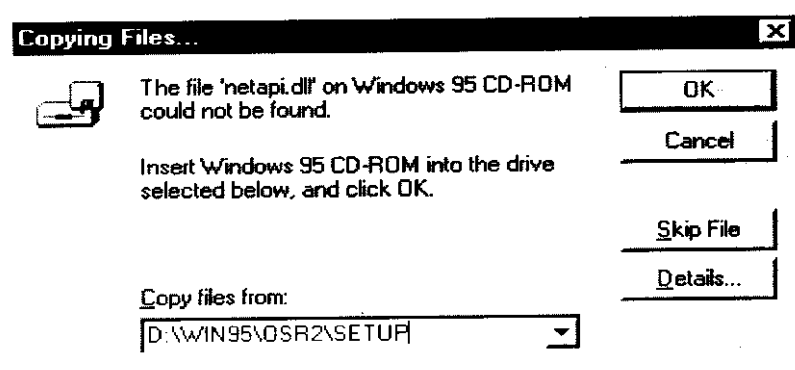
- If asked for a path, please specify the correct path to Windows 95 install files.

```
┌──────────────────────────────────────────────────────────┐
│ Copying Files...                                      [X] │
├──────────────────────────────────────────────────────────┤
│  ┌──┐   The file 'netapi.dll' on Windows 95 CD-ROM  ┌────────┐ │
│  │  │   could not be found.                         │   OK   │ │
│  └──┘                                               └────────┘ │
│         Insert Windows 95 CD-ROM into the drive     ┌────────┐ │
│         selected below, and click OK.               │ Cancel │ │
│                                                     └────────┘ │
│                                                               │
│                                                     ┌──────────┐│
│                                                     │ Skip File ││
│                                                     └──────────┘│
│         Copy files from:                            ┌──────────┐│
│        ┌──────────────────────────────┐  ▼         │ Details...││
│        │D:\WIN95\OSR2\SETUP│           │            └──────────┘│
│        └──────────────────────────────┘                       │
└──────────────────────────────────────────────────────────┘
```
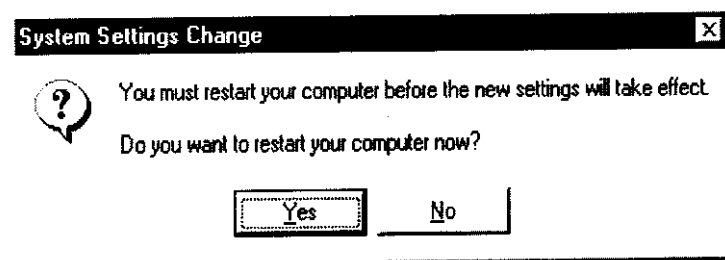
Note: At this point Windows 95 may take a few minutes to copy all the necessary files. *Please wait for the next Dialog Box to appear.*

25. System Restart:

The user will be prompted to restart the system.
- Select **Yes**, to restart the system.

```
┌────────────────────────────────────────────────────────┐
│ System Settings Change                             [X] │
├────────────────────────────────────────────────────────┤
│  ⟨?⟩   You must restart your computer before the new   │
│        settings will take effect.                      │
│                                                        │
│        Do you want to restart your computer now?       │
│                                                        │
│           ┌──────────┐    ┌──────────┐                 │
│           │   Yes    │    │    No    │                 │
│           └──────────┘    └──────────┘                 │
└────────────────────────────────────────────────────────┘
```
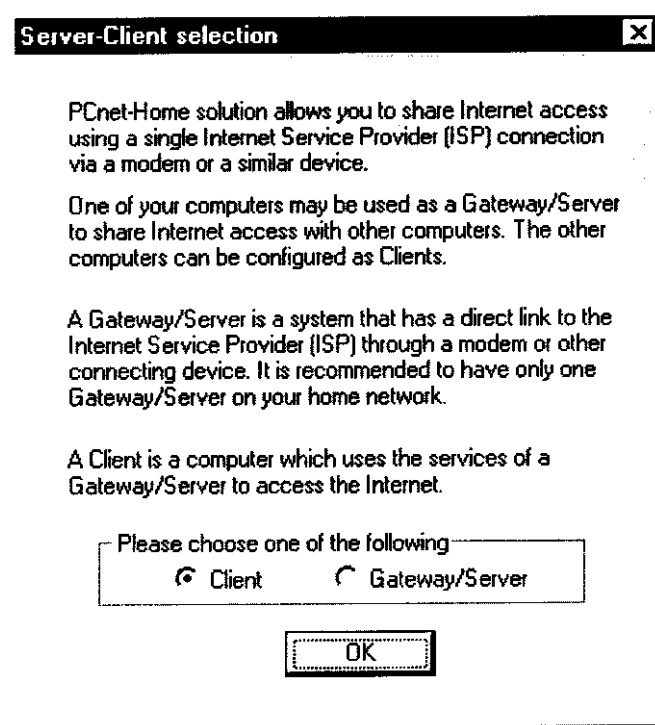
If you are using the default setup configuration, the WinGate Internet sharing application will be installed on your system automatically.

To correctly configure the system for WinGate installation, please check the pre-requisites in the Introduction to this document.

27. Server-Client Selection for WinGate Software Installation:

The user has the option to configure his/her system either as a Gateway/Server or a Client for Internet sharing. A Gateway/Server is a machine with an Internet connection configured through a Modem or other connection medium. A Client is a system accessing the Internet through a Gateway/Server, defined as above.

Server-Client selection ☒

PCnet-Home solution allows you to share Internet access using a single Internet Service Provider (ISP) connection via a modem or a similar device.

