



PC Card

Ethernet Adapter

Product Code:
BEN1PA
BEN2PA

Before You Begin your Installation

The product you have purchased is designed to be easily installed into most IBM PC or compatible systems. Many products have large, easy-to-read legends to allow for the easy configuring of the product. This installation manual contains detailed instructions. Most included software has automatic installation programs to place the software correctly onto your computer. However, as all computers are configured differently, you may be required to perform some basic DOS or Windows tasks. If you are not familiar with basic DOS commands such as DIR, CD, or EDIT, you should check your DOS manual, or seek assistance from your local computer dealer to install the product.



How to get Technical Assistance

The dealer that you purchased this product or your computer from is the first place you should go for technical assistance. The dealer is usually the most qualified source of help, and is most familiar with your system and how this product should be



installed. Many dealers have customer service and technical support programs, with varying levels of support offered, depending on your needs and computer knowledge. ***Please contact the dealer first whenever a problem occurs.***

If your Dealer Can't Assist you

If you can't get assistance from your dealer, the manufacturer provides varying levels of technical assistance as summarized on the following page.



Boca BBS
407-241-1601



**Standard Free
Technical Support**
407-241-8088



**Automated
Fax Retrieval
System**
407-995-9456



Priority Service
900-555-4900
(\$2 per minute)

The Standard Free Technical Support number is for quick answers to specific inquiries on product features and technical questions (call **407-241-8088**; M-F, 8 am to 6:30 pm EST). Direct access to technical support representatives is provided on a limited basis. If you require immediate attention or in-depth help with the installation of the product, please call our 900-priority support number for service. This number gives you immediate access to senior-level technicians. The number is **900-555-4900**. You will be charged \$2.00 per minute. The charges will appear on your next phone bill.

On-Line Support!
CompuServe: GO BOCA
Internet:

email: support@boca.org
on the World-wide WEB:
http://www.boca.org



Damaged or Missing Items

We use many world-class quality assurance programs to ensure the product you purchased is of the highest caliber. Sometimes, however, a component may be missing from the box, or is damaged or corrupt in some way. If this happens, immediately return the entire package to your place of purchase so you may exchange it for a new one. Your dealer should be able to provide you with an exchange far more quickly than by contacting us directly. If for some reason you are unable to return the product directly to its place of purchase, refer to the “Servicing Your Product” and “Warranty” sections in this manual for instructions.

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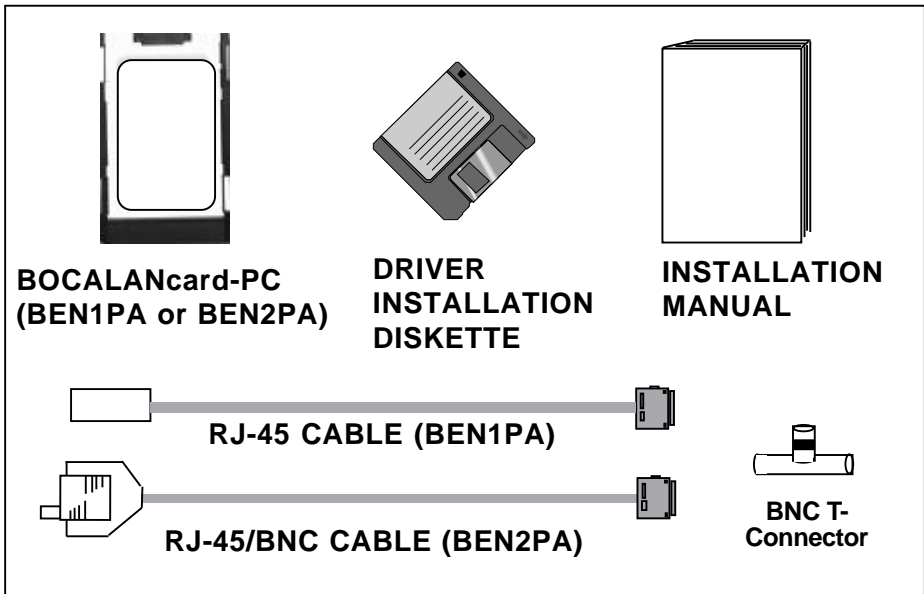
BEN2PA.PM5

Congratulations...

...on the purchase of your BOCALANcard-PC (BEN1PA) or Dual BOCALANcard-PC (BEN2PA) from Boca Research, Inc., a leader in high-tech computer enhancement products. Get started by reviewing the package contents as shown below. After continuing with some basic introductory information, go to the *EXPRESS* Installation on pages 8-11. The balance of the manual contains a product overview, driver installation, troubleshooting, and technical specifications.

