

**READ ME FIRST!**

# Cable Modem CMI Installation Guide For Windows®

part number 1.024.1906-00

## Before You Begin

### Contacting Your Broadband Service Provider (BSP)

In order to use your cable modem, you need to establish an Internet access account with your broadband service provider (BSP). Before contacting your BSP to establish an account, have the following information handy:

- The modem's Media Access Control (MAC) address (located on a bar code sticker on the modem's box). The MAC address consists of 12 characters preceded by the text EA =. In the following example label image, the MAC address is 00104B377410. Write the MAC address in the blank provided below.



- The modem's model number (located on the modem and printed on the box). This number may be required by a technical support representative if you ever need to call our technical support department.

MAC address: EA = \_\_\_\_\_  
Model number: \_\_\_\_\_

You should now contact your local cable company to verify that you have cable service to your home that supports cable modem access.

If you do not have a cable line in your home that supports cable modem access, your cable company can provide one. If you use your cable line for cable television access, your cable company can also provide you with the proper splitter or hookup for use with your cable modem.

Your BSP may also provide you with a login name and password for your cable modem Internet access account. Write these in the blanks below for future reference:

Login name: \_\_\_\_\_  
Password: \_\_\_\_\_

### Preparing Your Workspace

Position your computer so that it is located near the cable access outlet. Familiarize yourself with all of the materials in this box. Please read these installation instructions thoroughly before installing your cable modem. **CAUTION:** Your cable company will provide a cable connection. Do not attempt any rewiring without first contacting your cable company.

### Determining Your Version of Windows

Follow these steps to determine your version of Windows. This information will be important during installation.

- Click the **My Computer** icon on your desktop with the right mouse button.
- Click **Properties**.

In the "System Properties" screen, look at the system information under the General tab (circled in the following screen image). The number following the text "Microsoft Windows" will be followed by "950", "950a", "950b", "98", or "NT". This indicates your version of Windows. Write this number on the blank below for later reference. Then click **OK**.

Windows version : \_\_\_\_\_

## 8 Make your first connection!

Once you've installed your cable modem's drivers, you should shut down and turn off your computer. Wait ten seconds and then turn on your computer. When Windows restarts, the modem should initiate scanning for active cable modem data channels. If the modem succeeds in finding your BSP's active data channel, you will be able to work online by simply launching you Internet browser or e-mail software. If you cannot access the Internet, turn to the "Troubleshooting and Support Resources" section on the back of this guide. Otherwise, see the section titled "Understanding the Cable Modem LEDs" (page 20).

## 7 Configure TCP/IP.

You need to make sure the TCP/IP communications protocol is installed on your system after your cable modem is installed. (Windows NT users: this configuration is handled during the basic Windows NT driver installation.)