One of your computers may be used as a Gateway/Server to share Internet access with other computers. The other computers can be configured as Clients.

A Gateway/Server is a system that has a direct link to the Internet Service Provider (ISP) through a modem or other connecting device. It is recommended to have only one Gateway/Server on your home network.

A Client is a computer which uses the services of a Gateway/Server to access the Internet.

┌─ Please choose one of the following ──────────┐
│ ⊙ Client   ○ Gateway/Server   │
└───┘

[OK]

If you are installing as a Client, click OK. Otherwise, click on the Gateway/Server option and then click OK.

Note: For simpler configuration, it is highly recommended that you have no more than one Gateway/Server on your home network.

28. Restart Computer

At this time, your computer may restart. The reboot is only necessary in certain cases. Depending on your setup, you may not be required to reboot. In that case, proceed to step 13.

PCnet-Home Advanced Driver Features:

The **AMD PCnet-Home** drivers support the following features. For most users, default settings will be appropriate. The advanced features are for diagnostic purposes and may be appropriate for some users.

1. **Network Setup:**

   - To access Network Setup, open **My Computer** icon on your desktop.
   - Once the **My Computer** icon is open, double click on **Control Panel** folder to open it.
   - In the Control Panel, double click on **Network** icon to open the Network Setup program.

1. **Network Setup:**

   - To access driver properties, highlight **AMD PCnet-Home Based Adapter** and click on **Properties.**
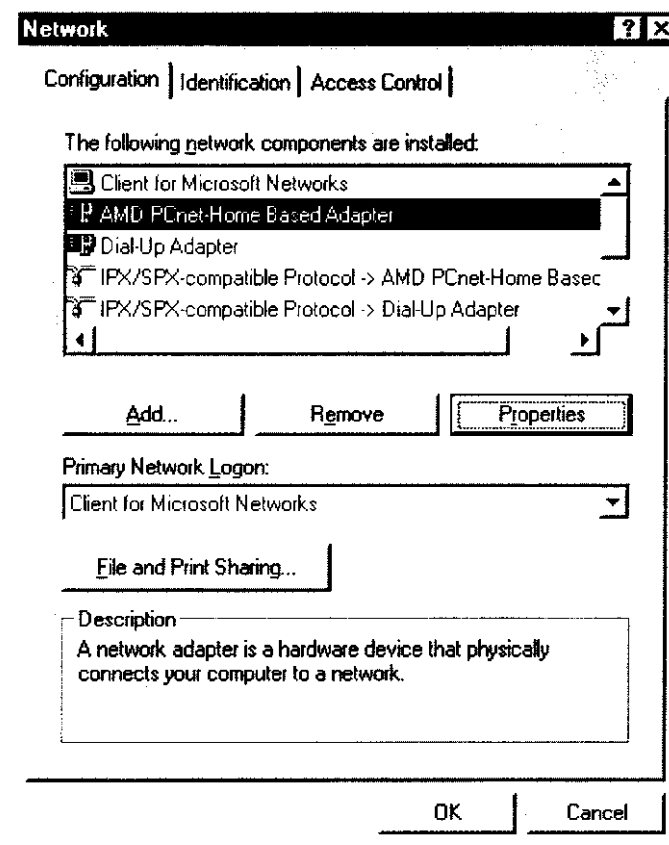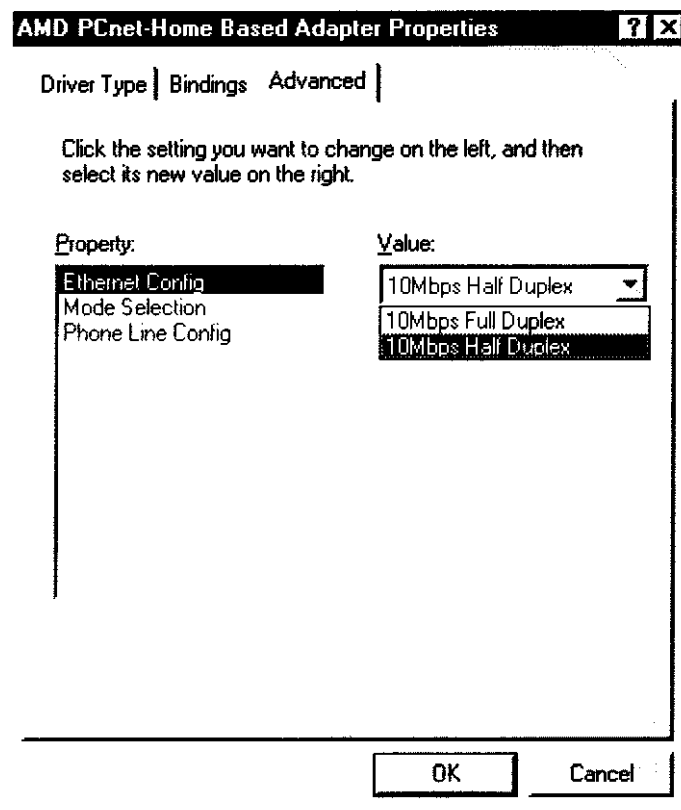
Advanced Properties:

Ethernet Configuration:

This option allows the user to force the speed/duplex mode of choice on the Ethernet PHY. The **Ethernet Config** option works in conjunction with the **Mode selection** option, and is valid only if:

- The **Mode Selection** is set to **10BASE-T-only PHY** or **10/100BASE-TX PHY**
  Or
- The **Mode Selection** is set to **Auto Detect** and there is a valid link on the **Ethernet port**
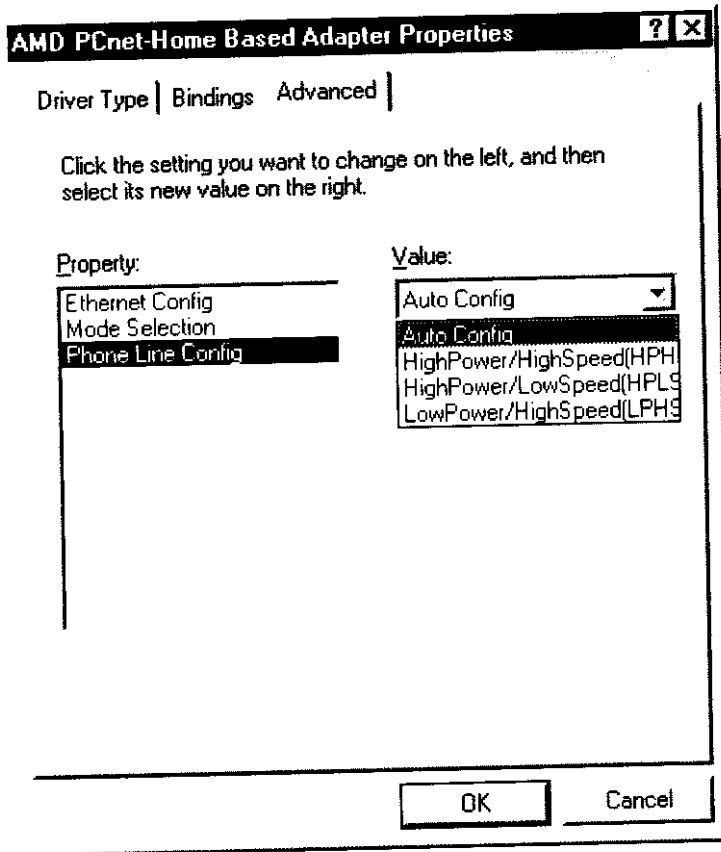
The choices for **Ethernet Configuration** are:

- **10Mbps Half Duplex** – sets the mode to 10Mbps Half Duplex Ethernet – (Default Option)
- **10Mbps Full Duplex** – sets the mode to 10Mbps Full Duplex Ethernet

---

AMD PCnet-Home Based Adapter Properties   ? X

Driver Type | Bindings   Advanced |

Click the setting you want to change on the left, and then select its new value on the right.

Property:

| Ethernet Config |
| Mode Selection |
| Phone Line Config |

Value:

| 10Mbps Half Duplex ▼ |
| 10Mbps Full Duplex |
| 10Mbps Half Duplex |

OK   Cancel

Phone Line Configuration:

Phone Line Config option is used to select the mode that the **Phone Line** port is going to operate. The selection is valid only if:

- in **Mode Selection** option, Phone Line is selected,

Or

- in **Mode Selection** option, Auto Detect is selected and Phone Line is the active link.

```
┌─────────────────────────────────────────────────────┐
│ AMD PCnet-Home Based Adapter Properties     [?] [X] │
├─────────────────────────────────────────────────────┤
│                                                       │
│  Driver Type │ Bindings   Advanced │                 │
│                                                       │
│   Click the setting you want to change on the left,   │
│   and then select its new value on the right.         │
│                                                       │
│   Property:              Value:                       │
│  ┌────────────────────┐ ┌────────────────────────┐  │
│  │ Ethernet Config    │ │ Auto Config        [▼] │  │
│  │ Mode Selection     │ ├────────────────────────┤  │
│  │ Phone Line Config  │ │ Auto Config            │  │
│  └────────────────────┘ │ HighPower/HighSpeed(HPH)│  │
│                         │ HighPower/LowSpeed(HPLS)│  │
│                         │ LowPower/HighSpeed(LPHS)│  │
│                         └────────────────────────┘  │
│                                                       │
│                                                       │
│                          ┌────────┐  ┌──────────┐    │
│                          │   OK   │  │  Cancel  │    │
│                          └────────┘  └──────────┘    │
└─────────────────────────────────────────────────────┘
```

The choices for this option are:

- **Auto Config (Default Option)** Configures the Phone Line PHY with Low power/High speed (LPHS). It monitors the PHY to dynamically reconfigure it, if necessary. It can automatically reconfigure to High Power/High Speed (HPHS) or High Power/Low Speed (HPLS).

- **LowPower/HighSpeed (LPHS)**
  Configures the Phone Line PHY with low power and high speed (1 Mb/Sec). It does not monitor the PHY.

- **HighPower/HighSpeed (HPHS)**
  Configures the Phone Line PHY with high power and high speed (1Mb/Sec). It does not monitor the PHY.

