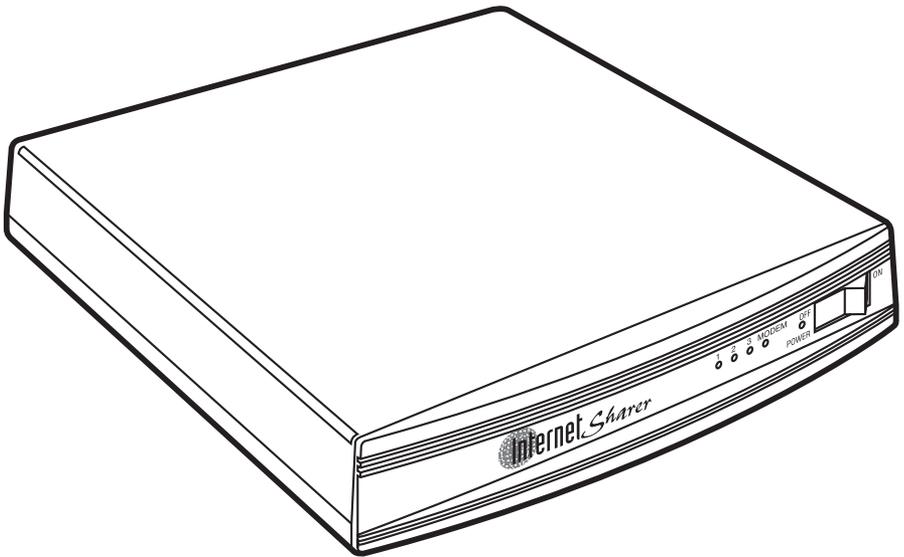




## Internet Sharer



---

**CUSTOMER  
SUPPORT  
INFORMATION**

Order **toll-free** in the U.S. 24 hours, 7 A.M. Monday to midnight Friday: **877-877-BBOX**  
FREE technical support, 24 hours a day, 7 days a week: Call **724-746-5500** or fax **724-746-0746**  
Mail order: **Black Box Corporation**, 1000 Park Drive, Lawrence, PA 15055-1018  
Web site: [www.blackbox.com](http://www.blackbox.com) • E-mail: [info@blackbox.com](mailto:info@blackbox.com)

**FEDERAL COMMUNICATIONS COMMISSION  
and INDUSTRY CANADA  
RADIO FREQUENCY INTERFERENCE STATEMENT**

**Class B Digital Device.** This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. However, there is no guarantee that interference will not occur in a particular 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. If this equipment does cause harmful interference to radio or telephone reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one 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 an experienced radio/TV technician for help.

**Caution:**

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

To meet FCC requirements, shielded cables and power cords are required to connect this device to a personal computer or other Class B certified device.

*This digital apparatus does not exceed the Class B limits for radio noise emission from digital apparatus set out in the Radio Interference Regulation of Industry Canada.*

*Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de classe B prescrites dans le Règlement sur le brouillage radioélectrique publié par Industrie Canada.*

## **NORMAS OFICIALES MEXICANAS (NOM) ELECTRICAL SAFETY STATEMENT**

### **INSTRUCCIONES DE SEGURIDAD**

1. Todas las instrucciones de seguridad y operación deberán ser leídas antes de que el aparato eléctrico sea operado.
2. Las instrucciones de seguridad y operación deberán ser guardadas para referencia futura.
3. Todas las advertencias en el aparato eléctrico y en sus instrucciones de operación deben ser respetadas.
4. Todas las instrucciones de operación y uso deben ser seguidas.
5. El aparato eléctrico no deberá ser usado cerca del agua—por ejemplo, cerca de la tina de baño, lavabo, sótano mojado o cerca de una alberca, etc..
6. El aparato eléctrico debe ser usado únicamente con carritos o pedestales que sean recomendados por el fabricante.
7. El aparato eléctrico debe ser montado a la pared o al techo sólo como sea recomendado por el fabricante.
8. Servicio—El usuario no debe intentar dar servicio al equipo eléctrico más allá a lo descrito en las instrucciones de operación. Todo otro servicio deberá ser referido a personal de servicio calificado.
9. El aparato eléctrico debe ser situado de tal manera que su posición no interfiera su uso. La colocación del aparato eléctrico sobre una cama, sofá, alfombra o superficie similar puede bloquear la ventilación, no se debe colocar en libreros o gabinetes que impidan el flujo de aire por los orificios de ventilación.

