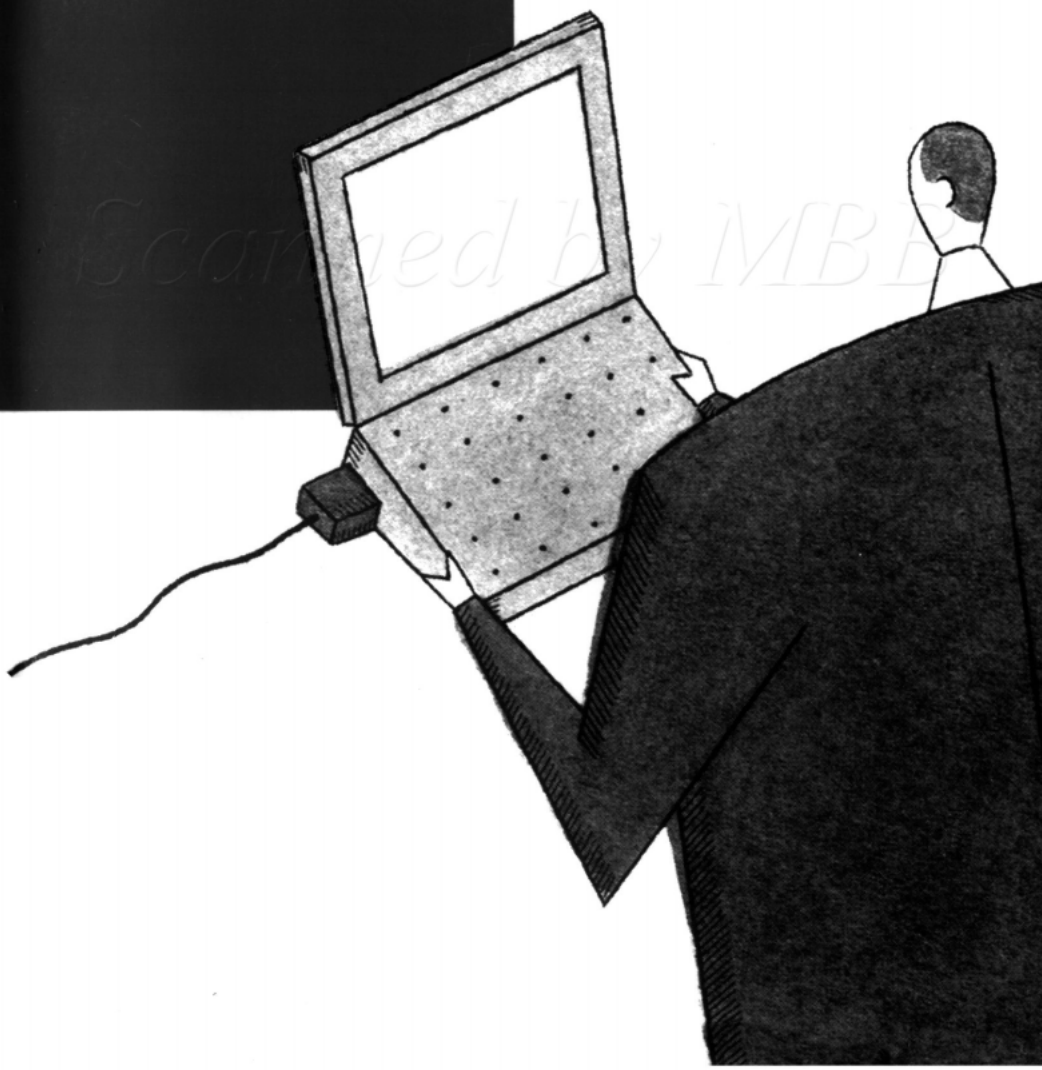


**Xircom**

# User's Guide

POCKET ETHERNET ADAPTER III





# POCKET ETHERNET ADAPTER III

## USER'S GUIDE

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June 1993

## FCC WARNING

This equipment has been tested and found to comply with the limits for Class A digital devices pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause interference to radio communications. Operation of this equipment in a residential area is likely to cause interference in which case the user will be required to correct the interference at his own expense.

The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

It is suggested that only shielded and grounded cables be used with the equipment to ensure compliance with FCC rules.

Xircom reserves the right to make improvements and/or changes in the products and programs described in this User's Guide at any time without notice.

The software described in this User's Guide is furnished under a license and may be used or copied only in accordance with such license.

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Xircom is a registered trademark and Pocket Ethernet Adapter is a trademark of Xircom, Inc.

All other product, brand, or trade names used in this publication are the trademarks of their respective trademark owners.

## IMPORTANT REFERENCE INFORMATION

***Fill in the blanks below and make copies of this page for easy access when calling Technical Support.***

Support Telephone Number (see page vi): \_\_\_\_\_

Model Number: \_\_\_\_\_ (from the Adapter label)

Serial Number: \_\_\_\_\_ (from the Adapter label)

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# PREFACE

This User's Guide is intended to introduce the Xircom Pocket Ethernet Adapter III. It includes complete instructions for hardware and software installation, configuration, and diagnostic procedures.

The contents of the User's Guide are as follows:

**Preface** contains information on Xircom Technical Support, bulletin board access, and product warranty.

**Introduction** describes the features, functions, and specifications of the Pocket Ethernet Adapter III.

**Hardware Installation** contains instructions for unpacking and installing Pocket Ethernet Adapter III hardware.

**Configuration and Diagnostics** provides information on Adapter configuration and diagnostics, with instructions for running the Adapter self test and interpreting test results.

**Software Setup and Operation** explains how to install networking software supported by the Pocket Ethernet Adapter III.

**Appendix A. Error Messages** lists error messages displayed during setup of the Adapter.

**Appendix B. Software Supplied** contains a list of software files provided with the Adapter.

**Appendix C. Command Line Parameters** lists instructions for using drivers with parameters other than those listed in the *Software Setup and Operation* section.

**Index** is an alphabetical list of topics covered in this guide and the page number where each topic is found.

## TECHNICAL SUPPORT

### Note

**For better service and support, please fill out and return the Product Registration Card supplied with the product.**

Please run the self test program included on your Xircom Pocket Ethernet Adapter III diskette (see instructions in the *Configuration and Diagnostics* section) **before** placing a call to Xircom Technical Support.

### U.S.A.

Xircom, Inc.  
26025 Mureau Road  
Calabasas, California 91302  
(800) 874-4428 Toll Free (6 a.m. to 4:30 p.m. Pacific time)  
(818) 878-7175 Fax to Technical Support  
(818) 878-7618 Bulletin Board System (24-hour access)  
(800) 438-4526 Toll free sales and product information

### Canada

Keating Technologies Inc.  
25 Royal Crest Court, Suite 200  
Markham, Ontario, Canada L3R 9X4  
(416) 479-0230  
(416) 479-0232 Fax

### Europe, Middle East, and Africa

Xircom Europe N.V.  
Bisschoppenhoflaan 82-84  
2100 Antwerp, Belgium  
32 3 326-34-94  
32 3 326-31-50 Fax  
32 3 326-23-68 Bulletin Board System (24-hour access)  
8:30 a.m. to 5:30 p.m. Monday-Thursday, 4:30 p.m. Friday.  
1-818-878-6280 International access to U.S. Technical Support  
(6:00 a.m. to 4:30 p.m. U.S. Pacific time).

## Asia Pacific

Xircom Asia Ltd.

1604 Century Square

1-13 D'Aguilar St.

Hong Kong

(852) 525-2078

(852) 525-8955 Fax

(852) 537-6048 Bulletin Board System (24-hour access)

1-818-878-6280 International access to U.S. Technical Support

(6:00 a.m. to 4:30 p.m. U.S. Pacific time)

## Other International

Contact your local reseller or distributor

1-818-878-6280 International access to U.S. Technical Support

(6:00 a.m. to 4:30 p.m. U.S. Pacific time).

## BULLETIN BOARD SYSTEM

Xircom maintains an electronic bulletin board system (BBS) containing product information and the latest versions of network drivers.

To use the BBS, set up your modem to xxxxx,N,8,1 (where xxxxx is your modem's maximum speed, N is no parity, 8 is data bits, and 1 is stop bit). Dial 1-818-878-7618 (U.S.A.), 32 3 326-23-68 (Belgium), or (852) 537-6048 (Hong Kong) to connect at up to 14,400 bps. Xircom modems will automatically fall back to accommodate lower speeds.

To download drivers, go to the BBS Main Menu, then type **F** (for File Directories) and press Enter. Follow the instructions to select and download current versions of Xircom *released* drivers (subject to the terms of your Xircom Software License Agreement).

## LIMITED WARRANTY, DISCLAIMER, AND LIMITATION OF LIABILITY

(a) Xircom warrants to the original purchaser that:

1. When purchased, the Pocket Ethernet Adapter III (the "Adapter"), including the Xircom AC power adapter, is free from defects in material and workmanship; and
2. For two years from the purchase date, the software accompanying the Adapter (the "Software") and the Adapter itself will perform as stated in the User's Guide.

(b) Xircom will honor claims under this Warranty only if the user completes all the following steps before making the claim and makes the claim according to the procedure below:

1. Read the User's Guide and follow its installation, setup, software setup, and operation instructions;
2. Run the self test provided on the Pocket Ethernet Adapter III software diskette;
3. Use the Adapter and Software only in the environments described in the User's Guide.

(c) Xircom will not honor this Warranty (and this Warranty will be automatically void) if there has been any (1) tampering with the Adapter's external label containing the Adapter's serial number; (2) attempt to remove the label or to open the Adapter's case; (3) repair or attempt to repair made by anyone other than a Xircom-authorized technician; or (4) installation or use with any AC power adapter other than the original Xircom AC power adapter supplied in the product package.

(d) This Warranty does not cover, and Xircom will not be liable for, any damage or failure caused by misuse, abuse, acts of God, accidents (such as dropping the Adapter or the diskette containing the Software), electrical irregularity, or other causes beyond Xircom's control, or claim by other than the original purchaser.

(e) If, after inspection, Xircom determines there is a defect or failure covered by this Warranty, Xircom will elect to repair or replace the Adapter or Software or refund the purchase price (if replacement is not possible or repair is not practical). The replacement may be a new or refurbished product.

- (f) To report a problem or to request warranty service

### **In the U.S.A.**

Contact Xircom's Technical Support department at **(800) 874-4428** and obtain a *Return Material Authorization* (RMA) number.

### **Outside the U.S.A.**

Contact your local Xircom supplier or Xircom regional center.

- (g) Products returned for any reason must be complete and must include the Adapters, cabling, connectors, all software diskettes, User's Guide, AC cables and adapters, and all other components from the original package, as well as a copy of the receipt of purchase, and must be shipped prepaid, **with the RMA number clearly visible on the outside of the shipping container**, as follows:

From the U.S.A., ship to

Xircom Service Department  
5717 Corsa Avenue  
Westlake Village, CA 91362

From outside the U.S.A.

Contact your local Xircom supplier or Xircom regional center for shipping instructions.

- (h) The statements in this Warranty are the only warranty made by Xircom for the Adapter and Software.

(i) *XIRCOM DISCLAIMS AND WILL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES (SUCH AS PERSONAL INJURY OR DAMAGE TO ANY COMPUTER OR DATA).*

- (j) (The following paragraph applies to the countries of the European Community only.) In any case of damage to which the European Community Directive of 25th July 1985 is applicable and which does not result from neglecting the instructions set out under paragraph (b) of this Warranty or from the occurrence of any circumstances as mentioned under paragraphs (c) and (d), the liability of Xircom will be extended according to the provisions of this Directive without prejudice to the right of Xircom to refer to the limitations of liability as provided by the Directive or the applicable national law.

(k) Except for the Warranty explicitly stated herein, Xircom makes no warranties for the Adapter, express or implied, either in fact or by operation of law. Xircom specifically disclaims any implied warranty of merchantability, fitness for a particular purpose, or noninfringement.

(l) Some states or countries do not allow exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply.

(m) This Warranty gives you specific legal rights and you may also have other rights which vary from state to state or country to country.

Inquiries under this Warranty should be directed to Xircom at the appropriate office listed under the heading "Technical Support" earlier in this Preface.

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# INTRODUCTION

The Xircom Pocket Ethernet Adapter III, shown in Figure 1, allows you to connect an IBM or compatible PC to an Ethernet or IEEE 802.3 local area network (LAN). The Adapter connects externally to a standard parallel printer port, which eliminates the need to open the computer case to install an internal card.

Xircom Adapters are ideal for notebook, laptop, and desktop computer users who need a flexible LAN connectivity solution. Xircom Adapters contain no configuration switches, and are not subject to the address and interrupt conflicts common with internal adapters.

