

ISDN LAN Modem Getting Started Guide

PRODUCT NO.: 3C892A

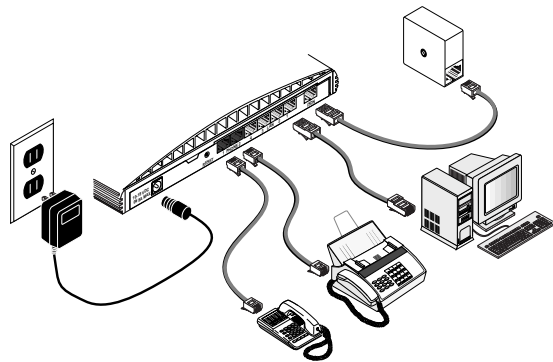
Part No. 981/00092-4
Published July 1999



TWO-STEP SETUP

Congratulations on choosing the 3Com OfficeConnect ISDN LAN Modem! For the most common network application, creating a LAN with shared Internet access, the ISDN LAN Modem setup is a simple, two-step process:

1. Install . . .



Connect the cables

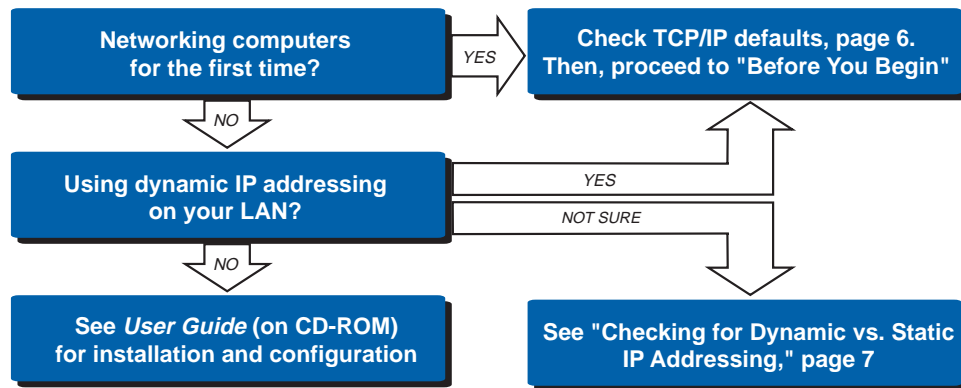
2. Configure . . .



**Launch your Web browser to run
the SPID Wizard and ISP Wizard**

WHO SHOULD USE THIS GUIDE?

This *Getting Started Guide* provides instructions for installing and configuring the ISDN LAN Modem based on the most common configuration — shared Internet access. For advanced configurations, the *OfficeConnect ISDN LAN Modem User Guide* is available in PDF and HTML formats on the *OfficeConnect ISDN LAN Modem Companion Programs CD-ROM*. The flow chart below will help direct you to the proper documentation source and location for your network scenario.



BEFORE YOU BEGIN

To complete your setup and establish an Internet connection for the first time, you must have the following:

- **ISDN Service** already installed at your location, with an available ISDN RJ-11 outlet.
 - If you have not yet ordered ISDN service, call (800) 343-3266 to have 3Com order your line for you free of charge.
- **An Internet Service Provider (ISP) Account.**
- **A Workstation** with the following requirements:
 - 10BASE-T Ethernet card (Ethernet connectivity built in with all Power Macintoshes)
 - TCP/IP connectivity (built in with Windows 98, 95, and NT and Macintosh OS 7.6 or later)
 - 386, 486, or Pentium processor (PCs only)
 - CD-ROM drive
- **A Web Browser**, such as Netscape Navigator (3.0 or later) or Microsoft Internet Explorer (3.0 or later), that is frames-capable and JavaScript-enabled.

If you do not have a browser, a custom browser is provided on the *OfficeConnect ISDN LAN Modem Companion Programs CD-ROM*.