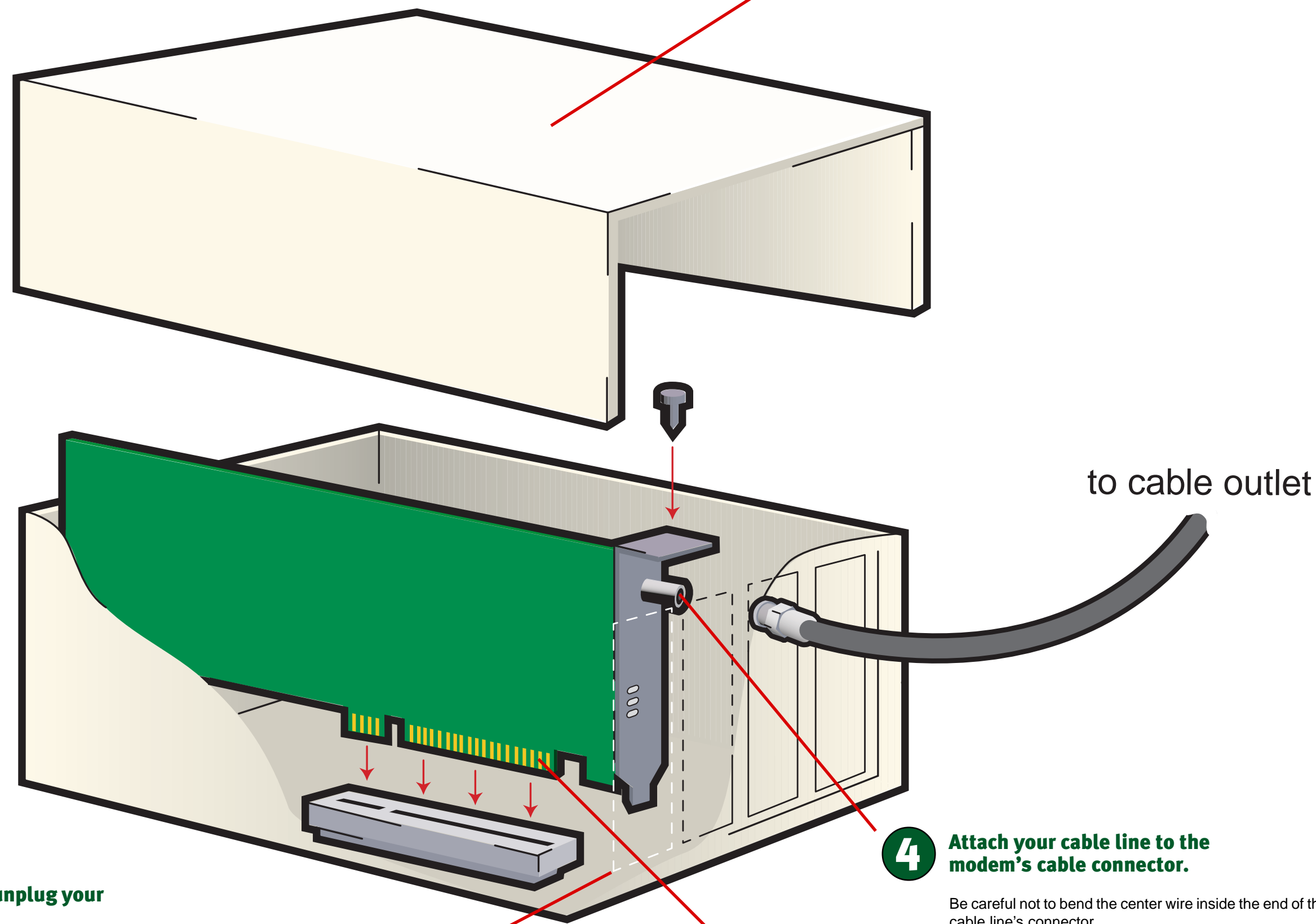
- Click **Start**, point to **Settings**, and then click **Control Panel**.
- Double-click the Network icon.
- A list of installed network components appears. Look for an entry reading **TCP/IP** ----> **3Com U.S. Robotics Cable Modem CMI**. If this entry is present, go to step 8. If the entry is not present, click **Add...**
- Click **Protocol**, and then click **Add...**
- Click **Microsoft** in the "Manufacturers" list and then click **TCP/IP** in the "Network Protocols:" list. Click **OK**.
- "TCP/IP" appears in the list of installed network components. Click **OK**.
- Windows will now ask you if you would like to restart your computer. Click **No**.

Your BSP may provide you with additional TCP/IP setup instructions. Consult those instructions, if provided, to complete configuration of your PC to work with your cable modem.

## 6 Install your cable modem's drivers.

When Windows detects your cable modem card, follow the on-screen instructions to install its drivers. For more detailed instructions, see "Cable Modem Driver Installation" in the included *User's Guide & Reference* (page 11).

## 5 Replace the computer cover. Plug the power cord into the computer and an electrical outlet. Turn on the computer.



## 1 Shut down, turn off, and unplug your computer.

Refer to your computer's manual or contact your computer's manufacturer for instructions on how to remove your computer's cover safely.

**CAUTION:** To avoid risk of electric shock, make sure your computer is turned off and unplugged from electrical outlets.

## 2 Unscrew and remove the expansion slot cover at the back of an empty PCI expansion slot.

The expansion slot cover is located inside on the back of the computer and covers an opening on the computer case. The opening lines up with the PCI expansion slot inside the computer. PCI expansion slots are usually white plastic lined with metal. PCI slots are shorter than ISA slots, which are usually black plastic lined with metal.