Package Contents

Make sure you have received the following items:

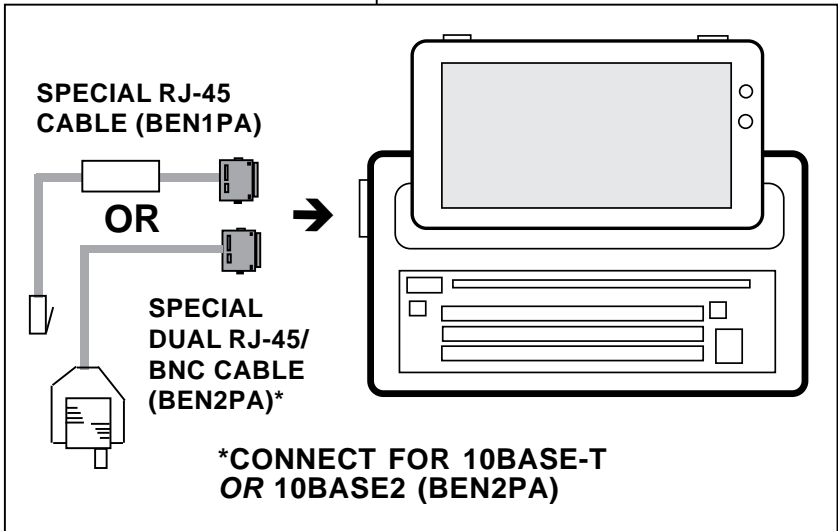
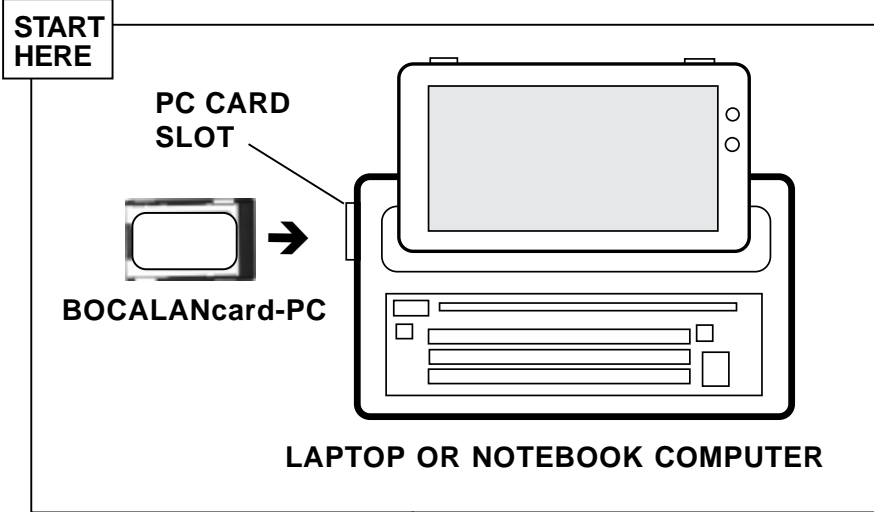


If any items are missing or appear damaged, contact your dealer for assistance.

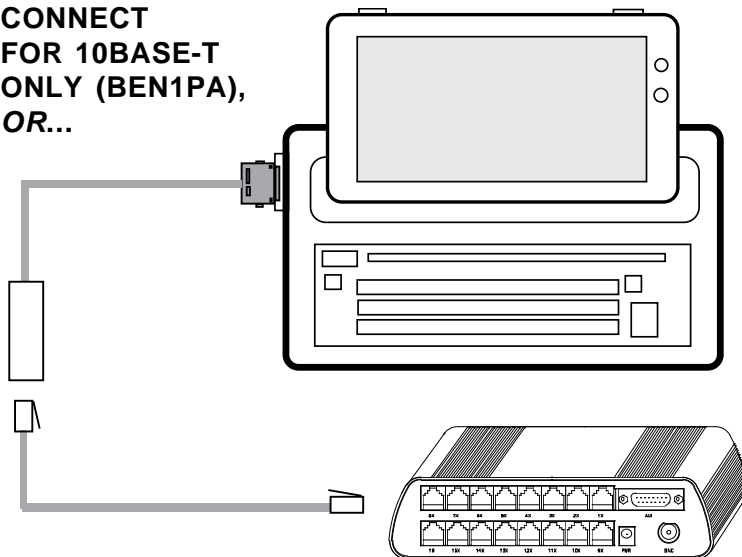
The EXPRESS installation sections which follow on pages 8 through 10 are intended for knowledgeable and experienced users accepting default settings. For more detailed instructions, go to Section Two (page 14).

Section One provides a product overview along with some basic introductory information. Section Three offers solutions to common problems.