PACKAGE CONTENTS

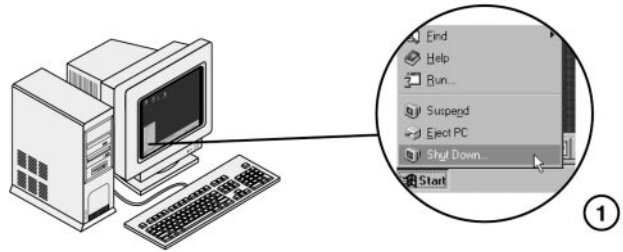


To install the ISDN LAN Modem:

- 1 Turn off your computer.

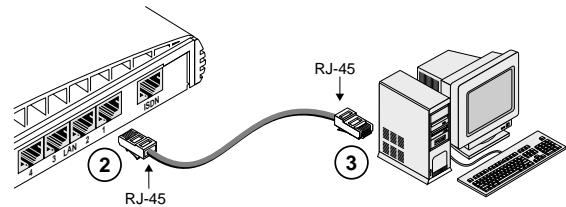


CAUTION: Do not connect more than one computer for this initial setup. After installation and configuration, you can connect additional computers and/or printers to the ISDN LAN Modem. Do not connect the ISDN LAN Modem to an existing LAN until after you have completed the configuration.



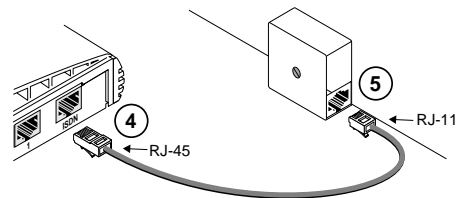
CONNECT YOUR COMPUTER:

- 2 Insert either end of the Ethernet cable into one of the LAN Modem ports marked LAN.
- 3 Insert the other end of the Ethernet cable into your computer's 10BASE-T Ethernet port.



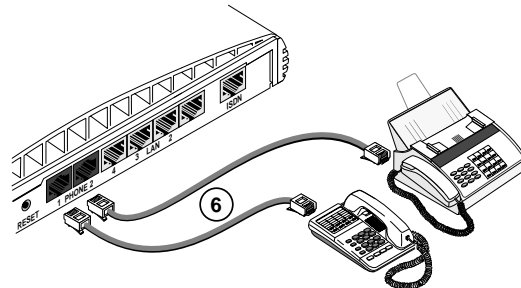
CONNECT THE ISDN LINE:

- 4 Insert the RJ-45 (8-pin) end of the ISDN cable into the LAN Modem port marked ISDN.
- 5 Insert the RJ-11 (6-pin) end of the ISDN cable into your ISDN wall jack.



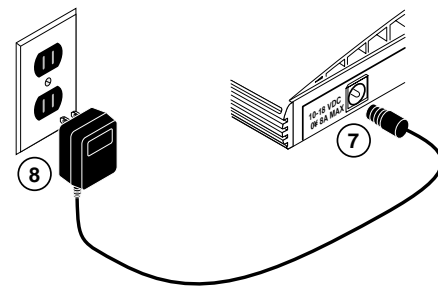
(Optional) CONNECT ANALOG EQUIPMENT:

- 6 Connect up to two analog devices to the ports marked PHONE, using RJ-11 to RJ-11 cables provided with your analog equipment, as shown.



CONNECT THE POWER SUPPLY:

- 7 Connect the power supply to the ISDN LAN Modem.
- 8 Plug the wall end of the power supply into your wall outlet (use of a surge-protected outlet strip is recommended).

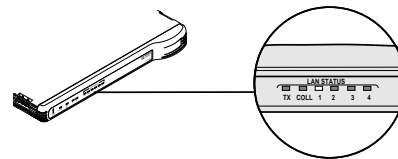


Watch for the following front panel LED signals:

- PWR LED illuminates.
- Indicator LEDs flash momentarily as the unit undergoes a power-up self-test diagnostic.
- ISDN LED begins to flash after a short delay.

- 9 Turn on your computer.

Watch for the LAN Status LED on the unit to flash and then remain lit.