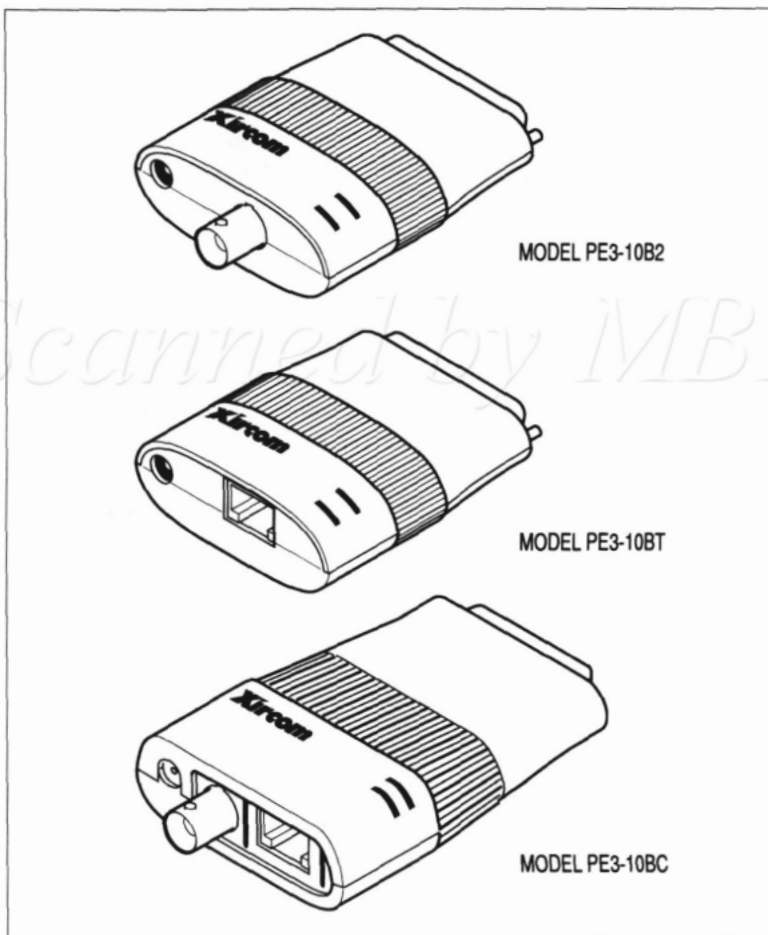
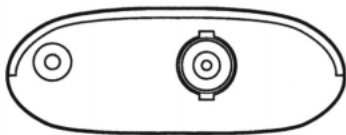


Figure 1. Xircom Pocket Ethernet Adapter III

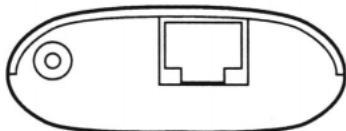


## MODEL NUMBERS



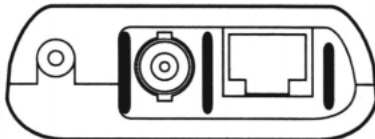
### **Model PE3-10B2**

10BASE-2 thin coax with BNC connector



### **Model PE3-10BT**

10BASE-T and StarLAN 10 unshielded twisted pair with an RJ-45 connector



### **Model PE3-10BC**

Combination unit supporting both unshielded twisted pair (RJ-45 connector) and thin coax (BNC connector)

## SOFTWARE

Drivers and diagnostic programs are supplied on a 3.5-inch diskette. (If you need a 5.25-inch diskette, call Xircom sales at (800) 438-4526 in North America or contact your local Xircom supplier or Xircom regional center.) Novell NetWare (using the ODI driver), Artisoft LANtastic/II version 4.1, DECnet-DOS, DEC PCSA and PATHWORKS, NDIS, ODI, and packet drivers are included. See Appendix B for a complete list of files and subdirectories.

AT&T StarLAN 10 is supported on Models PE3-10BT and PE3-10BC by disabling link integrity. See Appendix C.

Contact Xircom for information regarding the use of Xircom's Pocket Ethernet Adapter III in other networking environments.

## LOCAL PARALLEL PRINTER ACCESS

The Xircom Parallel Port Multiplexor (available as a separate product) can be used with the Pocket Ethernet Adapter III to provide simultaneous access to the LAN and a local parallel printer. Software support for the Parallel Port Multiplexor is programmed into the DOS drivers provided on the current version of the Xircom Network Drivers diskette.

### Note

**DO NOT USE the device drivers PPX.COM or PPX.SYS supplied with the Parallel Port Multiplexor with the Pocket Ethernet Adapter III network drivers. Remove any references to PPX.COM or PPX.SYS from any \*.BAT or CONFIG.SYS files on your system. The new Pocket Ethernet Adapter III driver will automatically determine which PPX port (A or B) is configured for the Xircom Pocket Adapter and which one for the printer. A PRINTER ATTACHED THROUGH THE PPX MUST BE POWERED ON FOR THE DRIVER TO LOAD.**

## SPECIFICATIONS

### Media Interface Specifications By Model

#### Model PE3-10B2

For thin Ethernet and IEEE 802.3 (10BASE-2) with BNC connector. BNC "T" connector also supplied.

#### Model PE3-10BT

For IEEE 802.3 (10BASE-T) and StarLAN 10 twisted pair Ethernet with RJ-45 connector.

#### Model PE3-10BC Combination

For IEEE 802.3 (10BASE-T) twisted pair Ethernet and StarLAN 10 with RJ-45 connector and for thin Ethernet and IEEE 802.3 (10BASE-2) with BNC connector (BNC "T" connector supplied).

## Additional Specifications

### Size:

**Models PE3-10BT and PE3-10B2** 3.22 in x 2.27 in x 0.81 in  
(81.8 mm x 57.7 mm x  
20.6 mm) overall, including  
connector

**Model PE3-10BC** 4.19 in x 2.38 in x 0.97 in  
(107 mm x 61 mm x  
25 mm) overall, including  
connector

### Weight:

**Models PE3-10BT and PE3-10B2** 2.2 oz (62 g)

**Model PE3-10BC** 2.9 oz (82.2 g)

**Operating Temperature Range:** 32°F to 122°F (0°C to 50°C)

**Storage Temperature Range:** -40°F to 176°F  
(-40°C to 80°C)

**Memory Size:** 32K x 8 network buffer  
256-bit EEPROM  
configuration storage

**Transfer Rate:** 10 megabits per second

**Diagnostics:** Self test capability

**FCC Certification:** Part 15, Subpart J, Class A

## AC POWER

### Phantom AC Power Cable

The Phantom Power Cable supplied with the Pocket Ethernet Adapter III allows you to power the Adapter directly from a PS/2-style (6-pin mini-DIN) mouse or keyboard port on your computer. The cable includes a passthrough connector that allows a mouse or keyboard to be plugged in on top of the Phantom Power Cable connection. The coiled cable is extensible to a length of 33 inches (0.84 m). See the *Hardware Installation* section for details.

### Wall-Mount AC Power Adapter

The wall-mount AC power adapter is a standard “power block” unit with the specifications listed below for the U.S.A. and Canada (AC adapters approved by appropriate regulatory agencies are also available for the U.K., Europe, Japan, Australia/New Zealand, Korea, and the Philippines):

<b>Input Voltage:</b>	120 VAC/60 Hz
<b>Output Voltage:</b>	12 VDC unregulated
<b>Size:</b>	2.76 in x 1.98 in x 1.59 in (70.1 mm x 50.3 mm x 40.4 mm) overall including connector and cord exit
<b>Cord Length:</b>	6 ft (1.8 m)
<b>Weight:</b>	10 oz (284 g)



# HARDWARE INSTALLATION

Follow the instructions in this section to unpack and install the Xircom Pocket Ethernet Adapter III hardware. Also included in this section is a discussion of parallel port performance issues, including bidirectional/non-bidirectional and Enhanced Parallel Port (EPP) modes of operation.

## UNPACKING AND INSPECTION

After opening the Pocket Ethernet Adapter III box, remove the contents and make certain that all parts are included and that none has been damaged during transportation. See Figure 2. Retain the packing materials in case you have to return the unit for service.

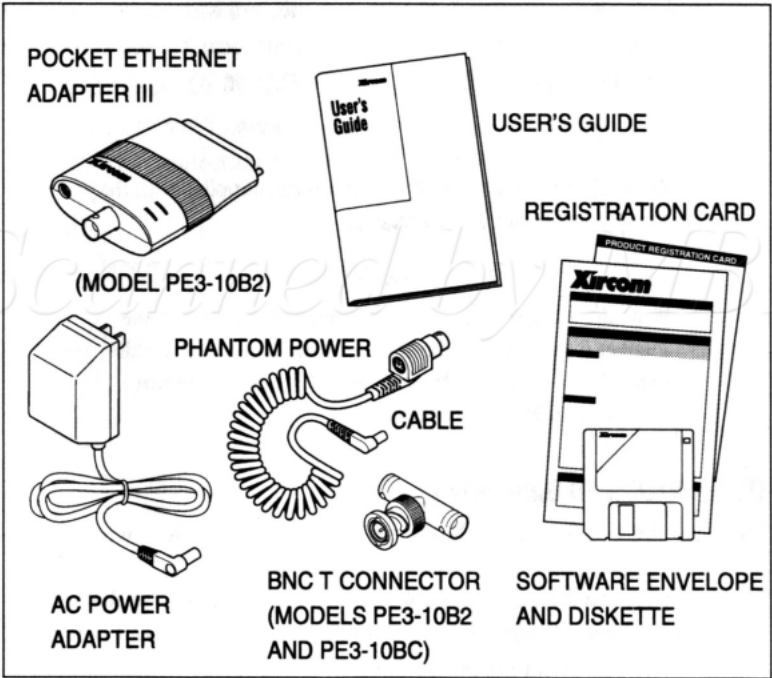


Figure 2. Contents of the Pocket Ethernet Adapter III Package

## PACKAGE CONTENTS

Use this as a checklist of the contents of the package.

- Xircom Pocket Ethernet Adapter III (Model PE3-10BT, PE3-10B2, or PE3-10BC)
- AC wall-mount power adapter
- AC Phantom Power Cable
- BNC T connector (Models PE3-10B2 and PE3-10BC only)
- Xircom Pocket Ethernet Adapter III User's Guide
- Product Registration Card
- License Agreement envelope containing 3.5-inch Network Drivers diskette. If you need a 5.25-inch diskette, call Xircom sales at (800) 438-4526 in North America or contact your local Xircom supplier or Xircom regional center.

### Note

**Please fill out the Product Registration Card supplied with the Adapter and return it immediately.**

### Important

**Write the Adapter model and serial number, and the phone number for support, in the space provided on page ii of this User's Guide (following the title page) for quick reference when calling Technical Support.**

## OTHER REQUIRED EQUIPMENT

To install the Pocket Ethernet Adapter III, you need the following:

1. A supported local area network operating system. See the section on *Software Setup and Operation* for information about networks for which Xircom supplies drivers.
2. For connection to a 10BASE-2 thin Ethernet cable, a BNC T connector (supplied); if the T connection is at the end of a cable segment, you will also need a 50-ohm terminator (not supplied).
3. For connection to a 10BASE-T twisted pair Ethernet cable, a dual twisted pair cable terminated with RJ-45 modular jacks (AT&T or D8W, or similar).

## POCKET ETHERNET ADAPTER III INSTALLATION

### Cautions

Before installing a Pocket Ethernet Adapter III, be sure all attached computer and printer equipment is powered OFF and that no power is being applied to the Pocket Ethernet Adapter III from any source.

Be sure computer power is OFF whenever connecting or disconnecting the AC Phantom Power Cable.

To prevent the possibility of damage to internal components from static electricity, do not touch or handle the gold connector pins on the parallel port connector of your Pocket Ethernet Adapter III.

### INSTALLATION OF MODEL PE3-10B2 (THIN ETHERNET)

1. Attach the T connector (and thin Ethernet network cabling) to the BNC connector on the Pocket Ethernet Adapter III as shown in Figure 3. If the Adapter is located at the end of a cable segment, attach a 50-ohm terminator to the open end of the T connector, as shown in the Figure.

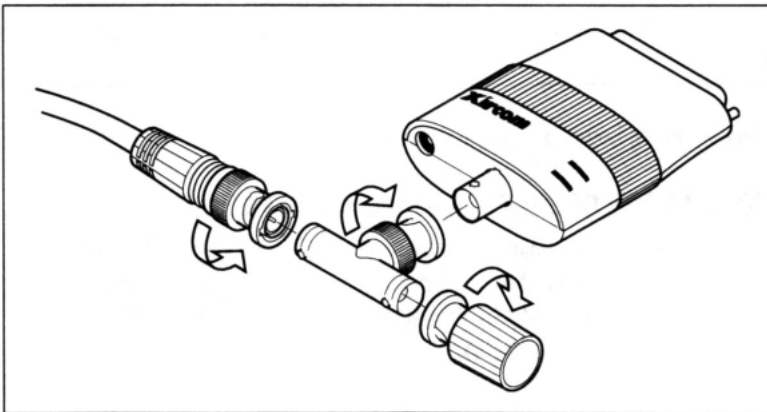


Figure 3. Attaching the Thin Ethernet Cable to Model PE3-10B2 (end of network segment)



### Note

For the network to function properly, both ends of the T connector must be attached to network cabling or, if the Adapter is at the end of a network segment, the end of the T connector not attached to the network must have a 50-ohm terminator installed.

## INSTALLATION OF MODEL PE3-10BT (TWISTED PAIR)

1. Plug one end of the modular data cable into the mating connector on the Pocket Ethernet Adapter III, as shown in Figure 4.
2. Plug the other end of the modular data cable into a network access port (usually a wall connection).

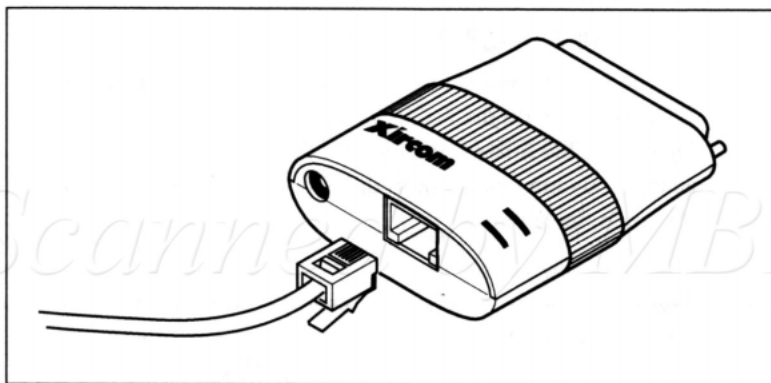


Figure 4. Attaching Twisted Pair Cabling to Model PE3-10BT

## INSTALLATION OF MODEL PE3-10BC (COMBINATION)

- Follow the installation instructions for Model PE3-10B2 if you are connecting to a thin Ethernet network (see Figure 3), or the instructions for Model PE3-10BT for connection to a 10BASE-T network (see Figure 4).