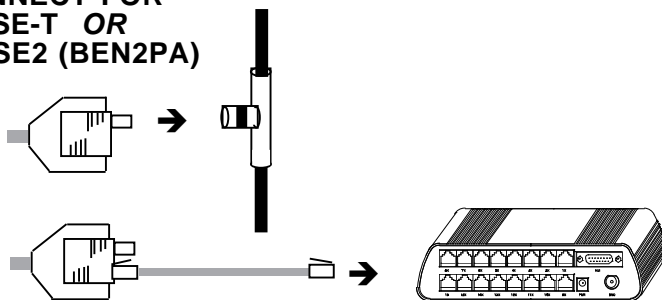
***EXPRESS* Hardware Installation**



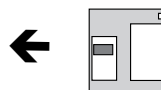
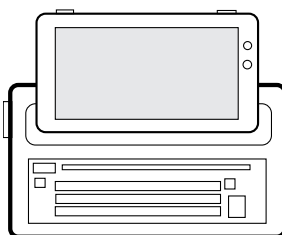
**CONNECT
FOR 10BASE-T
ONLY (BEN1PA),
OR...**



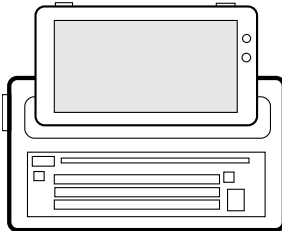
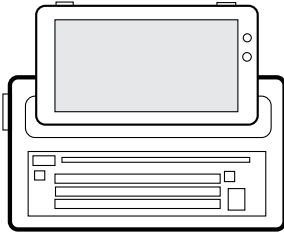
**...CONNECT FOR
10BASE-T OR
10BASE2 (BEN2PA)**



**GO TO PAGE 10,
EXPRESS
SOFTWARE
INSTALLATION.**



***EXPRESS* Software Installation**



**BOOT YOUR SYSTEM
AND GO TO THE C:\
DOS PROMPT.**

**INSERT THE BOCA
RESEARCH BEN1/2PA
DISKETTE IN THE
A:\DRIVE.**

**TYPE A:\INSTALL
AND PRESS ENTER.**

**SELECT THE NETWORK DRIVERS YOU
WISH TO INSTALL BY PRESSING THE
SPACEBAR FOR EACH. FOLLOW ALL
ON-SCREEN INSTRUCTIONS.**

**PRESS ENTER TO COPY THE DRIVERS
TO YOUR HARD DRIVE.**

**NOW, GO TO SECTION TWO FOR
INSTRUCTIONS ON HOW TO CONFIGURE
YOUR NETWORK OPERATING SYSTEM FOR
USE WITH THE BEN1/2PA DRIVERS.**

Section One: Product Overview

The BOCALANcard-PC (10Base-T) and Dual BOCALANcard-PC (10Base-T/10Base2) Ethernet Adapter by Boca allow you to easily connect your laptop or notebook computer to your network. Plug it in to any type II PCMCIA slot. The PCMCIA adapter comes with an RJ-45 connector for unshielded twisted pair (UTP), a BNC connector for coaxial wiring, and software drivers for many popular network operating systems.

The card is switchless, software-configurable, and includes an intelligent “enabler” which recognizes any previously installed card services software. This makes the card compatible with most current and future generations of portable, notebook, and palmtop computers.

Features

- Fully complies with Personal Computer Standard, release 2.0, of the Personal Computer Memory Card International Association (PCMCIA).
- Fully complies with IEEE 802.3 specifications for 10Base-T and 10Base2 Ethernet Local Area Networks.
- “Hot-swap” capability allows you to install and remove the card without powering down.
- Fully software-configurable with no switches or jumpers to set.
- Requires no external power supply.
- PCMCIA-standard 68-pin connector.

Network Driver Support

- Novell's NetWare, NDIS drivers, IBM's LAN Server, Microsoft LAN Manager, Microsoft Windows for Workgroups, and Banyan Vines.

System Requirements

- A laptop, notebook, or compatible with at least one PCMCIA Release 2.0 Type II adapter slot.
- MS-DOS or IBM PC-DOS 5.0 or higher.

A Note on PCMCIA Standards

The PCMCIA (Personal Computer Memory Card International Association) was created in 1989 to establish and monitor standards for these IC (integrated circuit) cards. There are three types of cards which differ only in thickness size: **Type I**, **Type II**, and **Type III**. All three use the same 68-pin connector which attaches the card to the notebook or laptop computer. The cards are *downward* compatible.

Software requirements for these cards are known as **card** services and **socket** services. Card services controls communications between the PCMCIA card and your computer. Socket services monitors each PCMCIA slot to determine if a card is present, so your computer can make use of the card's utilities.

Flexibility. A notebook or laptop computer with a PCMCIA slot allows greater flexibility for adding and interchanging components (e.g., modems, LAN cards).

Card Services and Socket Services Installation

In order for your BOCALANcard-PC to work in your laptop or notebook computer, you may need to install Card and Socket Services. Socket Services provide BIOS-level support to your computer to allow it to communicate with a PCMCIA adapter. Your laptop computer may have socket and card services already installed. If so, you do NOT need to re-install these services. Check with your laptop manufacturer if you are uncertain whether or not these services are installed on your laptop.