This completes the installation. Continue with "Configuring the ISDN LAN Modem." After you have finished the configuration, you can connect additional computers and/or printers. If you wish to add more than four users, see "Connecting More Than Four Users" after completing the configuration. Refer to "Troubleshooting," page 8, if the installation was not successful.

These instructions cover the typical configuration — setting up a connection for shared access to the Internet. To set up a connection to a private network, such as a corporate LAN, refer to the “Additional Service Providers” section in Chapter 6 of the *OfficeConnect ISDN LAN Modem User Guide*, located on the *OfficeConnect ISDN LAN Modem Companion Programs* CD-ROM.

Before You Start the Configuration

Before you start to configure the ISDN LAN Modem, have the following ready:

- Telephone number(s) for your ISDN line (provided by your telephone company).
- The following information from your Internet Service Provider (ISP):
 - *ISP telephone number*
 - *ISP account user ID*
 - *ISP account password*
 - *ISP DNS server address (if required)*

Configuration Steps

To configure the ISDN LAN Modem for Internet access:

- 1 Launch your Web browser to start the configuration process.

A welcome message appears. (If the welcome message does not appear, refer to “Troubleshooting,” page 8.)



Windows 98 and 95 users: If the Dial-Up Connection window appears, refer to “Note for Windows Dial-Up Networking Users,” page 7.

- 2 Click *Continue*.

The ISDN LAN Modem clock is synchronized to the date and time on your workstation. The Set Password window appears.

- 3 (Optional) Enter a password in the Password field and in the Password (repeat) field to confirm. (Be sure to record your password for future use.) This password protects access to the LAN Modem.

- 4 Click *Submit*.

The SPID Wizard window appears.

- 5 Enter the first telephone number for your ISDN line.

- 6 If you have a second telephone number associated with your ISDN line, enter it in the second telephone number field. Otherwise, leave blank.

- 7 Click *Continue*.

The SPID Wizard begins to configure the SPIDs for your ISDN line. Once this process is finished, the ISDN LED lights up, indicating that your line is ready for use.

- 8 Click *Continue* to bring up the ISP Wizard.

The ISP Wizard window appears.

- 9 Enter your ISP information. Choose any name for the ISP Name. If you are not sure about the DNS server address, leave this field blank.

- 10 Specify how you want the bandwidth allocated for this connection.

You can choose always to use just one B channel, always to use two B channels (that is, always use Multilink PPP), or you can specify that you only want the second B channel added when the first B channel reaches a predetermined usage rate (60% by default).

- 11 Specify the B channel rate.

Leave the B channel rate set to 64 Kbps, unless you know that your telephone company and the locations to which you will be connecting only support 56 Kbps.

- 12 Click *Continue*.

A call is launched to your ISP, and a message confirming proper configuration appears.



If you experience problems connecting to your ISP, refer to the troubleshooting section of the OfficeConnect ISDN LAN Modem User Guide, located on your CD-ROM.

- 13 Click *Continue*.

This takes you directly to the support page for the LAN Modem on 3Com's World Wide Web site.

- Click *Register* to register your product.



Your parameters for connecting to your ISP have been set to a typical default through this configuration. To change these default parameters, enter <http://3com.oc.lanmodem> or <http://192.168.1.1> to reach the LAN Modem's main configuration page. Click the Service Providers icon, and then select your ISP Name from the list.

This completes the configuration process. You may now connect additional computers and/or printers to your new LAN. If you wish to add more than four users, see "Connecting More Than Four Users." If you wish to set up a connection to a private network or to a second ISP, refer to Chapter 6 of the *User Guide*.



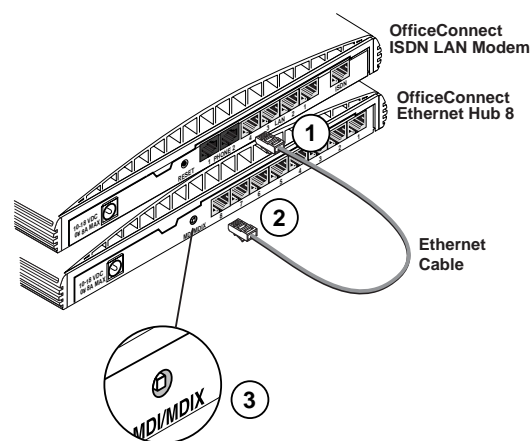
For access to documentation, firmware upgrades, and all the latest information about your ISDN LAN Modem, go to <http://www.remoteaccess.3com.com/support/docs/lanmodem/welcome.html>.