- **HighPower/LowSpeed (HPLS)**
  Configures he Phone Line PHY with high power and lowers the data rate to 700 kb/Sec. It does not monitor the PHY.
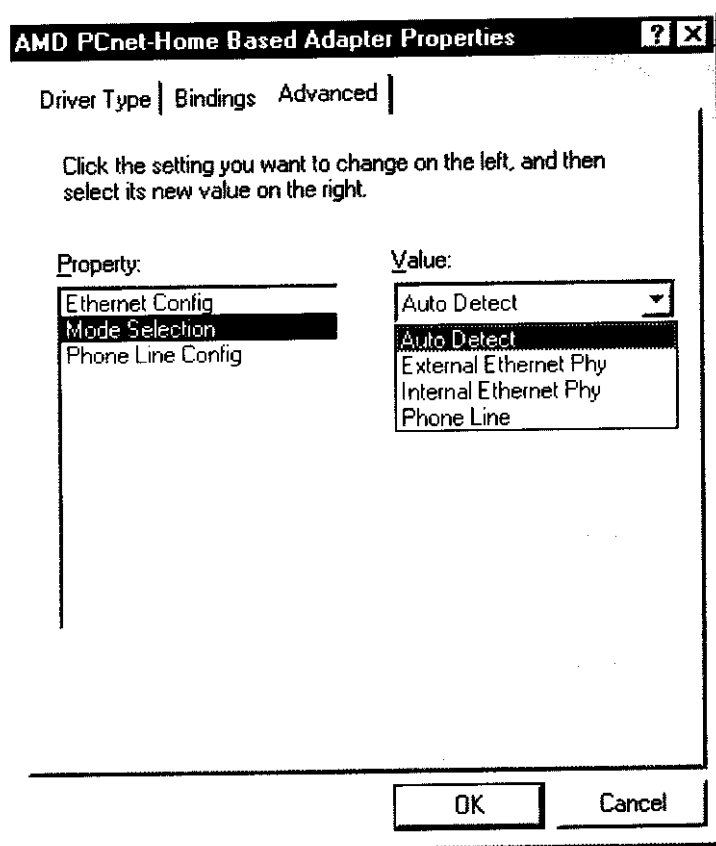
Mode Selection:

Mode Selection option allows the user to force a connection on one of the physical ports, in case there are multiple ports present. The choices for Mode Selection are:
- **Auto Detect (default option).** Driver will automatically search and activate a **PHY** where a link can be established. Search sequence is performed in the following order.
  - 10/100BASE-TX PHY, if present and active,
  - 10BASE-T PHY, if present and active,
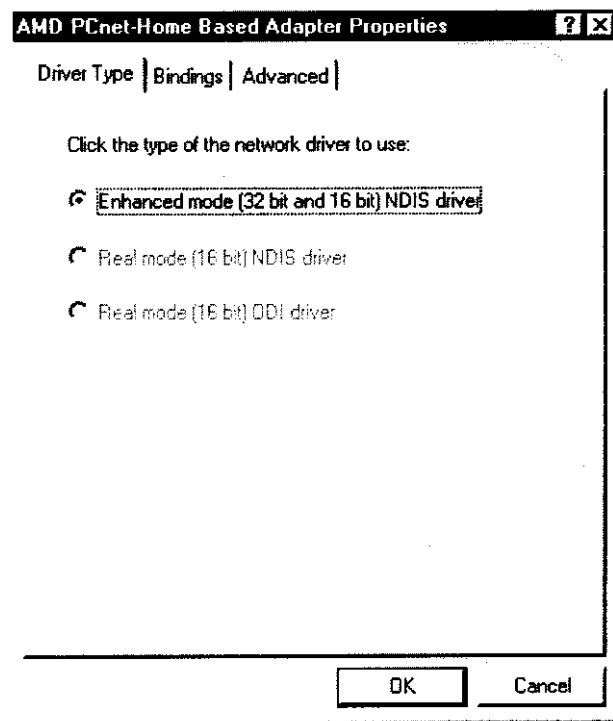 - Phone Line

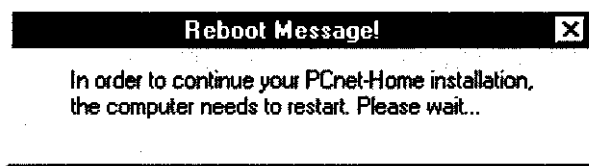If none of the PHYs has an active link, then Phone Line will be activated by default.

- **10/100BASE-TX Ethernet**
  This option forces the device to choose a **10/100BASE-TX Ethernet** if one is present.
- **10BASE-T Ethernet**
  This option forces the device to choose the **10BASE-T Ethernet if one is present.**
- **Phone Line**
  This option forces the device to choose the **Phone Line** for data communication.

AMD PCnet-Home Based Adapter Properties　　　🛈 ✖

Driver Type | Bindings Advanced |

Click the setting you want to change on the left, and then
select its new value on the right.

Property:

| Ethernet Config |
| Mode Selection |
| Phone Line Config |

Value:

| Auto Detect ▾ |

| Auto Detect |
| External Ethernet Phy |
| Internal Ethernet Phy |
| Phone Line |

|　OK　|　Cancel　|

3. AMD PCnet-Home Based Adapter Properties:

AMD PCnet-Home Based Adapter Properties dialog box opens up. Click on Advanced to view the advanced properties.

```
┌─────────────────────────────────────────┐
│ ████ Reboot Message!          ████ [X] ██│
├─────────────────────────────────────────┤
│ In order to continue your PCnet-Home     │
│ installation, the computer needs to      │
│ restart. Please wait...                  │
│                                          │
└─────────────────────────────────────────┘
```

After the restart, the WinGate Internet Sharing installation program will take over.

29. Internet Sharing Installation Program:

The AMD Install program can be customized to use any of the Internet sharing programs in the market (see the section on *Customizing Your Installation Options*). The Demo CD ships with a Beta version of WinGate 3.0 (from Deerfield.Com), one of the leading Internet sharing programs in the market.

- To install **WinGate**, click **Next** to continue. Follow on-screen directions to install WinGate.

License Key:

Following is a special evaluation license for the WinGate program. License is only required if you choose the Server/Gateway option during the WinGate Installation.