Network Driver Installation

It will be necessary to install drivers after you've connected the Ethernet adapter into your laptop or notebook computer. Drivers for some of the more popular network operating systems are included in sub-directories on the device driver diskette which came with this package. These drivers are standard implementations for their respective systems.

If you have any difficulty installing the drivers, then refer to *Section Two: Driver Installation* for particular instructions for your system. Also refer to the README files on the device driver diskette. Review these files for the latest information about drivers and installation instructions. **NOTE: Some network operating systems require some of their original installation diskettes. See your network installation manuals.**

Troubleshooting

If the card does not function after you have installed it and the necessary software, be sure it is completely inserted and that you have set all options correctly. If you still have difficulty, refer to *Section Three: Troubleshooting*.

Section Two: Installation and Configuration

The BOCALANcard-PC is compatible with IEEE Ethernet standards. Most notebook and laptop computers supporting the PCMCIA Type II slot specification have a small covered opening for the slot. Refer to the illustrations on pages 8-9.

STEP 1: Insert the Card

Open the cover to expose this slot. If you require assistance, refer to your computer documentation. Slide the card in **gently but firmly** into the slot until it is fully inserted.

STEP 2: Make Network Connections

1. **If you are using the supplied RJ-45 only cable (BEN1PA)**, then you are connecting to a 10Base-T network only. Attach the special plug end of the supplied RJ-45 cable to the Boca card. Connect the other end (female) to a standard RJ-45 cable. Then, attach the other end to a 10Base-T concentrator or hub.
2. **If you are using the supplied dual-purpose RJ-45/BNC cable (BEN2PA)**, then you are connecting to a 10Base-T **OR** 10Base2 network (**but not both**).
 - a. **If 10Base-T**, attach the special plug end of the supplied dual-purpose cable to the Boca card. Then, attach the remaining end to a standard RJ-45 cable. Attach the other end of the standard cable to a 10Base-T concentrator or hub.

- b. ***If 10Base2***, attach the special plug end of the supplied dual-purpose cable to the Boca card. Connect the BNC end to a BNC T-connector. Twist clockwise approximately one-quarter turn. **NOTE: If the workstation (i.e., your laptop), is at the end of the cable segment, you will need to attach a 50-ohm terminator to the open end of the T-connector.**

STEP 3: Install the Drivers

There is a driver diskette included with the BOCALANcard-PC. This diskette configures the card to the type of software in your system. Before beginning installation, make a back-up diskette for the software driver diskettes. Use the backup diskette as the working diskette. If drivers do not appear to have installed correctly, or if you receive an error message, refer to *Section Three: Troubleshooting*.

An install program is provided to install the BENCFG utility and the other drivers onto your hard disk. To run the program, insert the Boca driver diskette, type A:\INSTALL.

Please read the introductory screen which provides some cautionary notes before beginning actual driver installation. Press any key when done. The BOCALANcard-PC Install Program provides a series of options as follows. Continue with the next page for a discussion of these options.

1. After an introductory screen, the installation program asks you specify a destination drive.
2. Following that, a screen similar to the one below is displayed:



3. The installation program asks for destination directories to where the network operating system files will be copied. Accept the default or change the directory name. Press ENTER when ready.
4. The Installation program copies the driver(s) to your system, then sets up the card with the default choices.
5. Reboot your system.
6. If you need to reconfigure the card, run the BENCFG utility from the directory where you installed the drivers.

STEP 4: Configure the Card with BENCFG

If for any reason the default configuration fails to work, check your system for port, IRQ, or memory address conflicts and adjust switch parameters as needed.

The default settings for BENCFG are IRQ5 and port address 300h if loaded without any parameters. This information will be needed for your NET.CFG file, or your PROTOCOL.INI file, depending on your operating system. Most computers will operate with these default settings. If not, run BENCFG to change the settings.

Advanced users may change configuration manually by modifying your CONFIG.SYS as shown below and on the following page.

NETOPEN must be the last line entered in your CONFIG.SYS. Your NETOPEN line should read:

```
DEVICE=C:\BENXPA\NETOPEN.EXE /INT=A /PORT=300 /MEM=D000
```

NETOPEN [/INT=Q] [/PORT=PPP] [/MEM=MMMM] [/SKT=S]

WHERE:

Q is a 1-digit hex number representing the interrupt. Available options are 3, 4, 5, 10, 11, 12, 15.

PPP is a 3-digit hexadecimal number representing I/O port base address. Available options are 240h-360h (hexadecimal format) in increments of 10.

MMMM is a 4-digit hexadecimal number representing the memory base address. Available options are C800-DFFF in 16K-byte increments. **NOTE: Memory base addresses assigned with NETOPEN should be excluded from your EMM386.EXE (or the equivalent line in your CONFIG.SYS).**

You will need to change the following line in your CONFIG.SYS (example assumes the card is configured for memory address D000).