10. El equipo eléctrico deber ser situado fuera del alcance de fuentes de calor como radiadores, registros de calor, estufas u otros aparatos (incluyendo amplificadores) que producen calor.
11. El aparato eléctrico deberá ser conectado a una fuente de poder sólo del tipo descrito en el instructivo de operación, o como se indique en el aparato.
12. Precaución debe ser tomada de tal manera que la tierra fisica y la polarización del equipo no sea eliminada.
13. Los cables de la fuente de poder deben ser guiados de tal manera que no sean pisados ni pellizcados por objetos colocados sobre o contra ellos, poniendo particular atención a los contactos y receptáculos donde salen del aparato.
14. El equio eléctrico debe ser limpiado únicamente de acuerdo a las recomendaciones del fabricante.
15. En caso de existir, una antena externa deberá ser localizada lejos de las lineas de energia.
16. El cable de corriente deberá ser desconectado del cuando el equipo no sea usado por un largo periodo de tiempo.
17. Cuidado debe ser tomado de tal manera que objetos liquidos no sean derramados sobre la cubierta u orificios de ventilación.
18. Servicio por personal calificado deberá ser provisto cuando:
  - A: El cable de poder o el contacto ha sido dañado; u
  - B: Objetos han caído o líquido ha sido derramado dentro del aparato; o
  - C: El aparato ha sido expuesto a la lluvia; o
  - D: El aparato parece no operar normalmente o muestra un cambio en su desempeño; o
  - E: El aparato ha sido tirado o su cubierta ha sido dañada.

## TRADEMARKS

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# 1. Specifications

**System Requirements** — Internet dialer software: Microsoft Internet Explorer, Netscape Personal Edition, Trumpet Winsock version 2.x, or Windows 95; ISP must support a PPP connection; An external modem (the modem becomes a dedicated Internet modem); Operating system: Windows 3.x or Windows 95

**Approvals** — CSA, UL, TUV, FCC, CE

**Size** — 2"H x 12"W x 6.5"D (5.1 x 30.4 x 16.5 cm)

## 2. Introduction

With the Internet Sharer, up to 3 users can access the Internet using only one Internet account. The Internet Sharer provides businesses, schools, homes, and home offices with cost-effective Internet access.

It's compatible with services offered by the majority of Internet Service Providers (ISPs).

You can create, send, and receive personal email. WebShare works with NetScape Mail, Eudora, and other popular Winsock compliant programs.

To use the Internet Sharer, you need Windows 3.x or 95, and your Internet Service Provider (ISP) must support a PPP connection. You'll also need an external modem.

If the Internet dialer software is already installed, you don't have to reinstall it. If it's not installed, you must install it, one PC at a time.

Once the Internet dialer software is installed, attaching the Internet Sharer is plug-and-play. Simply connect the 3 PCs to the Internet Sharer unit using the serial cables provided. Then connect an external modem to the Internet Sharer.

## 3. Installation

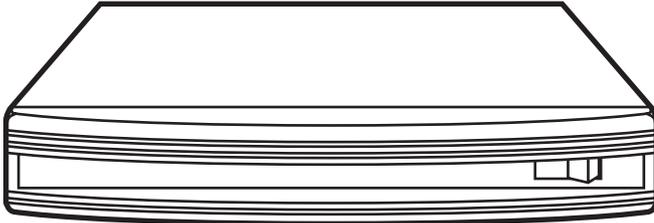
### 3.1 What the Package Includes

The following is a list of the items included in your package:

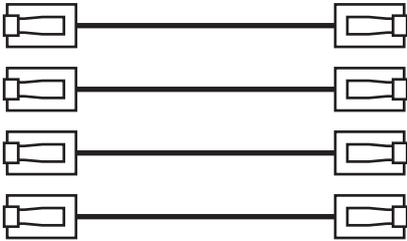
- (1) Internet Sharer
- (3) 15-ft. (4.6-m) serial cables
- (1) 15-ft. (4.6-m) telephone cable
- (4) DB25 to RJ-45 adapters
- (3) DB9 to RJ-45 adapters
- (1) power adapter
- This user's manual

If anything is missing or damaged, please contact Black Box immediately.

**Internet Sharer Unit**



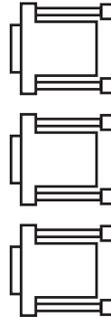
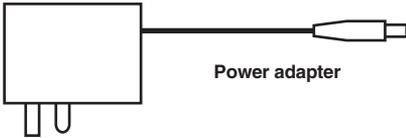
(4) 15-ft. (4.6-m) serial cables



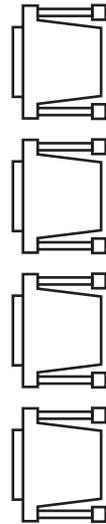
Male-to-male  
DB25 adapter



Power adapter



(3) DB9 to  
RJ-45  
adapters



(4) DB25 to  
RJ-45  
adapters

**Figure 3-1. What's included in your package.**

## 3.2 System Requirements

To use the Internet Sharer, you'll need:

- Windows 3.x or Windows 95 for PC or Mac OS 8 or greater
- Your Internet Service Provider (ISP) must support a PPP connection (check with your ISP).
- An external modem (the modem becomes a dedicated Internet modem)
- Modem compatible Mac cables for Mac environment.

## 3.3 Installing Internet Dialer Software

In order to connect to the Internet, you must first install an Internet dialer software on each PC or Mac. If the Internet dialer software is already installed, you do not have to reinstall it.

Your ISP will give you the information you need to set up your dialer software. This section explains how to make it work with the Internet Sharer.