### Note

Only one type of Ethernet connection may be used on the Model PE3-10BC at a time: either thin Ethernet (BNC connector) or twisted pair Ethernet (RJ-45 connector), but not both.

## CONNECTING THE POCKET ETHERNET ADAPTER TO THE COMPUTER

### Caution

**When attaching the Pocket Ethernet Adapter III to the parallel port of the computer, be sure that all computer and printer equipment is powered OFF and that no AC power is being applied to the Adapter. Do not touch the gold connector pins.**

1. Verify that the computer is turned OFF and no power cord is connected before attaching the Pocket Ethernet Adapter III.
2. Plug the 25-pin male D-type connector on the Pocket Ethernet Adapter III into the parallel port on the back of your computer, holding the Adapter with the Xircor logo and indicator lights on the top. The two parallel port attachment screws on the Adapter align with the holes on each side of the parallel port connector.
3. Rotate the red band ("tractor grip") on the Adapter clockwise until the screws are firmly secured. Refer to Figure 5. When the screws are tight, the red band will "click" as you rotate it. (To unscrew the screws, rotate the band counterclockwise.)

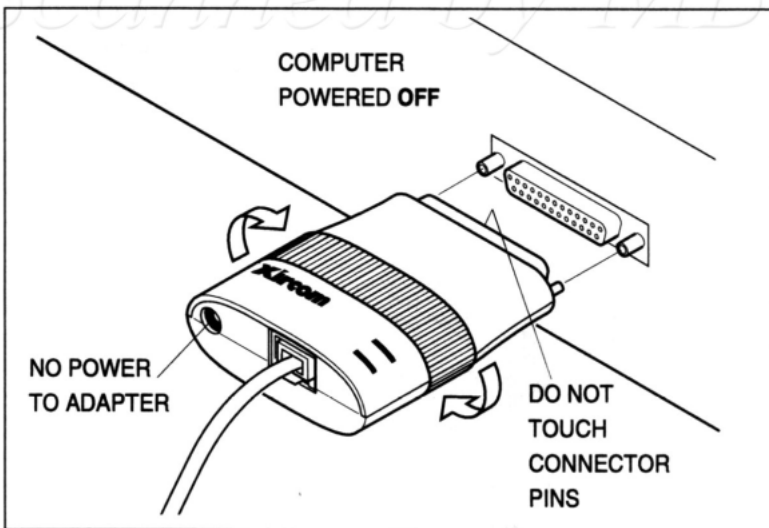


Figure 5. Connecting the Adapter to the Parallel Port on the Computer

## PARALLEL PORT PERFORMANCE

The type of parallel port on your computer can significantly affect the performance of the Pocket Ethernet Adapter III. If your PC's parallel port supports bidirectional mode, you can expect an improvement of up to 50% in the input transfer rate over a standard non-bidirectional parallel port. If your computer supports *Enhanced Parallel Port* (EPP) technology, data will be transmitted through the Adapter at three to four times the rate of a standard parallel port. All Xircom LAN Adapters are compatible with Enhanced Parallel Port technology. A utility program is supplied with the Pocket Ethernet Adapter III to enable EPP mode. See the *Configuration and Diagnostics* section for detailed instructions on its use.

Some PC designs allow the parallel printer port to be switched between bidirectional and non-bidirectional modes of operation, while others support only one mode. To find out if your parallel port is switchable, or if it is EPP-compliant, refer to the user documentation for your computer or contact the computer manufacturer.

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## CONNECTING AC POWER

### Caution

Before installing an AC power adapter or cable, be sure that all attached computer and printer equipment is powered OFF and that the Pocket Ethernet Adapter III is securely attached to the parallel port of the computer.

### Installing the Wall-Mount AC Power Adapter

1. Verify that the computer to which the Pocket Ethernet Adapter III is attached is powered OFF and that the wall-mount power supply is NOT plugged in to an AC outlet.
2. Plug the L-shaped end of the AC power adapter cable into the small round socket on the Pocket Ethernet Adapter III to the left of the network connector. See Figure 6.
3. Plug the AC power adapter into a standard electrical outlet.

On Models PE3-10B2 and PE3-10BT, the LED indicator closest to the red tractor band will illuminate when power is applied to both the Adapter and the computer to which it is connected. On Model PE3-10BC, the triangle over the letter "i" in the word Xircom will illuminate.

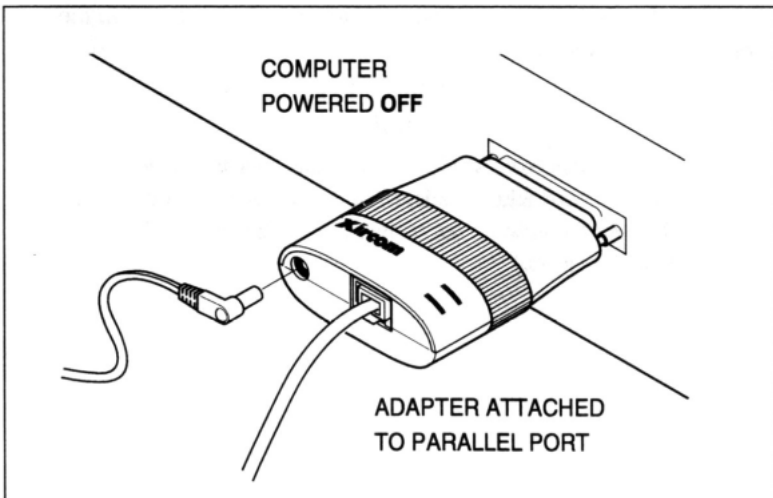


Figure 6. Plugging the Power Cable into the Pocket Ethernet Adapter III

## Installing the AC Phantom Power Cable

### Caution

To reduce the possibility of damage due to shorting, always connect and disconnect the Phantom Power Cable with the computer powered OFF and the Pocket Ethernet Adapter III securely attached to the parallel port of the computer.

1. Verify that the computer to which the Pocket Ethernet Adapter III is attached is powered OFF and that the Adapter is securely attached to the parallel port of the computer.
2. Plug the L-shaped plug on the AC Phantom Power Cable into the small round socket on the Pocket Ethernet Adapter III to the left of the network connector. See Figure 6.
3. Plug other end of the AC Phantom Power Cable into the 6-pin PS/2-style keyboard/mouse port on the computer. See Figure 7.
4. Plug the mouse or keyboard cable, if required, into the duplicate keyboard/mouse connector on the phantom power connector.

When power is applied to the computer to which the Pocket Ethernet Adapter III and Phantom Power Cable are connected, the LED indicator closest to the red tractor band will illuminate on Models PE3-10B2 and PE3-10BT. On Model PE3-10BC, the triangle over the letter "i" in the word Xircom will illuminate.

### Note

The Phantom Power Cable supplied with all models of the Xircom Pocket Ethernet Adapter III is designed to work with these models only. Do not attempt to use this cable on other pocket adapters.

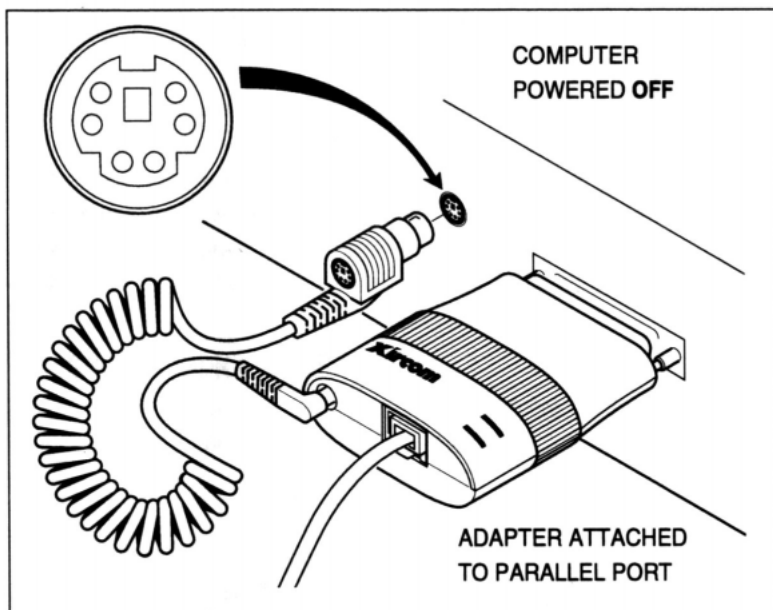


Figure 7. Connecting the AC Phantom Power Cable to the Computer

### **Power Management**

**Do not use power management or power saver features on your computer when logged in to a network through the Pocket Ethernet Adapter III. Reduction or loss of power to the Adapter could affect the network connection.**



# CONFIGURATION AND DIAGNOSTICS

This section contains a detailed description of the Pocket Ethernet Adapter III's diagnostic features, both hardware (diagnostic indicator lights) and software (PE3TEST diagnostic program). It also includes an explanation of how to disable link integrity on Model PE3-10BT, for operation with non-10BASE-T unshielded twisted pair networks. For additional diagnostic information, see the error messages in Appendix A.

## DIAGNOSTIC INDICATOR LIGHTS

The indicator lights on the top of the Pocket Ethernet Adapter III case function differently according to the model being used.

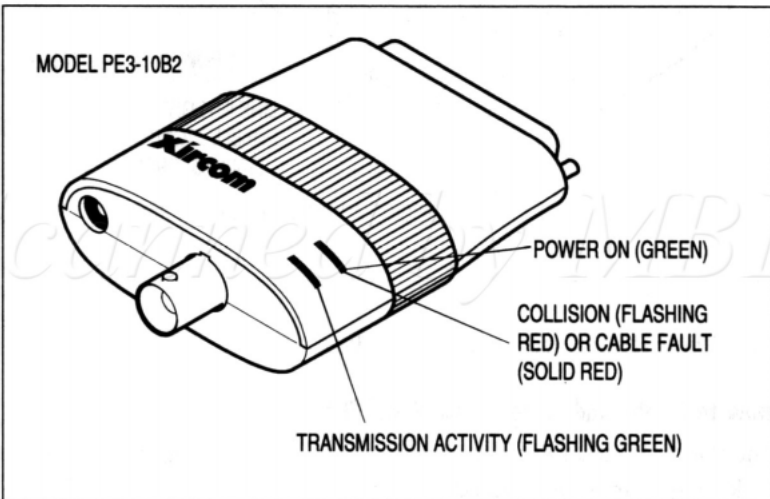


Figure 8. Pocket Ethernet Adapter III Indicator Lights for Model PE3-10B2

### Model PE3-10B2

The LED closest to the red band on this model displays solid green to indicate power on, flashes red to indicate a collision, and displays solid red to indicate a cable fault. The other LED indicator flashes green to show transmission activity.



## Model PE3-10BT

The LED closest to the red band displays solid orange to indicate power on and link integrity disabled. It displays solid green when link integrity is enabled and the network driver has been loaded. The other LED indicator flashes green to show transmission activity.

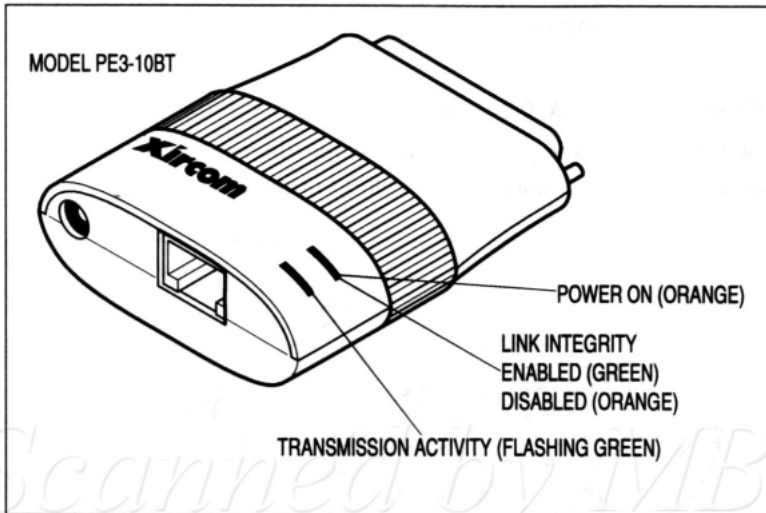


Figure 9. Pocket Ethernet Adapter III Indicator Lights for Model PE3-10BT

### How to Disable Link Integrity on Model PE3-10BT

The Pocket Ethernet Adapter III default setting is link integrity enabled. Link integrity must be disabled for operation on non-10BASE-T unshielded twisted pair networks such as StarLAN 10. Link integrity can be disabled in software for all Pocket Ethernet Adapter III drivers, using the keyword

#### **LINKDISABLE**

in configuration or startup files or on the command line with the driver. See *Appendix C, Command Line Parameters*, for detailed information on use of this keyword with each driver type.

