

PC

MACLAN

FOR WINDOWS 95

Miramar Systems, Inc.

Network any
Windows 95 PC
and Macintosh

Fully Windows 95
Compliant

Redefine Your Environment...
with PC MACLAN for Windows 95





User's Manual

Miramar wishes to acknowledge the creative input and feedback of our customers which played a significant role in the contents of this manual as well as the feature sets and improvements in our products. We here at Miramar value our customers and any suggestions you may have for this product and future related products are appreciated.

Copyright © 1997 Miramar Systems Inc.

PC MACLAN Connect, Personal MACLAN Connect, Redefine your environment & No Mac is an Island, are trademarks of Miramar Systems, Inc. Apple, AppleTalk, EtherTalk, TokenTalk, AppleShare, Chooser, AFP, LaserWriter, Macintosh, and Mac are trademarks of Apple Computer, Inc. Novell and NetWare are registered trademarks of Novell, Inc. HP, DeskJet, LaserJet are registered trademarks of Hewlett Packard, PostScript is a registered trademark of Adobe Systems, Inc. Windows, Windows 95, Network Neighborhood, Explorer, Excel, and Word are registered trademarks of Microsoft, Inc., EtherChain & PCTalk are registered trademark of Apexx Technology, Inc., EtherWave is a registered trademark of Farallon Computing, Inc., PageMaker is a registered trademark of Adobe Corporation.

Network adapter drivers provided with this software may only be used with the designated adapters.

Miramar Systems, Inc.
121 Gray Ave, Suite 200
Santa Barbara, CA 93101
Corporate Office (805) 966-2432
Technical Support (805) 965-5161
FAX (805) 965-1824
Internet www.miramarsys.com

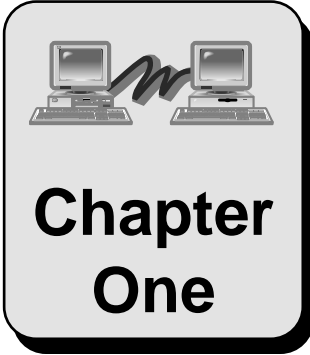
PC MACLAN Version 6.2
April 1997

Table of Contents

	Page
1 Getting Started	1-1
Manual Contents	1-2
How To Use This Manual	1-3
Getting Started	1-3
Technical Support	1-5
2 About PC MACLAN for Windows 95	2-1
Understanding Networks	2-2
PC MACLAN for Windows 95 Components	2-3
PC MACLAN Program Group	2-4
File Names and Properties	2-7
File Access Privileges	2-7
File Extension Mapping	2-9
Online Help	2-11
3 Preparing for Installation	3-1
Types of Network Connections	3-2
Software and System Requirements	3-2
IBM-Compatible Computer	3-3
Macintosh Computer	3-3
Printer Requirements	3-3
Network Adapters and Drivers	3-4
Ethernet or Token-Ring	3-4
LocalTalk	3-4
Network Cabling	3-5
Printer Requirements	3-6
Information You Need to Know	3-7
4 Installing PC MACLAN for Windows 95	4-1
The Installer Program	4-2
Installation Options	4-3
Standard Installation for Ethernet or Token-Ring Networks	4-4
Custom Installation for Ethernet or Token-Ring Networks	4-9
Installation for LocalTalk Networks	4-17
Uninstall PC MACLAN	4-26
Upgrade PC MACLAN	4-30

	Page
5 Setting Up PC MACLAN Client	5-1
About PC MACLAN Client	5-2
Logging On and Logging Off	5-2
Mapping to a Network Drive	5-6
Setting Up Client Print Services	5-9
Viewing/Changing AppleTalk Printer Functions	5-13
Creating/Viewing a Printer Log File	5-14
Auto-Spooling Print Jobs from a Directory	5-16
Changing Your Password	5-18
Changing Your Zone	5-20
6 Setting Up PC MACLAN File Server	6-1
PC MACLAN Server Console	6-2
Setting File Server Security Parameters	6-3
Defining Users and Groups	6-4
Defining Users	6-4
Defining Groups	6-9
Defining Shared Directories and Access Privileges	6-13
Create a Shared Directory / Assign Access Privileges	6-14
Change Access Privileges	6-17
Unshare a Directory	6-18
Defining a File Extension Map	6-18
Starting the File Server Automatically	6-23
7 Setting Up PC MACLAN Print Server	7-1
Printer Services and Spoolers	7-2
Creating a New Print Spooler	7-3
Starting and Stopping a Print Spooler	7-6
Editing a Print Spooler	7-8
Removing a Print Spooler	7-9
Exiting the Print Server	7-10
Using Print Services	7-10
8 Using PC MACLAN Client	8-1
Displaying Shared Files	8-2
Copying Files	8-3
Sharing Windows Applications	8-5
Viewing File Properties and Privileges	8-6
Defining a File Extension Map	8-8

	Page
9 Using PC MACLAN File Server	9-1
Start Server, Shutdown and Cancel Shutdown	9-2
Display and Use Shared Files	9-4
Real-Time Folder Update	9-4
Disable and Enable Logins	9-5
Display Connections and Send Messages	9-6
Backup System Files	9-8
Purge Volume	9-10
Exit the File Server	9-11
10 Using the Macintosh with PC MACLAN	10-1
About the Macintosh Network	10-2
Turning on AppleTalk	10-2
Selecting a Network Connection Type	10-3
Naming Your Computer and Starting Sharing	10-4
Sharing a folder	10-6
Logging On to the PC MACLAN Network	10-7
Working on the Desktop	10-9
Setting Access Privileges for Your Folders	10-9
Logging Off the Network	10-11
Using a Shared Printer	10-11
Glossary	G-1
Appendix A: Tips and Tricks	A-1
Appendix B: AppleTalk Protocol Installation	B-1
Appendix C: Configuration Parameters	C-1
Index	I-1



Getting Started

Welcome to the PC MACLAN for Windows 95 network system. Working on a network will make sharing files and printers between Windows 95 PC users and Macintosh users an efficient, expedient process. This chapters tells you how to use this manual to get your system up and running.

Topics include:

- Manual Contents
- How to Use This Manual
- Getting Started
- Technical Support

Before you start, you should write your serial number here.

Serial Number

About This Manual

This manual contains the following information:

Chapter 1 Getting Started: Provides an overview of the manual contents and the steps to follow for setting up your network using PC MACLAN.

Chapter 2 About PC MACLAN for Windows 95: Explains what a network is, the network components included in PC MACLAN as well as specific features.

Chapter 3 Preparing for Installation: Explains the ways to connect your computers for a network as well as the specific hardware and software you need to set up your network.

Chapter 4 Installing PC MACLAN for Windows 95: Provides the step-by-step instructions for installing PC MACLAN with the Windows 95 operating system.

Chapter 5 Setting Up PC MACLAN Client: Provides step-by-step instructions for accessing PC MACLAN Client file and print services.

Chapter 6 Setting Up PC MACLAN File Server: Provides step-by-step instructions for setting up PC MACLAN File Server.

Chapter 7 Setting Up PC MACLAN Print Server: Provides step-by-step instructions for setting up PC MACLAN Print Server and explains how to use a printer connected to the network.

Chapter 8 Using PC MACLAN Client: Explains how to display, access and copy files shared using PC MACLAN Client.

Chapter 9 Using PC MACLAN File Server: Explains how to use the PC MACLAN File Server after the setup is complete and how to display and access shared files.

Chapter 10 Using the Macintosh with PC MACLAN: Provides step-by-step instructions for setting up your Macintosh network, logging on, and using shared files.

Glossary: Defines terms that relate to the use of PC MACLAN for Windows 95.

Appendices: Provide technical information about the configuration of PC MACLAN for Windows 95.

How To Use This Manual

This manual is for people who install or use PC MACLAN for Windows 95. The manual assumes you are familiar with the basic Windows 95 environment and that you have basic Windows 95 skills such as using a mouse and choosing menu items. If you do not, refer to the manuals that came with your computer.

Whether you are unfamiliar or familiar with networks, we recommend you start by reading **Chapter 2: About PC MACLAN for Windows 95**. For the inexperienced user, this chapter describes what a network is and the role of each component as well as the PC MACLAN features. For the experienced user, this chapter is important because it tells you how PC MACLAN software functions in the network environment.

Once you have read Chapter 2, follow the installation and set up guidelines listed in the *Getting Started* section of this chapter.

Getting Started

There are specific steps to follow when setting up your PC MACLAN network. This section lists the steps and the chapter(s) that include the detailed instructions to complete each step.

Start by reading **Chapter 2: About PCMACLAN for Windows 95**. This will give you an understanding of what a network is, the components included in a network, and how PC MACLAN software functions in the network environment.

Set Up Your Network Hardware

1. Determine which type of connection you will use. Then make sure your computers meet the necessary system requirements and that you have the required hardware (adapter card, cables) and software (adapter driver, printer driver) needed to setup your network. Refer to:

- Chapter 3: Preparing for Installation

2. Install the adapter and driver and connect your network using the appropriate cables. Refer to:
 - Adapter installation manual
 - Chapter 3: Preparing for Installation

Install PC MACLAN for Windows 95

3. Use the Installer program to install PC MACLAN. Refer to:
 - Chapter 4: Installing for Windows 95

After installation, be sure to read the **Read Me** file found in the PC MACLAN Program Group. This file contains current information not found in the User Manual.

Set Up File Server and Print Server

4. Complete the required set up procedures for both PC MACLAN File Server and Print Server. Refer to:
 - Chapter 6: Setting Up PC MACLAN File Server
 - Chapter 7: Setting Up PC MACLAN Print Server

Set Up Your Macintosh for Networking

5. Before you can use PC MACLAN File Server or PC MACLAN Print Server, you must set up your Macintosh computer for networking:
 - Chapter 10: Using the Macintosh with PC MACLAN

Set Up PC MACLAN Client

6. You should now complete the set up procedures required to use PC MACLAN Client. Refer to:
 - Chapter 5: Setting Up PC MACLAN Client

Use Your Network

7. Once all of your network features are set up, you can begin to share files and printers across the network. Refer to:
 - Chapter 8: Using PC MACLAN Client
 - Chapter 9: Using PC MACLAN File Server
 - Chapter 10: Using the Macintosh with PC MACLAN

Technical Support

Before requesting technical support be sure to look at the README.TXT file for last minute changes and check Appendix A for trouble-shooting tips and tricks.

Technical support is available by phone or on the internet.

Phone: (805) 965-5161

Bulletin Board: (805) 963-6951

Internet: [HTTP://www.miramarsys.com](http://www.miramarsys.com)

Please be prepared to provide the following information:

1. **Your name, company name, phone, fax, email**
2. **PC MACLAN serial number**

3. Network Card information

Card name and model
Port I/O address
IRQ or INT interrupt
Type of network cabling

4. Hardware information

PC brand and model
Clock speed
CPU type

5. Software information

Windows version
PC MACLAN version
DOS version

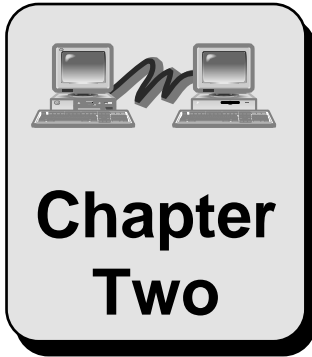
6. Peripherals information

Video card, driver and resolution
Modem port I/O address and IRQ or INT interrupt
CD-ROM port I/O address and IRQ or INT interrupt
Sound card port I/O address and IRQ or INT interrupt

7. Network information

Router type, if any
Number of MACs and PCs on the Network
Protocols in use on the PC
Network operating systems in use

8. A detailed description of the problem



About PC MACLAN for Windows 95

This chapter explains what a network is, the components of a network and the features unique to PC MACLAN for Windows 95.

Topics include:

- Understanding Networks
- PC MACLAN Components
- File Names and Properties
- File Access Privileges
- File Extension Mapping
- Online Help

Understanding Networks

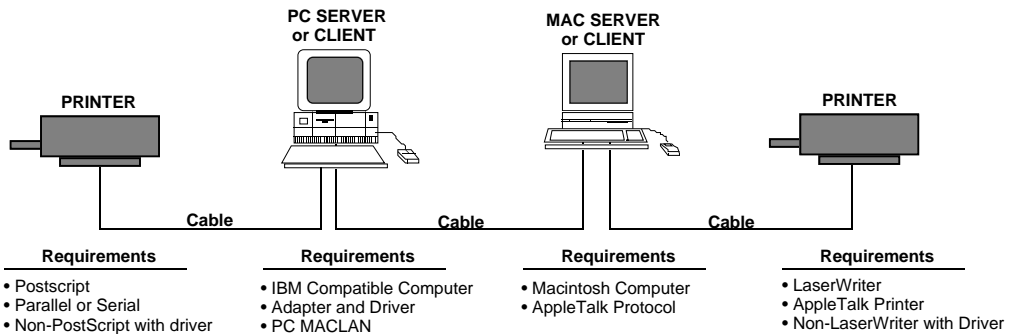
A network is a group of computers connected to each other for the purpose of sharing resources. When your computer is part of a network, you can:

- Share files, folders and disk drives among computers
- Print documents on a printer that is connected to the network

To set up your network, you need both hardware and software components. These are illustrated in the diagram below and explained after the illustration.

Network Component Definitions

An explanation of each network component shown in the illustration follows:



Client A computer that has access to services on a network. The user of a client computer requests services, such as file access, from a file server. The software that makes your PC a client is included in the PC MACLAN program.

File Server A computer that provides file services such as file transfer or storage across a network. The software that makes your PC a file server is included in the PC MACLAN program.

Print Server A computer that provides printing services across a network and accepts print jobs from other computers. The software that makes your PC a print server is included in the PC MACLAN program.

Protocol	The “language” the computers use to communicate with one another. In this case, AppleTalk is the protocol. AppleTalk comes with your Macintosh and is provided for the PC as part of the PC MACLAN program. The cable for AppleTalk can be either Ethernet, Token-Ring or LocalTalk.
Adapter	An adapter is a hardware device that physically connects your computer to a network. The adapters that may be used with PC MACLAN are listed in Chapter 3.
Cable	Cable is used to physically connect the computers and printers in the network. The type of cable you use will depend on whether you are setting up an Ethernet, Token-Ring or LocalTalk network. See Chapter 3 section titled <i>Network Cabling</i> .

PC MACLAN for Windows 95 Components

The PC MACLAN program allows a computer running Windows 95 to function as an AppleTalk **client**, an AppleShare **file server** and an AppleShare **print server** within a Macintosh environment. In addition, PC MACLAN print services take advantage of advanced AppleTalk printer features.

PC MACLAN Client

The client portion of PC MACLAN allows your Windows 95 computer to copy files to and from an AppleTalk File Server where your Windows 95 computer is the client and the Macintosh computer is the file server. It also allows you to print to AppleTalk printers on the network.

The client portion of PC MACLAN, which uses Network Neighborhood for setup, is integrated completely with the built-in networking of Windows 95. Therefore, there are no program items for the PC MACLAN client included in the PC MACLAN Program Group created by the installer program.

When you install the client portion of PC MACLAN, the program **AppleTalk Messenger** is set to run automatically from the Registry. AppleTalk Messenger allows the AppleTalk file server to send messages to your Windows 95 PC. For example, if the AppleTalk file server is about to shutdown, a message telling you how many minutes you have until shutdown displays on your PC.

PC MACLAN File Server

The file server portion of the PC MACLAN program allows the Windows 95 PC to emulate an AppleTalk File Server. As a result, you can share files with one or more Macintosh computers on a network via a shared directory, hard drive, floppy drive or other attached media. The file server portion of PC MACLAN is configured using the PC MACLAN Console that is presented during the PC MACLAN installation.

PC MACLAN Print Server

The print server portion of the PC MACLAN program turns the Windows 95 PC into an AppleTalk Print Server. As a result, you can share printers connected to your Windows 95 PC with one or more Macintosh computers. The print server portion of PC MACLAN is configured using the PC MACLAN Print Server window that is presented during the PC MACLAN installation.

PC MACLAN Program Group

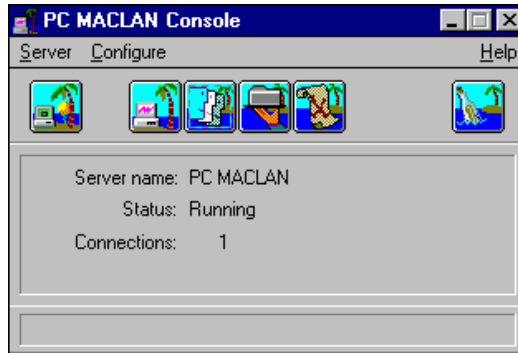
Unless you designate otherwise, the **Program Group** created by the installer is called **PC MACLAN**. When you open the program group, the following list of items displays:

- File Server
- Install Log
- PC MACLAN Online Help
- Print Server
- Read Me
- GatorPro

The client portion of PC MACLAN is accessible via the Windows 95 Network Neighborhood interface.

File Server

This program item is used to access the PC MACLAN Console window which is used for setting up, starting and stopping the file server. An example of the PC MACLAN Console window is shown below.



You may have a maximum of 10 Macintosh connections. For more information about how to setup and use the File Server, refer to Chapters 6, 9 and 10.

Install Log

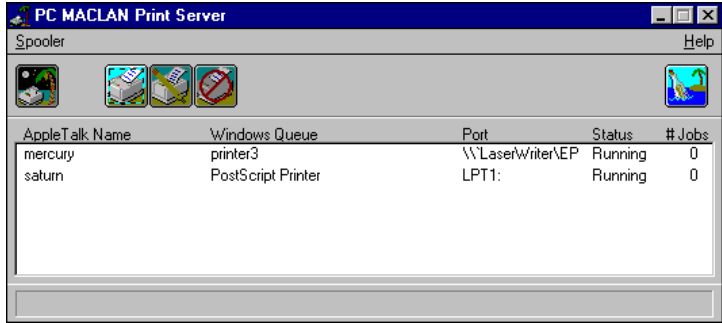
When you install PC MACLAN for Windows 95, the installer creates a log file called ATINSTAL.LOG to keep a record of the changes made to your system files during installation. If you select this program item, the installation log displays in Windows Notepad.