When installing the Internet dialer software to connect to your Internet service Provider, you must:

- Connect one computer to the external modem using your serial modem cable (do not use the supplied Internet Sharer cables).
- Install the Internet dialer software on one PC at a time by following the instructions provided with the Internet software package you will use.
- While you install the software on the first computer, write down the following parameters as they appear on the screen during the installation. This information will be useful for the second and third PC installation. Some of these parameters might not appear.

- Username

- Password

- E-mail address if you have only one for the 3 PCs

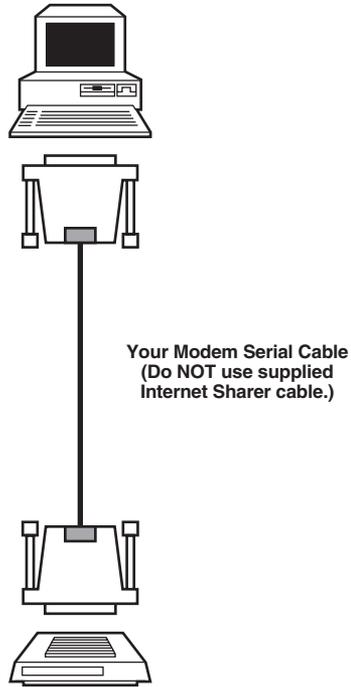
- IP address

- DNS (Name-server address for Mac environment)
- Provider's phone number
- Let your system detect your modem, or select it from the list.
- Verify that the maximum speed is set to 115200 baud. If not, set it to this value. If this speed is not supported select the next highest speed supported by the Internet Sharer unit. The supported speeds are 115200, 57600, 38400, 19200, and 9600 baud.
- Once the Internet dialer software installation has been completed, test the connection to the Internet with that computer directly connected to the modem (without the Internet Sharer).

### NOTE

**When you set up the second and third computers, it is possible that your Internet Service Provider will ask you if this is a reinstallation or a new account. Select "reinstallation."**

Repeat the installation steps for the other two computers.



**Figure 3-2. Attaching the modem to the PC.**

### 3.4 Installing the Internet Sharer in a PC Environment

Having previously confirmed that a direct connection from each PC to the Internet works, connect each PC to the Internet Sharer using supplied serial cables and adapters. Connect the Internet Sharer's MODEM port to the external modem using the supplied Internet Sharer cable.

In order to be able to use the Internet Sharer, you must first connect it to your computer's serial port. Follow these steps:

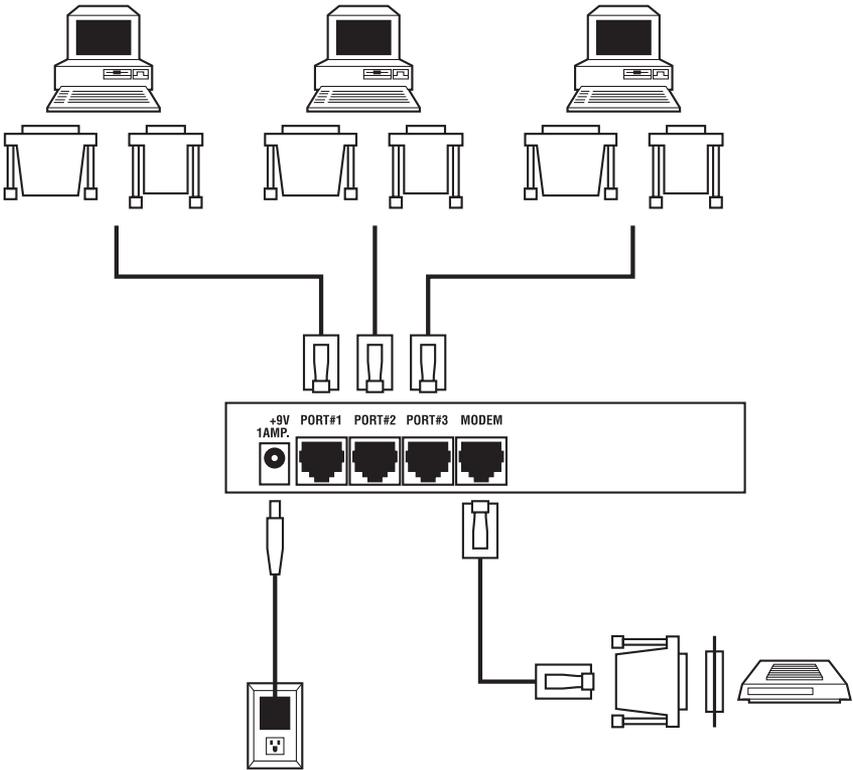
- Turn OFF your PCs.
- Find the serial port on your PC's back panel. Match the serial-port adapter included in your Internet Sharer package to the serial port on your PC (DB25 or DB9). Plug the serial port adapter onto the PC's serial port.
- Plug one end of the RJ-45-to-RJ-45 cable into the serial-port adapter, and the other into the Internet Sharer's PORT #1.
- To connect a second and third PC to the Internet Sharer's PORT #2 and PORT #3, respectively, follow steps above for each additional PC.
- Plug one end of the flat cable to the Internet Sharer MODEM port the other end to the modem using the supplied DB25-to-RJ-45 connector and the gender changer.
- Plug the included power supply into the power socket and the other end into the Internet Sharer's +9V power socket.
- Turn on the PCs, the Internet Sharer and the modem.