## 3 Remove the cable modem card from its anti-static bag and insert it into the empty PCI expansion slot.

Touch an unpainted metal part of your computer (the back is usually unpainted) to discharge static electricity. Static can damage your modem.

Take the modem out of its plastic bag. The modem's gold edge should fit snugly into the PCI expansion slot, and the metal bracket on the modem will cover the opening on the back of the computer. You should line up the back portion of the modem with the back of the slot and then push down and forward until the gold pins snap snugly into the slot. Use the screw you removed in step 3 to secure the modem.

## 4 Attach your cable line to the modem's cable connector.

Be careful not to bend the center wire inside the end of the cable line's connector.

## TROUBLESHOOTING

**PROBLEM: Windows does not detect the cable modem.**

**POSSIBLE SOLUTION:** Reboot and let Windows try to detect the card again. Click Windows **Start** and click **Shut Down**. When asked if you wish to shut down your computer, click **Yes**. When Windows indicates that it is safe to turn off your computer, turn it off and wait at least 15 seconds. Then turn the computer back on. Windows may detect your modem upon this restart even if it did not detect the modem during the initial installation. If you see screens indicating that new hardware has been detected by Windows , turn to step 6 on the other side of this *Installation Guide*. If not, continue with the next “Possible Solution”.

**POSSIBLE SOLUTION:** Windows may have installed the cable modem as an unknown or “other” device. Click Windows **Start**, point to **Settings**, and click **Control Panel**. Double-click the **System** icon and then click the **Device Manager** tab on the “System Properties” screen. Look for “Other Devices” or “Unknown Devices” in the list that appears. If you do not see either of these options in the list, continue with the next section to learn about our support options. If you do see one of these options, double-click the option. If the description that appears matches the modem you are trying to install, click the **Remove** button. Click **OK** when Windows asks if you wish to remove the device. Next, restart the computer as described in the previous “Possible Solution”. If the computer does not detect the modem after this second restart, please continue reading to learn about our support options.

**PROBLEM: I cannot access my email or Internet service.**

**POSSIBLE SOLUTION:** Check all connections. Make sure the cable line is securely connected to the cable jack on the back of the modem.

**POSSIBLE SOLUTION:** Call your cable service provider or broadband service provider (BSP) to verify that their service is two-way. This modem is designed for use with two-way cable plants.

**POSSIBLE SOLUTION:** You may not have installed TCP/IP properly or the TCP/IP parameters provided by your BSP may not be correct for your computer.

**POSSIBLE SOLUTION:** You may need to review your account with your BSP. Your password or other information may be invalid. Call you BSP to verify that all of your account information is still valid.

**POSSIBLE SOLUTION: WINDOWS 95/98 USERS:** You may need to manually obtain an IP address. Click **Start**, click **Run**, type **winicfg** and press **ENTER**. Select the 3Com Cable Modem CMI in the pull-down menu and then click **Renew**. If you still have problems, try these steps again.

**POSSIBLE SOLUTION:** Check the STS LED on the cable modem’s bracket. If it is not solid green, the modem has not registered. If it does not light solid green within 15 minutes, contact your BSP.

**PROBLEM: I use Windows NT and cannot access NIC card properties.**

**POSSIBLE SOLUTION:** The cable modem will not show NIC card properties in Windows NT. This is normal operation for the cable modem.

## SUPPORT RESOURCES

### 3Com BBS

Dial the 3Com BBS, 847-262-6000, using the communications software of your choice.

### Internet FTP

Our ftp site provides a free library containing the same files as the BBS site. FTP to **ftp.usr.com**.

### Internet on Demand

Our Internet on Demand site provides automatic technical support through a library containing product information, quick reference cards, and installation help. To obtain an index of available documents, send a blank e-mail to **support@usr.com**. To have a document e-mailed to you, send the document’s number as the subject.

### World Wide Web

The 3Com home page contains the same information as the Internet on Demand listing. Log on to **support.3com.com**

### CompuServe

You can access the same information as the Internet FTP site through CompuServe. The forum address is **GO THREECOM**. Address private messages to **76711,707**.

### America Online

Go to the **Keyword** field and type **3COM** to connect to various 3Com resources, such as file libraries, message boards, online customer support, and product announcements.