PC MACLAN Online Help

Because PC MACLAN Client is an integrated part of the Windows 95 Network Neighborhood, there is no separate Client window with access to the client online Help table of contents. Therefore, access is provided as a program item in the Program Group. When you select this item, the table of contents for PC MACLAN Client online help displays. See the section titled *Online Help* for more information.

Print Server

This program item is used to access the PC MACLAN Print Server which is used for creating and removing print server capabilities. An example of the PC MACLAN Print Server window is shown below.



For more information about how to configure and use the Print Server, refer to Chapters 7 and 10.

Read Me

The Read Me program item contains a document with additional information you should know about the PC MACLAN program.

GatorPro

The GatorPro utility provides a way to display a list of all the AppleTalk devices on your AppleTalk network. The left panel of the window lists all the zones on your Appletalk network. The right panel lists all the devices using the NBP (Name Binding Protocol) Device Type. For example, a Macintosh is listed as a Workstation, and an AppleTalk printer may be listed as a LaserWriter. You can use the Update buttons to refresh the displayed lists.

If the Filter Type field is set to "=", all devices in the currently selected zone are displayed. If a specific type is selected, only that type displays. If you select a device in the list, the Network, Node and Socket for the selected device displays. If you select a printer, the current status of the printer displays in the field next to the Query Printer field.

File Names and Properties

Once you have installed PC MACLAN and setup the client and/or server options, you can begin to share files between computers. However, there are some points to keep in mind about file names.

Number of Characters in a File Name

The Macintosh allows you to use up to 31 characters in a file name. Windows 95 allows you to use up to 253 characters. Therefore, if you attempt to transfer a file with a name that is more than 31 characters from your Windows 95 computer to a Macintosh, you will receive an error message. It is best, if possible, to keep your shared file names to 31 characters. Also keep in mind that many Windows 95 applications add a .xxx extension to the file name. These four characters are included in the total number of characters.

Characters not accepted by Windows 95

There are certain characters that cannot be used in a Windows 95 file or folder name. They are: \ / : * ? " < > |

If you transfer a Macintosh file that uses one of these characters in the name, the PC will substitute the ASCII code, enclosed in brackets, for the character, e.g., [047]

File Properties

Windows 95 has a Properties dialog box that allows you to see information about a file that resides in a volume on a file server. You can use this feature to see the long name, type/creator and Macintosh icon for a file as well as other properties.

File Access Privileges

Another benefit of working on a network is the ability to share the contents of a drive or designated folder with a user on another computer. Even though the file systems of Windows 95 and DOS differ greatly from the Macintosh operating system, both PC and Macintosh users can use the same files when they are stored on a PC MACLAN server.

However, you may not want all users to have access to all files. On the PC, you can use the PC MACLAN File Server component to define PC user access privileges for each shared directory (volume). On the Macintosh, you can use the Sharing dialog box to define user access privileges for any folder to which you have modification privileges.

This section provides an overview of the different categories of access privileges. Chapters 6 and 10 provide instructions for assigning access privileges for folders on the PC or Macintosh.

There are three sets of user categories:

- Owner** The user/group who created or was assigned ownership of the folder.
- Group** Users or groups who have common interests and need to share data.
- Everyone** Any user or group with access to the server.

Each of these three user categories can be assigned any combination of the following access privileges for a shared directory (volume). However, only the person or group that owns a directory or file can set or change access privileges.

- None** No file or directory operations are allowed.
- See Folders** Gives users the right to see folders contained within the folder for which access privileges are being set. The opening of additional folders within that folder is subject to the privileges defined for those folders. (In DOS, a folder is known as a directory).
- See Files** Gives users the right to see the icons for applications and documents in a folder. It also includes the option to open, view and copy applications and documents.
- Make Changes** Gives users the right to make changes to the contents of a folder. This includes editing the files within the folder, moving a file to the folder and deleting any of the folder's contents.

For the Macintosh, the following rules apply:

- Access privileges are defined only for folders (directories), not for individual files.
- An individual user's ability to access a folder is determined by that individual's user name, group membership, and any privilege settings for the folder.
- Each folder can have privileges for Everyone.
- When a user creates a new folder on the network, that user becomes the owner. The owner is granted all privileges. Group and Everyone have no privileges unless the owner grants them.
- The folder's owner may be a member of a group associated with the folder, although this is not required.
- A folder can have its owner defined as Any User. This is the lowest possible security setting, giving any registered user or any Guest all privileges for the folder.
- Only the owner can change privileges for a folder. If the owner is a group, then any member of the group can change privileges for the folder.

File Extension Mapping

File Extension Mapping provides a way to tell the PC MACLAN File Server and Client how to treat PC files with various name extensions so they will display properly on the Macintosh desktop.

In the Macintosh environment, there is a link between a data file and its creator application. In other words, if you create a document using Microsoft Word™, the file appears on the desktop as an icon provided by Microsoft Word (the creator application). When you open the file, Microsoft Word™ is automatically opened.

The Macintosh operating system provides this capability by storing specific information with every file. This includes a 4-character code called a **file creator** that uniquely identifies the application that originated the file and another 4-character code called a **file type** that identifies the type of file. For example, a Microsoft Word™ document has a file creator code of *MSWD* and a file type code of *WDBN*.

The PC operating system, on the other hand, identifies the file creator or application with a **file extension** that may have 8 characters. For example, a Microsoft Word™ document has a file extension of *.DOC*. The PC does not use the 4-character file creator code or file type code.

Extension mapping provides a way for you to tell the PC what file creator code and file type code to match with a particular PC file extension. Once the two codes and the file extension are mapped together, the file will display properly on both the PC and the Macintosh desktop.

For example, Excel™ creates spreadsheet files with the extension *.XLS* on the PC. In order to have these files appear correctly to a Macintosh user, the **extension** *.XLS* must be added to the File Extension Mapping list and associated with the **file creator** *XCEL* and the **file type** *XLS*. Once this is done, a spreadsheet created by Excel™ on the PC and placed in the shared directory will display with the proper icon on the Macintosh desktop. The Macintosh user can then double-click the icon and open both the document and the application. In addition, if the Excel™ file is saved to the Macintosh, it will be given the correct type and creator. Likewise, if the Macintosh user creates an Excel™ file and adds the *.XLS* extension to the file name, the file icon will display as an Excel™ file icon on the PC.

A few common file types come pre-configured with PC MACLAN. These are displayed in the File Extension Mapping dialog box located on the PC MACLAN Console window. However, there may be times when you have to add, edit, delete or duplicate a file extension. This can be done using the File Extension Mapping dialog box (see Chapters 6 and 8), or from the AppleTalk property page.

Online Help

PC MACLAN for Windows 95 provides online documentation that presents concepts, procedures and reference information for file and print services.

Help Table of Contents

There are two ways to open the main Help table of contents for the PC MACLAN **file server** or **print server**. You can:



- Click the icon located near the upper-right corner of the PC MACLAN window. Then select the Contents button at the top of the Help window.
- Open the Help pull-down menu located in the upper-right corner of the PC MACLAN window and select the Contents option.

To open the main Help table of contents for PC MACLAN **client**, click the program item PC MACLAN Online Help found in the PC MACLAN Program Group list. When help is open, you can browse through the help information and print any topic. To display information about a topic, double-click its title.

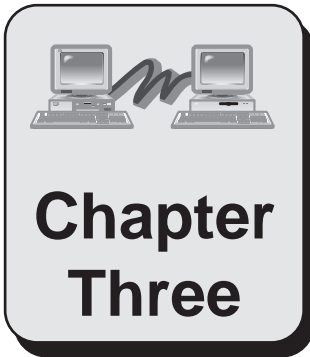
Help Window Buttons

The buttons at the top of the Help window present a variety of ways to locate information. An explanation of each button is listed below:

Contents	Displays a table of contents from which to choose.
Search	Allows you to locate a topic by a keyword
Back	Allows you to go back to the previously displayed topic.
History	Displays a list of all the topics you have already displayed. You can return to a topic by double-clicking it.
Left arrow Right-arrow	Allows you to move backward and forward through the Help topics.
Glossary	Displays a list of terms and their meanings.

Dialog Box Help

Every PC MACLAN dialog box contains a Help button. When you click the Help button, information is displayed for the specific items in the open dialog box. You can then use the buttons at the top of the Help window to locate other help information topics.



Preparing for Installation

This chapter describes the hardware and software requirements necessary to set up your network. These requirements must be completed before you can install PC MACLAN for Windows 95.

Topics include:

- Types of Network Connections
- Software and System Requirements
- Network Adapters and Drivers
- Network Cabling
- Printer Requirements
- Information You Need to Know

Types of Network Connections

The Macintosh comes with the AppleTalk protocol installed and the PC MACLAN program installs the AppleTalk protocol in your Windows 95 PC. As a result, both systems are able to communicate when connected to an AppleTalk network.

However, before your computers can communicate, they must be connected using the **same** type of network connection (unless you have a router or bridge). There are three types available. Each one requires a specific type of adapter and cabling. They are:

- LocalTalk
- Ethernet (EtherTalk)
- Token-Ring (TokenTalk)

On many of the newer Macintosh computers, LocalTalk and EtherTalk (Ethernet) connection hardware and software (adapters and drivers) are built into your computer. Therefore, you can connect to another Macintosh by simply plugging the LocalTalk connector or EtherTalk cables and/or transceivers into the back of both computers. For TokenTalk (Token-Ring), you must install the adapters and drivers in each Macintosh computer before you can connect them to a network.

In a Windows 95 computer, you will need to install either a LocalTalk, EtherTalk or TokenTalk adapter along with the appropriate network hardware such as cable, terminator, if necessary (thinnet Ethernet) and transceiver.

Once you decide which type of network connection you want to use, you must make sure that the proper adapters and drivers are installed on all of the computers in the network. For example, if you want to use Ethernet (EtherTalk), you must install the necessary Ethernet (EtherTalk) hardware and software in all computers and then connect them using the appropriate Ethernet (EtherTalk) cables and/or transceivers.

Software and System Requirements

The following software and minimum system configuration is required to successfully install and operate PC MACLAN for Windows 95.

IBM-Compatible Computer

The IBM-compatible computer requirements are:

- Windows 95 operating system.
- A 486, or Pentium microprocessor.
- A minimum of 8 megabytes (MB) of random-access memory (RAM).
- Approximately 2.5 MB of free disk space on your hard drive to install PC MACLAN files.
- Network Adapter (see section titled Network Adapters and Drivers) for Ethernet, Token-Ring or LocalTalk.
- Connecting cables for Ethernet, Token-Ring or LocalTalk

Macintosh Computer

The Macintosh computer requirements are:

- Any 680x0 or PowerPC Macintosh.
- AppleShare 3.0 or later software, or Macintosh system 7.0 with file sharing enabled.
- LaserWriter driver 7.1.2 or 8.x.x (standard with all Macs).
- Network Adapter for EtherTalk, TokenTalk or LocalTalk.
- Connecting hardware for EtherTalk, TokenTalk or LocalTalk

Printer Requirements

The PC using PC MACLAN can print to any LaserWriter or other AppleTalk printer connected to the network or to a LaserWriter printer that is monitored by an AppleShare print server or RIP.

Macintosh users can also use a PC printer if it is PostScript or if you have the correct drivers installed on the Macintosh. GDT (for the MAC) and Zenographics (for the PC) provide drivers for non-PostScript printers.

Network Adapters and Drivers

Setting up your network requires an **adapter** (the hardware that physically connects the computer to the network) and an **adapter driver** (the software that allows the adapter to function) installed in both your Macintosh and Windows 95 PC. The type of adapter and driver you use will depend on your network type, e.g., Ethernet, Token-Ring or LocalTalk.

Ethernet or Token-Ring

The Windows 95 network driver setup utilizes a 32-bit enhanced mode NDIS 3.1 (Network Device Interface Specification) driver for Ethernet and Token-Ring networks. Any network adapter that uses this type of driver will function properly with PC MACLAN for Windows 95.

A network adapter that does not use a 32 bit NDIS 3.1 driver may be used, but may not work correctly in all circumstances.

The standard installation for Windows 95 assumes you have a network adapter card for Ethernet or Token-Ring that uses an NDIS 3.1 driver and is already installed and properly setup. If your adapter card comes with a test utility, you should install the card in your computer, connect it to the network, and test the card before you install PC MACLAN for Windows 95.

LocalTalk

Although LocalTalk adapters do not use NDIS 3.1 drivers, the PC MACLAN custom installation will configure Windows 95 to access AppleTalk using an ODI (Open Datalink Interface) driver and LocalTalk adapter.

You may use one of the following network adapter cards connected to a LocalTalk network:

- Apexx LocalTalk Parallel Interface (PC Talk)
- Dayna/Farallon PhoneNet PC3 LocalTalk



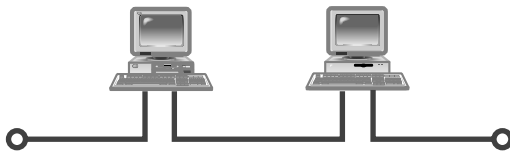
Refer to the README.TXT file for any adapter cards that may have been added to the list since the printing of this manual.

If your adapter card comes with a test utility, you should install the card in your computer, connect it to the network, and test the card before you install PC MACLAN.

Network Cabling

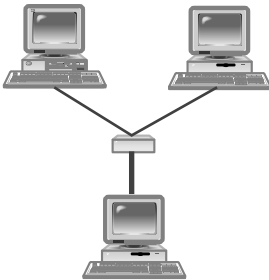
Cabling is used to physically connect the computers and printers in the network. The type of cable you use will depend on whether you are setting up an Ethernet (EtherTalk), Token-Ring (TokenTalk) or LocalTalk network. The appropriate cabling is illustrated below:

Ethernet (EtherTalk) Cabling



Thinnet (BNC) Ethernet

Thinnet (BNC) Ethernet requires a 50 Ohm terminator at each end of the cable unless a repeater is utilized.



10 Base T Ethernet

10 Base T Ethernet requires a hub. (If you are connecting two computers only, you may use a special cross-over cable instead. See Appendix A.)

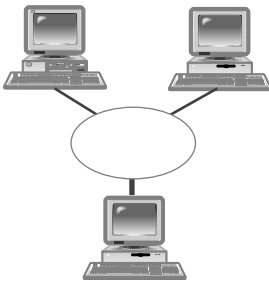
LocalTalk Cabling



LocalTalk requires an Apple compatible DIN or 9-pin interface. (For a PC, you can get either a LocalTalk ISA adapter or parallel port adapter.)

LocalTalk

Token-Ring (TokenTalk) Cabling



Token-Ring (TokenTalk) requires a MAU.

Token-Ring (TokenTalk)

Printer Requirements

To use LaserWriter printers or other AppleTalk printers on your PC MACLAN network, you need to know the type of each printer you want to use, e.g., LaserWriter, DeskWriter. In addition, each printer must be connected to the network and turned on.

You also need a printer driver for each type of printer. A **printer driver** is the software that formats the print job and controls the interaction between a computer and a printer. The appropriate drivers may already be installed. If the drivers are not installed, you will have to install them.

To print to a LaserWriter or compatible printer using PC MACLAN Client, you must have a Windows LaserWriter driver from Apple or a compatible Windows PostScript driver. The Apple LaserWriter II NT driver provided with Windows supports most of the features of Apple LaserWriter printers. Therefore, you might want to use this driver if you can't find the driver for your printer model or if you will be printing to different types of LaserWriters.

Information You Need to Know

Before you begin the installation and setup process, you should know the answers to the questions discussed in this section.

What type of Adapter do you have?

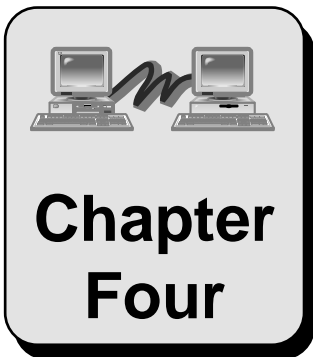
You will need to know the manufacturer name and model number of the network adapter card you have. Windows 95 automatically determines the address settings of your "plug and play" adapter during installation. Older adapters may require you to know the I/O base address (port), interrupt (IRQ), DMA information and shared memory block address and size (if any) for successful installation.

What type of Printer do you have?

You will need to know the make and model of your printer. In addition, you must determine the name you want to use for your printer on the network. Each printer on the network must have a unique name. You must have already connected your printer to either the PC or AppleTalk network.

Is AppleTalk already installed?

If AppleTalk software from another vendor is already installed on your Windows 95 computer, you must remove it before you install PC MACLAN. You should also remove any applications that rely on a previously installed version of AppleTalk because they will not work with the version of AppleTalk for Windows 95 included in PC MACLAN. (For information about removing software, see the file README.TXT on the floppy disk labeled PC MACLAN Disk 1 and the documentation that came with the software you need to remove.)



Installing PC MACLAN for Windows 95

This chapter explains the installation options for Windows 95 and gives you step-by-step instructions to follow for each type of installation.

Topics include:

- The Installer Program

- Installation Options

- Standard Installation for Ethernet or Token-Ring Networks

- Custom Installation for Ethernet or Token-Ring Networks

- Installation for LocalTalk Networks

- Uninstall PC MACLAN

- Upgrade PC MACLAN

The Installer Program

PC MACLAN for Windows 95 software is easily installed using the Installer program which consists of three components:

- PC MACLAN program
- AppleTalk Protocol Stack
- Install Network Transport

The first option, **PC MACLAN**, contains the required client, file server and print server software. The **AppleTalk Protocol Stack** component installs the AppleTalk protocol onto your Windows 95 PC. The **Install Network Transport** specifies the method to bind the AppleTalk stack to the network adapter, either NDIS3.1 or ODI.

In addition, to run PC MACLAN for Windows 95, the AppleTalk protocol, client and adapter must be added to the Network Control Panel. This procedure is completed as part of the installation process.