You are now ready to surf the Net using the Internet Sharer. Access the Internet exactly as you normally would with your Internet dialer software.

If you have any problems, it is possible that some parameters have not been set correctly. Make sure you've followed your Internet Service Provider's directions for setting up your dialer software. If you're still having problems, see the troubleshooting suggestions in **Appendix B**.

# INTERNET SHARER

For additional cabling information, refer to **Appendix A**.



**Figure 3-3.** Installing the Internet Sharer in a PC environment.

### 3.5 Installing the Internet Sharer in a Mac Environment

Having previously confirmed that a direct connection from each Mac to the Internet works, connect each Mac to the Internet Sharer using the supplied serial cables and adapters with a modem cable (not supplied). Connect the Internet Sharer's MODEM port to the external modem using the supplied Internet Sharer cable.

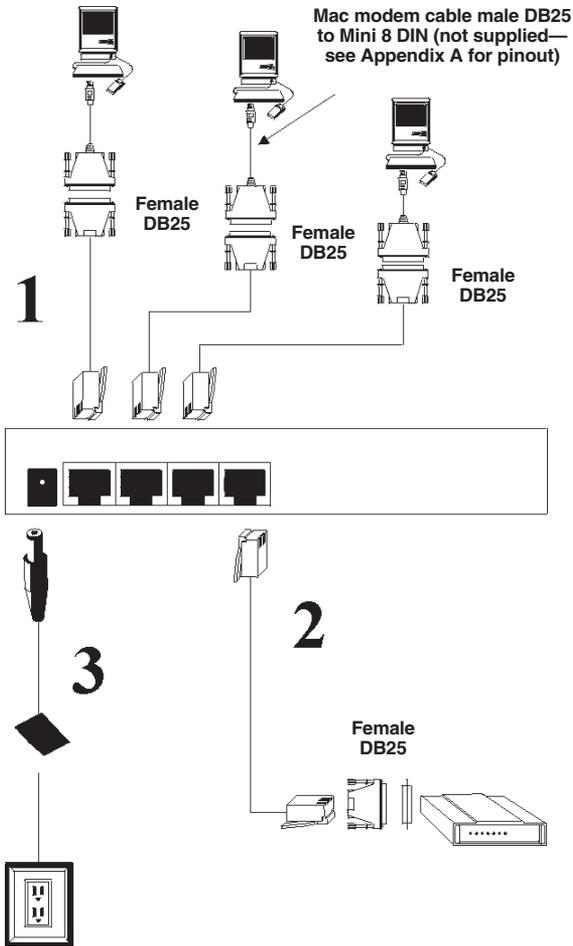
In order to be able to use the Internet Sharer, you must first connect it to your Mac's serial port. Follow these steps:

- Turn OFF your Mac computers.
- Find the serial port on your Mac. Connect a modem cable (not supplied) on your Mac and plug the supplied serial DB25 to RJ-45 adapter to the end of that cable.
- Plug one end of the supplied RJ-45-to-RJ-45 cable into the serial DB25-to-RJ-45 adapter, and the other end into the Internet Sharer's PORT #1.
- To connect a second and third Mac to the Internet Sharer's PORT #2 and PORT #3, respectively, follow steps above for each additional Mac.
- Plug one end of the RJ-45-to-RJ-45 cable to the Internet Sharer MODEM port the other end to the modem using the supplied DB25-to-RJ-45 connector and the gender changer.
- Plug the included power supply into the power socket and the other end into the Internet Sharer's +9V power socket.
- Turn on the computers, the Internet Sharer, and the modem.

You are now ready to surf the Net using the Internet Sharer. Access the Internet exactly as you normally would with your Internet dialer software.

If you have any problems, it is possible that some parameters have not been set correctly. Refer to **Appendix B** for more information.

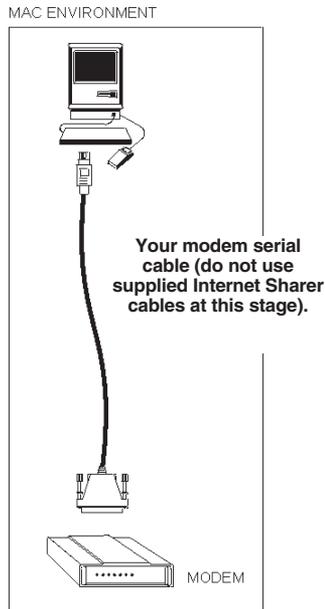
For additional cabling information, refer to **Appendix A**.