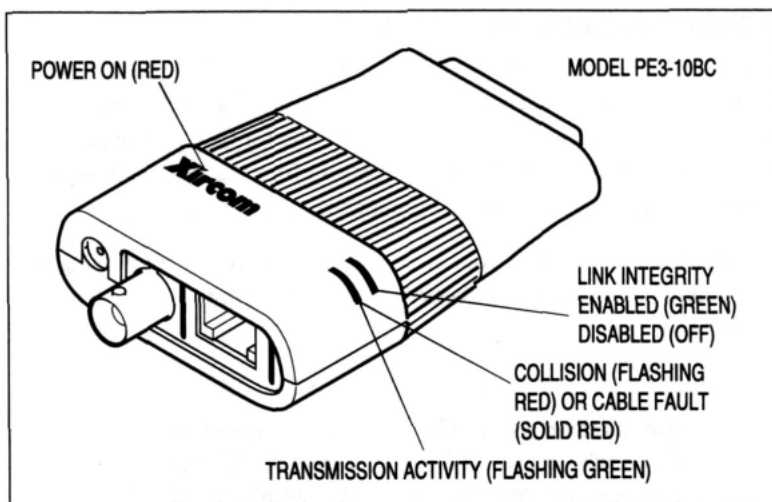


Figure 10. Pocket Ethernet Adapter III Indicator Lights for Model PE3-10BC

### Model PE3-10BC

The power-on indicator is the triangle over the letter “i” in the Xircom logo.

The LED closest to the red band displays solid green to indicate link integrity enabled (for unshielded twisted pair networks only); otherwise it is off. (The network driver must be loaded before the “link integrity” indicator becomes active.)

The other LED indicator flashes green to show transmission activity, flashes red to indicate a collision, and displays solid red to indicate a cable fault.

#### Note

The power-on indicator on all Pocket Ethernet Adapter III models illuminates when power is applied to both the Adapter and the computer to which it is attached. The Pocket Ethernet Adapter III shuts off when it is removed from the computer's parallel port, when its power cable is disconnected, or when the computer it is attached to is turned off.

## ENHANCED PARALLEL PORT UTILITY

Use the Enhanced Parallel Port (EPP) utility to enable EPP mode on an EPP-capable computer. There are three versions of the EPP utility on the Network Drivers diskette, two for DOS and one for OS/2. All three versions require that the EPP utility be run **before** the Pocket Ethernet Adapter III driver is loaded for your network.

If you're not sure whether your computer is EPP-capable, try running the EPP utility. A message will indicate whether EPP hardware has been identified on your machine.

### Note

Some machines with EPP hardware do not support EPP functionality because of their parallel port design. In these cases, the network driver will load in standard bidirectional or non-bidirectional mode. Consult your computer's documentation or manufacturer for additional information.

#### EPP.COM

Run this version from the DOS command line or add it to an AUTOEXEC.BAT or network startup \*.BAT file.

#### EPP.SYS

Add to the DOS CONFIG.SYS file to implement EPP support at boot time.

#### EPP.OS2

Add to the OS/2 CONFIG.SYS file to implement EPP support at boot time.

## Using the EPP Utility with DOS

To use EPP.COM as part of your DOS AUTOEXEC.BAT (or other \*.BAT) file:

1. Copy EPP.COM from the Xircom Network Drivers diskette to your hard disk or boot diskette.
2. Use an ASCII text editor to add the following line to your AUTOEXEC.BAT or other \*.BAT file:

**[path]EPP**

where [path] is the drive and directory to which you copied EPP.COM.

3. Save the modified \*.BAT file.
4. Run the \*.BAT file.

To use EPP.SYS in your DOS CONFIG.SYS file:

1. Copy EPP.SYS from the Xircom Network Drivers diskette to your hard disk or boot diskette.
2. Use an ASCII text editor to add the following line to your CONFIG.SYS file:

**DEVICE=[path]EPP.SYS**

where [path] is the drive and directory to which you copied EPP.SYS.

3. Save the modified CONFIG.SYS file.
4. Reboot the PC.

### Using the EPP Utility with OS/2

To use EPP.OS2 in your OS/2 CONFIG.SYS file:

1. Copy EPP.OS2 from the Xircom Network Drivers diskette to your hard disk.
2. Use an ASCII text editor to add the following line to your CONFIG.SYS file:

**DEVICE=[path]EPP.OS2**

where [path] is the drive and directory to which you copied EPP.OS2.

3. Save the modified CONFIG.SYS file.
4. Reboot the PC.

## DIAGNOSTIC SELF TEST

In addition to the diagnostic and power-on indicators described at the beginning of this section, Xircom provides a self test diagnostics program called **PE3TEST**. This program, located on the Network Drivers diskette, tests the Pocket Ethernet Adapter III configuration, setup, checksum, and memory. It also reports test results, the serial number of the unit, and the node address.

## EXECUTING THE SELF TEST

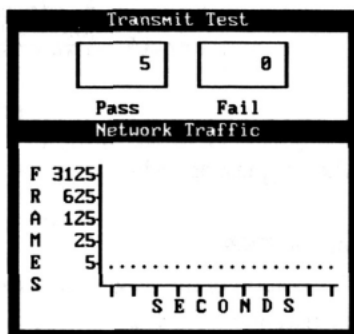
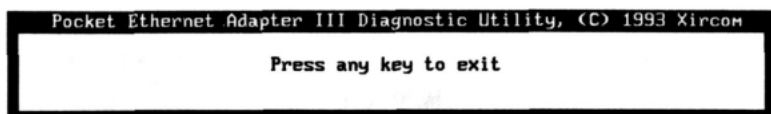
Use the following steps to execute the self test.

1. Install the Pocket Ethernet Adapter III hardware according to the instructions contained in the *Installation and Setup* section of this User's Guide.
2. Boot your computer from DOS, without loading a network driver. A network driver **must not be loaded** for PE3TEST to run.
3. Insert the Xircom Network Drivers diskette in the diskette drive on your computer and change to that drive.
4. At the diskette drive DOS prompt run the diagnostics by typing **PE3TEST** and then pressing Enter.

### Note

**If an error message displays when you execute the self test, refer to *Appendix A, Error Messages*.**

The diagnostic program displays the following windows on your computer's screen showing test parameters and results:



An explanation of the self test results follows.

### Hardware, EEPROM, Init, and Memory Tests

The Hardware test verifies that the Adapter is powered on and properly connected to the parallel port. The EEPROM test reads the EEPROM and verifies EEPROM data (this is where the Adapter's serial number and node address are stored). The Init test initializes the Adapter memory and Ethernet controller. The Memory test tests the 32K x 8 RAM on the Pocket Ethernet Adapter III.

A failure in any of these tests may indicate that service is required for the Pocket Ethernet Adapter III. Contact Xircom Technical Support.

## Adapter Data

This section displays the model number, serial number, manufacturing date of the unit, and the network node address. This data has been preprogrammed at the factory and cannot be altered.

### Important

**Write the Adapter model and serial numbers in the space provided on page ii of this User's Guide (following the title page) for quick reference when calling Technical Support.**

Technical Support will ask you to supply the model and serial numbers when requesting technical assistance or warranty service from Xircom.

## Configuration

This portion of the diagnostic screen describes interrupt settings, port settings, and parallel port transfer modes. Some computers allow the parallel port to be switched between bidirectional, non-bidirectional, and Enhanced Parallel Port (EPP) modes. For an optimal transfer rate, the unit should be in EPP or bidirectional mode. **PE3TEST** reports the mode of your parallel port, including Enhanced Parallel Port mode if the EPP utility EPP.COM or EPP.SYS has been run prior to testing.

To find out if you can switch modes on your parallel port, consult the documentation for your computer or contact the computer manufacturer.

## Transmit Test

This test transmits a packet every 1/2 second. A failure indicates that the Adapter is not accepting packets for transmission. Contact Xircom Technical Support.

## Network Traffic Graph

This graph provides a visual representation of the volume of traffic on the network. If there is no traffic (or if the Adapter is not connected to the network), a line of dots will display at the bottom of the chart.

# SOFTWARE SETUP AND OPERATION

This section provides installation information for the network drivers supplied on the Pocket Ethernet Adapter III Network Drivers diskette. It is organized in *alphabetical* order by network operating system.

These instructions are designed to take advantage of the Pocket Ethernet Adapter's self-configuring and default features. For more detailed information on the drivers, see *Appendix C, Command Line Parameters*.

## Making a Backup Copy of the Software

Before beginning driver installation, use DOS DISKCOPY to make a copy of the Network Drivers diskette supplied with your Pocket Ethernet Adapter III. Use the copy to install the software.

### 3COM 3+OPEN

#### 3Com 3+Open versions 1.x for DOS (NDIS driver)

1. Install your 3+Open workstation software according to the manufacturer's instructions, selecting the EtherLink II 3C503 adapter. After completing the installation, and before rebooting your system, continue with the following instructions.
2. Copy the file PE3NDIS.EXE from the \NDIS directory on the Xircom Network Drivers diskette to the directory \3OPEN\DOSWKSTA\LANMAN\DRIVERS on your hard disk or boot diskette.
3. Using an ASCII text editor, replace the reference to the EtherLink II 3C503 device driver in your CONFIG.SYS file with a reference to the Xircom device driver, as follows:

Change the line

```
DEVICE=C:\3OPEN\DOSWKSTA\LANMAN\DRIVERS\ELINKII.DOS
```

to read

```
DEVICE=C:\3OPEN\DOSWKSTA\LANMAN\DRIVERS\PE3NDIS.EXE
```

4. Change to the \3OPEN\DOSWKSTA\LANMAN\DRIVERS directory.



5. Use an ASCII text editor to edit your PROTOCOL.INI file:

- Add the following fragment to the ADAPTERS section:

```
;XIRCOM ADAPTER  
[XIRCOMNET]  
DRIVERNAME = XIRCOM$
```

- In the PROTOCOLS section of the PROTOCOL.INI file, replace all references to the 3Com 3C503 binding "ETHERLINKII" with "XIRCOMNET".

For example, in the definition

```
;XNS protocol  
[XNS_TRANSPORT]  
DRIVERNAME = XNSTP$  
BINDINGS = ETHERLINKII
```

the statement

```
BINDINGS = ETHERLINKII
```

should be changed to

```
BINDINGS = XIRCOMNET
```

6. Save the file and reboot the PC.

### **3Com 3+Open versions 1.x for OS/2 (NDIS driver)**

1. Install your 3+Open workstation software according to the manufacturer's instructions, selecting the EtherLink II 3C503 adapter. After completing the installation and before rebooting your system, continue with the following instructions.
2. Copy the file PE3NDIS.OS2 from the \NDIS directory on the Xircom Network Drivers diskette to the directory \3OPEN\OS2WKSTA\LANMAN\DRIVERS on your hard disk or boot diskette.
3. Using an ASCII text editor, replace the reference to the EtherLink

II 3C503 device driver in your CONFIG.SYS file with a reference to the Xircom device driver, as follows:

Change the line

```
DEVICE=C:\3OPEN\OS2WKSTA\LANMAN\DRIVERS\ELINKII.OS2
```

to read

```
DEVICE=C:\3OPEN\OS2WKSTA\LANMAN\DRIVERS\PE3NDIS.OS2
```

4. Change to the \3OPEN\OS2WKSTA\LANMAN\DRIVERS directory.
5. Use an ASCII text editor to edit your PROTOCOL.INI file:
  - Add the following fragment to the ADAPTERS section:

```
;XIRCOM ADAPTER  
[XIRCOMNET]  
DRIVERNAME = XIRCOM$
```

- In the PROTOCOLS section of the PROTOCOL.INI file, replace all references to the 3Com 3C503 binding "ETHERLINKII" with "XIRCOMNET".

For example, in the definition

```
;XNS protocol  
[XNS_TRANSPORT]  
DRIVERNAME = XNSTP$  
BINDINGS = ETHERLINKII
```

the statement

```
BINDINGS = ETHERLINKII
```

should be changed to

```
BINDINGS = XIRCOMNET
```

6. Save the file and reboot the PC.

## ARTISOFT LANTASTIC/AI (VERSION 4.1) ARTISOFT DRIVER

These instructions are for use with Artisoft LANtastic/AI version 4.1. If you have version 4.0, you must upgrade to version 4.1 to use this driver.

1. Run the LANtastic/AI INSTALL program. At the heading "Network Adapter Installed" press the Space Bar to display a list of adapters. Use the arrow keys to select "Xircom PE10B2 Ethernet Adapter" and press Enter.
2. Complete the installation and exit the INSTALL program.
3. Copy the file PE3AILAN.COM from the \ARTISOFT directory on the Xircom Network Drivers diskette to C:\LANTASTI.
4. Using an ASCII text editor, edit the file STARTNET.BAT in the C:\LANTASTI directory as follows:

Change the line

**PE.EXE IRQ=*x* LPT=*y* VERBOSE**

(where *x* is an interrupt setting and *y* a parallel port setting)

to read

**PE3AILAN.COM**

5. Reboot the computer and type STARTNET to start the LANtastic network.

This driver is self configuring. See *Appendix C, Command Line Parameters*, for more detailed information.

## **AT&T/NCR STARGROUP LAN MANAGER VERSION 2.1A (NDIS DRIVER)**

1. Begin installation of LAN Manager 2.1a using "ncrsetup."
2. When prompted to select the available network adapter driver, choose "Other Driver" at the bottom of the screen.
3. When prompted, insert the Xircom Network Drivers diskette.
4. Select "Xircom Pocket Ethernet Adapter III" from the menu.
5. Continue with the installation until it is completed.
6. Reboot the PC.

## **AT&T/NCR STARGROUP VERSION 3.5 (LAN MANAGER VERSION 2.0) NDIS DRIVER**

1. Make working copies of the StarGROUP Client install diskette(s) using the DOS DISKCOPY program.

### **Note**

If installing from two 720K diskettes, make room for the Xircom files listed below by deleting some third party drivers (along with their NIF files and associated directories) from the working copy of the "Network Program & Drivers 1 and 2" diskette. Do not delete any "ATT..." subdirectories or files.