Backup Configuration Files

When you run the PC MACLAN installer, changes are made to the DOS and Windows system files if you are using ODI drivers or LocalTalk. Unmodified versions of the changed files are saved before the existing files are overwritten or changed. The backup files are as follows:

AUTOEXEC.X	(AUTOEXEC.BAT)
CONFIG.X	(CONFIG.SYS)
NET.X	(NET.CFG)

Where X is the next available number starting with 1.

Installation Log

The installer creates a log file called ATINSTAL.LOG to keep a record of the changes made to your system files. All executions of the installation program are identified by a date and time stamp next to the actions performed. Each time the installation program is run, information is added to the installation log.

Online Help



Detailed online Help is available for each dialog box and message displayed throughout the installation process. All you have to do is click the HELP icon that appears in the lower right corner of the screen.

Exit Option



To exit the installation process, you can click the Cancel button on the current dialog box, or you can click the EXIT icon which appears in the lower right corner of the screen. In either case, the program discards any changes or selections you have made and exits the installation process.

Installation Options

The PC MACLAN installation program includes three options:

- Standard Installation
- Custom Installation
- Uninstall

The option you select depends on your network environment. Each option is explained below.

Standard Installation

The Standard Installation installs the complete PC MACLAN program (client and server) onto an Ethernet (EtherTalk) or Token-Ring (TokenTalk) network using the Windows 95 existing NDIS 3.1 adapter driver.

In addition, the following defaults are assigned:

- Destination drive: Windows installation drive (usually C)
- Destination directory: MACLAN6
- Program Group Name: PC MACLAN

If you do not want to use the default settings, you must use the Custom Installation option.

Custom Installation

The Custom Installation is used for the following reasons:

- To select the options you want to install, e.g., programs or AppleTalk protocol.
- To change the default destination drive, destination directory, and program group name typically assigned in the Standard Installation.
- To install PC MACLAN onto a LocalTalk network using Windows 95 and an ODI adapter driver.

Uninstall

The Uninstall option may be run using the Windows 95 Add/Remove Programs function. You have two uninstall options. You can:

- Uninstall both PC MACLAN and AppleTalk which removes all files installed and undoes any changes made to your system files.
- Uninstall PC MACLAN only and keep the AppleTalk networking configuration.

Standard Installation for Ethernet or Token-Ring Network

The Standard Installation installs the complete PC MACLAN program (client and server) onto an Ethernet (EtherTalk) or Token-Ring (TokenTalk) network using the Windows 95 existing NDIS 3.1 adapter driver.

In addition, the following defaults are assigned:

- Destination drive: Windows installation drive (usually C)
- Destination directory: MACLAN6
- Program Group Name: PC MACLAN

If you do not want to install the complete program or use the default settings, you must use the custom installation option.

To complete the Standard Installation

Skip steps 1-5 when installing from the CD

1. **On the Task Bar:**

- Click Start
- Point to Settings
- Click Control Panel

2. **In the Control Panel window, double click the Add/Remove Programs Icon.**

The Add/Remove Programs Properties dialog box displays with the Install/Uninstall tab selected.

3. **Insert the disk labeled Disk 1 into the disk drive and click the Install button.**

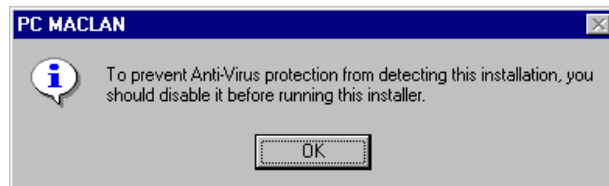
The Install Program From Floppy Disk or CD-ROM message displays.

4. **Click the Next button.**

The Run Installation Program message displays.

5. **Click Finish.**

The PC MACLAN screen displays along with an information window concerning viruses.

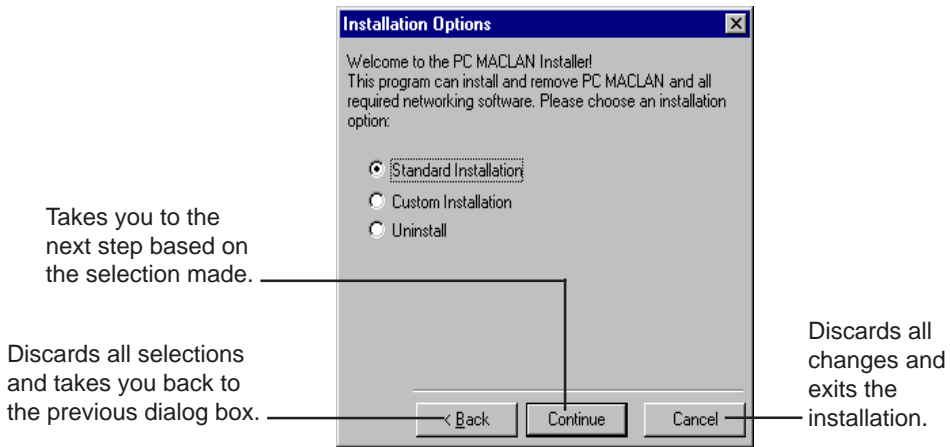


6. **If you need to disable your Anti-Virus protection, do so now before going any further:**

- Click OK in the information window
- Click the Exit icon

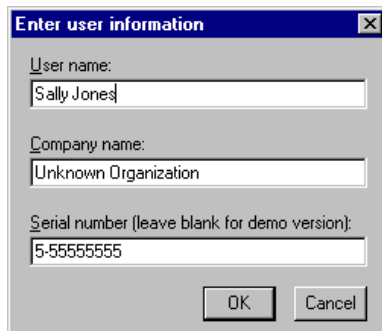
If you do not need to disable your Anti-Virus protection, click OK in the information window.

The Installation Options dialog box displays:



7. **Select Standard Installation and click Continue.**

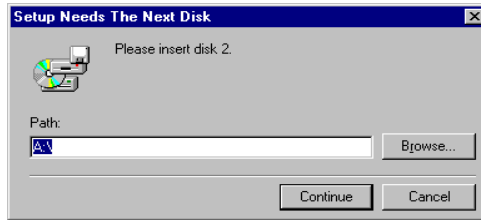
The Enter User Information dialog box displays.



8. **Type your user name, company name and serial number and click**

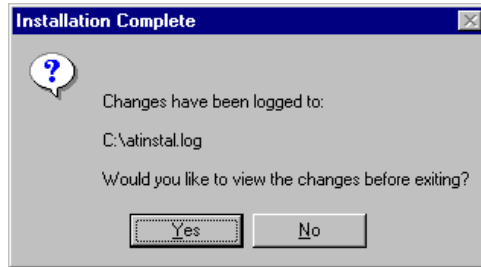
Continue. (The serial number is on the back of the licensing envelope.)

If installing from floppy, you are prompted to insert disk 2 of the installation disks.



9. **Remove Disk 1 from the floppy disk drive and insert Disk 2. Then click Continue. (Disregard when installing from CD.)**

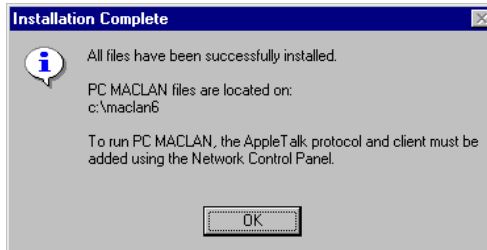
As the installation proceeds, the installer displays the names of the files it is decompressing and copying. After several seconds Installation Complete message box displays.



The Installer creates a log file called ATINSTAL.LOG to keep a record of the changes made to your system files. When the Installer exits, you can use the Notepad application to open the log file and review the changes.

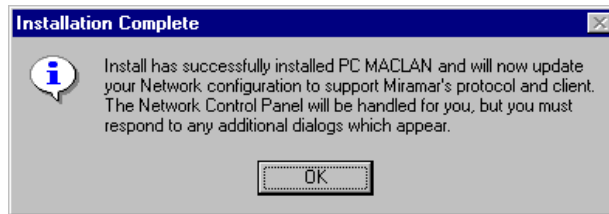
10. **To view the Installation Log, click Yes. Otherwise, click No.**

A message about the next step displays.



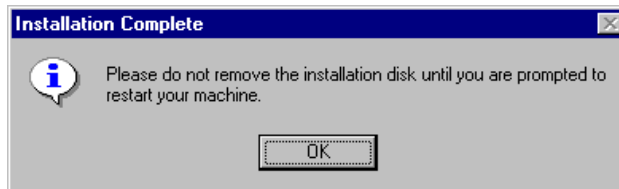
11. **Click OK.**

The following message displays.



12. **Click OK.**

The following message displays. (This message is not applicable during installation from the CD. Please disregard.)

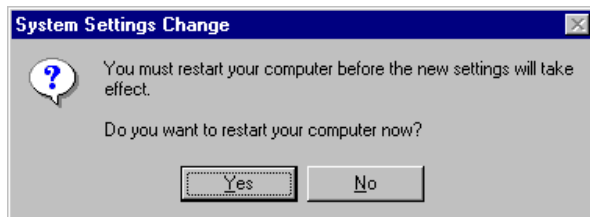


13. **Click OK.**

The Installer automatically adds the Miramar client and the AppleTalk protocol to the Network Control Panel. In addition, the installer automatically binds the AppleTalk protocol to the existing NDIS3 adapter.

If you have more than one NDIS3 adapter, you will be prompted to select the adapter. Follow the instructions that appear on the screen.

When the process is complete, the following message displays:



14. **Remove your disk from the floppy disk drive and click Yes to restart your computer now. (Do not remove disk when installing from CD.)**

The Program Group PC MACLAN is added to the Windows 95 programs listing. In addition, AppleTalk Messenger is set in the Registry to run automatically. For an explanation of the components in the program group, see Chapter 2.

You may now setup and use the client and server features of PC MACLAN for Windows 95. Refer to the appropriate chapters for details.

Custom Installation for Ethernet or Token-Ring Networks

You must use the Custom Installation for Ethernet or Token-Ring if you want to:

- Use a different destination directory
- Assign a different Program Group name

To complete the Custom Installation for Ethernet or Token-Ring

Skip steps 1-5 when installing from the CD.

1. **On the Task Bar:**
 - Click Start
 - Point to Settings
 - Click Control Panel
2. **In the Control Panel window, double click the Add/Remove Programs Icon.**

The Add/Remove Programs Properties dialog box displays with the Install/Uninstall tab selected.

3. **Click the Install button.**

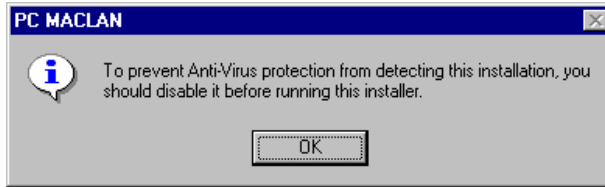
The Install Program From Floppy Disk or CD-ROM message displays.

4. **Place Disk 1 in the floppy disk drive and click the Next button.**

The Run Installation Program message box displays.

5. **Click Finish.**

The PC MACLAN screen displays along with an information window concerning viruses.

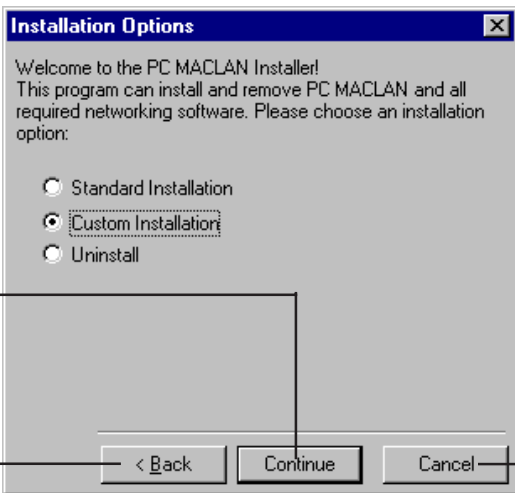


6. **If you need to disable your Anti-Virus protection, do so now before going any further:**

- Click OK in the information window
- Click the Exit icon

If you do not need to disable your Anti-Virus protection, click OK in the information window.

The Installation Options dialog box displays:



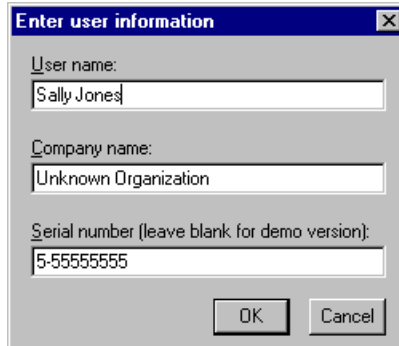
Takes you to the next step based on the selection made.

Discards all selections and takes you back to the previous dialog box.

Discards all changes and exits the installation.

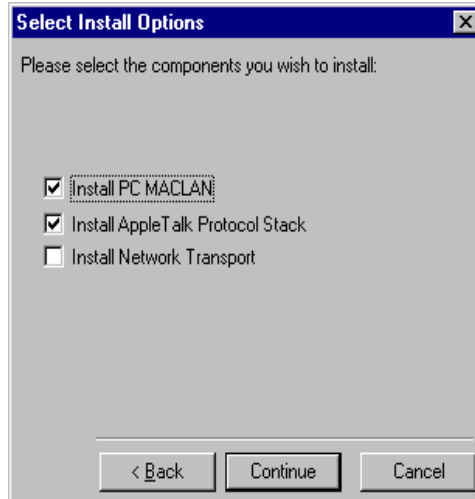
7. **Select Custom Installation and click Continue.**

The Enter User Information dialog box displays.

A dialog box titled "Enter user information" with a close button (X) in the top right corner. It contains three text input fields: "User name:" with the text "Sally Jones", "Company name:" with the text "Unknown Organization", and "Serial number (leave blank for demo version):" with the text "5-55555555". At the bottom are "OK" and "Cancel" buttons.

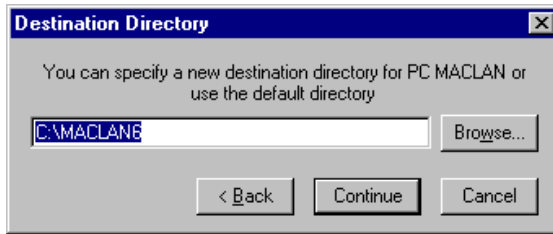
8. **Type your user name, company name and serial number and click OK.** (The serial number is located on the bottom of the software box.)

The Select Install Options dialog box displays with the first two options selected. (Click HELP for more information about each selection.)

A dialog box titled "Select Install Options" with a close button (X) in the top right corner. The text inside says "Please select the components you wish to install:". Below this are three checked checkboxes: "Install PC MACLAN", "Install AppleTalk Protocol Stack", and "Install Network Transport". At the bottom are "< Back", "Continue", and "Cancel" buttons.

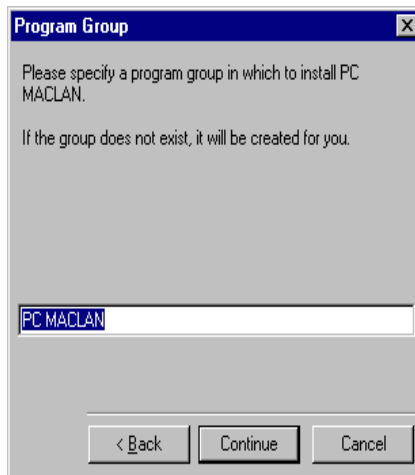
9. **Click Continue.**

The Destination Directory dialog box displays. C:\MACLAN6 is the default directory name.



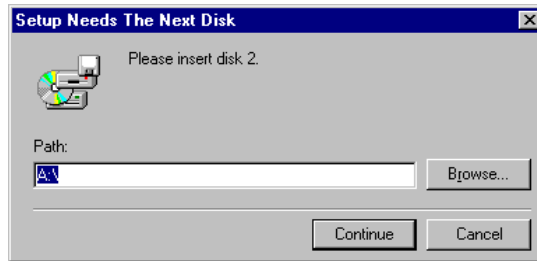
10. **Type a different destination drive and/or directory and click Continue.**

The Program Group dialog box displays. PC MACLAN is the default group name.



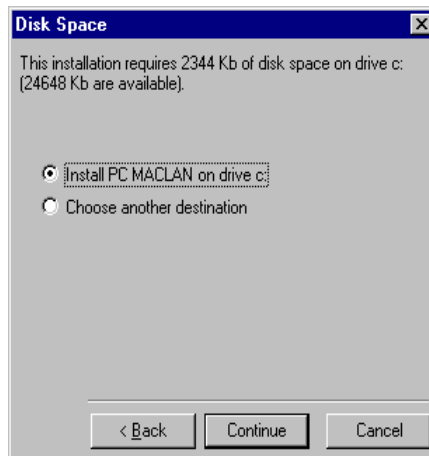
11. **Type a different Program Group name and/or click Continue.**

If installing from floppy, you are prompted to insert disk 2 of the installation disks.



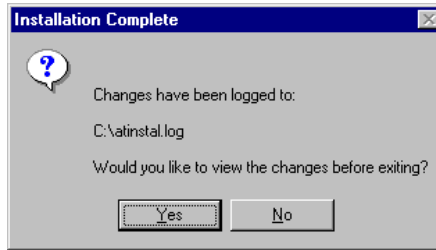
12. **Remove Disk 1 from the floppy disk drive and insert Disk 2. Then click Continue. (Disregard when installing from CD.)**

The Disk Space message displays:



13. **If the available disk space is sufficient, click Continue. If not, click Choose Another Destination and type the new drive. Then click Continue.**

The installation continues. As files are updated an information message displays. When the installation is complete, the following message displays.



The Installer creates a log file called ATINSTAL.LOG to keep a record of the changes made to your system files. When the Installer exits, you can use the Notepad application to open the log file and review the changes.

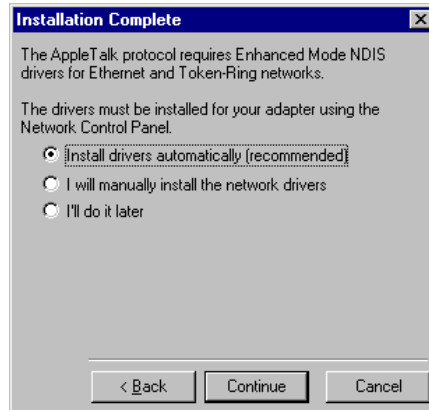
14. **To view the Installation Log, click Yes. Otherwise, click No.**

A message about the next step displays.