CONNECTING MORE THAN FOUR USERS

After you have finished configuring your ISDN LAN Modem, you can connect an additional Ethernet hub or hubs to the ISDN LAN Modem to add up to 25 users. An example of a ten-user connection is shown.

To connect an additional hub:

- Insert one end of a 10BASE-T Ethernet cable into one of the ports marked *LAN* on the back of the ISDN LAN Modem.
- Insert the opposite end of the cable into one of the 10BASE-T Ethernet ports on the Ethernet hub. (If you are connecting to an OfficeConnect Ethernet Hub 8, insert the cable into port 8.)
- If connecting to an OfficeConnect Ethernet Hub 8, set the MDI/MDIX switch to MDI (that is, pressed in).



If the hub to which you are connecting does not have an MDI/X switch, you will need a cross-over Ethernet cable.

STACKING OFFICECONNECT UNITS

The Rubber Feet. For desktop use, the four self-adhesive rubber feet prevent your ISDN LAN Modem from sliding. Attach the feet to the underside of the ISDN LAN Modem in the marked corners.

The Stacking Clip. The stacking clip allows you to stack two or more OfficeConnect units together securely.

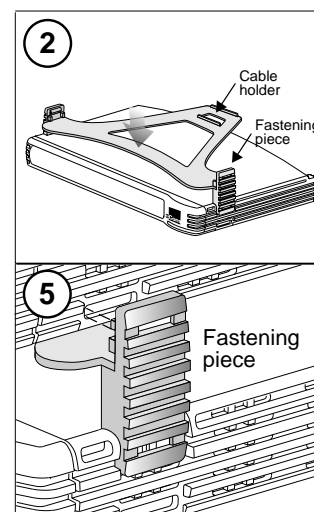


CAUTION: You can stack up to a maximum of four units. Smaller units must be stacked on top of larger units.

To stack two units:

- Place the first unit on a flat surface.
- Fit the clip across the top of the unit, as shown. The longer end of the fastening pieces should point downward.
- Align the fastening pieces over the slots on each side of the unit, and then push the clip down gently to secure it. Ensure that the fastening pieces snap into the slots.
- Rest the second unit on top of the clip and align it with the front of the bottom unit.
- Press down gently to secure the top unit onto the clip, ensuring that the fastening pieces fit into the slots, as shown.

To unstack units, gently pry the top unit away from the clip, and then carefully pull either fastening piece out of its slot to detach the clip from the bottom unit.



It is recommended that you return your TCP/IP settings to their factory default values (this is for use with dynamic IP addressing). To do this, follow the steps for your operating system:

Windows 98 and 95

- 1 From the *Start* menu, select *Settings*, and then *Control Panel*. Double-click the *Network* icon.
- 2 Select *TCP/IP*, and then click *Properties*. If you do not see *TCP/IP* listed, refer to "Setting Up TCP/IP" below.



If you have more than one TCP/IP entry, select the entry associated with your Ethernet card.

- 3 Click the *IP Address* tab. Select *Obtain an IP address automatically*.
- 4 Click the *Gateway* tab. Click *Remove* to clear the *Installed gateways* field.
- 5 Click the *DNS Configuration* tab. Select *Disable DNS*.
- 6 Click *OK* to close the *TCP/IP Properties* window, and then click *OK* to close the *Network* window, saving any changes.

If prompted, restart your workstation.