Before: DEVICE=C:\DOS\EMM386.EXE...

After: DEVICE=C:\DOS\EMM386.EXE... X=D000-DC00

S is a 1-digit number representing socket number. This is only necessary if your computer has two sockets (first is 0; second is 1).

Example of NETOPEN options:

DEVICE=NETOPEN /INT=3 /PORT=240 /MEM=C800 /SKT=1

When the proper addresses have been assigned, reboot your computer. After the driver loads, a message similar to the following will appear

**LAN CARD Enabler
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All Rights Reserved**

The card is now configured and should be ready to load the network drivers. Continue with the appropriate section for configuring your network operating system with the BEN1PA/BEN2PA drivers.

Novell NetWare Drivers

Novell NetWare driver support includes:

- DOS ODI Client Drivers for Novell NetWare 3.11 through 4.02.

A NET.CFG file is needed to establish defaults for the Boca PCMCIA card. An MLID section must exist in the NET.CFG if your network has more than one adapter.

NOTE: The ODI driver always checks the parameters of the NET.CFG first. If the related adapter's configuration parameters are found, they will be recognized as the "preferred setting" even though it conflicts with parameters stored in the EEPROM adapter. Thus, it will fail to initialize the adapter. The following is an example of a NET.CFG file:

Link Driver PMXMLID

```
Frame Ethernet_802.3
Frame Ethernet_II
Frame Ethernet_802.2
Frame Ethernet_Snap
  INT 5
  PORT 320
```

Your port and interrupt address should be the same as the ones assigned by NETOPEN.

1. To install ODI Client drivers, run INSTALL from the Boca driver diskette (refer to STEP 3 on pages 15-17).
2. To manually load your network files from the DOS prompt each time the system is restarted, type the following commands in the given order to initialize the DOS ODI driver support and the IPL protocol stack. Be sure you in the current directory where the files are located.

```
LSL.COM [ENTER]  
PMXMLID.COM [ENTER]  
IPXODI.COM [ENTER]  
NETX.COM [ENTER]
```

3. To automatically load these files, use a DOS text editor to create and/or modify a batch file, then save it to disk. You may use your AUTOEXEC.BAT if you desire. Load the files in the following order: PCMCIA card enabler, link support layer, LAN Driver, protocol stacks, then the shell. Your batch file should look similar to the following:

```
CD\<PATH>      (change directory to location of files)  
LSL.COM  
PMXMLID.EXE  
IPXODI.COM  
NETX.COM
```

4. To change any default settings when the driver is loaded, you must create a NET.CFG file on the workstation diskette. You can use NET.CFG to change interrupt priority, port address, frame type, and socket location. See Appendix D for more information.

Refer to the NetWare ODI DOS installation documentation for more information on installing the DOS ODI driver.

IBM OS/2 LAN SERVER VERSION 3.0

Do the following to install IBM's OS/2 LAN Server:

1. Install the OS/2 Advanced LAN server from the OS/2 documentation.
2. Install the LAN Adapter and Protocol Support (LAPS) program.
3. Select "Install" again to copy the Boca PCMCIA driver file to the hard disk. When prompted, type: A:\NDIS2.
4. Select Configure and choose the "Boca Ethernet PC Card".
5. Choose the appropriate protocols and bindings.
6. Choose "Apply the Changes" and follow the instructions to complete the installation.
7. Close OS/2 and reboot.

MICROSOFT LAN MANAGER

Microsoft LAN Manager (2.1 or later) for DOS and OS/2 (NDIS Driver)

1. Use the Setup program from Microsoft LAN manager to begin installation.
2. Select “Other Driver” when prompted to select the available network adapter.
3. Insert the Boca PCMCIA driver diskette and type A:\NDIS2..
4. Select the “Boca Ethernet PC Card” from the menu.
5. Complete the installation and reboot the computer.

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

1. Use the Setup program from Microsoft LAN Manager to begin installation.
2. Choose “Yes” at the Import Network Drivers screen.
3. Insert the Boca PCMCIA driver diskette and type A:\NDIS2.
4. Select the “Boca Ethernet PC Card” from the list of drivers to import.
5. Continue installation.
6. Select the “Boca Ethernet PC Card” from the Network Driver menu.
7. Complete installation and reboot the computer.

LAN MANAGER Version 2.0

Do the following to install the LAN Manager drivers.