### 90-Day Free Installation Support

If you need help with installation within 90 days of purchase, please call our toll-free installation support number. (Hours: 8:00 am - 6:00 pm CST)

**888-877-5040**

### Technical Support Hotline

Technical questions about 3Com U.S. Robotics modems can also be answered by technical support representatives. The hotline is a toll call. (Hours: 8:00 am - 6:00 pm CST)

**847-262-2550**

### Are You Still Having Problems?

- Review this manual.
- Call or visit your modem dealer. They may be able to assist you.
- If your dealer can’t help you, contact 3Com Customer Support.

When you call, specify your modem’s model number (found on the modem and on the outside of the box) and the software being used.

### If You Need to Return the Modem to Us

Contact 3Com Customer Support. If the support representative determines that you need to return the modem, you will receive an SRO (Service Repair Order) number. You must have an SRO number before returning the modem to us. Ship the unit, postage paid, in a strong box made of corrugated cardboard with plenty of packing material. DO NOT send the modem back in the original box. Send ONLY the modem (NOT manuals, diskettes, etc.). Include your SRO number, name, and address on the shipping label as well as inside the package. If possible, send the package via a courier capable of tracking the progress of the shipment. Ship to the following address:

**3Com**  
**SRO # \_\_\_\_\_**  
**attn: Dock 15 PCD**  
**1800 W. Central Ave.**  
**Mount Prospect, IL 60056**

## REGULATORY INFORMATION

Manufacturer’s Declaration of Conformity

3Com

3800 Golf Road

Rolling Meadows, IL 60008

U.S.A.

declares that the product *U.S. Robotics Cable Modem CMI* conforms to the FCC’s specifications:

*Part 15:*

Operation is subject to the following two conditions:

- (1) this device may not cause harmful electromagnetic interference, and
- (2) this device must accept any interference received including interference that may cause undesired operations.

### Caution to the User

The user is cautioned that any changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

### Performance Specifications

This equipment has a bit-error rate (BER) less than 10E-8 when the signal-to-noise ratio (SNR) is 23.5 dB or greater when operating in 64-QAM mode, and when the SNR is 30.0 dB or greater when operating in 256 QAM mode.

### Export Notices

- Unlawful to export from the US or Canada without an approved US Department of Commerce export license.
- The hardware contained in this product contains encryption software which may not be exported or transferred from the US or Canada without an approved US Department of Commerce export license.

### License Agreement

You agree that you will not export or re-export the Software or accompanying documentation (or any copies thereof) or any products utilizing the Software or such documentation in violation of any applicable laws or regulations of the United States or the country in which you obtained them.

The software covered by this agreement may contain strong data encryption code that cannot be exported outside of the U.S. or Canada. You agree that you will not export/reexport, either physically or electronically, the encryption software or accompanying documentation (or copies thereof) or any products utilizing the encryption software or such documentation without obtaining written authorization from the U.S. Department of Commerce.

### Industry Canada (IC)

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the interference-causing equipment standard entitled *Digital Apparatus*, ICES-003 of Industry Canada.

Cet appareil numérique respecte les limites de bruits radioélectriques applicables aux appareils numériques de Classe B prescrites dans la norme sur le matériel brouilleur: *Appareils Numériques*, NMB-003 édictée par l’Industrie Canada.

### UL Listing/CUL Listing

This information technology equipment is UL-Listed and CUL-Listed for use with UL-Listed personal computers that have installation instructions detailing user installation of card cage accessories.

### Radio and Television Interference

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer’s instructions, may cause interference to radio and television reception. This device has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Part 15 of FCC rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause interference to radio or television reception, which you can determine by monitoring reception when the modem is installed and when it is removed from the computer, try to correct the problem with one or more of the following measures:

- Reorient the receiving antenna (for televisions with antenna reception only) or cable input device.
- Relocate the computer with respect to the receiver.
- Relocate the computer and/or the receiver so that they are on separate branch circuits.

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the following booklet, prepared by the Federal Communications Commission, helpful:

### *How to Identify and Resolve Radio-TV Interference Problems*

**Stock No. 004-000-0345-4**

**U.S. Government Printing Office**

**Washington, DC 20402**

In accordance with Part 15 of the FCC rules, the user is cautioned that any changes or modifications to the equipment described in this manual that are not expressly approved by 3Com could void the user’s authority to operate the equipment.