2. Copy the file XIRATT35.NIF from the \ATT35 directory of the Xircom Network Drivers diskette into the \DOS\DRIVERS2 directory of the StarGROUP Client install diskette.
3. Create a XIRATT35 directory on the StarGROUP Client install diskette as follows:

```
A: \>MD \DOS\DRIVERS2\XIRATT35
```

4. Copy the file PROTOCOL.INI from the \ATT35 directory on the Xircom Network Drivers diskette to the directory \DOS\DRIVERS2\XIRATT35 on the StarGROUP Client diskette.
5. Copy the PE3NDIS.EXE file from the \NDIS directory on the Xircom Network Drivers diskette to the directory \DOS\DRIVERS2\XIRATT35 of the StarGROUP Client install diskette.

6. You may now use the modified StarGROUP Client install diskette to install StarGROUP on the client computer. Refer to the StarGROUP documentation for further information.

### **AT&T/NCR STARGROUP VERSIONS 3.3 AND 3.4 (NDIS DRIVER)**

1. Make working copies of the StarGROUP Client install diskette(s) using the DOS DISKCOPY program.
2. Copy the file XIRATT34.NIF from the \ATT34 directory of the Xircom Network Drivers diskette into the \DOS\DRIVERS directory of the StarGROUP Client install diskette.
3. Create a XIRATT34 directory on the StarGROUP Client install diskette as follows:

**A:\>MD \DOS\DRIVERS\XIRATT34**

4. Copy the PROTOCOL.INI file from the \ATT34 directory on the Xircom Network Drivers diskette to the directory \DOS\DRIVERS\XIRATT34 on the StarGROUP Client diskette.
5. Copy the PE3NDIS.EXE file from the \NDIS directory on the Xircom Network Drivers diskette to the directory \DOS\DRIVERS\XIRATT34 on the StarGROUP Client diskette.
6. You may now use the modified StarGROUP Client install diskette to install StarGROUP on the client computer. Refer to the StarGROUP documentation for further information.

## **BANYAN VINES DOS WORKSTATION (VERSIONS 4.X AND LATER)**

### **NDIS DRIVER**

1. Create a Banyan directory on your workstation hard disk or VINES boot diskette. For example:

```
C:>MD \VINES
```

2. At the DOS prompt, copy the files PE3NDIS.EXE and PROTOCOL.INI from the \NDIS directory on the Xircom Network Drivers diskette to the \VINES directory just created.
3. Copy the files from the VINES Master diskette into the \VINES directory.
4. Copy the NDIS driver files from \NDIS directory on the VINES LAN Drivers diskette into the \VINES directory.
5. Using an ASCII text editor, edit the CONFIG.SYS file to include the following lines:

```
DEVICE=C:\VINES\PROTMAN.DOS /I:C:\VINES
```

```
DEVICE=C:\VINES\PE3NDIS.EXE
```

6. Change to the \VINES directory.
7. Type PCCONFIG and select Network Card Settings, followed by NDIS Ethernet.
8. Select interrupt level 7 if your Xircom Pocket Ethernet Adapter III is using LPT1 or LPT3, or interrupt level 5 if the Adapter is using LPT2.
9. At the PROTOCOL.INI bindings prompt type XIRCOMNET.
10. Press F10 to save and Esc to return to the main menu.
11. Select Login Environment Settings, followed by Default Communications Driver, followed by NDIS Ethernet.
12. Press Esc to return to the Main Menu and press F10 to save.
13. Reboot the PC.

Refer to your Banyan VINES documentation for additional information.

## DEC PATHWORKS (VERSION 4.1) NDIS DRIVER

1. Run NETSETUP.
2. Choose Ethernet controller type and select "Other NDIS."
3. Choose "Other NDIS Information."
4. Insert the Xircom Network Drivers diskette into the A: drive.
5. When prompted for the path to the driver file, type

**A:\NDIS\PE3NDIS.EXE**

6. When prompted for the path to the PROTOCOL.INI file, type:

**A:\DEC**

7. Complete NETSETUP and return to the DOS prompt.
8. Reboot the PC.

### Note

If the keydisk being configured is in diskette drive A:, copy the files PE3NDIS.EXE and PROTOCOL.INI to another drive before configuring the keydisk with NETSETUP.

## DEC PATHWORKS (VERSION 4.0) NDIS DRIVER

1. Run NETSETUP.
2. Select "Ethernet board."
3. Select "Other."
4. Select NDIS driver.
5. Insert the Xircom Network Drivers diskette into the A: drive.
6. Enter the path to the driver file as follows:

**A:\NDIS\PE3NDIS.EXE**

7. Select Protocol.ini.
8. Enter the path to the PROTOCOL.INI file as follows:

**A:\DEC**

9. Complete NETSETUP and return to the DOS prompt.
10. Reboot the PC.

## DEC PCSA AND DECNET-DOS (VERSIONS 3.X) DEC DRIVER

1. Install Digital Equipment Corporation's DECnet-DOS or PCSA product according to the instructions provided by DEC (select any datalink controller and local boot).
2. Copy the file PE3DLL.EXE from the \DEC directory on your Xircom Network Drivers diskette to your DECNET directory (typically C:\DECNET).
3. Using an ASCII text editor, edit the C:\STARTNET.BAT file. Replace each occurrence of DLL with PE3DLL, as in the following example.

Replace

**DLL /IRQ:2 /T:2**

with

**PE3DLL**

Xircom's PE3DLL.EXE is a self-configuring driver that searches for and uses the appropriate LPT and interrupt settings. See *Appendix C, Command Line Parameters*, for more detailed information.

4. Also in the C:\STARTNET.BAT file, edit the LAD line so that the /R: and /W: values are both 4. For example:

**LAD /R:4 /W:4**

See the Notes below for additional details.

5. Save the file.
6. Reboot the PC.

### Notes

1. Remote boot and remote floppy boot are not supported.
2. The Pocket Ethernet Adapter III driver does not operate if a network adapter other than the Xircom Pocket Ethernet Adapter III is initialized during startup.
3. Unloading the network with STOPNET is not supported.



## Notes (continued)

### LAD Values

Examine the LAD startup line in STARTNET.BAT. A typical LAD command line might have the following elements:

**LAD /R:12 /W:15 /A:D**

where the /R: switch specifies the transaction size of virtual disk read operations and the /W: switch specifies the transaction size of virtual disk write operations. Valid range for both is 1 through 15 and the default is 15.

A transaction size that is too large can cause data overruns, which in turn can cause LAST transport timeouts. An excessive number of timeouts can result in lost LAD connections. Set the Pocket Ethernet Adapter III to initial values of /R:4 and /W:4. If you experience no difficulties, increase the transaction size.

### Datalink Size

On disk, the datalink executable code requires 23K bytes. Part of that code, however, is used for initialization only and is then removed from memory. The remaining executable code uses only 15K. The datalink requires buffers and these buffers use 1528 bytes each. The more buffers you include, the more memory the driver occupies. Use the NCP command **DEFINE EXECUTOR MAXIMUM BUFFERS *n*** to set the number of buffers, where *n* is a minimum of 4.

## FTP SOFTWARE LANWATCH (PACKET AND NDIS DRIVERS)

FTP Software's LANWatch network monitor software (versions 2.01 or later) can be installed using Xircom's packet or NDIS drivers. For information on which driver is appropriate for your network environment, refer to the FTP LANWatch documentation.

### FTP Software LANWatch Packet Driver Installation

1. Install LANWatch according to the instructions in your FTP LANWatch manual.
2. Copy the file PE3PD.COM from the \PKTDRV directory on the Xircom Network Drivers diskette to the directory where your LANWatch files are stored.
3. (This step not required for LANWatch versions 3.0 and later.)  
Using an ASCII text editor, add the following line to your CONFIG.SYS file:

**DEVICE = [path]IFCUST.SYS**

where [path] is the drive and directory where your LANWatch files are stored.

4. Reboot the PC.
5. Change to the directory where your LANWatch files are stored and run PE3PD.COM.
6. Run LW.EXE.

You may have to reboot your PC after running LANWatch to deactivate promiscuous mode, which is needed to monitor all packets.

## FTP Software LANWatch NDIS Driver Installation

1. Install LANWatch according to the instructions in your FTP LANWatch manual.
2. Using an ASCII text editor, add the following lines to your CONFIG.SYS file:

```
DEVICE = C:\NDIS\PROTMAN.SYS /I:C:\NDIS  
DEVICE = C:\NDIS\PE3NDIS.EXE  
DEVICE = C:\NDIS\DIS_PKT.GUP
```

(Include the following line for LANWatch versions earlier than 3.0 only)

```
DEVICE = C:\LW\IFCUST.SYS
```

3. Create a directory called \NDIS on your hard disk, as follows:

```
MD \NDIS
```

4. Copy the files PE3NDIS.EXE and PROTOCOL.FTP from the \NDIS directory on the Xircom Network Drivers diskette to the \NDIS directory you created in Step 3.
5. Rename the PROTOCOL.FTP file PROTOCOL.INI.
6. Copy all the files from the \NDIS directory on the FTP Unsupported Software Diskette A to the \NDIS directory you created in Step 3.
7. Reboot the PC.
8. Change to the \NDIS directory and run NETBIND.EXE.
9. Run LW.EXE.

## FTP SOFTWARE PC/TCP (PACKET, NDIS, AND ODI DRIVERS)

FTP Software's PC/TCP Generic Ethernet Kernel ETHDRV.EXE can be installed using Xircor's Packet, ODI, or NDIS drivers. For information on which driver is appropriate for your network environment, see the FTP PC/TCP documentation.

### FTP Software PC/TCP Packet Driver Installation

1. Install PC/TCP software according to the directions given in the PC/TCP documentation.
2. When the installation is complete, copy the file PE3PD.COM from the \PKTDRV directory on the Xircor Network Drivers diskette to the PC/TCP directory specified in the PC/TCP install procedures.
3. (This step not required for PC/TCP versions 2.10 and later.) Using an ASCII text editor, add the following lines to your CONFIG.SYS file:

**DEVICE=[path] IPCUST.SYS**

**DEVICE=[path] IFCUST.SYS**

where [path] is the drive and directory specified at the PC/TCP installation.

#### Note

The PC/TCP manual describes a method for adjusting the configuration of PC/TCP. The Xircor PE3PD.COM driver is self-configuring for its printer port and interrupt and does not use an I/O Base address or PC memory address. Therefore, these values are not adjusted through the *ifconfig* program.

4. Reboot the PC.
5. Change to the directory where your PC/TCP files are stored and run PE3PD.COM.
6. Run the ETHDRV.EXE kernel program supplied with PC/TCP. This loads the PC/TCP kernel into memory. The packet driver must always load before the kernel.
7. Continue your server or workstation startup as instructed in the PC/TCP documentation.

## FTP Software PC/TCP NDIS Driver Installation

1. Install PC/TCP software according to the directions given in the PC/TCP documentation.
2. Use an ASCII text editor to add the following lines to your CONFIG.SYS file:

```
DEVICE = C:\NDIS\PROTMAN.SYS /I:C:\NDIS
```

```
DEVICE = C:\NDIS\PE3NDIS.EXE
```

```
DEVICE = C:\NDIS\DIS_PRT.GUP
```

(Include the following lines for PC/TCP versions earlier than 2.10 only)

```
DEVICE = C:\PCTCP\IFCUST.SYS
```

```
DEVICE = C:\PCTCP\IPCUST.SYS
```

3. Create a directory called \NDIS on your hard disk, as follows:

```
MD \NDIS
```

4. Copy the files PE3NDIS.EXE and PROTOCOL.FTP from the \NDIS directory on the Xircom Network Drivers diskette to the \NDIS directory you created in Step 3.
5. Rename the PROTOCOL.FTP file PROTOCOL.INI.
6. Copy all the files from the \NDIS directory on the FTP Unsupported Software Diskette A to the \NDIS directory you created in Step 3.
7. Reboot the PC.
8. Change to the \NDIS directory and run NETBIND.EXE.
9. Run the ETHDRV.EXE program supplied with PC/TCP to complete the installation.

## FTP Software PC/TCP ODI Driver Installation

1. Install PC/TCP according to the instructions in your FTP PC/TCP manual.
2. (This step not required for PC/TCP versions 2.10 and later.) Using an ASCII text editor, add the following lines to your CONFIG.SYS file:

**DEVICE=[path] IPCUST.SYS**

**DEVICE=[path] IFCUST.SYS**

where *[path]* is the drive and directory specified at the PC/TCP installation.

3. Copy the following files from the \ODI directory on the Xircom Network Drivers diskette to the PC/TCP directory created in the PC/TCP install procedure:

**LSL.COM**

**PE3ODI.COM**

**ODIPKT.COM**

**NET.CFG**

### Note

If your Ethernet frame type is 802.3, you must use the NET.CFG file supplied on the Xircom Network Drivers diskette. For additional parameters that can be used with the Xircom ODI driver, refer to *Appendix C, Command Line Parameters*.

4. To start the workstation, load the drivers in the following order:

**LSL**

**PE3ODI**

**ODIPKT**

**ETHDRV**

5. Continue your server or workstation startup as instructed in the PC/TCP documentation.

## ODI with FTP Software PC/TCP and NetWare

If you need to run Novell NetWare concurrently with FTP PC/TCP, proceed as follows:

1. Install PC/TCP according to the instructions in your FTP PC/TCP manual.
2. (This step not required for PC/TCP versions 2.10 and later.) Using an ASCII text editor, add the following lines to your CONFIG.SYS file:

```
DEVICE=[path] IPCUST.SYS
```

```
DEVICE=[path] IFCUST.SYS
```

where *[path]* is the drive and directory specified in the PC/TCP installation.