**Figure 3-4. Installing the Internet Sharer in a Mac environment:**

1. Connect the computers to the Internet Sharer.
2. Connect the Internet Sharer to the modem.
3. Plug in the power adapter.

See the previous page for detailed instructions.



**Figure 3-5. Macintosh computer (MINI 8 DIN) to the Internet Sharer cable.**

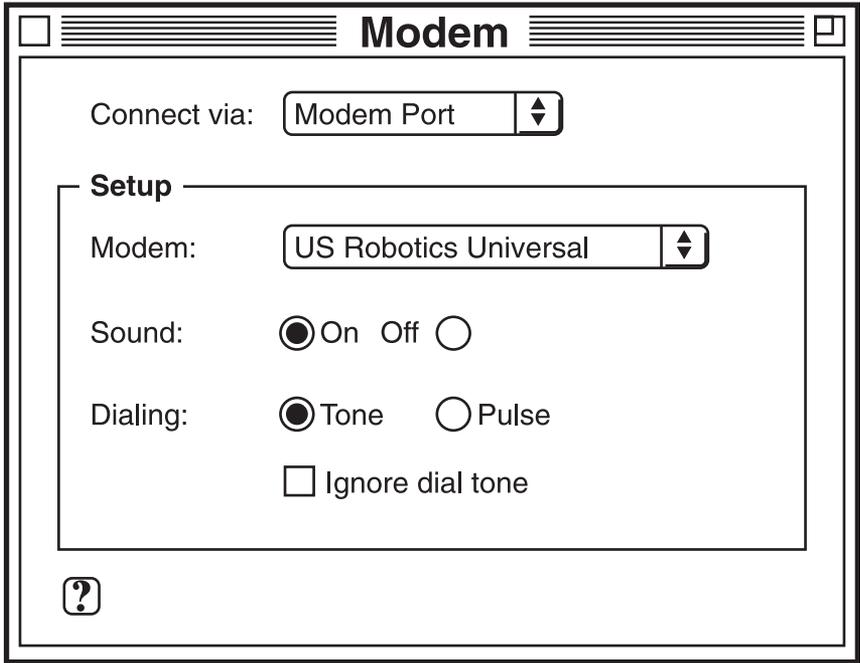
#### MAC DIALER CONFIGURATION PARAMETERS

If you have problems surfing the Net, check the following parameters on each Mac:

##### *Modem port and driver*

- Click on the Apple menu.
- Select **Control Panel**.
- Click on **Modem**.
- **Connect via:** Select the Mac modem port to which the Internet Sharer is connected.
- **Modem:** Select the name of the modem that corresponds to the modem connected to the Internet Sharer.

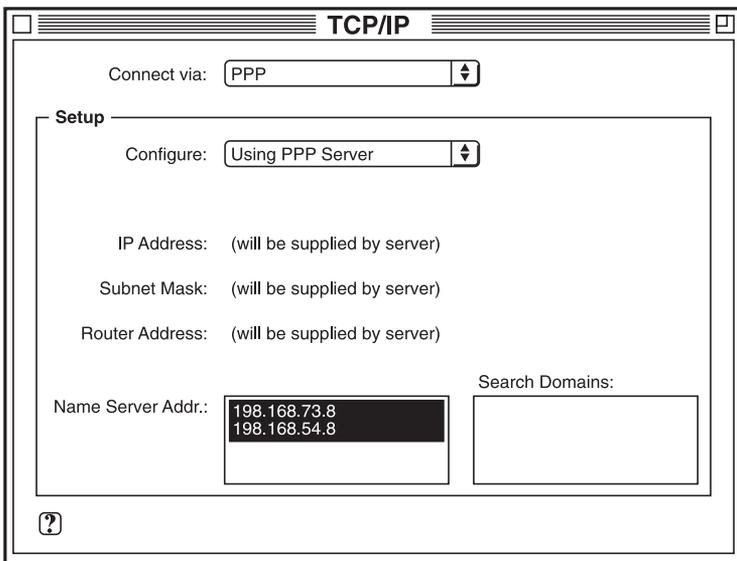
- Close the window and save your settings.



**Figure 3-6. Modem screen.**

*TCP/IP Settings*

- Click on the Apple menu.
- Select **Control Panel**.
- Click on TCP/IP.
- Select **PPP** in the **Connect via** field.
- Select **Using PPP Server** in the **Configure** field.
- Make sure a **Name server addr.** has been defined. These addresses are normally provided by your ISP.
- Close the window and save your settings.



**Figure 3-7. TCP/IP screen.**

## Dialer Settings

- Click on the Apple menu.
- Select **Control Panel**.
- Click on **PPP**.
- Click on **Registered User**.
- Enter your Name, your Password, and the ISP's Phone Number.
- Close the window and save your settings.