15. **Click OK.**

The drivers installation options box displays. You are given three options. It is recommended that you install the drivers now during the installation process.



16. **Verify that Install drivers automatically is selected and click Continue.**

The following message displays.

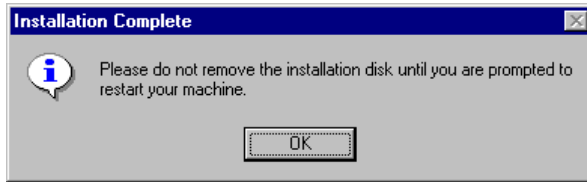


The Installer automatically adds the required components to the Network Control Panel and automatically binds the AppleTalk protocol to the existing NDIS3 adapter.

If you have more than one NDIS3 adapter, you will be prompted to select the adapter. Follow the instructions that appear on the screen.

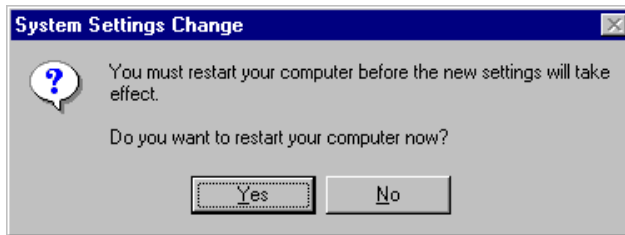
17. **Click OK.**

The following message displays. (This message is not applicable during installation from the CD. Please disregard.)



18. **Click OK.**

The Network Control Panel displays followed by the message shown below.



19. **Remove your disk from the floppy disk drive and click Yes to restart your computer now. (Do not remove disk when installing from CD.)**

The Program Group PC MACLAN is added to the Windows 95 programs listing. In addition, AppleTalk Messenger is set in the Registry to run automatically. For an explanation of the components in the program group, see Chapter 2.

You may now setup and use the client and server features of PC MACLAN for Windows 95. Refer to the appropriate chapters for details.

Installation for a LocalTalk Network

If you want to install PC MACLAN onto a LocalTalk network using Windows 95 with an ODI adapter driver, you must use the Custom Installation option. This is the only way you can install for a LocalTalk network.

To complete the Custom Installation for LocalTalk

Skip steps 1-5 when installing from the CD.

1. **On the Task Bar:**

- Click Start
- Point to Settings
- Click Control Panel

2. **In the Control Panel window, double click the Add/Remove Programs Icon.**

The Add/Remove Programs Properties dialog box displays with the Install/Uninstall tab selected.

3. **Click the Install button.**

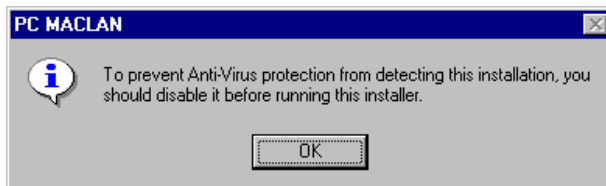
The Install Program From Floppy Disk or CD-ROM message displays.

4. **Insert disk 1 in the floppy disk drive and click the Next button.**

The Run Installation Program message box displays.

5. **Click Finish.**

The PC MACLAN screen displays along with an information window concerning viruses.

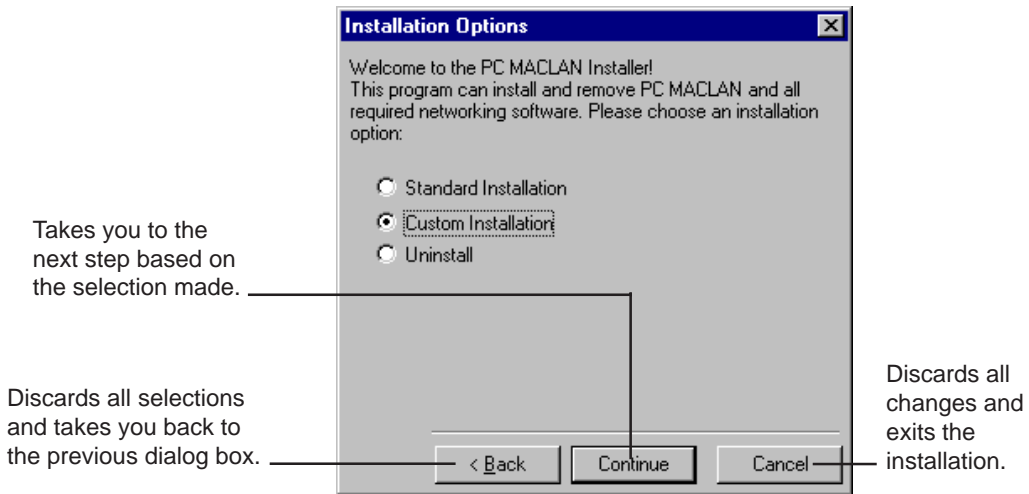


6. **If you need to disable your Anti-Virus protection, do so now before going any further:**

- Click OK in the information window
- Click the Exit icon

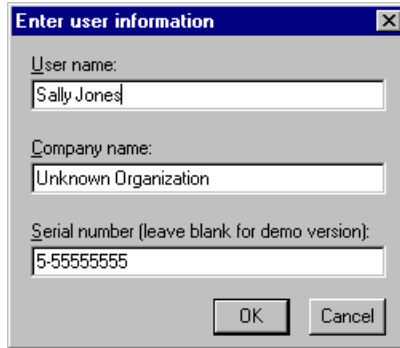
If you do not need to disable your Anti-Virus protection, click OK in the information window.

The Installation Options dialog box displays:



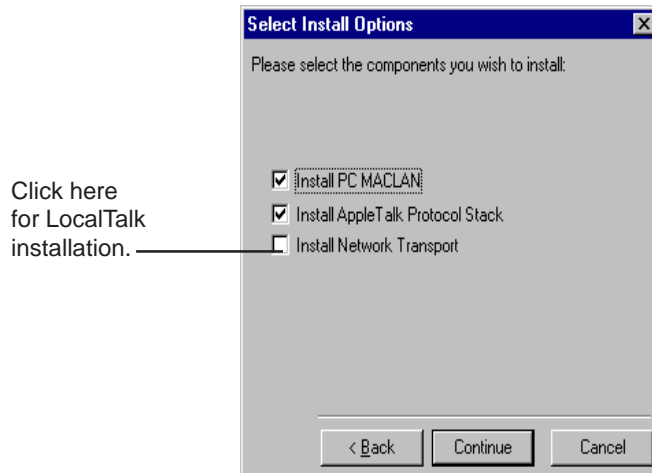
7. **Select Custom Installation and click Continue.**

The Enter User Information dialog box displays.



8. **Type your user name, company name and serial number and click OK.** (The serial number is on the bottom of the software box.)

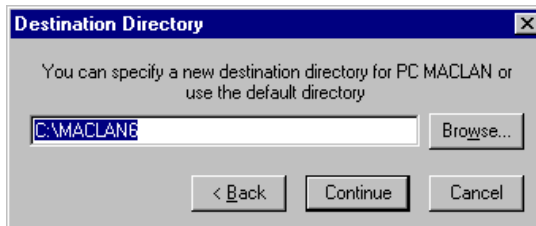
The Select Install Options dialog box displays with the first two options selected. (Click HELP for more information about each selection.)



Because you are not using the default network adapter driver (NDIS3), you must select Install Network Transport. You will then be given an opportunity to select the LocalTalk adapter you want to use.

9. **Click the check box next to Install Network Transport.**
10. **Then click Continue.**

The Destination Directory dialog box displays. C:\MACLAN6 is the default directory name.



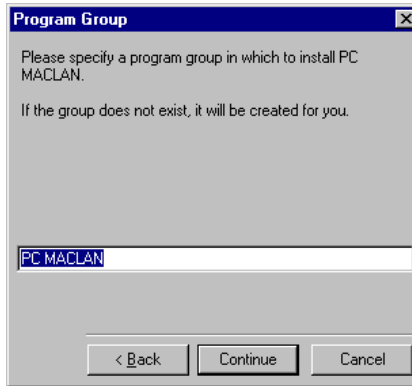
11. **To accept the default directory, click Continue.**

Or

To select a different directory, type the new name or click the Browse button to select a destination directory. Then click Continue.

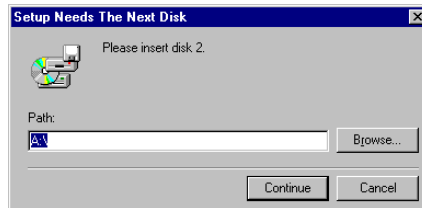


After you click Continue, the Program Group dialog box displays. PC MACLAN is the default group name.



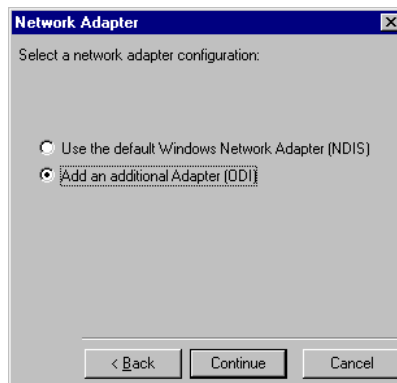
12. **Type a different Program Group name and/or click Continue.**

If installing from floppy, you are prompted to insert disk 2 of the installation disks.



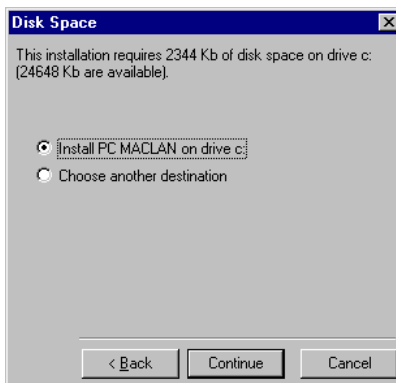
13. **Remove Disk 1 from the floppy disk drive and insert Disk 2. Then click Continue. (Disregard when installing from CD.)**

The Select a Network Adapter dialog box displays.



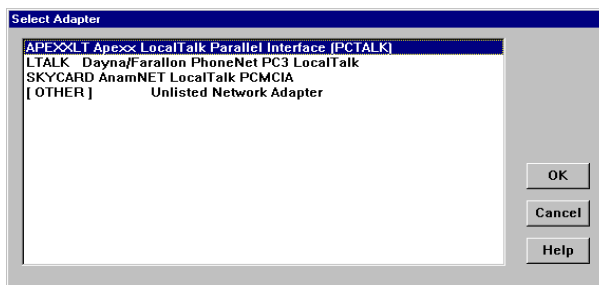
14. **Click the check box next to Add an Additional Adapter (ODI). Then click Continue.**

The Disk Space dialog box displays.



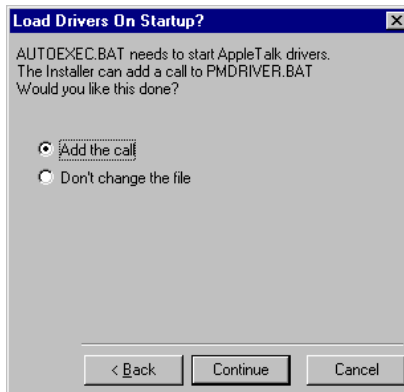
15. **If the available disk space is sufficient, click Continue. If not, click Choose Another Destination and type the new directory path. Then click Continue.**

The Select Adapter window displays.



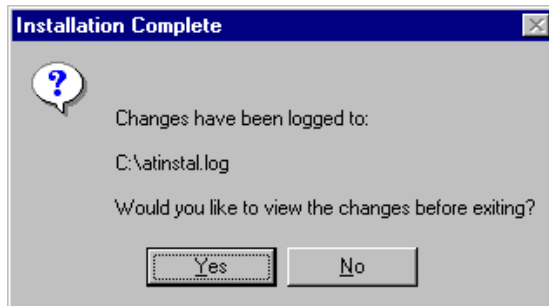
16. **Highlight the name of your adapter and click OK.**

During the program loading, you are prompted with the following message:



17. **Leave as is or change according to your situation. Then click Continue. (Click HELP for more information.)**

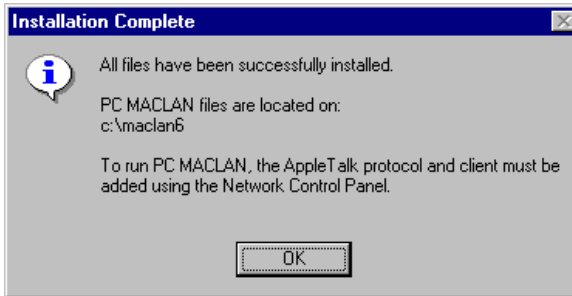
The installation continues. As files are updated an information message displays. After several seconds, the Installation Complete message displays.



The Installer creates a log file called ATINSTAL.LOG to keep a record of the changes it made to your system files. When the Installer exits, you can use the Notepad application to open the log file and review the changes.

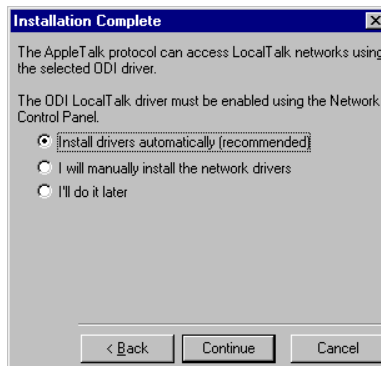
18. **To view the Installation Log click Yes. Otherwise, click No.**

A message about the next step displays.



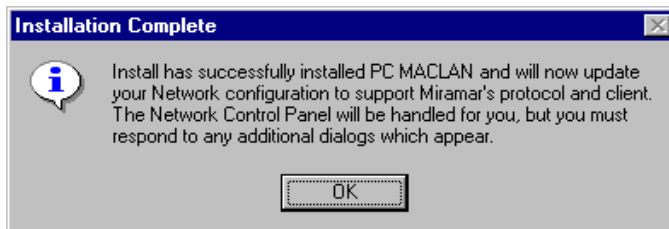
19. **Click OK.**

The Network Control Panel installation options box displays. You are given three options. It is recommended that you install the drivers now during the installation process.



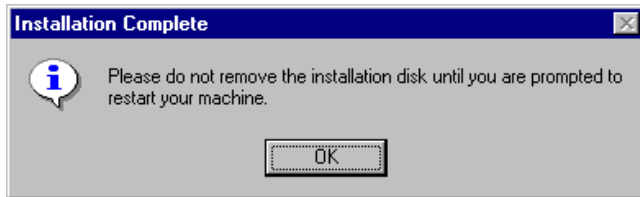
20. **Verify that Install drivers automatically is selected and click Continue.**

The following message displays.



21. **Click OK.**

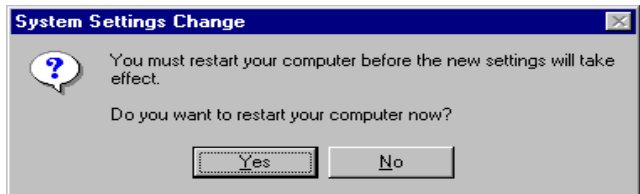
The following message displays. (This message is not applicable during installation from the CD. Please disregard.)



22. **Click OK.**

The Installer automatically adds the required components to the Network Control Panel and automatically binds the AppleTalk protocol to the selected ODI LocalTalk adapter.

When the process is complete, the following message displays:



23. **Remove your disk from the floppy disk drive and click Yes to restart your computer now. (Do not remove disk when installing from CD.)**

The Program Group PC MACLAN is added to the Windows 95 programs listing. In addition, AppleTalk Messenger is set in the registry to run automatically. For an explanation of the components in the program group, see Chapter 2.

You may now setup and use the client and server features of PC MACLAN for Windows 95. Refer to the appropriate chapters for details.

Uninstall PC MACLAN

The Uninstall option may be run using the Windows 95 Add/Remove Programs function. You have two uninstall options. You can:

- Uninstall both PC MACLAN and AppleTalk which removes all files installed and undoes any changes made to your system files.
- Uninstall PC MACLAN only and keep the AppleTalk networking configuration.



You must remove the Miramar Client, Protocol and Adapter before you can successfully uninstall PC MACLAN. You may do this now, or as part of the uninstall procedures described below.

To uninstall PC MACLAN for Windows 95

1. **On the Task Bar:**

- Click Start
- Point to Settings
- Click Control Panel

2. **In the Control Panel window, double click the Add/Remove Programs Icon.**

The Add/Remove Programs Properties dialog box displays with the Install/Uninstall tab selected.

3. **Select PC MACLAN from the list and click Add/Remove.**

The Uninstaller box displays.



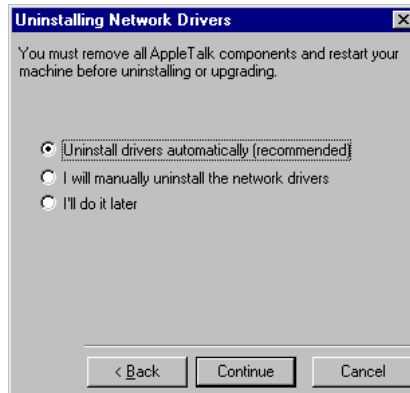
4. **Click the MACLAN and AppleTalk button to remove all files that were installed by the PC MACLAN installer and to undo changes the installer made to your system files.**

Or

Click the MACLAN only button to keep your AppleTalk networking configuration and to remove PC MACLAN Client and Server software.

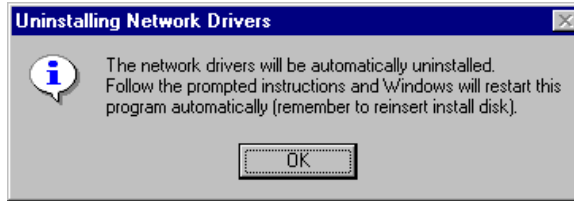
5. **Insert the installation disk into the drive and click Uninstall.**

After the initialization is complete, the Uninstalling Network Drivers dialog box displays.