3. Copy the following files from the \ODI directory on the Xircom Network Drivers diskette to the PC/TCP directory created in the PC/TCP install procedure:

LSL.COM

PE3ODI.COM

IPXODI.COM

ODIPKT.COM

NETX.EXE

NET.CFG

### Note

If your Ethernet frame type is 802.3, you must use the NET.CFG file supplied on the Xircom Network Drivers diskette. For additional parameters that can be used with the Xircom ODI driver, refer to *Appendix C, Command Line Parameters*.

4. To start the workstation, load the drivers in the following order:

**LSL**

**PE3ODI**

**IPXODI**

**ODIPKT**

**ETHDRV**

**NETX**

5. Change to the network drive (usually F:\LOGIN)
6. Log in to the network.

## **HP LAN MANAGER (VERSIONS 1.X) NDIS DRIVER**

1. Install your HP LAN Manager workstation software according to the instructions in your HP LAN Manager manuals, selecting a 3Com Ethernet network adapter. Before rebooting your system, continue with these instructions.
2. Copy PE3NDIS.EXE (for DOS) or PE3NDIS.OS2 (for OS/2) from the \NDIS directory on the Xircom Network Drivers diskette to the drive and directory you are using for your HP LAN Manager workstation files.
3. Using an ASCII text editor, replace all references to the 3Com Ethernet device driver in your CONFIG.SYS file with references to the Xircom device driver. For example:

**DEVICE=C:\LANMAN\PE3NDIS.EXE (or PE3NDIS.OS2)**

4. Using an ASCII text editor, edit the PROTOCOL.INI file as follows:
- In the section that references the LAN adapters add the following fragment:

**;Xircom Adapter**

**[XIRCOMNET]**

**DRIVERNAME=XIRCOM\$**

- In the protocol bindings definition area of the PROTOCOL.INI replace all references to the 3Com Ethernet adapter with:

**BINDINGS=XIRCOMNET**



For example, in the series:

```
;XNS Protocol  
[XNS_TRANSPORT]  
DRIVERNAME=XNSTP$  
BINDINGS=ETHERLINK
```

replace

```
BINDINGS=ETHERLINK
```

with

```
BINDINGS=XIRCOMNET
```

5. Save the file and reboot the PC.

## **IBM LOCAL AREA NETWORK SUPPORT PROGRAM (VERSION 1.2) NDIS DRIVER**

1. Install the IBM Local Area Network Support Program according to the instructions in the IBM Local Area Network Support Program User's Guide. The following instructions refer to the prompts and messages displayed with the Configuration Aid automated install software provided with the LAN Support Program.
2. If a message appears during the LAN Support Program installation indicating there are no IBM LAN adapters installed in the workstation, bypass the message by pressing Enter.
3. Answer [N]o to program support for the PC Network Adapter.
4. Answer [Y]es to use of programs needing the NETBIOS interface.
5. When prompted, select the Etherand Network family of network cards.
6. Continue with the installation until finished.

7. Use an ASCII text editor to replace the line in your CONFIG.SYS file that reads:

**device=\XX.DOS**

with the line

**device=\PE3NDIS.EXE**

8. Still in the CONFIG.SYS file, add the parameter O=N (where O is a letter, not zero) to the line

**device=\DXMT0MOD.SYS**

as follows

**device=\DXMT0MOD.SYS O=N**

9. Copy the file PE3NDIS.EXE from the \NDIS directory on the Xircom Network Drivers diskette to the root directory of your hard disk or boot diskette.
10. Change to the \LANMAN directory on your hard disk or boot diskette.
11. Use an ASCII text editor to edit the PROTOCOL.INI file as follows:
  - Under the ETHERAND section, the line that reads

**Bindings = TCMAC2**

should be changed to read

**Bindings = XIRCOMNET**

- Underneath that section insert a new section that reads as follows:

**[XIRCOMNET]**

**DriverName = XIRCOM\$**

12. Save the file and reboot the PC.

## **IBM PC LAN and IBM DOS LAN Requester**

1. Install the IBM LAN Support Program for use with the Xircom Pocket Ethernet Adapter III according to the instructions under the heading "IBM Local Area Network Support Program," which immediately precedes this one.
2. Reboot the PC.
3. Install IBM PC LAN or IBM DOS LAN Requester according to the instructions in the IBM documentation.
4. Reboot the PC.

## **IBM OS/2 VERSION 2.0 EXTENDED SERVICES (NDIS DRIVER)**

1. Follow the instructions for an Extended Services installation. If your options require you to choose a Network Adapter card, choose a 3Com EtherLink II Network Adapter, complete the installation, and reboot.

When you reboot, you will receive messages indicating that you do not have a 3Com EtherLink II adapter installed. Ignore these messages and continue with the steps below.

2. From an OS/2 Full Screen command prompt, copy two files from your Xircom Network Drivers diskette to the \IBMCOM\MACS directory, using the COPY command, as follows:

```
COPY A:\NDIS\PE3OS2V2.NIF C:\IBMCOM\MACS
```

```
COPY A:\NDIS\PE3NDIS.OS2 C:\IBMCOM\MACS
```

3. Use an ASCII text editor to modify the CONFIG.SYS file, replacing the 3Com EtherLink II driver name with the Pocket Ethernet Adapter III driver name, as follows:

Change the line

```
DEVICE = C:\IBMCOM\MACS\ELNKII.OS2
```

to read

```
DEVICE = C:\IBMCOM\MACS\PE3NDIS.OS2
```

4. Save the file.

5. Change to the \IBMCOM directory.
6. Use an ASCII text editor to open and edit the PROTOCOL.INI file as follows:

- In the [IBMLXCFG] section, add the line

**PE30S2V2\_nif = PE30S2V2.NIF**

- In the [LANDD\_nif] section, modify the BINDINGS statement so that it reads

**BINDINGS = PE30S2V2\_nif**

- At the end of the PROTOCOL.INI file, add the following lines:

**[PE30S2V2\_nif]**

**DriverName = XIRCOM\$**

7. Save the file and reboot the PC.

## **IBM OS/2 LAN SERVER VERSION 2.0**

### **LAN Requester Installation (for IBM OS/2 LAN Server version 2.0) NDIS Driver**

1. Follow the instructions in your OS/2 documentation for an **Advanced** LAN Requester installation.
2. When installing and configuring the Requester component, under Select Requester Services, choose "Neither of the above" for messaging services, unless you know you need them and have the information required for configuring these services.
3. When you reach the Configure window, select LAN Adapter and Protocol Support, then under the Options window choose Copy additional network adapter drivers.
4. On the Copy Additional Network Drivers window, type in the path A:\NDIS, then insert the Xircom Network Drivers diskette in drive A and follow the prompts.
5. When the Options window is displayed again, select Configure Workstation and choose the Xircom Pocket Ethernet Adapter III with IBM OS/2 NETBIOS protocol.

6. Follow the prompts to complete the installation.
7. Shut down OS/2 and reboot the PC.

## **LAN Server Installation (for IBM OS/2 LAN Server version 2.0) NDIS Driver**

Installation of OS/2 LAN Server automatically includes the installation of OS/2 LAN Requester. For requester-only installation, see the preceding section.

1. Follow the instructions in your OS/2 documentation for an **Advanced** LAN Server installation.
2. When you reach the Configure window, select LAN Adapter and Protocol Support.
3. On the Options window choose Copy additional network adapter drivers, then OK.
4. On the Copy Additional Network Drivers window, type in the path A:\NDIS, then insert the Xircom Network Drivers diskette in drive A and follow the prompts.
5. On the Options window again, select Configure workstation and choose Select Default PROTOCOL.INI, Xircom Pocket Ethernet III Adapter, and the appropriate protocols, then OK.
6. Choose Adapter 0 if the correct adapter is displayed, then OK.
7. Choose Apply the Changes then follow the prompts to complete the installation.
8. Shut down OS/2 and reboot the PC.

## **IBM OS/2 EXTENDED EDITION VERSIONS 1.2X OR 1.3X**

### **LAN Requester (for IBM OS/2 Extended Edition versions 1.2x or 1.3x) NDIS Driver**

1. Configure OS/2 Extended Edition versions 1.2x or 1.3x on your machine using the instructions for a 3Com EtherLink network adapter.

If for any reason you have to reboot at this point, you will receive messages indicating that you do not have a 3Com EtherLink adapter installed. Press Enter to override these messages and continue with the steps below.

2. Open an OS/2 box and use an ASCII text editor to modify the CONFIG.SYS file. Replace the 3Com EtherLink driver name with the Pocket Ethernet Adapter III driver name, as follows:

Change the line

```
DEVICE = \CMLIB\ELNKM.C
```

to read

```
DEVICE = \CMLIB\PE3NDIS.OS2
```

3. Save the file.
4. Change to the \CMLIB directory.
5. Use an ASCII text editor to open and edit the PROTOCOL.INI file as follows:
  - In the [ETHERAND] section, modify the BINDINGS statement so that it reads

```
BINDINGS = XIRCOMNET
```

- At the end of the PROTOCOL.INI file, add the following lines:

```
[XIRCOMNET]
```

```
DRIVERNAME = XIRCOM$
```

6. Save the file.
7. Copy the file PE3NDIS.OS2 from the \NDIS directory on the Xircom Network Drivers diskette to the \CMLIB directory on your hard disk.
8. Shut down OS/2.
9. Reboot the PC.

## **LAN Server 1.3 (for IBM OS/2 Extended Edition versions 1.2x or 1.3x)**

To install LAN Server version 1.3 you must have previously installed OS/2 Extended Edition version 1.3 and two of its component programs: Communications Manager and LAN Requester. Instructions for installing LAN Requester with the Xircom network driver are contained in the preceding section. Once the required components are installed, install LAN Server using the SRVINST program, according to the instructions in the LAN Server documentation.

## **MICROSOFT LAN MANAGER**

### **Microsoft LAN Manager (versions 2.1 and later) for DOS and OS/2 (NDIS Driver)**

1. Begin installation of LAN Manager using "setup."
2. When prompted to select the available network adapter driver, choose "Other Driver" at the bottom of the screen.
3. When prompted, insert the Xircom Network Drivers diskette.
4. Select "Xircom Pocket Ethernet Adapter III" from the menu.
5. Continue with the installation until it is completed.
6. Reboot the PC.

### **Microsoft LAN Manager (version 2.0) for DOS and OS/2 (NDIS Driver)**

1. Begin installation of LAN Manager 2.0 using "setup." At the "Import Network Drivers" screen choose YES.
2. Insert the Xircom Network Drivers diskette.
3. Select "Xircom Pocket Ethernet Adapter III" from the list of drivers to import.
4. Continue with the installation.
5. At the Network Drivers menu, select "Xircom Pocket Ethernet Adapter III" from the list of drivers to install.
6. Continue with the installation until it is completed.
7. Reboot the PC.

## MICROSOFT WINDOWS FOR WORKGROUPS (NDIS DRIVER)

1. Run the Windows for Workgroups "setup" program.
2. When prompted to select the available network adapter driver, choose "Unlisted or Updated Network Adapter" at the bottom of the screen.
3. When prompted, insert the Xircom Network Drivers diskette.
4. Select "Xircom Pocket Ethernet Adapter III" from the menu.
5. Complete the Windows for Workgroups setup, inserting the Xircom Network Drivers diskette as required.
6. Reboot the computer.

## NCR STARGROUP

See the heading "AT&T/NCR StarGROUP."

## NCSA TELNET (PACKET DRIVER)

NCSA Telnet is a public domain Telnet implementation from the National Center for Supercomputing Applications (NCSA). It can be used with PE3PD.COM, Xircom's Packet Driver, which can be found in the \PKTDRV directory on the Xircom Network Drivers diskette. After installing the packet driver in accordance with your NCSA Telnet documentation, assign the following options in the CONFIG.TEL file:

**hardware=packet**

**ioaddr=60**

where 60 is the default software interrupt for the Xircom Packet Driver.

## NDIS DRIVER

The Xircom NDIS driver conforms to the Microsoft Network Driver Interface Specification (NDIS). It can be found in the \NDIS directory on the Xircom Network Drivers diskette. A sample PROTOCOL.INI segment is also included. For installation instructions, see the alphabetical listing for your network operating system in this section. See *Appendix C, Command Line Parameters*, for more detailed information.



## NOVELL NETWORK (VERSIONS 2.1X AND LATER) ODI DRIVER

The Xircom ODI driver allows for the concurrent use of Novell NetWare and other protocols that support Novell's Open Data-Link Interface (ODI) specification.

### NetWare ODI Driver Installation

1. Copy the following files from the \ODI directory on the Xircom Network Drivers diskette to the appropriate directory of your hard disk or network boot disk:

LSL.COM  
PE3ODI.COM  
IPXODI.COM  
NETX.EXE  
NET.CFG

#### Note

If your Ethernet frame type is 802.3, you must use the NET.CFG file supplied on the Xircom Network Drivers diskette. For additional parameters that can be used with the Xircom ODI driver, refer to *Appendix C, Command Line Parameters*.

2. To start the workstation, change to the appropriate directory and load the drivers in the following order:

LSL  
PE3ODI  
IPXODI  
NETX

3. Change to the network drive (usually F:\LOGIN>).
4. Log in to the network.

## **NetWare ODI and Packet Drivers**

If you have a need to run Novell NetWare concurrently with the Xircom packet driver, copy the file ODIPKT.COM from the \ODI directory of the Xircom Network Drivers diskette to the same directory to which you copied the NetWare ODI drivers. From the same directory, load the drivers in the following order:

**LSL**

**PE3ODI**

**IPXODI**

**ODIPKT**

**NETX**

## **NetWare with the Novell SNA Gateway**

If you are running Novell NetWare and communicate to your host computer through a Novell SNA Gateway, configure your Novell SNA workstation software to print to a LAN printer. For additional information, refer to your Novell documentation.