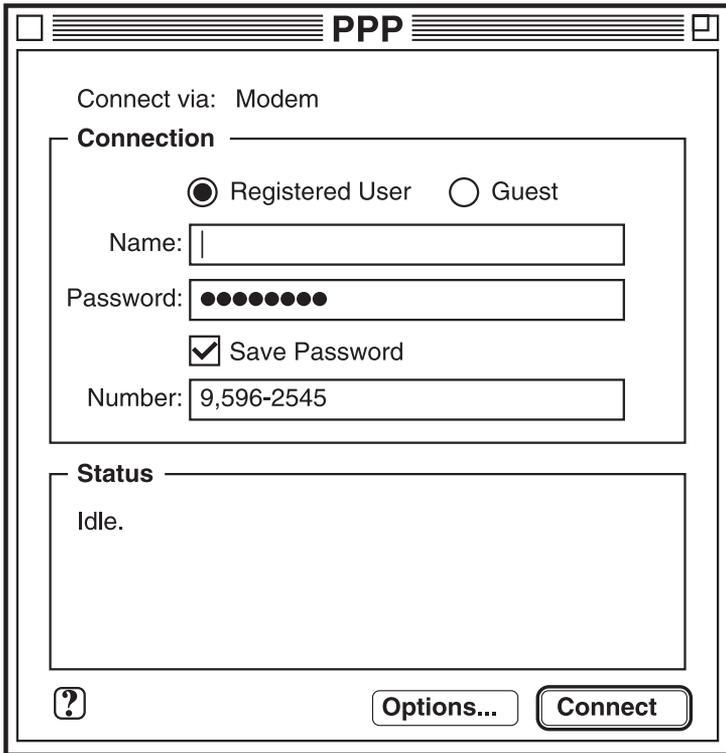


Figure 3-8. PPP screen.

# Appendix A: Serial Cables

## A.1 Cable and Connector Information

The following information is provided for those who plan to buy or construct their own cables. A description of the different connectors is also available.

### A.1.1 CABLES

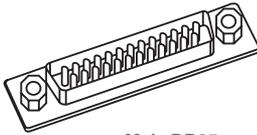
Use UTP low-capacitance (less than 15 pF per foot) cable for all serial cables.

Serial cables may be up to 600 feet (180 m) in length.

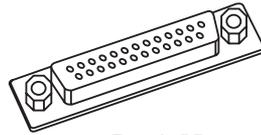
To avoid potential signal-corruption problems, avoid running cables near fluorescent light fixtures, generators, large electrical motors, and any other potential source of electromagnetic interference.

## A.1.2 CONNECTOR TYPES

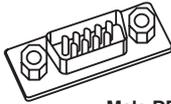
The different connector types used to connect an Internet Sharer to a PC and to a modem are shown in **Figure A-1**.



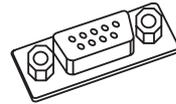
Male DB25



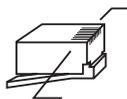
Female DB25



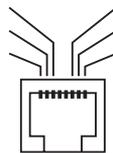
Male DB9



Female DB9



Male RJ-45



Female RJ-45

**Figure A-1. Connector Types.**

## A.2 Serial Cables

Use a female DB25 (or female DB9) to female RJ-45 adapter and an 8-conductor UTP crossed cable to connect a PC to the Internet Sharer. Use a standard Macintosh modem cable, a female DB25 to female RJ-45 adapter and an 8-conductor UTP crossed cable to connect a Macintosh computer to the Internet Sharer. Use female DB25 to female RJ-45 adapters with a male to male gender changer and an 8 conductor UTP crossed cable to connect a modem to the Internet Sharer.

### A.2.1 COMPUTER (DB25) TO THE INTERNET SHARER

Use a female DB25 to female RJ-45 adapter and an 8-conductor UTP crossed cable to connect a PC with a DB25 port to the Internet Sharer.

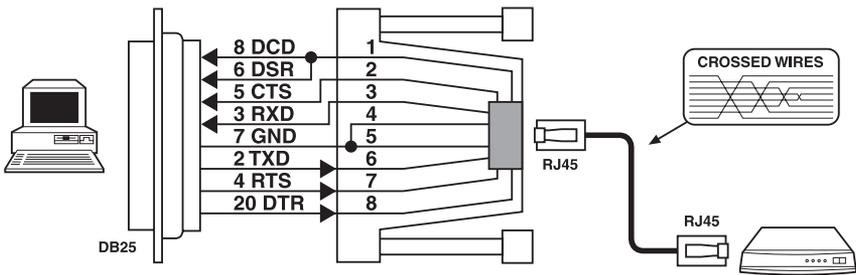


Figure A-2. Computer (DB25) to the Internet Sharer.

## A.2.2 COMPUTER (DB9) TO THE INTERNET SHARER

Use a female DB9 to female RJ-45 adapter and an 8-conductor UTP crossed cable to connect a PC with a DB9 port to the Internet Sharer.