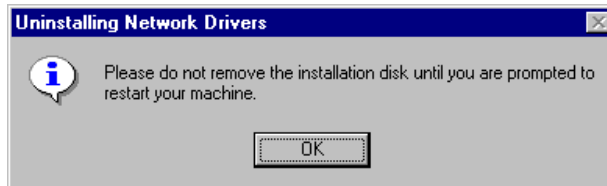
6. **Verify that Uninstall Drivers Automatically is selected and click Continue.**

The following message displays.



7. **Click OK.**

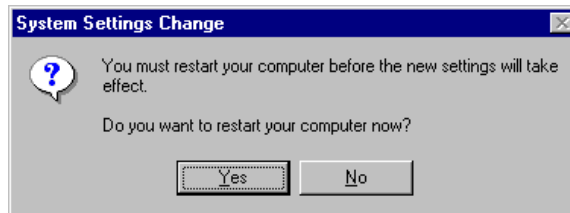
The following message displays. (This message is not applicable during installation from the CD. Please disregard.)



You must leave your disk in the disk drive while the client, protocol and adapter are being removed from the network.

8. **Click OK.**

The Network window displays while the client, protocol and adapter are being removed. When completed, the Network dialog box closes and a message displays asking if you want to restart the computer.



9. **Remove your disk from the disk drive and click Yes. (Do not remove disk when installing from CD.)**

You must restart your system before you can uninstall PC MACLAN.

10. **When the restart is complete, open the Control Panel window and double-click the Add/Remove Programs icon.**

The Add/Remove Programs Properties dialog box displays with the Install/Uninstall tab selected.

11. **Select PC MACLAN from the list and click Add/Remove.**

The uninstaller dialog box displays.



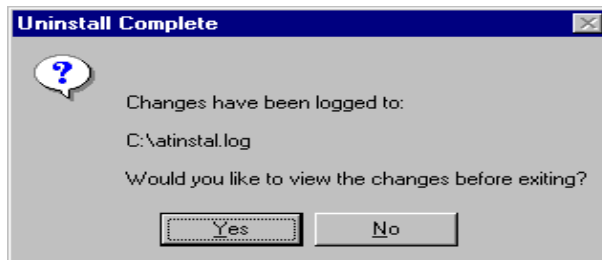
12. **Click the MACLAN and AppleTalk button to remove all files that were installed by the PC MACLAN installer and to undo changes the installer made to your system files.**

Or

Click the MACLAN only button to keep your AppleTalk networking configuration and to remove PC MACLAN Client and Server software.

13. **Insert the installation disk into the drive and click Uninstall.**

The system locates the uninstall program on the disk and the uninstall process begins. When the uninstall is complete, the following message box displays.

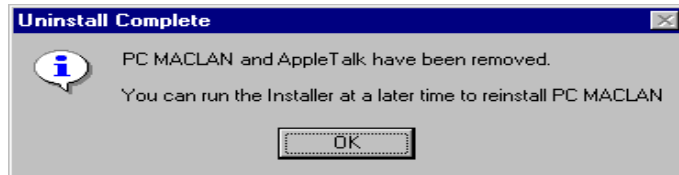


The installer creates a log file called ATINSTAL.LOG to keep a record of

the changes made to your system files. When the Installer exits, you can use the Notepad application to open the log file and review the changes.

14. **Click No. (If you want to view the log now, click Yes.)**

The following completion message displays.



15. **Click OK.**

The Add/Remove dialog box displays. If PC MACLAN is still listed, close and reopen the dialog box. PC MACLAN should no longer be listed. You do not have to restart your computer now.

Upgrade PC MACLAN

The Upgrade procedure may be completed using the Windows 95 Add/Remove Program You can use these procedures regardless of which Installation option you choose – Standard, Custom or LocalTalk.

To upgrade PC MACLAN for Windows 95

Skip steps 1-5 when installing from the CD.

1. **On the Task Bar:**

- Click Start
- Point to Settings
- Click Control Panel

2. **In the Control Panel window, double click the Add/Remove Programs Icon.**

The Add/Remove Programs Properties dialog box displays with the Install/Uninstall tab selected.

3. **Insert the disk labeled Disk 1 into the disk drive and click the Install option.**

The Install Program From Floppy Disk or CD-ROM message displays.

4. **Click the Next button.**

The Run Installation Program message displays.

5. **Click Finish.**

After initialization, the PC MACLAN screen displays along with an information window concerning viruses.

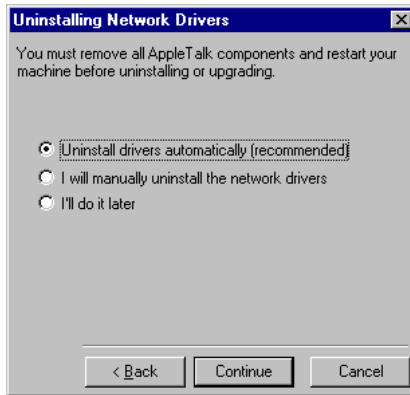


6. **If you need to disable your Anti-Virus protection, do so now before going any further:**

- Click OK in the information window
- Click the Exit icon

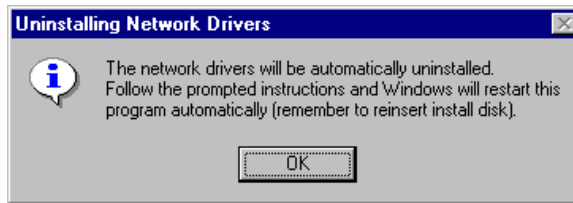
If you do not need to disable your Anti-Virus protection, click OK in the information window.

The Uninstalling Network Drivers dialog box displays:



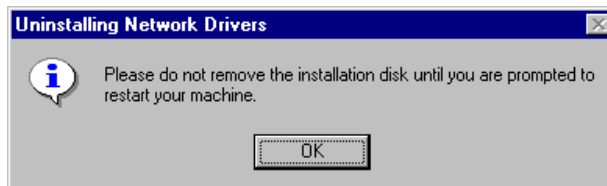
7. **Verify that Uninstall Drivers Automatically is selected and click Continue.**

The following message displays.



8. **Click OK.**

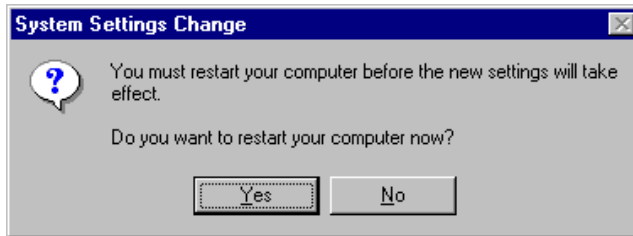
The following message displays. (This message is not applicable during installation from the CD. Please disregard.)



You must leave your disk in the disk drive while the current client, protocol and adapter are being removed from the network.

9. **Click OK.**

The Network window displays while the client, protocol and adapter are being removed. When complete, the Network dialog box closes and a message displays asking if you want to restart the computer.



10. **Remove your disk from the disk drive and click Yes. (Do not remove disk when installing from CD.)**

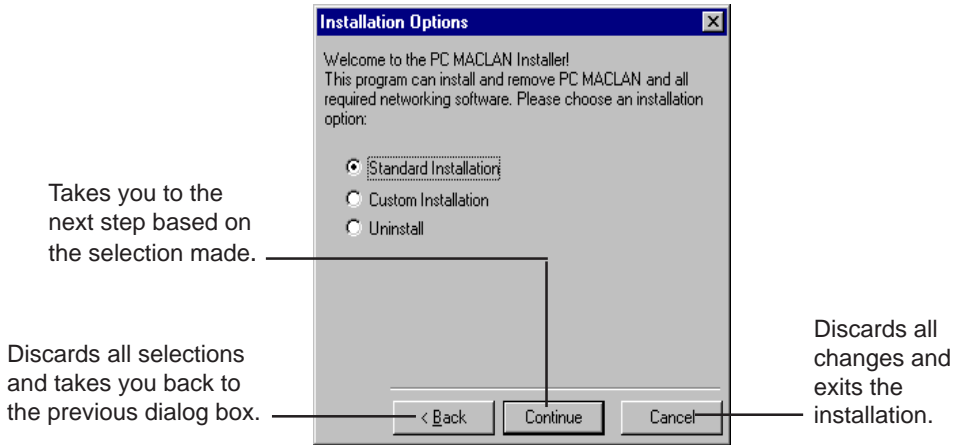
You must restart your system before you can upgrade PC MACLAN.

11. **After restart, insert Disk 1 in the disk drive. (Disregard when installing from CD.)**

The installer will automatically restart.

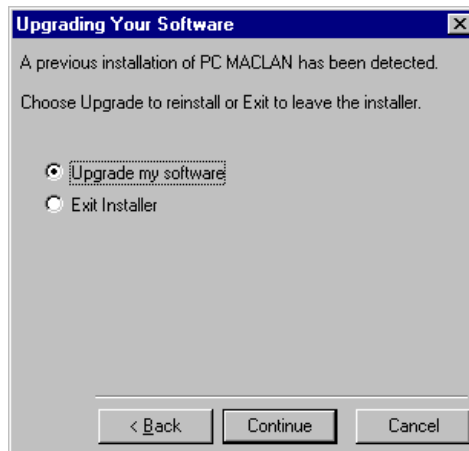
12. **Click OK at the virus message.**

The Installation Options dialog box displays.



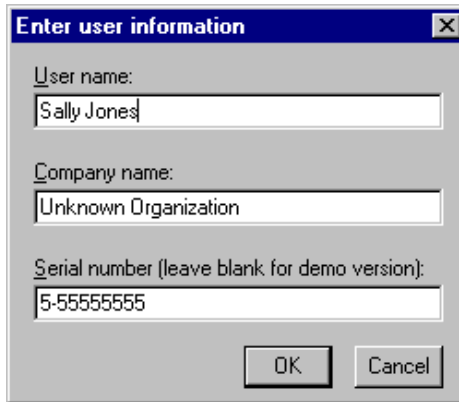
13. **Select the Installation Option that meets your requirements and click Continue.**

If you are uncertain, refer to the section of this chapter titled *Installation Options*. The Upgrading Your Software dialog box displays.



14. **Verify that the Upgrade software option is selected and click Continue.**

The User Information dialog box displays.



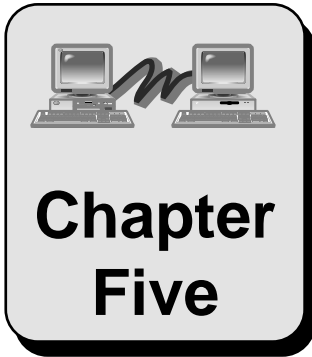
The screenshot shows a standard Windows dialog box titled "Enter user information". It features three text input fields. The first field is labeled "User name:" and contains the text "Sally Jones". The second field is labeled "Company name:" and contains "Unknown Organization". The third field is labeled "Serial number (leave blank for demo version):" and contains "5-5555555". At the bottom right of the dialog box are two buttons: "OK" and "Cancel".

15. **Verify your user name, company name and serial number and click OK.**

The next dialog box to display will depend on the option you selected in the Installation Options dialog box.

16. **Refer to the instructions for the installation option you selected. The procedures will be the same. For example:**

- If you selected Standard Installation, go the instructions titled *Standard Installation for Ethernet or Token-Ring*.
- If you selected Custom Installation, go to the instructions titled *Custom Installation for Ethernet or Token-Ring Networks*,
- If you have a LocalTalk network, go to the instructions titled *Installation for a LocalTalk Network*.



Setting Up PC MACLAN Client

This chapter explains how to set up the PC MACLAN Client services which allow you to access AppleTalk file servers and printers from your Windows 95 PC.

Topics include:

- About PC MACLAN Client
- Logging On and Logging Off
- Mapping to a Network Drive
- Setting Up Client Print Services
- Viewing/changing AppleTalk Printer Functions
- Creating/Viewing a Printer Log File
- Auto-Spooling Print Jobs from a Directory
- Changing Your Password
- Changing Your Zone

About PC MACLAN Client

The PC MACLAN client allows you to use AppleTalk file servers and printers. These can be accessed from your Network Neighborhood. As a result, you can share files (as a client) between your PC and Macintosh and use printers that are on the AppleTalk network.

All of the options available for the client are setup using the features that come with the Windows 95 Network Neighborhood. In other words, PC MACLAN provides an integrated network client. Therefore, there are no items listed in the PC MACLAN program group for the client portion of the PC MACLAN software.

The Universal Naming Convention (UNC) used to identify a MACLAN file server or print server on the network is as follows:

File server = `\\zone name@file server name`
Printer = `\\zone name`printer type\printer name`

Logging On and Logging Off

Once all of your computers and printers are connected physically (see Chapter 3), and the PC MACLAN program is installed (see Chapter 4), you need to complete two steps to logon to an AppleTalk file server as a client.

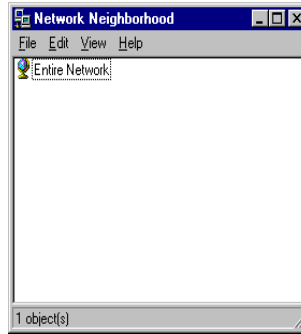
1. Turn on the AppleTalk file server (Macintosh computer) that is running Macintosh file sharing. This is the file server from which you will receive and send files. (See Chapter 10.)
2. Use the Windows 95 Network Neighborhood to logon to the AppleTalk file server.

To logon to an AppleTalk file server

Logging On

1. **Double-click the Network Neighborhood icon on your desktop.**

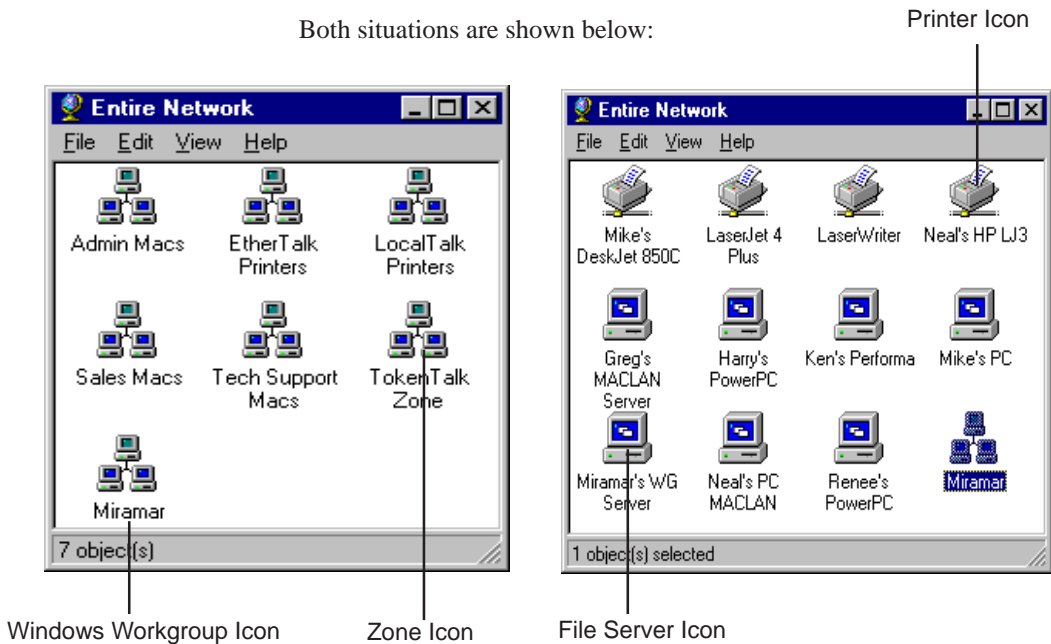
The Entire Network icon, any computers in your workgroup, and any servers you are connected to will display.



2. To find the AppleTalk server, double-click the Entire Network icon.

All computers on the network display. If AppleTalk zones are available on your network, the zone name appears with the zone icon. When you click a zone, the file servers and printers available in that zone display in a new window. If your network does not use zones, only the icons for file servers, printers and workgroups display.

Both situations are shown below:



3. **If you have zones, double-click the icon that represents the zone containing the AppleTalk file server you want to access. If you do not have zones, go to step 4.**

A window displays the contents, file servers and printers, contained in the zone.

4. **Double-click the individual icon for the AppleTalk file server you want to access.**

The Enter Network Password dialog box displays with your user name in the User Name field. The name of the file server is in the Resource field.



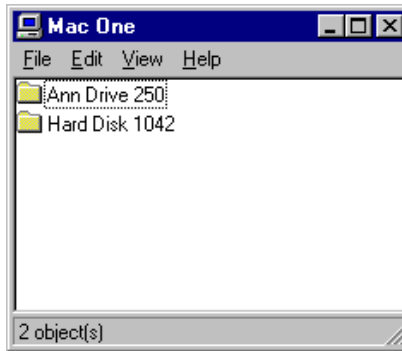
To be a registered user, you must enter a user name and password for the file server you selected. The user name and password you enter must be the same ones entered on the AppleTalk file server. If the server does not allow Guest access, the “Connect as Guest” checkbox does not appear.

5. **Type your user name in the User Name field, if it is not accurately displayed.**
6. **In the password field, type your password exactly as it was set on the AppleTalk file server, matching both upper and lower case letters and spaces.**

Asterisks (*) appear as you type to protect your password from being seen by others.

7. **If you do not want to retype the password each time you logon to the selected AppleTalk file server, click the *Save this password in your password list* checkbox.**
8. **Click the OK button.**

A window displays the volumes available in the selected AppleTalk file server. The name of the AppleTalk file server appears in the title bar of the window.



You may now access the files located on the AppleTalk server by double-clicking on the folder. For information about file names and file access privileges, see Chapter 2. You may also access the files using the Windows Explorer. The icon for the shared AppleTalk server is located within the Network Neighborhood.

To logoff an AppleTalk file server

Logging Off

1. **Double-click the Network Neighborhood icon.**

The AppleTalk File Server to which you are logged on should appear in the displayed list.

2. **Click the AppleTalk file server icon with the right mouse button.**

A shortcut menu displays.