1. Type “Setup” in the LAN Manager Directory and press <ENTER>.
2. Press <ENTER> again.
3. Choose “Import Network Driver...” in “Action” and press <ENTER>.
4. Enter the specific floppy drive (A:\NDIS2). The Import Network Drivers screen should now appear.
5. Press the <SPACEBAR> to select the Boca PCMCIA Adapter card and press <ENTER>.
6. Select “NO” on the screen.
7. Press <ENTER> three times and the Network Driver will appear.
8. Choose the “Boca Ethernet PC Card” in the Network Adapter Cards select menu.
9. Choose the “Add Driver” option, the “Add Protocol,” and the “OK” selections. The Workstation Primary parameters appears. Select “OK.”
10. Select “OK” three times.
11. Choose “Save” in “Action”, then press the <F3> to exit.

LAN MANAGER Version 2.1

Do the following to install the LAN Manager drivers.

1. Type "1mSetup" in the LAN Manager Directory and press <ENTER>.
2. Choose "Network Driver.." in "Configuration" and press <ENTER>.
3. Choose "Add New Configs" and press <ENTER>. The Network Adapter Drivers should now appear.
4. Choose "Other Driver" and press <ENTER>.
5. Insert the Driver diskette into the specific floppy drive and enter the drive (A: or B:).
6. Choose an available Network Adapter Driver (PCMCIA Ethernet adapter) and select "OK."
7. Press the <SPACEBAR> to select the specific protocol.
8. Select "OK" and the Configuration Complete indication appears.
9. Choose "Save" and press <ENTER>.

2.7 WINDOWS FOR WORKGROUPS

Do the following to install the Windows for Workgroups drivers.

1. Select “Control Panel” icon in Main group in Windows Program Manager.
2. Select “Network” icon.
3. Select “Adapters” item in “Option” dialog.
4. Push <Add> button.
5. Select “Unlisted or Updated Network Adapter”. “Install driver” appears.
6. Key in specified drive and path name.(A:\NDIS2).
7. Insert your driver diskette in the specified drive, then press <Enter>.
8. Select <OK>, then <Close>.
10. Click <OK> twice and restart the computer.

2.8 BANYAN VINES

Do the following to install the Banyan Vines drivers:

1. Type PCCONFIG. Press <Enter>. The message “Configuring A PC for the Network” appears.
2. Select “1 - Network Card Setting” and press <Enter>. “The possible hardware configuration options are” message appears.
3. Chose “NDIS Ethernet” and press <Enter>.
4. Key in the specified interrupt number and PCMCIA to the PROTOCOL bindings = .
5. Press ‘F10’ when done. Press <Esc> to exit this screen.
6. Select “2 - Login Environment Settings. “, and press <Enter>.
7. Select “1 - Select Default Communications Driver. “ and press <Enter>.
8. Choose “NDIS Ethernet”; press <Esc> to exit this menu.
9. Press ‘F10’ when complete. The message “Please wait...” appears.
10. Modify the CONFIG.SYS and PROTOCOL.INI files.

Section Three: Troubleshooting

This section provides a list of possible software error messages with suggested solutions as well as other common problems that may be encountered. Always make sure that the network you are connected to is functioning.

Message: THE BOARD CANNOT BE FOUND

Problem: The adapter is not present or the driver does not recognize the adapter.

Solution: Plug the adapter into your PC card slot.

Message: BOARD RAM FAILED THE MEMORY TEST

Problem: The RAM buffer on the adapter failed.

Solution: Change to a new adapter and run the driver again.

Message: THE BOARD DID NOT RESPOND TO THE INITIALIZATION COMMAND

Problem: The driver recognized the adapter, but the adapter failed to respond.

Solution: Change to a new adapter and run the driver again.

Message: THERE IS NO CABLE CONNECTED TO THE ADAPTER

Problem: There is no cable connecting to the adapter, or the transceiver within the adapter failed.

Solution: Connect the cable to the adapter and run the driver again.

Message: ADAPTER CARD NOT FOUND OR I/O PORT ERROR

Problem(s): There two possible reasons for this message:

- (1) the adapter card is not installed correctly or,
- (2) an incompatibility between exists between the computer and the adapter card.

Solution: Check to make sure the card is seated properly, or check if the card is enabled correctly.

The balance of the Troubleshooting section provides tips to isolate and solve common problems. If the problems remain unsolved, contact your dealer for assistance. Write a problem description, including what problems occurred, when they occurred, duration of the problems, type of hardware, software, and DOS version that you're using.

You may also run the MSD (Microsoft Diagnostics) program, which is available from DOS 6.0 (or higher) or Windows 3.1. Then select Report ALL and send this report to your dealer's technical support. In your report, also indicate your:

- NOS and version number
- Software driver type and version number

Symptoms:

Your computer reboots or hangs after running the network driver PMXMLID.COM.

Possible Cause: The PC Card enabler may be conflicting with installed card and socket services. Some card and socket and services may cause a problem with the way they allocate system resources for PCMCIA devices.

Solution: Disable card and socket services in your CONFIG.SYS. Do this by placing the REM command in front of the card and socket services commands in your CONFIG.SYS. Reboot your computer and rerun your PC card enabler (NETOPEN.EXE) and proceed to load your network drivers. Contact your card and socket services manufacturer for the latest revision of the software.