License Name: AMD OEM Eval
License Number: 5B233EFA0901E2D313BE96CB

30. Using WinGate:

If you have the Internet connection already configured on the Server/Gateway machine, all you need to do to access Internet from a client machine is to open a browser or other Internet application and you ll be seamlessly connected to the Internet.

31. WinGate Help:

Further information for WinGate can be found in WinGate Help file.
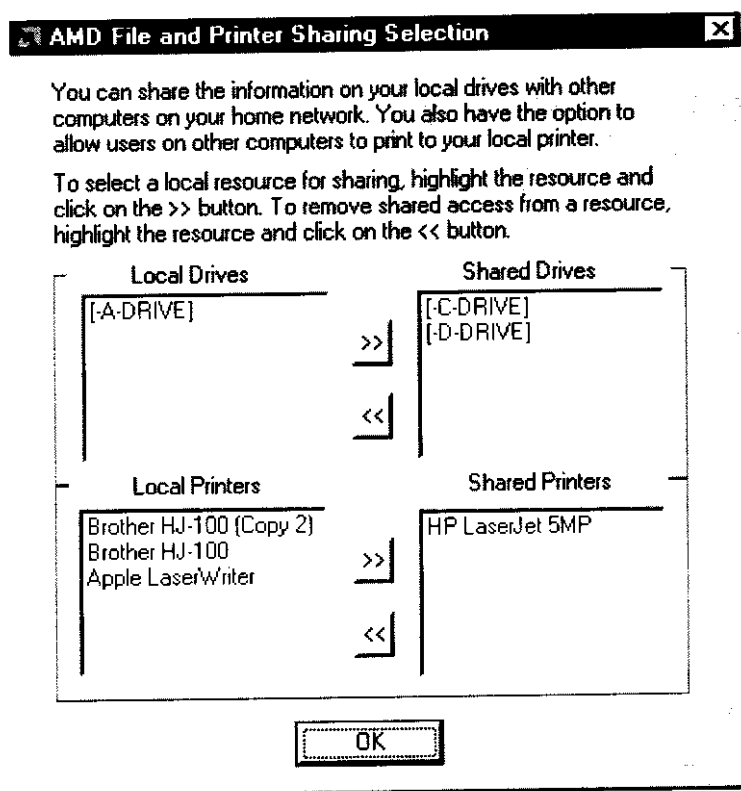
26. File and Printer Sharing:

The installation process will now prompt you to select the local disk drives and printers that you may like to share over the Home network. All local drives and printers are automatically found and displayed by the installation wizard in the following dialog box that will display on your screen.

Choose the drives to share for File sharing.

- To choose, highlight the drive letter by clicking on it and click the >> button. This will place the selected drive letter in the shared drives list.
- To remove a drive from the shared drives list, highlight the drive letter by clicking on it and then click the << button.

Choose the printers to share for Printer sharing.

- To choose, highlight the printer name by clicking on it and click the >> button. This will place the selected printer in the shared printers list.
- To remove a printer from the shared printers list, highlight the printer name by clicking on it and then click the << button.
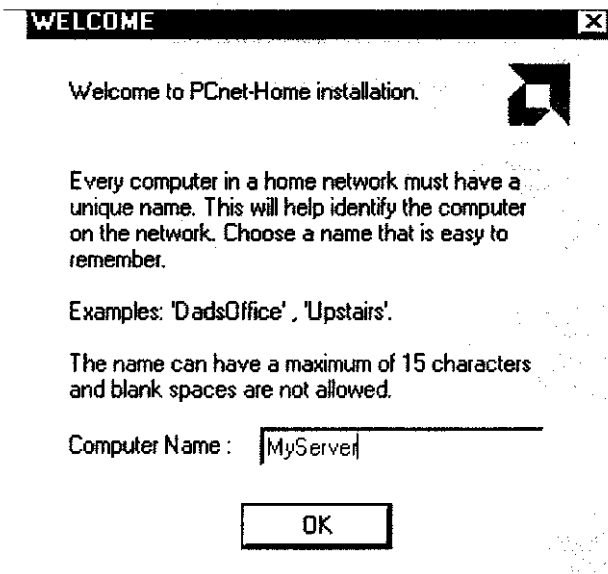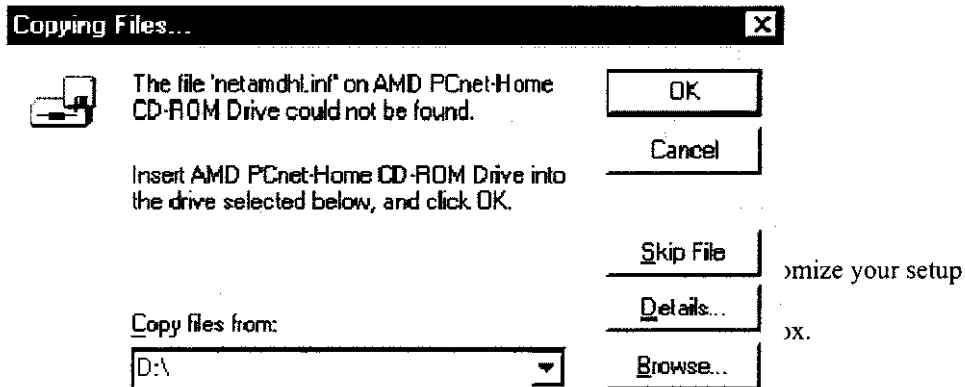

If you are configured to start an Internet sharing application automatically, this process will start now. Please see the section on *Customizing Your Installation Options* for details on how to setup your Internet sharing application to start automatically.
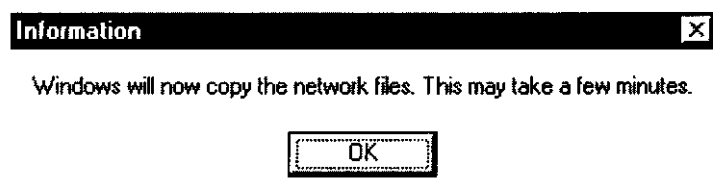
21. Copy Files

In **Copy Files From** choose **D:** where **D:** is your CD-ROM device with the AMD PCnet-Home CD loaded.