3. **Click the Logout menu option.**

The Logoff Verification dialog box displays.



4. **Click OK.**

You are logged off the AppleTalk file server and will have to logon the next time you want to access the server. In addition, any drives you have mapped to the server will be disconnected.

Mapping to a Network Drive

If you want a shared AppleTalk volume to display in Windows Explorer as a drive connected to your PC, you can map the shared AppleTalk volume to a selected drive letter. Then, when you start the Windows 95 system, the shared volume will display in Windows Explorer next to the designated drive letter.



You can map only one volume to one drive letter. If there are two shared volumes located on the same AppleTalk file server, you must map them individually.

You may also disconnect the mapped drive at any time. Both procedures are listed below.

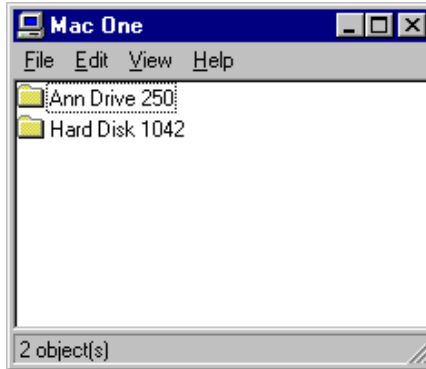
To map to a network drive

Map To Drive

1. **If you just completed logging on to the file server, the volumes located on the file server should be displayed in a window titled with the file server's name.**

If you closed the window, double-click the Network Neighborhood icon. Then double-click the AppleTalk file server you just logged onto.

The volumes included in the selected AppleTalk file server should now be displayed in a window.

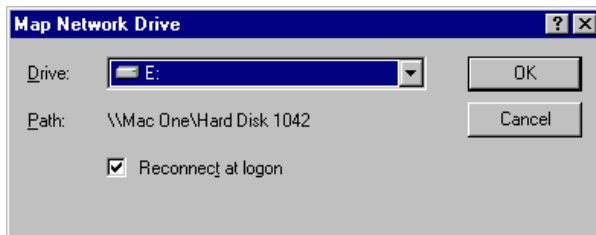


2. **Click the shared volume with the right mouse button.**

A shortcut menu displays.

3. **Click the Map Network Drive option.**

The Map Network Drive box displays.



4. **In the Drive field, select a drive letter that is not in use. The volume name is already displayed in the Path field.**

This is the drive that will be mapped to the AppleTalk file server. If you choose a drive that is already mapped to a drive or volume, the new drive or volume will replace the existing one.

5. **If you want the server to be shown as connected every time you start Windows, click the *Reconnect at logon* checkbox.**
6. **Click OK.**

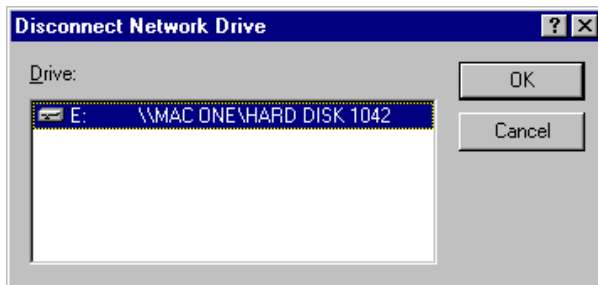
The contents of the mapped volumes displays in a window. Now when you open the Windows Explorer, the shared AppleTalk file server displays as a separate drive in the list as well as a component in the Network Neighborhood.

To disconnect a mapped network drive

Disconnect Mapped Drive

1. **Click the Network Neighborhood icon with the right mouse button.**
A shortcut menu displays.
2. **Click the Disconnect Network Drive option.**

The Disconnect Network Drive dialog box displays.



3. **Click OK.**

The AppleTalk file server is no longer mapped to the drive.

Setting Up Client Print Services

You may also use the Windows 95 Network Neighborhood capabilities to setup the PC MACLAN Print Client services which allow your Windows 95 PC to print to a printer connected to the AppleTalk network.

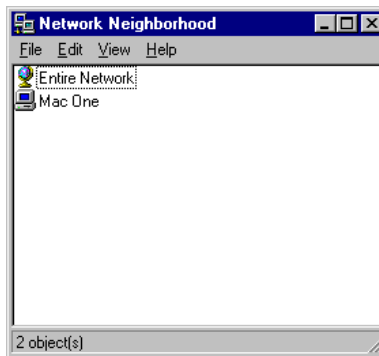
Before you setup PC MACLAN client print services, you need to:

- Know the make and model of your printer.
- Know the name of your printer.
- Make sure the printer is turned on and correctly connected to the network.
- (Optional) Know the AppleTalk printer “type” of your printer.

To setup the print client services

1. **Double-click the Network Neighborhood icon on your desktop.**

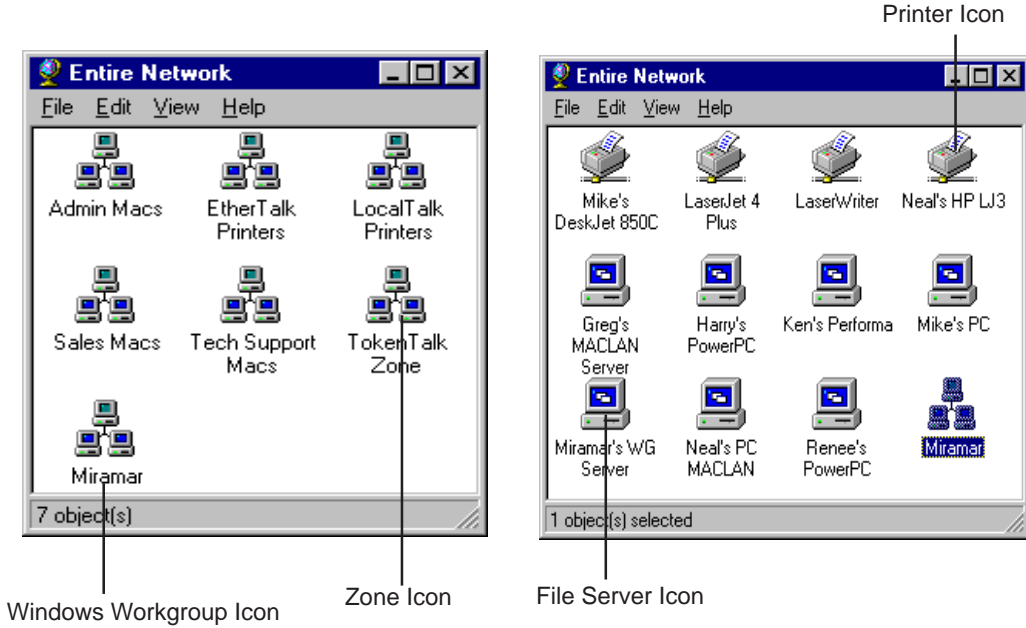
The Entire Network icon, any computers in your workgroup, or any servers you are connected to or logged on to will display.



2. **To find the AppleTalk printer, double-click the Entire Network icon.**

All computers on the network display. If AppleTalk zones are available on your network, the zone name appears with the zone icon. When you click a zone, the file servers and printers available in that zone display in a new window. If your network does not use zones, only the icons for file servers, printers and workgroups display.

Both situations are shown below:



3. **If you have zones, double-click the icon that represents the zone containing the AppleTalk printer you want to access. If you do not have zones, go to step 4.**

A window displays the contents, file servers and printers, contained in the zone.

4. **Double-click the icon for the AppleTalk printer you want to access.**

The following message displays:



5. **Click Yes.**

The Windows 95 Add Printer Wizard displays. The first question is *Do you print from MS-DOS programs?*

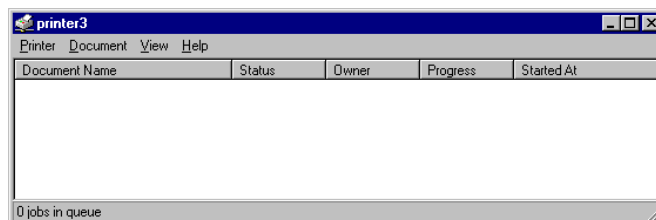


6. **Select the appropriate answer for your circumstances and click Next.**
7. **Follow the clearly defined instructions on each screen.**



If you are using a LaserWriter or any other PostScript printer, do not print a test page.

When the Printer Wizard is complete, the printer window displays for the printer you selected. The name of the printer is in the title bar of the window.

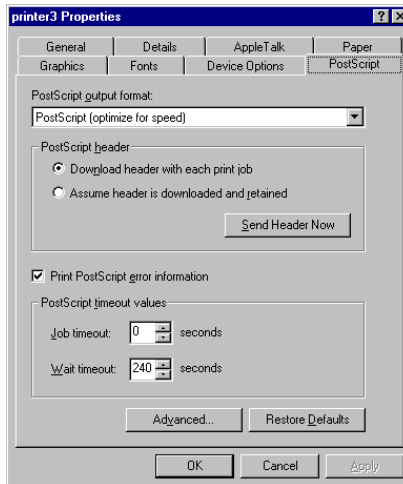


8. **Open the Printer pull-down menu and click Properties.**

The Properties dialog box displays.

9. **Click the PostScript tab.**

The following PostScript properties options displays.



10. **Click the Advanced button at the bottom of the dialog box.**

The Advanced PostScript options dialog box displays.

11. **In the Data Format List, click Pure Binary Data.**

This is the fastest format for printing and can be used over network cables or AppleTalk.

12. **Click OK to return to the PostScript Properties dialog box.**

13. **For any LaserWriter printer, change the PostScript Output Format to “Archive Format”.**

This eliminates a PostScript printer error which manifests as an extra page

feed and an error page printed after the job completes successfully.

14. **Click OK.**

The printer window displays. The changes you made are registered to the selected printer. You can now use the printer the same way you use any other printer.

Viewing/Changing AppleTalk Printer Functions

Once your AppleTalk printer is set up, PC MACLAN provides a utility that allows you to do the following printer functions:

- View general printer properties
- Display resident fonts
- Download fonts
- Download PostScript files
- View printer page settings

To display the AppleTalk Printer Functions window

1. **Open the Control Panel and double-click the Printers icon.**

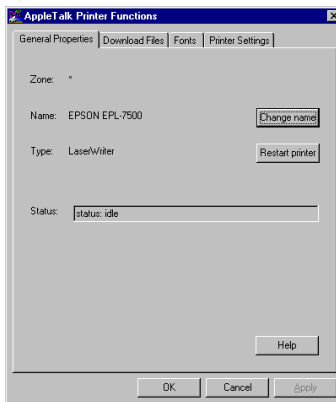
The Printers window displays.

2. **Click the icon for your AppleTalk printer with the right mouse button.**

A shortcut menu displays.

3. **Click the AppleTalk Printer Utilities... option.**

The AppleTalk Printer Functions dialog box displays.



4. **Click the tab that represents the printer function you want to view or change.**

The dialog box for the selected function displays.

Creating/Viewing a Printer Log File

PC MACLAN also provides the ability to keep a log file for the connected printer. You can track one or all of the following:

- Standard events and errors
- General messages from the printer
- Error messages from the printer

You can view and clear the contents of the log at any time.

To create a printer log file

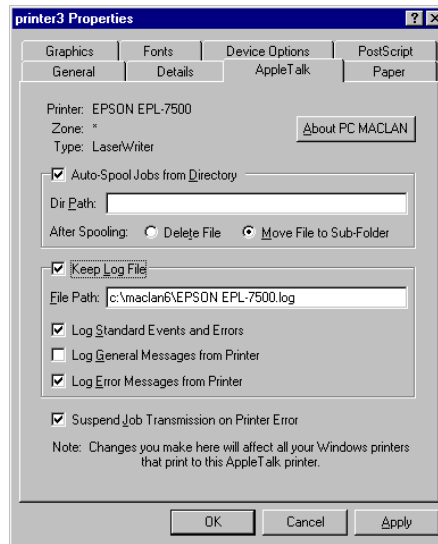
Create a Printer Log

1. **In the Printer window for the selected printer, open the Printer pull-down menu and click Properties.**

The Properties dialog box displays. (There are several ways to access the Properties dialog box. Refer to your Windows 95 User Manual.)

2. **Click the AppleTalk tab.**

The following AppleTalk properties options display.



3. **Click the Keep Log File box.**

A check mark appears in the box and all the possible options are activated.

4. **In the File Path field, leave the default destination file or type a new file path.**

5. **Click the check boxes next to the options you want to include in your log file.**

A check mark appears in the box of the selected option. If you do not want an option, make sure the check box is blank.

6. **Click OK.**

The log file is created and the Properties dialog box closes.

To view and clear the printer log file

View/Clear Printer Log

1. **Open the Control Panel and select the Printers icon.**

The Printers window displays all printers available on the system as well as the Add Printer icon.

2. **Click the AppleTalk printer once with the right mouse button.**

A shortcut menu displays.

3. **To view the contents of the printer log, click the View Printer Log option.**

4. **To clear the contents of the printer log, click the Clear Printer Log option.**

Auto-Spooling Print Jobs from a Directory

This feature allows you to establish a directory from which printable files can be spooled to an AppleTalk printer. The files copied to this directory must be properly formatted print jobs. If the target printer is a LaserWriter, the files must be PostScript files.

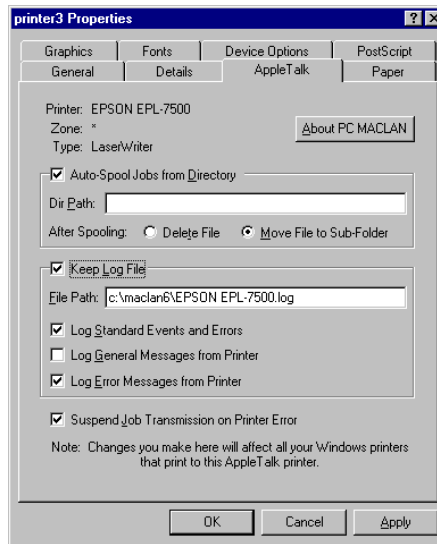
To automatically spool print jobs from a directory

1. **In the Printer window for the selected printer, open the Printer pull-down menu and click Properties.**

The Properties dialog box displays. (There are several ways to access the Properties dialog box. Refer to your Windows 95 User Manual.)

2. **Click the AppleTalk tab.**

The following AppleTalk options display.



3. **Click the Auto-Spool Jobs from Directory box.**

A check mark appears in the box and all possible options are activated.

4. **In the Dir Path field, type the complete path to an existing directory.**

This directory should not contain any files.

5. **Click one of the two “After spooling” options.**

This tells the system what to do with the file after the printing is complete.

6. **Click OK.**

The auto-spooling to a directory is established and the dialog box closes.

Changing your Password

PC MACLAN uses your Windows 95 user name as the default user name when you log onto an AppleTalk file server. All you have to do is enter your password. You can change your password at any time using the Change Password option on the Windows shortcut menu. (To set a user name and password on the Macintosh, see Chapter 10.)

To change your password

1. **Double-click the Network Neighborhood icon on your desktop.**

The AppleTalk file server to which you are logged on should appear in the Network Neighborhood listing along with the Entire Network icon, and any computers in your workgroup.

Or

If you are not logged on, double-click the Entire Network icon to find the AppleTalk server.

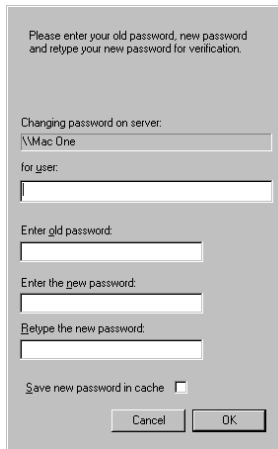
All computers on the network will display. If AppleTalk zones are available on your network, they appear. When you click a zone, the file servers and printers that are available display in the zone window. If your network does not use zones, only the File Servers and printer display in the window.

2. **Click the shared AppleTalk file server icon once with the right mouse button.**

A shortcut menu displays.

3. **Click the Change Password option.**

The following dialog box displays.



Please enter your old password, new password and retype your new password for verification.

Changing password on server:
\\Mac One

for user:
[]

Enter old password:
[]

Enter the new password:
[]

Retype the new password:
[]

Save new password in cache

Cancel OK

4. **Enter your existing password and your new password in the appropriate fields.**

Remember, your password must be typed exactly as it was the first time you entered it. Passwords are case sensitive, e.g., rosebud is NOT the same as ROSEBUD.

5. **Click OK.**

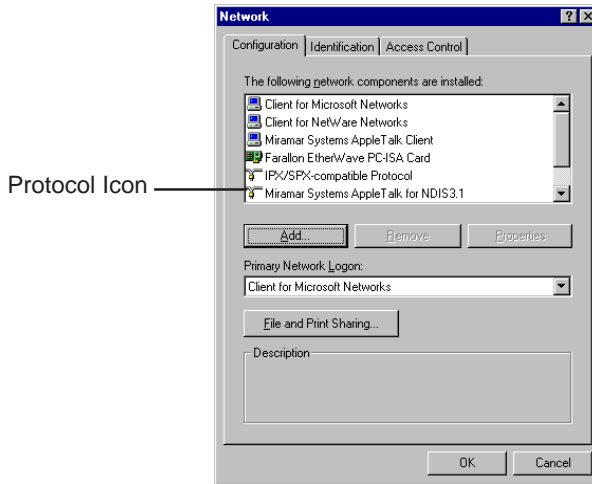
The new password is accepted by the system. If you log off and then log on again, you must use the new password.

Changing your Zone

You can also change the zone in which your AppleTalk file server and any shared printers display in the Network Neighborhood. The change will take effect immediately. You do not have to restart your PC unless you are changing a network adapter card.

To change the AppleTalk zone

1. **Click the Network Neighborhood icon with the right mouse button.**
A shortcut menu displays.
2. **Click the Properties option.**
3. **Select the *Miramar Systems AppleTalk Protocol* included in the network components list. (Look for the protocol icon.)**



The wording will correspond to the adapter you are using. For example, it may read *Miramar Systems AppleTalk for NDIS* or *Miramar Systems AppleTalk for ODI*.