## 3COM CORPORATION LIMITED WARRANTY

3Com warrants this hardware product to be free from defects in workmanship and materials, under normal use and service, for the following length of time from the date of purchase from 3Com or its authorized reseller: 5 years. 3Com’s sole obligation under this express warranty shall be, at 3Com’s option and expense, to repair the defective product or part, deliver to Customer an equivalent product or part to replace the defective item, or if neither of the two foregoing options is reasonably available, 3Com may, in its sole discretion, refund to Customer the purchase price paid for the defective product. All products that are replaced will become the property of 3Com. Replacement products may be new or reconditioned. 3Com warrants any replaced or repaired product or part for ninety (90) days from shipment, or the remainder of the initial warranty period, whichever is longer.

**YEAR 2000 WARRANTY:** In addition to the Hardware Warranty stated above, 3Com warrants that each product sold or licensed to Customer on and after January 1, 1998 that is date sensitive will continue performing properly with regard to such date data on and after January 1, 2000, provided that all other products used by Customer in connection or combination with the 3Com product, including hardware, software, and firmware, accurately exchange date data with the 3Com product, with the exception of those products identified at 3Com’s Web site,

**http://www.3com.com/products/yr2000.html**

as not meeting this standard. If it appears that any product that is stated to meet this standard does not perform properly with regard to such date data on and after January 1, 2000, and Customer notifies 3Com before the later of April 1, 2000, or ninety (90) days after purchase of the product from 3Com or its authorized reseller, 3Com shall, at its option and expense, provide a software update which would effect the proper performance of such product, repair such product, deliver to Customer an equivalent product to replace such product, or if none of the foregoing is feasible, refund to Customer the purchase price paid for such product. Any software update or replaced or repaired product will carry a Year 2000 Warranty for ninety (90) days after purchase or until April 1, 2000, whichever is later.

**OBTAINING WARRANTY SERVICE:** Customer must contact a 3Com Corporate Service Center or an Authorized 3Com Service Center within the applicable warranty period to obtain warranty service authorization. Dated proof of purchase from 3Com or its authorized reseller may be required. Products returned to 3Com’s Corporate Service Center must be pre-authorized by 3Com with a Return Material Authorization (RMA) number marked on the outside of the package, and sent prepaid and packaged appropriately for safe shipment, and it is recommended that they be insured or sent by a method that provides for tracking of the package. The repaired or replaced item will be shipped to Customer, at 3Com’s expense, not later than thirty (30) days after 3Com receives the defective product.

**WARRANTIES EXCLUSIVE:** IF A 3COM PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, CUSTOMER’S SOLE REMEDY FOR BREACH OF THAT WARRANTY SHALL BE REPAIR, REPLACEMENT, OR REFUND OF THE PURCHASE PRICE PAID, AT 3COM’S OPTION. TO THE FULL EXTENT ALLOWED BY LAW, THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, TERMS, OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR IN OPERATION OF LAW, STATUARY OR OTHERWISE, INCLUDING WARRANTIES, TERMS, OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, SATISFACTORY QUALITY, CORRESPONDANCE WITH DESCRIPTION, AND NON-INFRINGEMENT, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. 3COM NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF ITS PRODUCTS.

3COM SHALL NOT BE LIABLE UNDER THIS WARRANTY IF ITS TESTING AND EXAMINATION DISCLOSE THAT THE ALLEGED DEFECT OR MALFUNCTION IN THE PRODUCT DOES NOT EXIST OR WAS CAUSED BY CUSTOMER’S OR ANY THRID PERSON’S MISUSE, NEGLIGENCE, IMPROPER INSTALLATION OR TESTING, UNAUTHORIZED ATTEMPTS TO OPEN, REPAIR OR MODIFY THE PRODUCT, OR ANY OTHER CAUSE BEYOND THE RANGE OF THE INTENDED USE, OR BY ACCIDENT, FIRE, LIGHTNING, OTHER HAZARDS, OR ACTS OF GOD.

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**GOVERNING LAW:** This Limited Warranty shall be governed by the laws of the State of California, U.S.A. excluding its conflicts of laws principles and excluding the United Nations Convention on Contracts for the International Sale of Goods.