Copying Files... ☒

The file 'netamdhl.inf' on AMD PCnet-Home CD-ROM Drive could not be found.

[OK]

[Cancel]

22

Insert AMD PCnet-Home CD-ROM Drive into the drive selected below, and click OK.

[Skip File]

ɔmize your setup

Copy files from:

[Details...]

ɔx.

[D:\   ▼]

[Browse...]

WELCOME ☒

Welcome to PCnet-Home installation.

Every computer in a home network must have a unique name. This will help identify the computer on the network. Choose a name that is easy to remember.

Examples: 'DadsOffice' , 'Upstairs'.

The name can have a maximum of 15 characters and blank spaces are not allowed.

Computer Name : [MyServer]

[OK]

23. Information:

Information ☒

Windows will now copy the network files. This may take a few minutes.

[OK]

The installation process will now check if you have networking and print services already installed on your system.
Windows may take a few minutes to copy all the necessary files. Please <u>do not</u> cancel the Installation process.
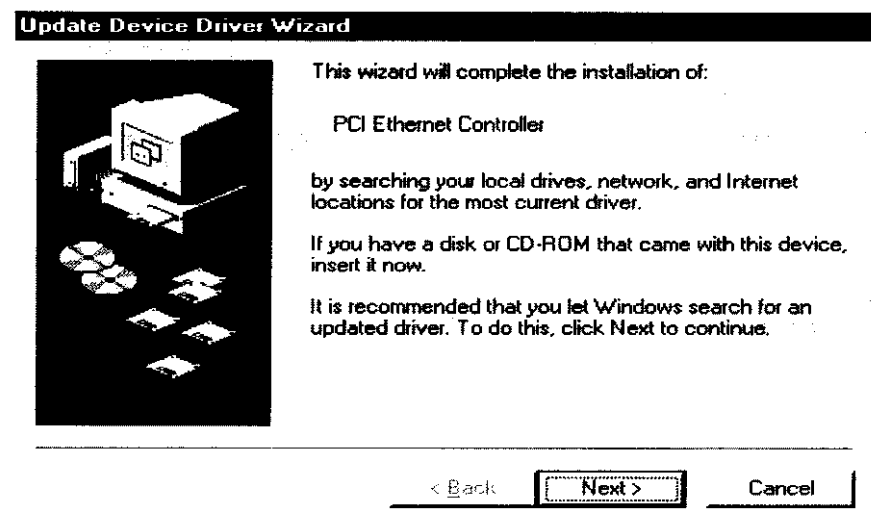
PCnet-Home Installation in a Windows 95® System

17. Adapter Installation:

With the machine turned off, place the PCnet-Home device based adapter in one of the PCI slots and reboot your system.

18. Windows Boot:

When Windows 95 boots up, it recognizes that a new hardware has been added to the system and brings up the pdate Device Driver Wizard" Window.

```
Update Device Driver Wizard

                        This wizard will complete the installation of:

                           PCI Ethernet Controller

                        by searching your local drives, network, and Internet
                        locations for the most current driver.

                        If you have a disk or CD-ROM that came with this device,
                        insert it now.

                        It is recommended that you let Windows search for an
                        updated driver. To do this, click Next to continue.


                              < Back    [   Next >   ]      Cancel
```
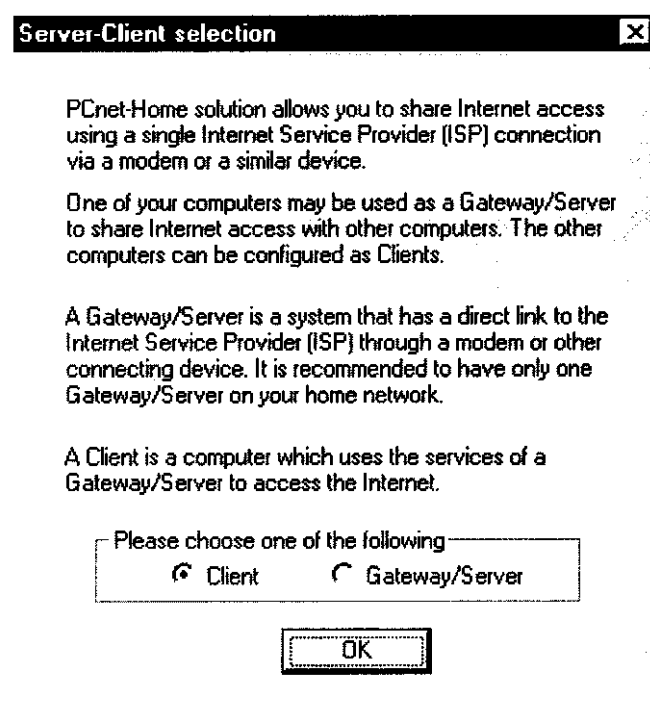
- Insert the AMD PCnet-Home CD-ROM in your CD-Drive
- Click **Next**.