Windows NT 4.0

- 1 From the *Start* menu, select *Settings*, and then *Control Panel*. Double-click the *Network* icon.
- 2 Click the *Protocols* tab. Select *TCP/IP*, and then click *Properties*. If you do not see *TCP/IP* listed, refer to "Setting Up TCP/IP" below.
- 3 Click the *IP Address* tab. From the *Adapter* field, select the Ethernet card associated with your ISDN LAN Modem. Select *Obtain an IP Address automatically*.
- 4 Click *OK*.
If prompted, restart your workstation.

Macintosh

- 1 From the *Apple* menu, select *Control Panels*. Double-click *TCP/IP*.
- 2 From the *Connect Via* drop-down list box, select *Ethernet* (if iMac, select *Ethernet built-in*).
- 3 From the *Configure* drop-down list box, select *Using DHCP Server*. All other entries should be either blank or set to *<will be supplied by server>*.
- 4 Select *File*, and then *Close*, saving any changes.

SETTING UP TCP/IP

If you are using Windows 98, 95, or NT and have never made remote connections on your computer, you may have to set up the TCP/IP protocol by adding it to your computer's protocol list. To do this, have your Windows installation disks or CD-ROM ready, in case you are prompted for them, and then follow the steps for your operating system.

Windows 98 and 95

- 1 From the *Start* menu, select *Settings*, and then *Control Panel*. Double-click the *Network* icon.
- 2 Click *Add*.
The *Select Network Component Type* dialog box opens.
- 3 Select *Protocol*, and then click *Add*.
The *Select Network Protocol* dialog box appears.
- 4 From the *Manufacturers* list box, select *Microsoft*, and then from the *Network Protocols* list box, select *TCP/IP*.
- 5 Click *OK*.

Windows NT 4.0

- 1 From the *Start* menu, select *Settings*, and then *Control Panel*. Double-click the *Network* icon.
The *Network* dialog box appears.
- 2 Click the *Protocols* tab.
- 3 Click *Add*.

The *Select Network Protocol* dialog box appears.

- 4 Select *TCP/IP Protocol*, and then click *OK*.

You are asked if your network has a DHCP server and if you would like to have IP addresses automatically configured. It is recommended that you click *Yes*, since the ISDN LAN Modem has a DHCP server and automatic configuration is preferred. If, however, you are on a static network, click *No*.

You may now be prompted to insert your Windows NT 4.0 installation CD-ROM.



If you have Windows NT Remote Access Service (RAS) installed on your workstation, after the appropriate files are copied to your workstation, you are asked whether or not you would like TCP/IP installed for RAS. If you select Yes, you must select the adapter you want to access remotely and then click Close.

After the appropriate files are copied to your workstation, you will see *TCP/IP Protocol* listed in the *Network Protocols* group box.

NOTE FOR WINDOWS DIAL-UP NETWORKING USERS 7

If you are already using Dial-Up Networking for remote connections, you may have to make the following changes to your Internet connection parameters:

- 1 From the *Start* menu, select *Settings*, and then *Control Panel*. Double-click the *Internet* icon.
- 2 Click the *Connection* tab, and clear the check box labeled *Connect to the Internet as needed*. (If this option is not available, choose *Connect to the Internet using a local area network* instead.) Click *OK*.

This allows outgoing connections to run through your ISDN LAN Modem each time you launch your Web browser, bypassing the Dial-Up Connection window.



If you want to use Dial-Up Networking again — for example, to use another modem connected to your computer's serial port when you are not using the ISDN LAN Modem — remember to switch back to the setting, Connect to the Internet as needed.

CHECKING FOR DYNAMIC VS. STATIC IP ADDRESSING

Your ISDN LAN Modem is optimized for use with dynamic, rather than static, IP addressing. In static IP addressing, a permanent IP address is manually assigned to each device on a network. In dynamic IP addressing, an IP address is temporarily assigned for the duration of a network "session" and then returned to a pool of addresses for reuse. By default, the ISDN LAN Modem assigns IP addresses dynamically to each attached computer.