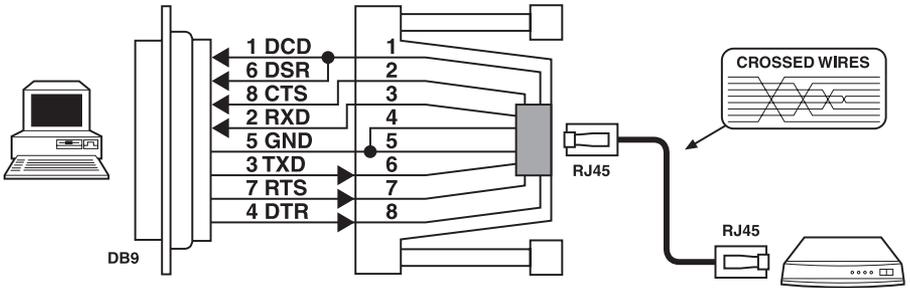


Figure A-3. Computer (DB9) to the Internet Sharer.

### A.2.3 MACINTOSH COMPUTER (MINI 8 DIN) TO THE INTERNET SHARER

Use a standard Macintosh modem cable, the supplied female DB25 to female RJ-45 adapter, and the supplied 8-conductor UTP crossed cable to connect a Macintosh to the Internet Sharer.

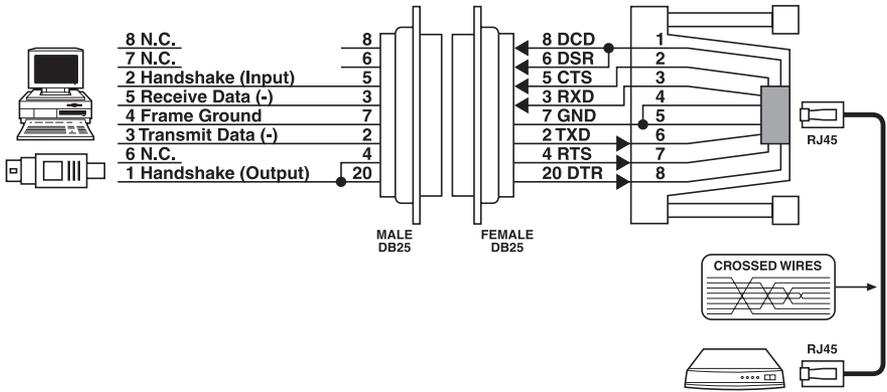


Figure A-4. Macintosh computer (MINI 8 DIN) to the Internet Sharer.

# INTERNET SHARER

## A.2.4 INTERNET SHARER TO THE MODEM

Use female DB25 to female RJ-45 adapters with a male-to-male gender changer and an 8-conductor UTP crossed cable supplied to connect a modem to the Internet Sharer.

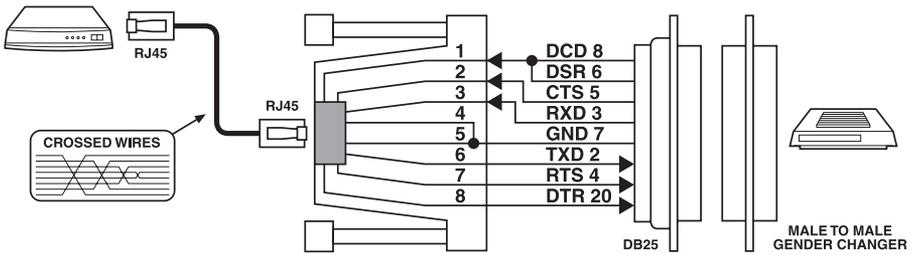


Figure A-5. Internet Sharer to the Modem.

### A.3 Using Wall Cables

If your PCs are far from each other or the Internet Sharer is installed in an equipment room, you can use existing wall cabling or you can install wall cabling. Remember that all cables from the PC to the Internet Sharer or to the modem have to be crossover cables.

#### NOTE

**You can mix crossover and straight-through cables if you respect the following conditions.**

- You can use straight through cables one after the other with one crossover cable.
- You can use one or any odd number of crossover cables connected one after the other because you will still obtain a crossover cable.

You cannot use two or any even number of crossover cables connected one after the other because you will obtain a straight-through cable.