If you are using the default setup configuration, the WinGate Internet sharing application will be installed on your system automatically.

To correctly configure the system for WinGate installation, please check the pre-requisites in the Introduction to this document.

12. Server-Client Selection for WinGate Software Installation:

The user has the option to configure his/her system either as a Gateway/Server or a Client for Internet sharing. A Gateway/Server is a machine with an Internet connection configured through a Modem or other connection medium. A Client is a system accessing the Internet through a Gateway/Server, defined as above.

Server-Client selection   ☒

PCnet-Home solution allows you to share Internet access using a single Internet Service Provider (ISP) connection via a modem or a similar device.

One of your computers may be used as a Gateway/Server to share Internet access with other computers. The other computers can be configured as Clients.

A Gateway/Server is a system that has a direct link to the Internet Service Provider (ISP) through a modem or other connecting device. It is recommended to have only one Gateway/Server on your home network.

A Client is a computer which uses the services of a Gateway/Server to access the Internet.

┌─ Please choose one of the following ──────────┐
│   ⦿ Client   ○ Gateway/Server   │
└──┘

[OK]

- If you are installing as a Client, click OK. Otherwise, click on the Gateway/Server option and then click OK.

Note: For simpler configuration, it is recommended that you have no more than one computer configured as Gateway/Server on your home network.

- If you chose **Server**, proceed to step 13.
- If you chose **Client**, proceed to step 14.

Note: Again at this point Windows 98 may take a few minutes to copy all the necessary files. *Please wait for the next Dialog Box to appear.*

10. System Restart:

Ensure that the AMD PCnet-Home CD is in your CD-ROM drive.
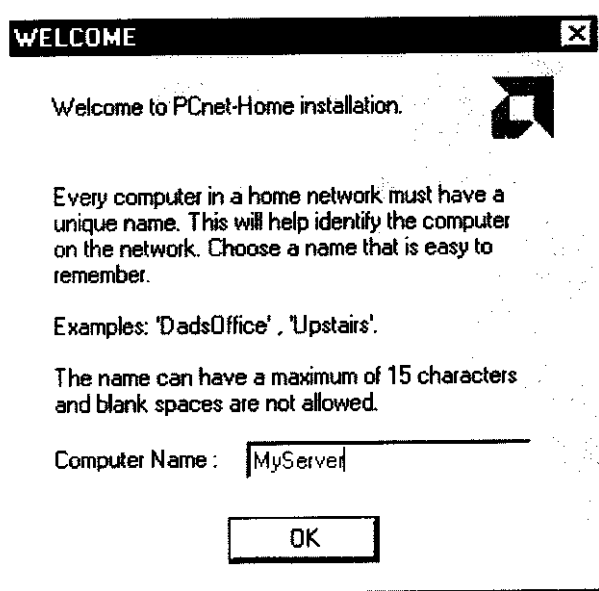The user will be prompted to restart the system. Select **Yes** to restart the system.
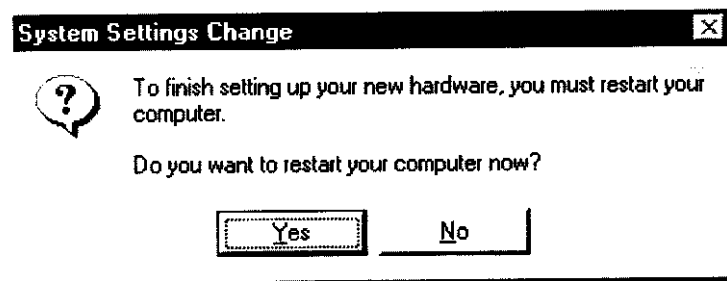
The Installation process will now continue to enable file sharing, printer sharing and Internet sharing.
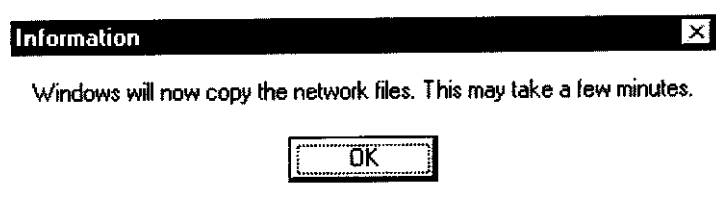
6. AMD *EZ*Installation Wizard:

The AMD EZInstallation Wizard will provide you with options to customize your setup.

Please select a Computer Name as suggested by the Welcome dialog box

```
╔═══════════════════════════════════════╗
║ WELCOME                            [X] ║
╠═══════════════════════════════════════╣
║                                        ║
║   Welcome to PCnet-Home installation.  ║
║                                        ║
║                                        ║
║   Every computer in a home network     ║
║   must have a                          ║
║   unique name. This will help identify ║
║   the computer                         ║
║   on the network. Choose a name that   ║
║   is easy to                           ║
║   remember.                            ║
║                                        ║
║   Examples: 'DadsOffice' , 'Upstairs'. ║
║                                        ║
║   The name can have a maximum of 15    ║
║   characters                           ║
║   and blank spaces are not allowed.    ║
║                                        ║
║   Computer Name :   │MyServer          ║
║                                        ║
║          ┌─────────────────┐           ║
║          │      OK         │           ║
║          └─────────────────┘           ║
║                                        ║
╚═══════════════════════════════════════╝
```

7. Information:

```
╔═══════════════════════════════════════╗
║ Information                        [X] ║
╠═══════════════════════════════════════╣
║ Windows will now copy the network      ║
║ files. This may take a few minutes.    ║
║                                        ║
║          ┌─────────────────┐           ║
║          │      OK         │           ║
║          └─────────────────┘           ║
╚═══════════════════════════════════════╝
```

The installation process will now check if you have networking and print services already installed on your system.
**Windows may take a few minutes to copy all the necessary files. Please do not cancel the Installation process.**

If these services are not already installed, you will be prompted to insert the Windows 98 CDROM as indicated in the next step. If the services are already installed on your computer, the installation procedure will skip next step.