For most users setting up a LAN for shared Internet access (regardless of whether you are connecting to the Internet for the first time or have already been dialing in through an individual connection), it is most likely that your computer or computers are set up for dynamic IP addressing. To verify that your computer or computers are set up for dynamic IP addressing, follow the steps for your platform:

Windows 98, 95 and NT 4.0

- 1 From the *Start* menu, select *Settings*, and then *Control Panel*. Double-click the *Network* icon.
- 2 **Windows 98, 95:** Select *TCP/IP* for the Ethernet card associated with your ISDN LAN Modem.
Windows NT: Select *Protocols*; and then *TCP/IP*.
- 3 Click *Properties*.
- 4 Click the *IP Address* tab.

If *Obtain an IP address automatically* (Windows 98, 95) or *Obtain an IP address from a DHCP server* (Windows NT 4.0) is selected, your computer has a dynamic IP address.

If *Specify an IP address* is selected, your computer has a static IP address.
- 5 Click *Cancel* to exit the TCP/IP Properties window, and then *Cancel* to exit the Network window.

Macintosh

- 1 From the Apple menu, select *Control Panels*.
- 2 Double-click *TCP/IP*.
- 3 Select *Ethernet* from the *Connect Via* pop-up menu, if it is not already chosen.

If the *Configure* pop-up menu is set to *Using DHCP Server*, your computer has a dynamic IP address.

If *Configure* is not set to *Using DHCP Server* and you have specific values listed in any of the following fields: *IP Address*, *Subnet mask*, *Router address*, or *Name server addr.*, your computer has a static IP address.
- 4 Select *File* and *Close* to exit the *TCP/IP Control Panel*.

Where to Go from Here . . .

If you are set up for dynamic IP addressing, you are ready to continue directly with "Before You Begin," page 2.

If you are set up for static IP addressing, refer to Chapters 3 and then 5 of the *User Guide* (located on the *OfficeConnect ISDN LAN Modem Companion Programs* CD-ROM) for your installation and configuration. You may have to perform additional steps not covered in this guide.

The table below lists symptoms of common problems, possible causes, and possible solutions. For additional troubleshooting information from the *User Guide*, FAQs, and other technical notes, refer to:

<http://www.remoteaccess.3com.com/support/docs/lanmodem/welcome.html>.

Symptom	Possible Cause	Solution
Launching your Web browser does not start the configuration process (the welcome message does not appear).	Incompatible IP address on your computer.	Reset the IP address on your computer, as follows: Windows 98 and 95: Run winipcfg.exe . Select the Ethernet adapter connected to the ISDN LAN Modem. Click <i>Release All</i> and then <i>Renew All</i> . Windows NT 4.0: Run ipconfig /release and then ipconfig /renew . Macintosh: From the Apple menu, select <i>Control Panels</i> and then <i>TCP/IP</i> . Make sure <i>Ethernet</i> is selected in the Connect via field. In the Configure field, select <i>Using BootP Server</i> to clear the fields, then close and save changes. Open the <i>TCP/IP</i> control panel again and select <i>Using DHCP Server</i> . The fields should now read <will be supplied by server> . Select <i>File</i> , then <i>Close</i> , and save changes when prompted.
	Web browser needs the IP address of the ISDN LAN Modem.	Enter the following URL in your Web browser: http://3com.oc.lanmodem . Alternatively, you can enter http://192.168.1.1 .
	Web browser may not be set to a default start page.	Launch your Web browser and enter a default URL, as follows: Internet Explorer: From the <i>View</i> menu, select <i>Options</i> . From <i>Page</i> , select <i>Start Page</i> , and then enter an address in the address field, such as http://www.3com.com . Netscape: From the <i>Options</i> menu, select <i>General Preferences</i> . From <i>Browser Starts With</i> , select <i>Home Page Location</i> , and then enter a URL such as http://www.3com.com .
	Web browser may be configured to use a proxy server.	Launch your Web browser, and then set the browser to use the LAN Modem, as follows: Internet Explorer: From the <i>View</i> menu, select <i>Internet Options</i> , and then the <i>Connection</i> tab. Under the <i>Proxy Server</i> header, uncheck the box labeled <i>Accessing the Internet using a proxy server</i> . Netscape: From the <i>Edit</i> menu, select <i>Preferences</i> . Double-click <i>Advanced</i> , and then click <i>Proxies</i> . Check the box labeled <i>Direct Connection to the Internet</i> .
	There is a configuration problem.	Reset the ISDN LAN Modem to the factory default setting. Disconnect the ISDN cable from the ISDN LAN Modem and then connect an analog telephone to one of the phone ports. Lift the handset and press **3266# and then replace the handset. Reconnect the ISDN cable, restart your computer, and then launch your Web browser.
Clicking "submit" during configuration does not take you to the next screen.	JavaScript may not be enabled in your Web browser.	Enable JavaScript via your Web browser's configuration options.
At installation, LAN LED does not light.	Wrong cable used to connect your computer to the LAN Modem's LAN port.	Make sure you are using the 8-pin to 8-pin cable labeled <i>Ethernet</i> which was provided with your ISDN LAN Modem. If you are using another 10BASE-T Ethernet (Category 5) cable, it must be a straight-through cable.
At installation, ALERT LED remains lit.	An internal failure.	Notify your reseller or technical support that the ISDN LAN Modem has failed the self-test.
At installation, ALERT LED continues to flash.	Self-test failure, or the LAN Modem is in firmware download mode	Power cycle the ISDN LAN Modem. If the ALERT LED continues to flash, the ISDN LAN Modem has failed the self-test. Contact your network supplier. If the ALERT LED is not flashing, then the LAN Modem is now operating correctly.