Symptoms:

1. Unshielded twisted-pair connection results in Card failure; Link LED indicator is off.
2. Running Test Adapter results in External Loopback Test failure.

Possible Cause: Invalid twisted-pair link.

Solution:

1. Check the RJ-45 connection for loose cabling.
2. Check for wrong RJ-45 pin assignments.

Symptoms:

1. Coax connection results in card failure.
2. Rx/Tx LED indicator flashes on and off.

Possible Cause: Bad coax cable link

Solution:

1. Check BNC connection for loose cabling.
2. Make sure that both ends of the network segment are properly terminated. Terminate the open end of the network segment with a 50-ohm terminator.

Symptoms: Ethernet PCMCIA Card failure; suddenly cannot log into the network

Possible Causes:

1. Bad cable connection.

2. Ethernet PCMCIA Card not properly installed in PCMCIA slot.
3. Host PC's slot defective.

Solution:

1. Check cabling for loose connection or wrong pin assignment if you're using the RJ-45 connection.
2. Check if the card is properly inserted in the PCMCIA slot; it may have been accidentally loosened.
3. Install the Ethernet PCMCIA Card in another computer, or install it on another slot (if available). If the problem is eliminated, then the original slot may be defective. Contact your dealer for assistance.

Symptom: Card failure after configuration.

Possible Cause: Configuration conflict.

Solution: Check I/O and IRQ for possible setting conflicts. Make sure they don't conflict with other devices.

Symptom: Problems loading socket services...

Solution: The lines added to the CONFIG.SYS file to load Socket and Card Services should follow any entries used to load memory managers. These drivers **MUST** also be placed after any entries which load Power Management software.

Symptom: If you are using memory management software...

Solution: You MUST instruct the manager to exclude the ROM Expansion area assigned to socket and card services. This is done by adding a command line to the DEVICE= line used to load the memory manager in your CONFIG.SYS file. For example, Microsoft EMM386 requires the argument X=mmmm-nnnn, where mmmm is the starting segment address and nnnn is the ending segment address of the area to be excluded. See your memory manager documentation for more information.

Symptom: Incompatibility with your system's BIOS...

Solution: The BIOS in many portable computers and laptops resides in flash memory which is easily updated. Most laptop manufacturers allow you to download an updated BIOS via their BBS.

Symptom: If Socket Services is loaded into a system that already has other socket services installed...

Solution: A warning message is displayed. Socket Services will initialize all other hardware, but does not affect the previous socket settings. If your system locks immediately after Socket Services is loaded during CONFIG.SYS file processing, or if your system begins to behave erratically (i.e., beeping, etc.), power-off and restart.

Symptom: If mouse handling becomes erratic or interferes with PCMCIA card activity...

Solution: This normally results from assigning the card to the COM port corresponding to the mouse's COM port (e.g. COM1 and COM3, or COM2 and COM4).

Symptom: Cannot Load Network Drivers...

Solution: Make sure the card is fully inserted correctly and the cable to the card is inserted correctly.

Appendix A: Specifications

- **System Configuration:** PCMCIA-compliant computers
- **Standard Conformance:** IEEE 802.3 standard, PCMCIA Release 2.1 Type II, JEDIA 4.1
- **Bus-Width:** 16-bit
- **RAM Buffer** 16KB
- **I/O Base Addresses:** 240h to 360h, software-selectable
- **Interrupts:** 3, 4, 5, 10, 11, 12, 15
- **Card Dimensions:** 85mm x 54mm x 5mm
(3.37" x 2.13" x .197")
- **Power Requirements:** BNC Transceiver: +5V/0.28A max.
(typical)
Twisted-pair: +5V/0.16A max.
(typical)
- **Temperature:** 0° to 55° C (standard operating)
32° to 131° F
- **Humidity:** 10% to 90% (non-condensing)
- **FCC:** Meets Part 15, Class A requirements
(see Appendix B)

Appendix B: FCC Compliance

This equipment has been tested and found to comply with the limits for a Class A digital device, 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 instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case users will be required to correct the interference at their own expense.”

**CHANGES OR MODIFICATIONS TO THIS EQUIPMENT
NOT EXPRESSLY APPROVED BY THE MANUFACTURER
COULD VOID YOUR AUTHORITY TO OPERATE THE
EQUIPMENT.**

Appendix C: Servicing Your Boca Product

If your Boca product requires service, first contact the authorized dealer from whom you purchased the product. If the dealer is unable to assist you, and you must contact Boca Research, Inc., please follow the instructions below.

Our electronic BBS is available 24 hours a day at (407) 241-1601 and will support data transmission speeds up to 28.8Kbps with settings of N, 8, 1. If you have a modem, the BBS may be helpful (especially during off hours) if you have a question about product settings or compatibility, or if you wish to download driver software or utilities.