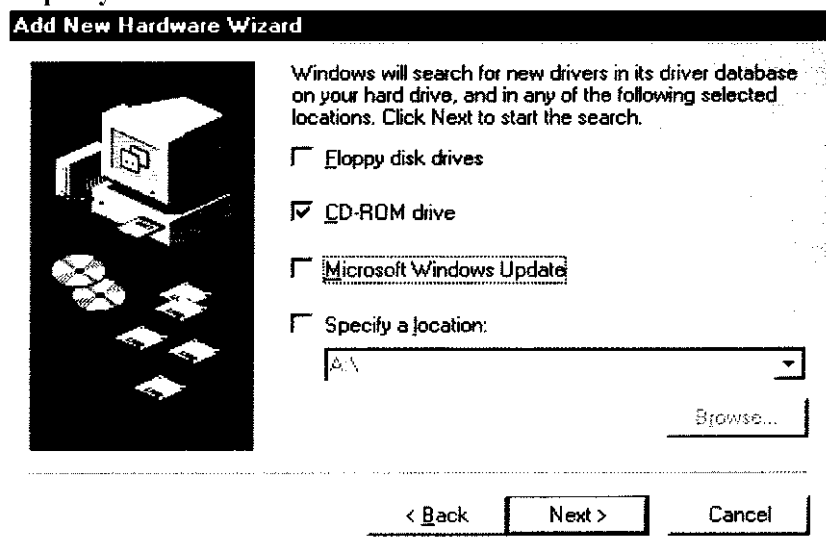3. **Add New Hardware Wizard:**

The Wizard gives you two options:

☑**Search for the best driver for your device (Recommended).**
☐**Display a list of all the drivers in a specific location so you can select the driver you want.**

- Choose the default (first option) and click **Next.**

Add New Hardware Wizard

What do you want Windows to do?

(•) Search for the best driver for your device.
    (Recommended).

( ) Display a list of all the drivers in a specific
    location, so you can select the driver you want.

< Back   Next >   Cancel
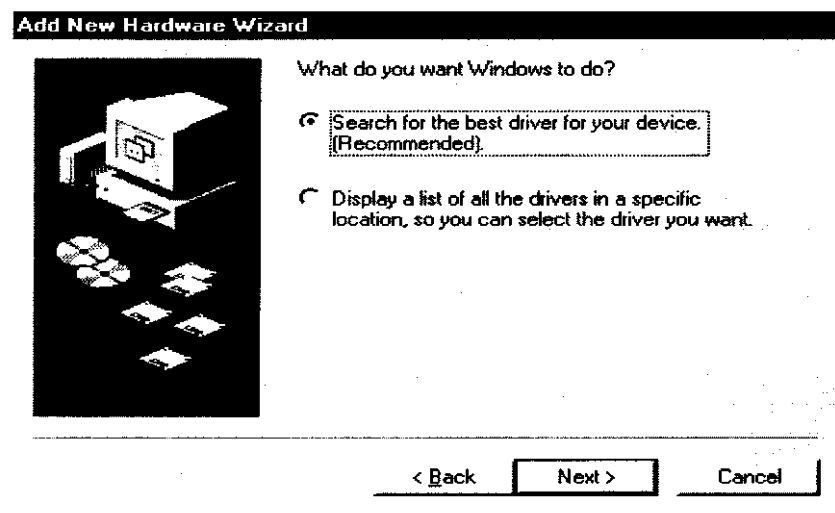
4. **Add New Hardware Wizard:**

The Wizard gives you the following location options:

☐**Floppy disk drives**
☑**CD-ROM drive**
☐**Microsoft Windows Update**
☐**Specify a location**

Add New Hardware Wizard

Windows will search for new drivers in its driver database
on your hard drive, and in any of the following selected
locations. Click Next to start the search.

☐ Floppy disk drives

☑ CD-ROM drive

☐ Microsoft Windows Update

☐ Specify a location:

A:\

Browse...

< Back   Next >   Cancel

- Choose **CD-ROM drive** only.

One of your computers may be used as a Gateway/Server to share Internet access with other computers.
The other computers can be configured as clients.
A Gateway/Server is a computer with a direct connection to the Internet through a modem or other
connecting device.
A client is a computer which uses the services of a Gateway/Server to access the Internet.
Following are the prerequisites for Internet sharing:

1.   You should have a valid ISP setup on the machine acting as the Server/Gateway.
2.   It is recommended to install and configure the PCnet-Home Based Adapter on the
     Server/Gateway first.

Typical Home Network Configuration Using Phone Line

The following figure depicts a typical network setup using the PCnet-Home solution.

The left side of the picture depicts a Home Computer used as a Server/Gateway. A Server/Gateway is
defined as a system that has an ISP account setup and has a communication device like a modem installed
on it for connection to the Internet. The Server/Gateway system is connected to the RJ11 jack on the wall
of the room where the computer is located.

The right side of the picture depicts two clients daisy chained together using the PCnet-Home adapter. A
Client is defined as a computer that gets Internet access using the services of the Server/Gateway. Client 1
is connected to the RJ11 jack on the wall of the room where these computers are located.