3Com Corporation, 5400 Bayfront Plaza, Santa Clara, California, 95052-8145

© 3Com Corporation, 1999. All rights reserved. No part of this documentation may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without permission from 3Com Corporation. 3Com Corporation reserves the right to revise this documentation and to make changes in content from time to time without obligation on the part of 3Com Corporation to provide notification of such revision or change. 3Com Corporation provides this documentation without warranty of any kind, either implied or expressed, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. 3Com may make improvements or changes in the product(s) and/or the program(s) described in this documentation at any time.

UNITED STATES GOVERNMENT LEGEND:

For units of the Department of Defense:

The Software is commercial computer software as defined in 48 C.F.R. 211 and therefore is provided to units of the Department of Defense under the terms of this License Agreement, which is 3Com's standard commercial agreement for the Software. In the alternative, if 48 C.F.R. 211 is not invoked, the Software is licensed as follows: Restricted Rights Legend: Use, duplication or disclosure by the United States Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software Clause at 48 C.F.R. 52.227-7013. 3Com Corporation, 5400 Bayfront Plaza, Santa Clara, California 95052-8145.

For civilian agencies:

Restricted Rights Legend: Use, reproduction or disclosure is subject to restrictions set forth in subparagraph (a) through (d) of the Commercial Computer Software - Restricted Rights clause at 48 C.F.R. 52.227-19 and the limitations set forth in 3Com's standard commercial agreement for the Software. Unpublished rights reserved under the copyright laws of the United States.

If there is any software on removable media described in this documentation, it is furnished under a license agreement included with the product as a separate document, in the hard copy documentation. If you are unable to locate a copy, please contact 3Com and a copy will be provided to you.

Unless otherwise indicated, 3Com registered trademarks are registered in the United States and may or may not be registered in other countries.

3Com and OfficeConnect are registered trademarks of 3Com Corporation.

Acrobat and Adobe are registered trademarks of Adobe Systems, Incorporated. Macintosh is a registered trademark of Apple Computer. Pentium is a registered trademark of Intel Corporation. Windows and Windows NT are registered trademarks of Microsoft. Netscape Navigator is a registered trademark of Netscape Communications.

Other brand and product names may be registered trademarks or trademarks of their respective holders.

Environmental Statement

It is a 3Com policy to be environmentally friendly in all operations. This manual is printed on paper that comes from sustainable, managed European forests. The production process for making the pulp has a reduced AOX level (adsorbable organic halogen) resulting in elemental chlorine-free paper.

This paper is fully biodegradable and recyclable.