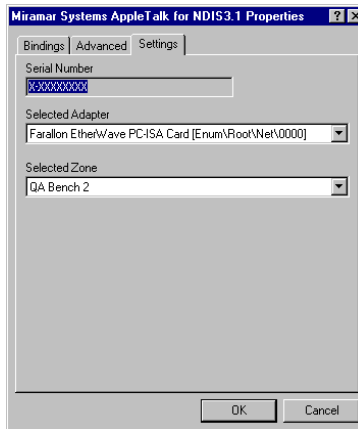
The selection is highlighted and the Properties button is activated.

4. **Click the Properties button.**

The Miramar Systems AppleTalk for NDIS Properties dialog box displays. There are three tabs: Bindings, Advanced and Settings.

5. **Click the Settings Tab.**

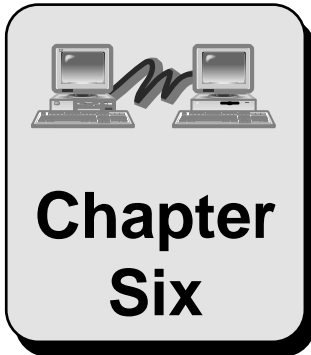
The following dialog box displays. The zone selected during installation is displayed in the Zones field.



6. **Click the arrow in the Zones field to display a list of available zones. Then select the new zone.**

7. **Click OK.**

Your PC will now be located in the newly selected zone.



Setting Up PC MACLAN File Server

This chapter explains how to set up the PC MACLAN File Server once you have completed the appropriate installation procedures.

Topics include:

- PC MACLAN Server Console
- Setting File Server Security Parameters
- Defining Users and Groups
- Defining Shared Directories and Access Privileges
- Defining a File Extension Map
- Starting the File Server Automatically

PC MACLAN File Server Console

The PC MACLAN File Server allows you to share files between a PC computer and a Macintosh via a designated directory, hard drive, floppy drive or other attached media. Before you can use the PC MACLAN File Server, you will need to:

- Set the File Server Security Parameters
- Define the Users and Groups
- Define the Shared Directories and Files
- Set Up Definable File Extensions

The PC MACLAN Console window is used to complete each of these tasks.

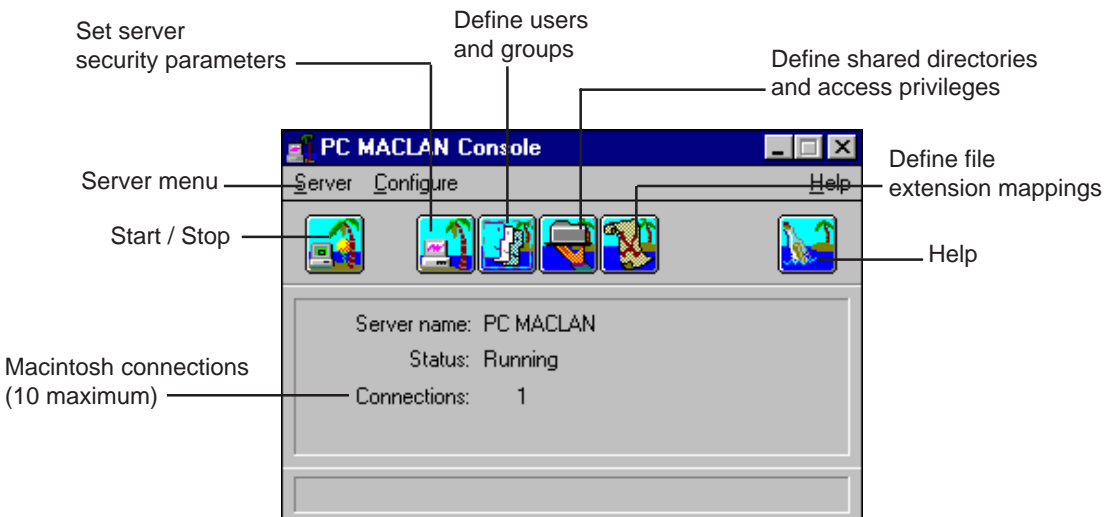
To display the PC MACLAN Console window

1. **Open the PC MACLAN program group.**

The program group name (PC MACLAN) may be different if you used the Custom option during installation.

2. **Click the File Server program item to display PC MACLAN Console.**

This is the main window for the file services.



For details about online Help, refer to Chapter 2. To complete the remaining tasks, follow the step-by-step instructions provided in the sections that follow.

Setting File Server Security Parameters

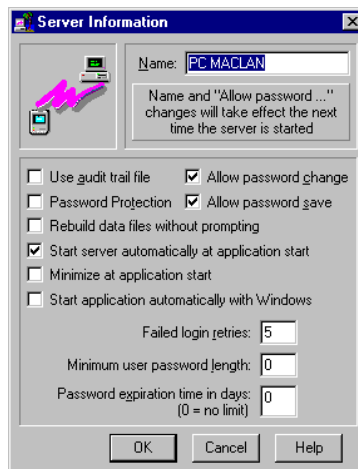
The PC MACLAN Console provides a way for you to change the default server name (PC MACLAN) and set security parameters for the file server. If you make changes when the server is running, the changes will be reflected the next time the server is started.

To set the server security parameters



1. **On the PC MACLAN Console, click the Server icon.**

The Server Information dialog box displays.



2. **Click the HELP button for a detailed explanation of each option in the Server Information dialog box.**
3. **Enter the configuration parameters you desire. Then click OK.**

All parameters go into effect immediately except for the “name change” and “allow password change” parameters. These two changes go into effect when the server is restarted.

Defining Users and Groups

Users are the people who are allowed to use the PC MACLAN file server. A person may be assigned as an individual user and also as part of a group. A **group** is a logical organization of users according to an activity or resource. For example, a group may include all users from a specific department or all users who require access to a specific volume.

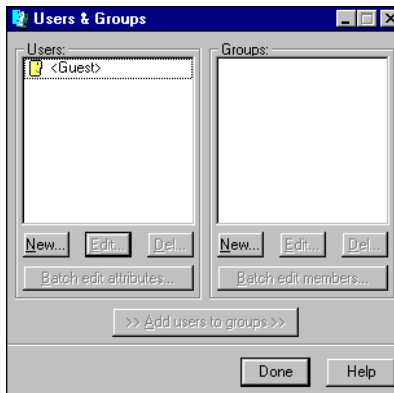
Users and groups are added, deleted or changed using the Users & Groups dialog box shown below.

To display the Users & Groups dialog box



1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays.



Click the **HELP** button for a detailed explanation of each option in the Users & Groups dialog box.

Defining Users

The individuals using the PC MACLAN Server are defined along with their attributes before they can access the server from their Macintosh. A **Guest User** does not require a unique name or password and typically does not have complete access rights to a volume.

A **Registered User** has a unique name and password and may be assigned access rights to any shared folder or file.

The procedures for defining users are listed below.

To add a new user

Add A New User

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays. You may add a registered user. Anyone can login as a guest if guest logins are allowed.

2. **Click New on the User side of the dialog box.**

The User dialog box displays with New User entered in the dialog box title and the Name field.



3. **Type the registered user's name in the Name field.**

This name displays in the User's column in the Users & Groups dialog box. This same user name should be entered on the Macintosh client when accessing this server. (See Chapter 10.)

4. **To set a password for the new registered user:**

- Click Set Password.
- In the Set Password dialog box, type the password in both the New Password and Retype fields.
- Click OK

New passwords must be entered twice with an exact match before a password is changed. If the two attempts do not match, an error message is displayed and you are prompted to reenter the new password. The maximum length of a password is 8 characters. Passwords are case sensitive, e.g. rosebud is not the same as ROSEBUD.

5. **In the Attributes section, click on the boxes that define the specific access privileges for the user.**

Click HELP to see an explanation of each field in the Attributes section.

6. **To add the user to a defined group:**

- Click Add to display a list of existing groups.
- Click the desired group name.
- Click OK to add the Group name in the box.

7. **To remove the user from a group.**

- Click the group name listed in the box.
- Click Remove to delete the group name from the list.

To edit one user's attributes

Edit One User

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays.

2. **In the Users column, click the name of the User who's attributes you want to change.**

The New, Edit and Del buttons are activated.

3. **Click Edit on the User side of the dialog box.**

The User dialog box displays the user's name and attributes.

4. **Make the appropriate changes and click OK.**

The new user attributes are saved.

To edit several users attributes at the same time

Edit Several Users

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays.

2. **In the Users column, hold down the shift key and click each user name you want to edit.**

The New, Edit, Del and Batch Edit User Attributes... buttons are activated.

3. **Click Batch Edit User Attributes.**

The Batch Edit User Attributes dialog box displays with all of the selected users listed in the Users to Alter box.



4. **Make the appropriate changes and click OK.**

The new user attributes are saved for each of the selected users.

To delete an existing user

Delete A User

1. **On the PC MACLAN Console, click the Users and Groups icon.**

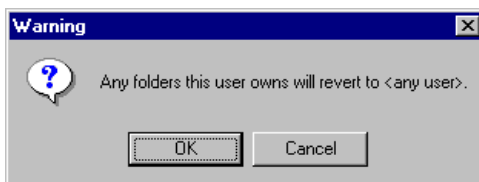
The Users & Groups dialog box displays.

2. **In the Users column, click the name of the user you want to delete.**

The New, Edit and Del buttons are activated.

3. **Click Del on the User side of the dialog box.**

The delete warning box displays.



4. **Click OK.**

The user is deleted from the server.

To disable guest access

Disable Guests

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays.

2. **In the Users column, click <Guest>.**

The New, Edit and Del buttons are activated.

3. **Click Edit on the User side of the dialog box.**

The User dialog box displays the Guest access privilege which is usually Can Login only.

4. **Deselect the Can Login option.**

No-one can login as a Guest until you reselect the Can Login option.

Defining Groups

Users may at times be organized into logical groups. For example, a group may include all users from a specific department or all users who require access to a specific volume. The procedures for defining groups are listed below.

To add a new group

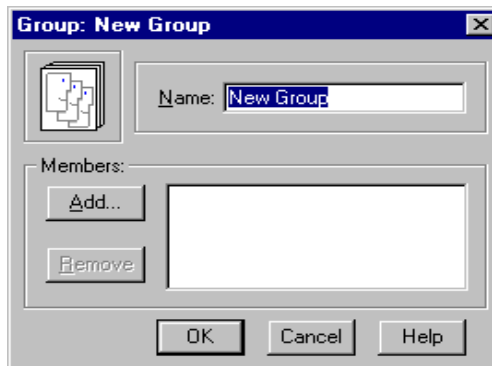
Add A New Group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays.

2. **Click New on the Group side of the dialog box.**

The Group dialog box displays with New Group entered in the dialog box title and the Name field.



3. **Type the name of the group in the Name field.**

This name will display in the Group column of the Users & Groups dialog box.

4. **Click Add.**

The Add Members to New Groups selection box displays.



5. **Click each name you want to add to the group. Then click OK.**

The user names are added to the Members box.

6. **Click OK.**

The group is defined and the members are added.

To add existing users to a defined group

Add Users To A Group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays.

2. **In the Group column, click the name of the group you want to add users to.**

The >>Add Users to Group>> option is activated.

3. **In the Users column, click the names of the users you want to add to the selected group.**

4. **Click >>Add Users to Group>>.**

An Operation Completed message displays.

5. **Click OK.**

The selected users have been added to the selected group.

To edit a group

Edit A Group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

The Users & Groups dialog box displays.

2. **In the Groups column, click the name of the Group you want to change.**

The New, Edit and Del buttons are activated.

3. **Click Edit.**

The Group dialog box displays the group name and members.



4. **To add a new user:**

- Click the Add button.
- Click the name of the user you want to add.
- Click OK

5. **To remove a group member:**

- Click the name of the user you want to remove.
- Click Remove

6. **Click OK.**

The group changes are saved.

To batch edit group member's attributes

Batch Edit A Group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

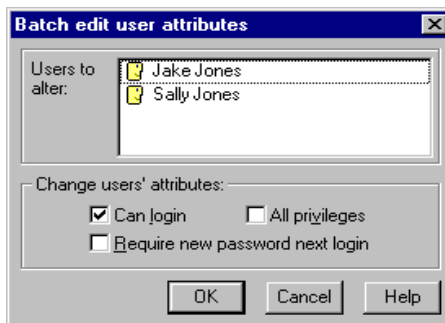
The Users & Groups dialog box displays.

2. **In the Group column, click each group you want to edit.**

The Batch Edit Members button is activated.

3. **Click Batch Edit Members.**

The Batch Edit User Attributes dialog box displays with all of the selected users listed in the Users to Alter box.



4. **Make the appropriate changes and click OK.**

The new user attributes are saved for each user.

To delete an existing group

Delete A Group

1. **On the PC MACLAN Console, click the Users and Groups icon.**

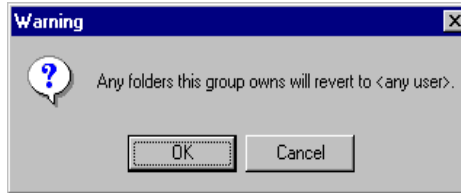
The Users & Groups dialog box displays.

2. **In the Groups column, click the name of the group you want to delete.**

The Del button is activated.

3. **Click Del.**

The delete warning box displays.



4. **Click OK.**

The group designation is deleted from the server.

Defining Shared Directories and Access Privileges

The next step in setting up the file server is to indicate which directory, hard drive, floppy drive or other attached media will be used to share files among the defined users and groups. When you select and name a directory (folder) on the file server, you define the name that will appear on the Macintosh desktop of connected users. A user can connect and log in only if they have access privileges to that folder. For more information on using shared directories, see Chapters 9 and 10. For more details on access privileges, see Chapter 2.

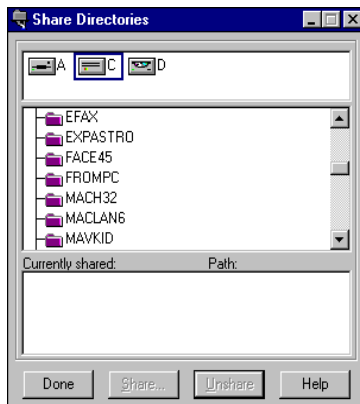
Shared directories are defined using the Shared Directories dialog box shown below.

To display the Shared Directories dialog box



1. **On the PC MACLAN Console, click the Share Directories icon.**

The Share Directories dialog box displays.



Create a Shared Directory / Assign Access Privileges

When you create a shared directory you must identify the physical device, the directory name and the access privileges of those users who will be sharing the directory.

There are two ways to create a shared directory and set up access privileges. You can:

- Use the PC MACLAN Console window
- Select the folder in Windows Explorer

The procedures are the same once the Shared Directory dialog box displays.

To create a shared directory and assign access privileges

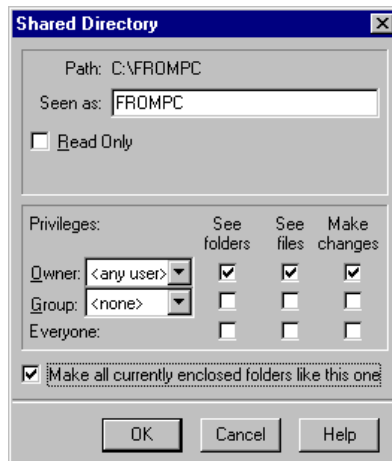
1. Use the PC MACLAN Console window as follows:
 - Click the Share Directories icon to display the Share Directories dialog box.
 - In the drives selection box, click the drive that contains the directory you want to share. All of the available directories in the selected drive display.

- Click the directory you want to share, or select the entire drive by clicking the root directory.
- Click the Share button. The Shared Directory dialog box displays.

Or

Display the directory icon in Windows Explorer, click the icon once with the right mouse button and select AppleTalk Sharing from the shortcut menu.

In either case, the Shared Directory dialog box displays.



2. **In the Seen As field, type the directory name you want to display on the users desktop.**

If the name is different than the existing directory name, the new name appears in parentheses next to the current one on the PC.

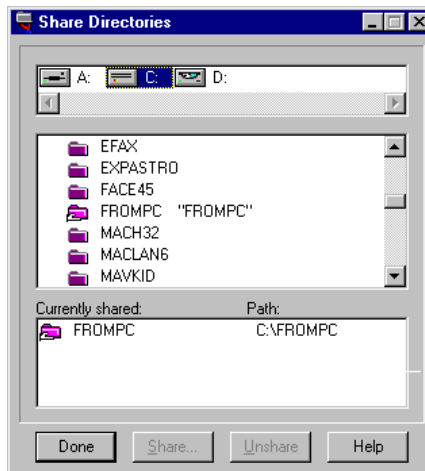
3. **Click Read Only if you do not want a user to be able to save anything to the selected directory.**
4. **In the Privileges box, select the Owner, Group and Everyone privileges you want for the directory.**

For a detailed explanation of access privileges, click the Help icon and then click *Understanding Access Privileges* in the Privileges section.

5. **To apply the same access privileges to all folders contained within the selected folder, click the *Make all currently enclosed folders like this one* checkbox.**
6. **When all privileges are selected, click OK.**

The selected directory name is placed in the Currently Shared box in the Shared Directories dialog box in two forms: (1) The way the directory name will appear in the Macintosh Chooser and on the Macintosh desktop, (2) The way the directory name appears on the PC.

If you accessed the Shared Directory dialog box from the PCMACLAN Console, the Share Directories dialog box will display now.



7. **Repeat steps 2 through 6 for each directory you want to share.**
8. **When finished, click DONE.**

All shared directories will display in the Currently Shared box on the Shared Directories dialog box.

Change Access Privileges

You may also change the access privileges assigned for a shared volume using the Shared Directory dialog box.