If the Troubleshooting section did not resolve your problem, you may call our technical support staff for assistance. If you haven't referred to the Troubleshooting section, there's a good chance the solution to your problem is there.

NOTE: CALLING TECHNICAL SUPPORT WITHOUT COMPLETE AND ACCURATE INFORMATION CONCERNING YOUR PROBLEM MAY BE BOTH TIME-CONSUMING AND FRUSTRATING FOR YOU.

1. When calling Boca Research Technical Support, have the following information available:

Board name and part # (located on the board)
Computer manufacturer
Computer model
Peripherals in system
Operating system and version

If you suspect a problem with a specific program or software package, make note of the name, version or release number, and manufacturer of the software.

2. Call Boca Research Technical Support Department between the hours of 8:00 a.m. and 6:30 p.m. Monday through Friday EST at (407) 241-8088. A technical support specialist will be available to discuss the problem(s) you are experiencing. If factory service is required, you will be given a Return Merchandise Authorization (RMA) number. **Please place this number on the outside of the package** when you return the item(s) for service and reference it on any correspondence included in the package. Boca Research, Inc. will return any product which is not accompanied by an RMA number.
3. Refer to the Warranty Statement if the product is covered under the five-year Boca Research, Inc. Limited Warranty.
4. Certain parts will not be covered under the Boca Research, Inc. Limited Warranty. Dealer installed parts are warranted by the dealer. Parts which you have installed yourself are covered only by the suppliers warranties. In these cases, Boca Research, Inc. can identify which parts are defective, but will not replace such parts until we receive written authorization from you. Cost of parts and labor involved in making such repairs will be billed to you C.O.D.
5. When returning the product to Boca Research, Inc. for repairs, please be sure to include:
 - **copy of the original invoice**
 - **the Boca Research product (card only)**
 - **your return street address (for UPS purposes), your phone number, and the RMA number mentioned above.**

Package the product securely in a container equivalent to the original packaging, and insure the package to protect against loss or damage during transit. Shipping charges must be prepaid; C.O.D. shipments will not be accepted. Please use the address below for all correspondence:

Boca Research, Inc.
RMA Department - RMA # _____
1601 Clint Moore Road
Boca Raton, FL 33487-2841

6. If the repairs performed on your product were covered by the warranty, Boca Research, Inc. will return it prepaid via UPS.

Limited Warranty

Boca Research, Inc. (BRI) warrants to the original buyer of this BRI product that the hardware is free of defects in materials and workmanship for a period specified in the original sales contract (“the Warranty Period”). Should the product fail to be in working order at any time during the specified period, BRI, will at its option, repair or replace this product as described below, provided that in BRI’s sole determination the part or product has not been abused, misused, repaired, or modified.

All products will be serviced and returned via ground at no charge to customers DURING the first year of service.

All returns for limited warranty service require a Return Merchandise Authorization (RMA). All customers are required to demonstrate proof of purchase when requesting an RMA. The period of warranty commences on the date of purchase. A dated copy of the sales slip must be included with the returned merchandise.

Products which require Limited Warranty service during the warranty period should be delivered to BRI at the address shown below in the Appendix (Servicing Your Boca Product) with proof of purchase, copy of canceled check (if any), and the Return Merchandise Authorization (RMA) number provided by BRI Technical Support. Refer to the Appendix in this manual. Replacement parts or complete products will be furnished on an exchange basis only. Replaced parts and/or products become the property of BRI.

If the returned product is sent by mail, the purchaser agrees to prepay shipping charges, insure the product or assume the risk of loss or damage which may occur in transit, and to use a shipping container equivalent to the original packaging. BRI does not make any warranties in respect to the product, either expressed or implied, including no implied warranties of merchantability or fitness for a particular purpose, except as expressly provided in this agreement. If any labor, repair, or parts replacement is required because of accident, negligence, misuse, theft, vandalism, fire, water or other peril; or because of conditions outside of specifications, including, but not limited to, electrical power, temperature, humidity or dust; or by moving, repair relocation, or alteration not performed by BRI, or by any other cause other than normal use, the warranty and maintenance obligations provided herein shall not apply.

BRI SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OR FOR LOSS, DAMAGE, OR EXPENSE DIRECTLY OR INDIRECTLY ARISING FROM CUSTOMER’S USE OF OR INABILITY TO USE THE EQUIPMENT EITHER SEPARATELY OR IN COMBINATION WITH OTHER EQUIPMENT, OR FOR PERSONAL INJURY OR LOSS OR DESTRUCTION OF OTHER PROPERTY, OR FROM ANY OTHER CAUSE.

This warranty shall not be applicable to the extent that any provision of this warranty is prohibited by any Federal, state, or municipal law which cannot be preempted. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



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