## **NetWare Requester for OS/2 (versions 2.x)**

These instructions explain how to load the Xircom network driver as part of the NetWare Requester installation process.

1. Run the NetWare Requester INSTALL program as instructed in the NetWare Requester documentation and choose Requester on workstation from the Installation menu.
2. After verifying your target directory and source drive for NetWare Requester files, choose Edit CONFIG.SYS and Copy Files at the Requester Installation dialog box.
3. When prompted for the Network Interface Card driver, type in the name of the Xircom driver: PE3ODI.OS2. After completing the other options in the dialog box, click on Save.
4. When asked if the driver you specified is the one you want to install, choose Yes, then type in the path to the Xircom driver:

**A: \ODI\PE3ODI.OS2**

5. Remove the NetWare Requester install diskette and insert the Xircom Network Drivers diskette.
6. At the dialog box "Requester files will copy to:", click on Copy.
7. Complete the installation and exit the NetWare Requester installation utility.
8. Shut down OS/2 and reboot the computer.

## NetWare Requester for OS/2 (version 1.3)

### Note

If the NetWare installation utility allows installing from a floppy disk, insert the Xircom Network Drivers diskette into the disk drive when prompted and install the Xircom driver PE3ODI.OS2 from the \ODI directory on the Xircom diskette. Otherwise, follow the instructions below.

1. Install NetWare Requester for OS/2 and choose any Ethernet adapter (for example, NE2).
2. Using an ASCII text editor, edit the CONFIG.SYS file as follows:  
Replace the line specifying the Ethernet adapter driver you installed in Step 1, for example:

**device=c:[path]NE2.SYS**

with a line specifying the Xircom driver:

**device=c:[path]PE3ODI.OS2**

3. Copy the files PE3ODI.OS2 and NET.CFG from the \ODI directory on the Xircom Network Drivers diskette into the subdirectory containing the file NE2.SYS.
4. Shut down OS/2 and reboot the computer.

### Note

The EPP.OS2 utility, if used, should be listed in the CONFIG.SYS *before* the line containing the PE3ODI.OS2 file.

## NOVELL NETWORK LITE (VERSIONS 1.X) ODI DRIVER

1. Install NetWare Lite according to the instructions in the NetWare Lite manual.
2. When prompted for type of network adapter, choose "3Com EtherLink II" and complete the installation.
3. Copy the files PE3ODI.COM and NET.CFG from the \ODI directory of your Xircom Network Drivers diskette to the \NWLITE directory on your hard disk or boot diskette.
4. Use an ASCII text editor to replace the line in your STARTNET.BAT file that reads

**3C503**

with

**PE3ODI**

5. Save the file.
6. Reboot the PC.
7. Change to the \NWLITE directory and type STARTNET to start the network on that station.

## OS/2

See entries under "IBM OS/2."

## ODI DRIVER

See the alphabetical listing of network operating systems for those that can use the ODI driver. See *Appendix C, Command Line Parameters*, for more detailed information.

## PACKET DRIVER

Xircom's packet driver is based on FTP Software's public domain specification. The driver file PE3PD.COM is located in the \PKTDRV directory of the Xircom Network Drivers diskette. To determine whether you should use the packet driver, refer to the instructions for your network operating system, listed alphabetically in this section. See *Appendix C, Command Line Parameters*, for more detailed information.

## SUN MICROSYSTEMS PC-NFS (VERSIONS 3.5 AND LATER) NDIS DRIVER

1. Install PC-NFS for Ethernet according to instructions in the PC-NFS documentation. Choose NDIS setup, and follow the instructions to complete the setup. Note the prompt that tells you that further manual modifications will have to be made.
2. Reboot. You will see some error messages. Disregard them and continue with these instructions.
3. Rename the file `PROTOCOL.NFS` in the `C:\LANMAN` directory to `PROTOCOL.INI`. Use an ASCII text editor to edit the `PROTOCOL.INI` file as follows:

Replace the items

```
[your-mac-module]
    drivename = YOURMAC$
    option1 = value1 etc.
```

```
[NFS-NDIS]
    drivename = NFSLINK1
    bindings = your-mac-module
```

with

```
[XIRCOMNET]
    drivename = XIRCOM$
```

```
[NFS-NDIS]
    drivename = NFSLINK$
    bindings = XIRCOMNET
```

4. Copy the file `PE3NDIS.EXE` from the `\NDIS` directory on the Xircom Network Drivers diskette to the `C:\LANMAN` directory.
5. Use an ASCII text editor to insert the following line in your `CONFIG.SYS` file:

```
DEVICE=C:\LANMAN\PE3NDIS.EXE
```

between the two lines that read

```
DEVICE=C:\LANMAN\PROTMAN.SYS
```

```
DEVICE=C:\LANMAN\NFS-NDIS.SYS
```

6. Verify that your AUTOEXEC.BAT file contains a line that reads

```
C:\LANMAN\NETBIND
```

before the line that reads

```
NET INIT
```

7. Configure PC-NFS options according to your PC-NFS documentation, and reboot the PC.

## **TENSET TECHNOLOGIES TENSET/TCP (PACKET DRIVER)**

1. Run the Tenset/TCP INSTALL Program as instructed in the Tenset/TCP User Guide. Select the destination drive and directory into which you want to install the Tenset/TCP programs.
2. If your copy of Tenset/TCP does not include the packet driver for the Xircor Pocket Ethernet Adapter III, select the Proprietary driver. Then, after INSTALL completes, copy the Xircor packet driver, PE3PD.COM, from the \PKTDRV directory of the Xircor Network Drivers diskette to the directory in which you installed Tenset/TCP.
3. INSTALL causes the following line to be added to your CONFIG.SYS file:

```
DEVICE=[path]NETDEV.SYS
```

where *[path]* is the drive and directory in which you installed Tenset/TCP.

INSTALL also adds SET RESOURCES and SET HOSTS lines to AUTOEXEC.BAT. Before rebooting, ensure that both your CONFIG.SYS and AUTOEXEC.BAT files include these lines by executing TYPE AUTOEXEC.BAT and TYPE CONFIG.SYS at the DOS prompt. Then, reboot the PC to load NETDEV.SYS.

4. Run CUSTOM NETDEV according to your own needs. At the very least, select a unique Local Site IP Address.
5. Before you can run Tenset/TCP, you must execute the Xircom packet driver, PE3PD, as follows:

#### **PE3PD**

The Xircom packet driver is self-configuring and finds its own LPT port and interrupt under most circumstances. To override the self-configured choices, see the command line options described in Appendix C, or type:

#### **PE3PD ?**

### **UNGERMANN-BASS NET/ONE LAN MANAGER VERSION 2.1 FOR DOS AND OS/2 (NDIS DRIVER)**

The Xircom Pocket Ethernet Adapter III is supported on Ungermann-Bass Net/One LAN Manager and MS-NET networks. There are two NDIS driver packages available from UB: XNS BNS/NDIS and TCP BNS/NDIS. These packages, used with a Xircom NDIS driver, provide files that support both DOS and OS/2 workstations. They are available from UB or an authorized UB representative.

### **Ungermann-Bass Net/One LAN Manager version 2.1 Installation**

1. Begin installation of LAN Manager 2.1 using "setup."
2. When prompted to select the available network adapter driver, choose "Other Driver" at the bottom of the screen.
3. When prompted, insert the Xircom Network Drivers diskette.
4. Select "Xircom Pocket Ethernet Adapter III" from the menu.
5. Continue with the installation until it is completed.
6. Following the UB instructions, modify your CONFIG.SYS file by adding the following line:

For DOS:

**DEVICE = [path]PE3NDIS.EXE**

For OS/2:

```
DEVICE = [path]PE3NDIS.OS2
```

where *[path]* is the drive and directory in which you installed your network operating system.

7. Use an ASCII text editor to modify your PROTOCOL.INI file as follows:

- For each protocol that you want to bind, set the protocol definition area of the PROTOCOL.INI file to:

```
BINDINGS = UBLOOP
```

- At the end of the file, add the following fragments:

```
[UBLOOP]
```

```
DRIVERNAME = UBLOOP$
```

```
BINDINGS = XIRCOMNET
```

```
;XIRCOM ADAPTER
```

```
[XIRCOMNET]
```

```
DRIVERNAME = XIRCOM$
```

8. Reboot the PC.



## **WOLLONGONG PATHWAY ACCESS FOR DOS (VERSIONS 1.1 AND LATER) NDIS AND ODI DRIVERS**

Wollongong PathWay Access for DOS can be installed using Xircom NDIS or ODI drivers. Installation instructions for both types of driver are provided below. For information on which driver is appropriate for your network environment, refer to the Wollongong PathWay Access for DOS documentation.

### **Wollongong PathWay NDIS Installation**

1. Install PathWay Access for DOS Kernel and Drivers programs according to the instructions in the PathWay Access for DOS manual. Before rebooting the PC, continue with the following steps.
2. Use an ASCII text editor to modify the CONFIG.SYS file. After the statement that reads

```
DEVICE=C:\PATHWAY\PWTCP.SYS
```

add the lines

```
DEVICE=\PATHWAY\[PROTMAN FILE] /I:C:\PATHWAY
```

```
DEVICE=\PATHWAY\PE3NDIS.EXE
```

where [PROTMAN FILE] is equal to the PROTMAN2.EXE or PROTMAN.EXE file that is located in your \PATHWAY directory. (Refer to the Wollongong PathWay Access for DOS manual for information regarding the differences between these two files.)

3. Copy the files PE3NDIS.EXE and PROTOCOL.INI from the \NDIS subdirectory on the Xircom Network Drivers diskette to the \PATHWAY directory on your hard disk or boot disk.
4. Continue with the "custom" instructions in the PathWay Access for DOS manual.
5. Reboot the PC.

## Wollongong PathWay ODI Installation

1. Install PathWay Access for DOS Kernel and Drivers programs according to the instructions in the PathWay Access for DOS manual. Before rebooting the PC, perform the following steps.
2. Copy the following files from the \ODI directory on the Xircom Network Drivers diskette to the \PATHWAY directory on your hard disk or boot diskette:

**LSL.COM**  
**PE3ODI.COM**  
**IPXODI.COM**  
**NETX.EXE**  
**NET.CFG**

### Note

If your Ethernet frame type is 802.3, you must use the NET.CFG file supplied on the Xircom Network Drivers diskette. For additional parameters that can be used with the Xircom ODI driver, refer to *Appendix C, Command Line Parameters*.

3. Change to the \PATHWAY directory and load the drivers in the following order:

**LSL**  
**PE3ODI**  
**IPXODI** (only if using Novell NetWare)  
**NETX** (only if using Novell NetWare)

4. Load the Wollongong file ODI.EXE.
5. Continue with the instructions in the PathWay Access for DOS manual.
6. Reboot the PC.



# APPENDIX A. ERROR MESSAGES

The Xircom network drivers report the following problems if they occur during the initialization of a network session. For error messages related to network operation, see your network operating system documentation.

## **A Pocket Ethernet Adapter could not be found**

Ensure that AC power connections are secure (whether from a wall outlet or through the Phantom Power Cable) and that the power cable is connected properly to the power input socket on the rear of the Pocket Ethernet Adapter III.

Ensure that the Pocket Ethernet Adapter III is securely connected to the parallel port (LPT1, LPT2, LPT3) specified during installation.

## **A Pocket LAN Adapter driver is already loaded**

You may have specified a nonexistent parallel port during installation, or a Pocket Ethernet Adapter III device driver is already loaded. Repeat the installation procedure.

## **Pocket Ethernet Adapter III address EEPROM unreadable**

The Pocket Ethernet Adapter III had an internal failure. Run the self test program described in the section on *Configuration and Diagnostics* before calling Xircom Technical Support.

## **This driver does not support the currently connected adapter**

The Pocket LAN Adapter hardware connected to the parallel port is not compatible with the type of driver software being used.

## **The selected interrupt is unavailable**

## **The selected I/O address is unavailable**

## **The selected LPT Port is unavailable**

These messages indicate that values for the parameters listed have been changed in the NET.CFG or PROTOCOL.INI file, or on the command line with packet, Artisoft, or DEC PCSA drivers, and that the system cannot implement the changes.



## APPENDIX B. SOFTWARE SUPPLIED

The files and directories contained on the Xircom Network Drivers diskette are listed below. For installation instructions, see the section *Software Setup and Operation*, where supported network operating systems are listed in alphabetical order. Contact Xircom Technical Support for information about networking environments not covered in this User's Guide.

### **README.DOC**

The latest information about the software.  
To view, type

**MORE <A:README.DOC**

at the DOS prompt.