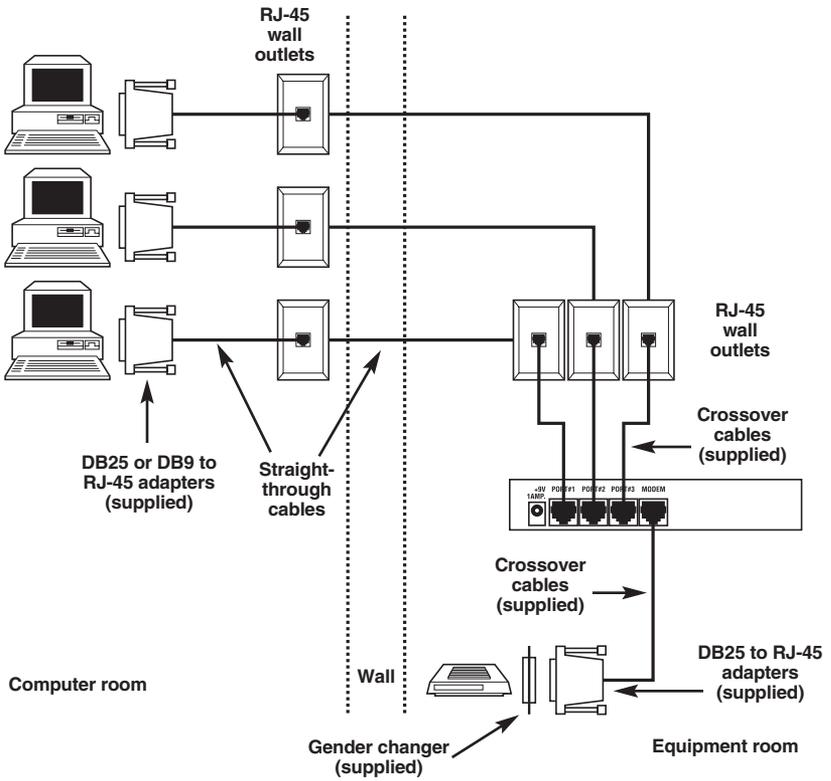


Figure A-6. Example using wall cabling.

# Appendix B: Troubleshooting

## B.1 Common Problems

Here are some of the most common problems you might have with the Internet Sharer. Try the solutions suggested. If you're still having trouble, see the technical-support information in **Section B.2**.

### *Problem*

Unable to dial.

### *Solution*

Verify your cabling and connection.

Verify your cable/adaptor, try another cable/adaptor. Make sure you are using **ONLY** the cable **AND** adaptor supplied with the Internet Sharer.

Verify the serial-port settings. The settings must be: 115200, 57600, 38400, 19200 or 9600; N,8,1.

Make sure that your modem supports 115200 baud. If not, you have to set the Internet Sharer MODEM port to the maximum speed supported by your modem. To change the speed, use a terminal communication software such as HyperTerminal in Windows 95 or Terminal in Windows 3.x. With your PC connected to Port #1, #2 or #3 of the Internet Sharer, establish the communication between your PC and the Internet Sharer using the terminal software and send the command corresponding to the maximum speed supported by your modem and press Enter. Following is the list of supported commands:

ATI54=57600

ATI54=38400

ATI54=19200

ATI54=9600

You should receive a message from the Internet Sharer confirming the speed. If you do not know the maximum speed of your modem, start by selecting 57600 and try to communicate with your modem. If it still does not work, try the next speed, 38400, and so on. Using a modem that supports 115200 baud will increase the performance of the Internet Sharer.

Verify that you are using the right modem driver for your modem.

### *Problem*

Able to dial but unable to establish the first connection.

### *Solution*

Verify your serial-port settings. The settings must be: 115200, 57600, 38400, 19200 or 9600 bps, N,8,1.

Verify the handshaking—it must be hardware RTS/CTS.

Verify that you are attempting to establish a PPP connection.

### *Problem*

Able to dial and establish the first connection but unable to locate any WWW site.

### *Solution*

Verify your DNS setting. A DNS must be provided.

### *Problem*

Unable to establish a second connection.

### *Solution*

Make sure each of the 3 PCs connected to Internet Sharer is able to establish a connection through the Internet Sharer, one PC at a time.

Make sure the username, password, and script file (if defined) are the same on all 3 PCs.

Make sure the IP address is the same on all PCs. For example if one PC is set at “IP address is assigned automatically” all the PCs must use this same setting.

Attempt to surf again on the Internet. If you are unable to solve your problem with the information provided in this section, please refer to **Section B.2, Contacting Technical Support**.

#### MAC DIALER CONFIGURATION PARAMETERS

If you have problems surfing the Net, check the following parameters on each Mac: modem port, modem driver, TCP/IP connection, and dialer settings.

If you have problems surfing the Net, check the following parameters on each Mac:

##### *Modem port and driver*

- Click on Apple menu
- Select **Control Panel**
- Click on **Modem**

##### **Connect via:**

Select the Mac modem port that the Internet Sharer is connected to.

##### **Modem:**

Select the name of the modem that corresponds to the modem connected to the Internet Sharer.

Close the window and save your settings.

##### *TCP/IP Settings*

- Click on Apple menu
- Select **Control Panel**
- Click on **TCP/IP**

Select **PPP** in the *Connect via* field

Select *Using PPP Server* in the *Configure* field

Make sure a **Name server addr.** has been defined. These addresses are normally provided by your ISP.

Close the window and save your settings.

*Dialer Settings*

- Click on Apple menu
- Select **Control Panel**
- Click on **PPP**
- Click on **Registered User**
- Enter your Name, your Password and the ISP's phone number.
- Close the window and save your settings.

## B.2 Contacting Technical Support

If you are unable to solve your problem with the information provided in this appendix, please do the following before calling technical support:

Try to recreate the problem; record what you do and what happens.

Record the status of the indicator lights at the time the problem occurs.

Record any other observations you have made.

Be sure to have the unit close by and have the following information on hand:

- Model number (P/N)
- Serial number (S/N)
- Purchase date
- The User's Manual
- Name of the Internet dialer software used



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