### **PE3TEST.EXE**

Self test diagnostic program

### **EPP.COM**

DOS command line utility that enables Enhanced Parallel Port (EPP) mode on EPP-capable computers

### **EPP.SYS**

DOS configuration program that enables Enhanced Parallel Port (EPP) mode from the CONFIG.SYS file on EPP-capable computers

### **EPP.OS2**

OS/2 configuration program that enables Enhanced Parallel Port (EPP) mode from the CONFIG.SYS file on EPP-capable computers

### **PE3NDIS.EXE**

NDIS driver for Windows for Workgroups

### **PROTOCOL.INI**

Protocol initialization segment

### **OEMSETUP.INF**

Windows for Workgroups configuration file

### **\ARTISOFT directory**

#### **PE3AILAN.COM**

Driver for Artisoft LANtastic/AI version 4.1

#### **\ATT34 directory**

**XIRATT34.NIF** AT&T/NCR StarGROUP 3.3 and 3.4  
configuration file

**PROTOCOL.INI** Protocol initialization segment

#### **\ATT35 directory**

**XIRATT35.NIF** AT&T/NCR StarGROUP 3.5 configuration file

**PROTOCOL.INI** Protocol initialization segment

#### **\DEC directory**

**PE3DLE.EXE** Datalink driver for use with DECnet-DOS or  
PCSA 3.x

**PROTOCOL.INI** Protocol initialization segment

#### **\MSLANMAN.DOS\DRIVERS\ETHERNET\XIRCOM directory**

**PE3NDIS.EXE** NDIS driver for DOS

**PROTOCOL.INI** Protocol initialization segment

#### **\MSLANMAN.DOS\DRIVERS\NIF directory**

**PE3DOS.NIF** LAN Manager DOS configuration file

#### **\MSLANMAN.OS2\DRIVERS\ETHERNET\XIRCOM directory**

**PE3NDIS.OS2** NDIS driver for OS/2

**PROTOCOL.INI** Protocol initialization segment

#### **\MSLANMAN.OS2\DRIVERS\NIF directory**

**PE3OS2.NIF** LAN Manager OS/2 configuration file

### **\NDIS directory**

<b>PE3NDIS.EXE</b>	NDIS driver for DOS
<b>PE3NDIS.OS2</b>	NDIS driver for OS/2
<b>PROTOCOL.INI</b>	Protocol initialization segment
<b>PROTOCOL.FTP</b>	Protocol initialization segment for FTP Software's PC/TCP and LANWatch
<b>PE3OS2V2.NIF</b>	Configuration file for OS/2 version 2.0

### **\ODI directory**

<b>IPXODL.COM</b>	IPX protocol stack
<b>PE3ODL.COM</b>	ODI driver for DOS workstations
<b>PE3ODL.OS2</b>	ODI driver for Novell NetWare Requester for OS/2
<b>LSL.COM</b>	Link support module
<b>NETX.EXE</b>	NetWare shell for use with DOS 3.x or higher
<b>NET.CFG</b>	ODI configuration file (DOS only)
<b>ODIPKT.COM</b>	Allows operation of Novell NetWare concurrently with a packet driver

### **\PKTDRV directory**

<b>PE3PD.COM</b>	Packet driver file conforming to FTP Software's public domain driver specification
------------------	--

See the alphabetical listing of network operating systems in the *Software Setup and Operation* section for instructions on how to use the files required for your network. Contact Xircom Technical Support for information about other networking environments.





## APPENDIX C. COMMAND LINE PARAMETERS

This appendix contains instructions for using driver parameter settings other than those described in the *Software Setup and Operation* section. The driver types are listed in alphabetical order: Artisoft, DECnet, NDIS, ODI, and packet. In most cases the Xircom driver will be able to automatically configure for the correct parallel port, interrupt value, and EPP, bidirectional, or non-bidirectional mode.

### ARTISOFT LANTASTIC/AI 4.1 DRIVER PARAMETERS

The Xircom Artisoft driver PE3AILAN.COM is self-configuring and therefore finds its own LPT and interrupt values and correctly selects bidirectional or non-bidirectional mode under most circumstances.

Should it be necessary to override the self-configured parameters, use one or more of the following options on the command line with PE3AILAN:

Keyword	Default	Valid Settings
?		
REM		
NON	AUTO	
XEROX	802.3	
LPT=	AUTO	(1 to 3)
IRQ=	AUTO	(3 to 15)
MPX=	C7	(C0-FF)
PACKET_SIZE=	1500	(574 to 1500)
IOADDRESS=	AUTO	(0x240 to 0x380)
LINKDISABLE	LINK	
	INTEGRITY	
	ENABLED	

where

? displays a summary of command line options.

REM unloads the driver from memory.

**NON** forces the driver to run in non-bidirectional mode. Without the "NON" keyword, the driver autoconfigures to bidirectional or non-bidirectional mode.

**XEROX** sets the packet type to Xerox Ethernet. Without the "XEROX" keyword, the driver defaults to 802.3.

**LPT=** requires a number from 1 to 3 which designates the physical parallel port to which the Adapter is connected: LPT1, LPT2, or LPT3. Default (if parameter not specified) is autoconfiguration.

**IRQ=** requires a number designating the parallel port hardware interrupt (for example, IRQ=5 or IRQ=7). Default (if parameter not specified) is autoconfiguration.

**MPX=** requires the multiplexed interrupt ID in hexadecimal notation (C0-FF, default is C7).

**PACKET\_SIZE=** requires the maximum packet size in decimal notation (574-1500, default is 1500).

**IOADDRESS=** requires an I/O address in hexadecimal notation (0x240 to 0x380). Default (if parameter not specified) is autoconfiguration.

**LINKDISABLE** disables link integrity for operation with non-10BASE-T networks such as StarLAN 10. Without the "LINKDISABLE" keyword in the PE3AILAN command line, the driver defaults to link integrity ENABLED.

Instructions for loading the Artisoft driver are provided in the *Software Setup and Installation* section listing network operating systems in alphabetical order by vendor.

## **DECNET-DOS AND PCSA PE3DLLEXE PARAMETERS**

PE3DLL.EXE is the Datalink Driver for Digital Equipment Corporation's DECnet-DOS and PCSA products.

If the PE3DLL command is executed with no parameters, the Adapter will automatically select EPP, bidirectional, or non-bidirectional modes and configure an appropriate parallel port and interrupt value. Should it be

necessary to override the self-configured values, any combination of the following command options can be used:

Keyword	Default	Valid Settings
?		
NON	AUTO	
LPT=	AUTO	(1 to 3)
INT=	AUTO	(3 to 15)
IOADDRESS=	AUTO	(0x240 to 0x380)
LINKDISABLE	LINK INTEGRITY ENABLED	

where

? displays a summary of command options.

**NON** forces the driver into non-bidirectional mode. Without the "NON" keyword, the driver autoconfigures to bidirectional or non-bidirectional mode.

**LPT=** requires a number from 1 to 3 which designates the physical parallel port to which the Adapter is connected: LPT1, LPT2, or LPT3. Default (if parameter not specified) is autoconfiguration.

**INT=** requires a number designating the parallel port hardware interrupt (for example, INT=5 or INT=7). Default (if parameter not specified) is autoconfiguration.

**IOADDRESS=** requires an I/O address in hexadecimal notation (0x240 to 0x380). Default (if parameter not specified) is autoconfiguration.

**LINKDISABLE** disables link integrity for operation with non-10BASE-T networks such as StarLAN 10. Without the "LINKDISABLE" keyword in the PE3DLL command line, the driver defaults to link integrity ENABLED.

Instructions for loading the appropriate DECnet-DOS and PCSA files and drivers are provided in the *Software Setup and Installation* section listing network operating systems in alphabetical order by vendor.

## NDIS DRIVER PARAMETERS

See the alphabetical listing of network operating systems in the *Software Setup and Installation* section to determine whether your network uses an NDIS driver.

PE3NDIS.EXE and PE3NDIS.OS2 are NDIS drivers that support the Pocket Ethernet Adapter III. The `PROTOCOL.INI` file used with these drivers must contain the module name and `DRIVERNAME` as follows:

```
[XIRCOMNET]
```

```
DRIVERNAME = XIRCOM$
```

When the PE3NDIS command is executed, the Adapter will automatically find and use an appropriate parallel port and interrupt value and select bidirectional or non-bidirectional mode. Should it be necessary to override the self-configured values, use an ASCII text editor to add the appropriate combination of the parameters listed below to the **PROTOCOL.INI** file (keywords are not case sensitive):

Keyword	Default	Valid Settings
NON	AUTO	
LPT=	AUTO	(1 to 3)
INT=	AUTO	(3 to 15)
IOADDRESS=	AUTO	(0x240 to 0x380)
LINKDISABLE	LINK	
	INTEGRITY	
	ENABLED	

where

**NON** forces the driver to run in non-bidirectional mode. Without the “NON” keyword, the driver autoconfigures to bidirectional or non-bidirectional mode.

**LPT=** requires a number from 1 to 3 which designates the physical parallel port to which the Adapter is connected: LPT1, LPT2, or LPT3. Default (if parameter not specified) is autoconfiguration.

**INT=** requires a number designating the parallel port hardware interrupt (for example, INT=5 or INT=7). Default (if parameter not specified) is autoconfiguration. Use 0 (zero) to force the Adapter into a polled mode.

**IOADDRESS=** requires an I/O address in hexadecimal notation (0x240 to 0x380). Default (if parameter not specified) is autoconfiguration.

**LINKDISABLE** disables link integrity for operation with non-10BASE-T networks such as StarLAN 10. Without the “LINKDISABLE” keyword in the PROTOCOL.INI file, the driver defaults to link integrity ENABLED.

Instructions for loading the appropriate NDIS files and drivers are provided in the *Software Setup and Installation* section listing network operating systems in alphabetical order by vendor.

## ODI DRIVER PARAMETERS

See the alphabetical listing of network operating systems in the *Software Setup and Installation* section to determine whether your network uses an ODI driver.

The ODI driver PE3ODI.COM uses its default settings unless other options are specified in the NET.CFG file. This file is supplied on the Xircom Network Drivers diskette and must be present in the same directory as the ODI driver.

While the Xircom ODI driver defaults to Ethernet frame type 802.2, the NET.CFG file supplied on the Xircom diskette sets both 802.2 and 802.3. Therefore the Xircom NET.CFG file **must** be used if your network frame type is 802.3.

To change any parameters, use an ASCII text editor to open and modify the **NET.CFG** file and insert the appropriate keywords and values after the line

### LINK DRIVER PE3ODI

Keyword syntax for **NET.CFG** is as follows (keywords are not case sensitive):

Keyword	Default	Valid Settings
FRAME	ETHERNET_802.2	ETHERNET_II ETHERNET_802.2 ETHERNET_802.3 ETHERNET_SNAP
NON	AUTO	
LPT	AUTO	(1 to 3)
INT	AUTO	(3 to 15)
IOADDRESS	AUTO	(240 to 380)
LINKDISABLE	LINK INTEGRITY ENABLED	

where

**FRAME** designates support for multiple Ethernet frame types. One or more types can be used. Refer to your NetWare documentation for more information. The Xircom ODI driver's default frame type is 802.2, but the NET.CFG file supplied with the ODI driver on the Xircom Drivers diskette sets both 802.2 and 802.3. Therefore if your network's frame type is 802.3, you **must** use Xircom's NET.CFG with the ODI driver.

**NON** forces the driver to run in non-bidirectional mode. Without the "NON" keyword, the driver autoconfigures to bidirectional or non-bidirectional mode.

**LPT** requires a space followed by a number from 1 to 3 which designates the physical parallel port to which the Adapter is connected: LPT1, LPT2, or LPT3. Default (if parameter not specified) is autoconfiguration.

**INT** requires a space followed by a number designating the parallel port hardware interrupt (for example, INT=5 or INT=7). Default (if parameter not specified) is autoconfiguration. Use 0 (zero) to force the Adapter into a polled mode.

**IOADDRESS** requires a space followed by an I/O address in hexadecimal notation (0x240 to 0x380). Default (if parameter not specified) is autoconfiguration.

**LINKDISABLE** disables link integrity for operation with non-10BASE-T networks such as StarLAN 10. Without the "LINKDISABLE" keyword in the NET.CFG file, the driver defaults to link integrity ENABLED.

Instructions for loading the appropriate ODI files and drivers are provided in the *Software Setup and Installation* section listing network operating systems in alphabetical order by vendor.



## PACKET DRIVER PARAMETERS

Packet driver parameters must be stated on the command line with the PE3PD.COM packet driver.

See the alphabetical listing of network operating systems in the *Software Setup and Installation* section to determine whether your network uses a packet driver.

The packet driver supplied on the Xircom Network Drivers diskette is based on FTP Software's public domain specification. The driver file PE3PD.COM is located in the \PKTDRV directory on the Drivers diskette.

Refer to your network documentation for instructions on how to install the packet driver with your network. Most installations should be able to use the default settings listed below. To change the default settings, use the appropriate keywords and settings on the PE3PD.COM command line when loading the packet driver.

The Xircom packet driver PE3PD.COM is self-configuring and therefore finds its own LPT and interrupt values and correctly selects bidirectional or non-bidirectional mode under most circumstances. Should it be necessary to override the self-configured parameters, use the following command line options (keywords are not case sensitive):

Keyword	Default	Valid Settings
?		
NON	AUTO	
SINT=	60	(60-80)
LPT=	AUTO	(1 to 3)
INT=	AUTO	(3 to 15)
IOADDRESS=	AUTO	(240 to 380)
LINKDISABLE	LINK	
	INTEGRITY	
	ENABLED	

where

**?** displays a summary of command line options.

**NON** forces the driver to run in non-bidirectional mode. Without the "NON" keyword, the driver autoconfigures to bidirectional or non-bidirectional mode.

**SINT=** is a number from hex 60 to 80 designating a software interrupt. The default is 60.

**LPT=** requires a number from 1 to 3 which designates the physical parallel port to which the Adapter is connected: LPT1, LPT2, or LPT3. Default (if parameter not specified) is autoconfiguration.

**INT=** requires a number designating the parallel port hardware interrupt (for example, INT=5 or INT=7). Default (if parameter not specified) is autoconfiguration. Use 0 (zero) to force the Adapter into a polled mode.

**IOADDRESS=** requires an I/O address in hexadecimal notation (0x240 to 0x380). Default (if parameter not specified) is autoconfiguration.

**LINKDISABLE** disables link integrity for operation with non-10BASE-T networks such as StarLAN 10. Without the "LINKDISABLE" keyword in the PE3PD command line, the driver defaults to link integrity ENABLED.

Instructions for running the packet driver are provided in the *Software Setup and Installation* section listing network operating systems in alphabetical order by vendor.



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