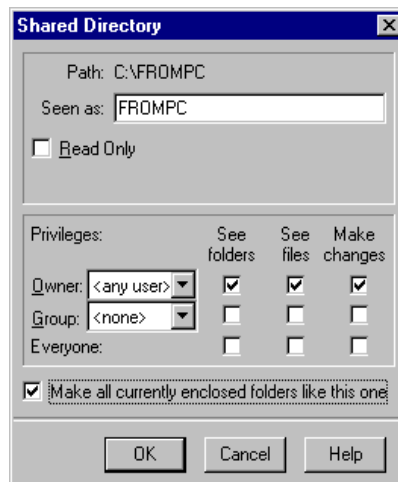
To change access privileges for a shared directory

1. On the PC MACLAN Console, click the Share Directories icon. When the Share Directories dialog box displays, click the directory name in the Currently Shared section that you want to edit. Then click Share.

Or

Display the Directory icon in Windows Explorer, click once with the right mouse button and select AppleTalk Sharing from the shortcut menu.

In both cases, the Shared Directory dialog box displays the current privileges.



4. Make the desired changes and click OK.

For a detailed explanation of access privileges, click the Help icon and then click *Understanding Access Privileges* in the Privileges section.

Unshare a Directory

When you no longer have a reason to share a directory, you can unshare the directory. You cannot unshare a directory if a user is currently accessing the volume.

To unshare a directory

1. **On the PC MACLAN Console, click the Share Directories icon.**

The Share Directories dialog box displays.

2. **In the Currently Shared box, click the name of the directory you want to unshare.**

The Unshare button is activated.

3. **Click Unshare.**

All of the Macintosh file and folder information for the volume remains intact.

4. **Click OK to accept your selection.**

Defining a File Extension Map

When a document is created on the PC, the operating system identifies the file creator or application with a **file extension**. For example, a Microsoft Word document has a file extension of *.DOC*. If you double-click the file name, the document will open along with the application. The server supports file extensions up to eight characters.

The Macintosh operating system provides this capability by storing specific information with every file. This includes a 4-character code called a **file creator** that uniquely identifies the application that originated the file and another 4-character code called a **file type** that identifies the type of file. For example, a Microsoft Word document has a file creator code of *MSWD* and a file type code of *WDBN*.

File Extension Mapping provides a way to tell the PC MACLAN File Server how to treat PC files with various name extensions so they will display properly on the Macintosh desktop. In other words, you can define which Macintosh file creator code and file type code should be used with (mapped to) a specific PC file extension. (See Chapter 2 section titled *File Extension Mapping* for more detail.)

A few common file types come pre-configured with PC MACLAN. These are displayed in the File Extension Mapping window. However, there may be times when you have to add, edit, delete or duplicate a file extension. This can be done using the File Extension Mapping dialog box.

PC files that do not have an extension mapping assigned are displayed on the Macintosh desktop using a generic PC icon. If you assign an extension mapping to a file displayed using the generic PC icon, the generic icon is automatically updated to the newly assigned icon when the folder is reopened by the Macintosh user. However, if you change the extension mapping for a file that already has an extension mapping, the new icon is not applied until the existing file is renamed or moved to a new location in the shared directory.

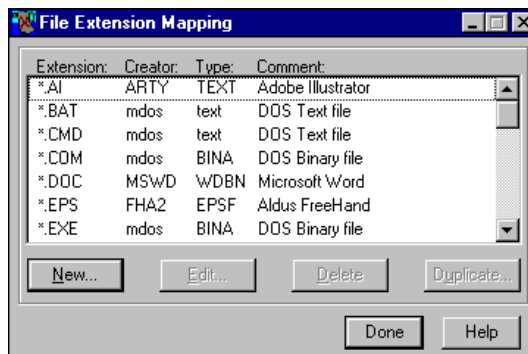
PC MACLAN Client uses these file extension mappings when files are copied to an AFP server.

To display the File Extension Mapping dialog box



1. On the PC MACLAN Console, click the File Extension Mapping icon.

The File Extension Mapping dialog box displays a list of the current file extension settings with the New button activated.



To add a new file extension

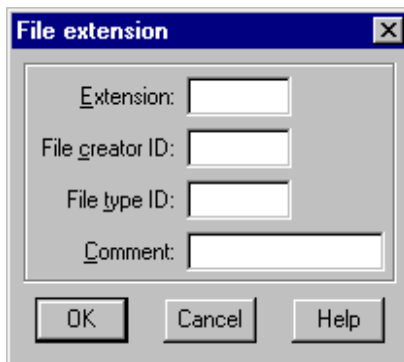
Add File Extension Map

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

The File Extension Mapping dialog box displays.

2. **Click New.**

The File Extension dialog box displays.



3. **Type the PC extension, the 4-character Macintosh file creator ID and the 4-character Macintosh file type ID in the appropriate fields.**

Click Help for more detail about each field. The file creator and file type ID's are case sensitive. The PC file extension can have up to 8 characters.

4. **In the Comment field, type a description that explains the extension you just added or updated.**
5. **Click OK.**

The File Extension Map is added to the list.

To edit a file extension map

Edit File Extension Map

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

The File Extension Mapping dialog box displays.

2. **Click the file extension map you want to change.**

The Edit button is activated.

3. **Click Edit.**

The File Extension dialog box displays the existing data for the selected map.

4. **Make the appropriate changes in each of the fields.**

If the file creator and file type are changed, the changes will not be reflected on files that have already been displayed on the Macintosh. Changing the Extension field has the same effect as deleting the current value and creating a new one.

5. **Click OK.**

The File Extension Map changes are saved.

To delete a file extension map

Delete File Extension Map

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

The File Extension Mapping dialog box displays.

2. **Click the file extension map you want to delete.**

The Del button is activated.

3. **Click Del.**

4. **Click OK.**

The File Extension Map is deleted.

To duplicate a file extension map

You can quickly add a file extension map that is similar to an existing one by copying the existing map and then making changes.

Duplicate a File Extension Map

1. **On the PC MACLAN Console, click the File Extension Mapping icon.**

The File Extension Mapping dialog box displays.

2. **Click the file extension map you want to duplicate.**

The Duplicate button is activated.

3. **Click Duplicate.**

The File Extension window displays with all fields except the Extension field complete. This data is taken from the selected file extension map.

4. **Type the PC extension in the Extension field and modify any of the other fields, if applicable.**

5. **Click OK.**

The new file extension map is added.

The PC MACLAN File Server is now set up and ready to be used. Before you can use the File Server, your Macintosh must be set up for file sharing and you must be logged in (See Chapter 10.) For details on how to start the file server and use the features, see Chapter 9.

Starting the File Server Automatically

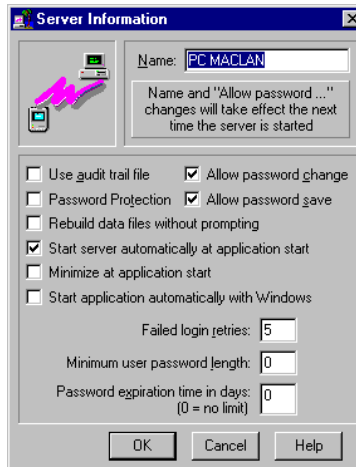
The PC MACLAN file server can be set to start automatically when Windows loads. In other words, you will not have to open the PC MACLAN Program Group, select the File Server item and then start the file server each time you load Windows 95.

In addition, the file server can be set to run minimized to keep the desktop uncluttered. (See Windows 95 user manual.) However, if password protection is enabled, only an “Admin” user can restore the minimized file server to an editable configuration.

To have the file server start automatically

1. **On the PC MACLAN Console, click the Server icon.**

The Server Information dialog box displays.

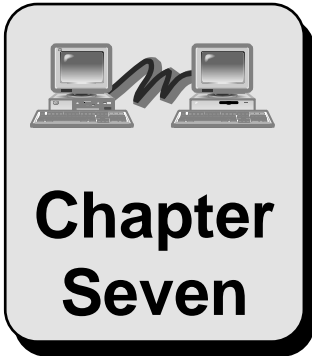


2. **Select the following options:**

- Start application automatically with Windows
- Start server automatically at application start
- Minimize at application start (if desired)

3. **Click OK.**

From this point forward, the server will start automatically when Windows 95 loads.



Setting Up PC MACLAN Print Server

This chapter explains how to set up the PC MACLAN Print Server once you have completed the appropriate installation procedures.

Topics include:

- Print Services and Spoolers
- Creating a New Print Spooler
- Starting and Stopping a Print Spooler
- Editing a Print Spooler
- Removing a Print Spooler
- Exiting the Print Server
- Using Print Services

Print Services and Spoolers

The PC MACLAN print server allows you to share local printers (printers connected to the PC via a parallel port cable) with other users on your network by registering selected printers onto the AppleTalk network as a LaserWriter or other device type, as specified. The print server accepts print jobs from AppleTalk workstations using the Printer Access Protocol (PAP) and responds to any queries requested by the workstation, passing the print jobs onto the Windows printer queue.

The Macintosh user who wants to access a printer connected to a PC using the PC MACLAN Print Server can do so by selecting the printer in the Macintosh Chooser dialog box. (For information on printer requirements, see Chapter 3.)

PC MACLAN may print to any Windows printer. The default setting on a Macintosh is PostScript. Therefore, to use a printer other than a PostScript printer you will need a PAP driver (from GDT) on the Macintosh or Zscript (from Zenographics) on the PC.

The print queue spooler will accept jobs simultaneously from multiple Macintoshes. You can setup a unique spooler for each printer. Each spooler is operated independently and may be started or stopped individually.

The PC MACLAN Print Server window is used to set up the print spoolers.

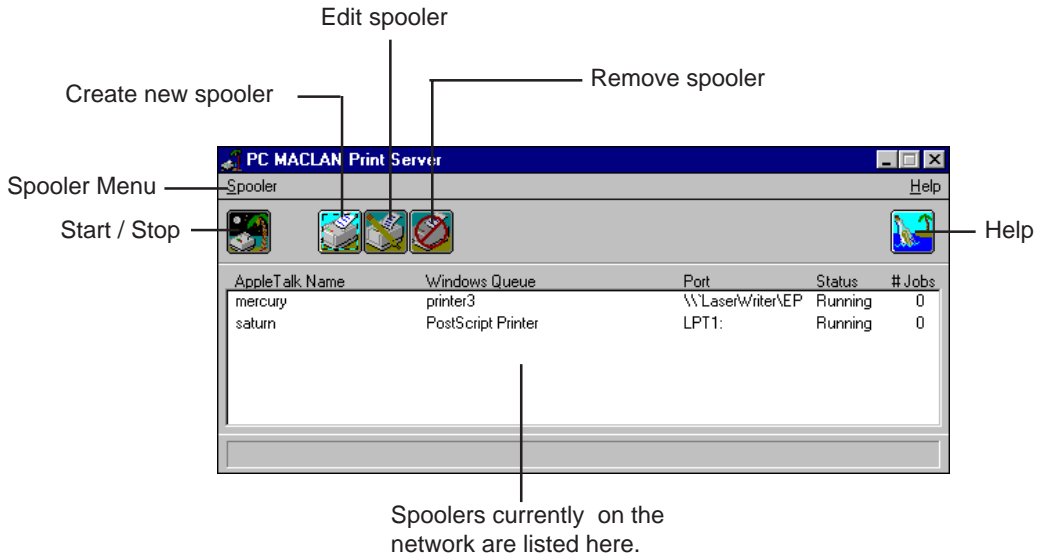
To display the PC MACLAN Print Server window

1. **Open the PC MACLAN program group.**

The program name (PC MACLAN) may be different if you used the Custom option during installation.

2. **Click the Print Server program item.**

The PC MACLAN Print Server window displays with the Create Spooler icon active. This is the main window for the print services. When you open the PC MACLAN print server, any existing print spoolers that were running when the application was last shutdown are automatically started. Any print spoolers that were stopped will remain stopped.



For details about online Help, refer to Chapter 2. To complete the remaining tasks, follow the step-by-step instructions provided in the sections below.

Creating a New Print Spooler

Creating a spooler provides an additional printer for those on the network to access. You can spool your documents to a printer locally connected on the network, or you can spool documents to a directory on the Windows 95 PC.

There are two ways to create a new print spooler. You can:

- Use the PC MACLAN Print Server Window
- Select the printer in Printers Control Panel

The procedures are the same once the Spooler Configuration dialog box displays.

To create a print spooler

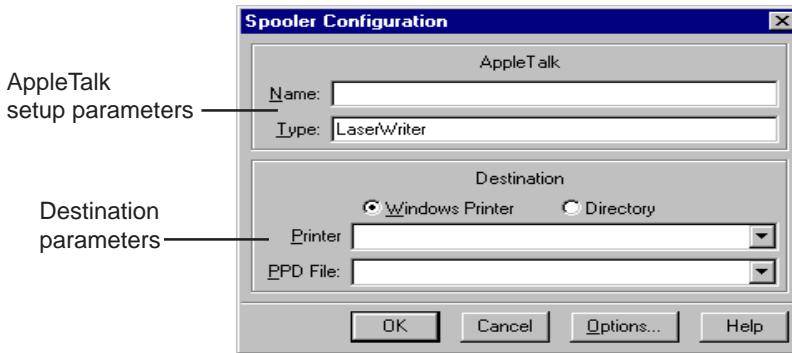


1. **On the PC MACLAN Print Server window, click the Create New Spooler icon.**

Or

Display the Printer icon in Printers Control Panel, click once with the right mouse button and select AppleTalk Sharing from the shortcut menu.

In both cases, the Spooler Configuration dialog box displays.



If you select **Windows Printer** as your destination, you can designate a Windows printer to print any incoming job. If you select **Directory** as your destination, you can have the jobs saved to a designated directory to be printed later by you or a RIP program.

2. **In the Name field, type the name of the printer or spooler.**

The name you type here will appear in the Macintosh Chooser dialog box.

3. **In the Type field, enter the type of printer you have.**

The default device type is LaserWriter. This will support most PostScript printers. However, you can use any other Printer Access Protocol (PAP) device. (For example, an HP DeskJet 500 can be shared as a “DeskWriter” type.)

4. **To select a Windows printer to print incoming jobs:**

- Click the Windows Printer option box.
- Click the arrow to open the Printer options list.
- Select one of the printers on the list

To provide spooler services for network printers, the printer must be redirected to an LPT port. If the printer is not displayed, it is not installed on your system. Refer to the Windows 95 user manual to install the printer driver.

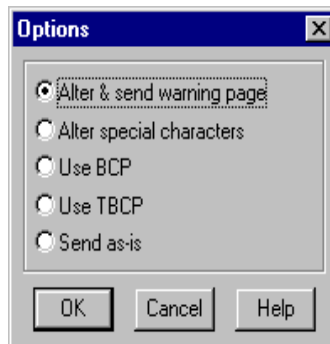
5. **To save print jobs to a specific directory:**

- Click the Directory option box.
- Type the directory path in the Directory field.

6. **Click the arrow to open the PPD File options list and select the PPD file that contains the specific PostScript functionality (including fonts) your printer supports.**

Check your printer user manual if you are unsure what PPD file to select. PC MACLAN comes with a number of standard Apple LaserWriter PPDs. If your printer is a PostScript printer there is probably a specific PPD file that may be found on the Windows driver installation disk that came with your printer.

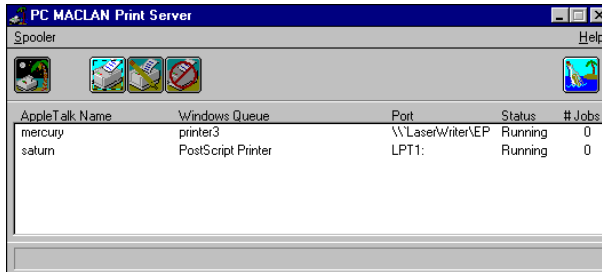
7. **If your print jobs contain binary data (graphics), click the Options window and select an option to avoid print job failure due to embedded control characters.**



Click Help for detailed information about each available option. Select an option only if it is supported by your printer. Refer to the documentation that came with your printer. Click OK or Cancel to return to the Spooler Configuration window.

8. Click OK on the Spooler Configuration window.

The print spooler is added to the list on the PC MACLAN Print Server window with the status “running”.



The printer may now be used the same way as any other printer attached to your PC.

Starting and Stopping a Print Spooler

The print spoolers displayed on the PC MACLAN Print Server window may be started and stopped individually. As long as the status of the print spooler reads “running”, the printer may be used by anyone on the network.

When you open the PC MACLAN print server, any existing print spoolers that were running when the application was last shutdown are automatically started. Any print spoolers that were stopped will remain stopped. In addition, each time you create a new print spooler, it is automatically started when created.

To start a print spooler



1. **On the PC MACLAN Print Server window, click the name of the print spooler you want to start.**

The name is highlighted.

2. **Click the Start/Stop icon, or open the Spooler pull-down menu and click the Start Spooler option.**

The status of the selected print spooler changes to “running” and the Start/Stop icon is lit. The printer may now be used by anyone connected to the AppleTalk network.

To stop a print spooler



1. **On the PC MACLAN Print Server window, click the name of the print spooler you want to stop.**

The name is highlighted.

2. **Click the Start/Stop icon, or open the Spooler pull-down menu and click the Stop Spooler option.**

The status of the selected print spooler changes to “Stopped” and the Start/Stop icon turns dark. The printer is no longer available to users connected to the AppleTalk network.

Editing a Print Spooler

Once a print spooler has been created, you can make changes to the existing information using the PC MACLAN Print Server window. You cannot change a spooler when it is running. The spooler must be stopped first.

To edit a print spooler from the PC MACLAN Print Server window



1. **On the PC MACLAN Print Server window, click the print spooler you want to edit.**

The spooler name is highlighted.

2. **If applicable, click the start/stop icon to stop the spooler.**

The spooler status must be “Stopped” before you can make a change.

3. **Click the Edit Spooler icon on the PC MACLAN Print Server window.**

The Spooler Configuration dialog box displays the existing information for the selected print spooler.

4. **Make the appropriate changes and click OK.**

The changes are saved but the status remains as “Stopped”.

5. **Click the start/stop icon to start the spooler.**

The start/stop icon is lit and the spooler status changes to “Running”.

Removing a Print Spooler

The PC MACLAN Print Server window allows you to remove an existing print spooler. The print spooler status must be “Stopped” before you can remove it.

To remove a print spooler



1. **On the PC MACLAN Print Server window, click the print spooler you want to remove.**

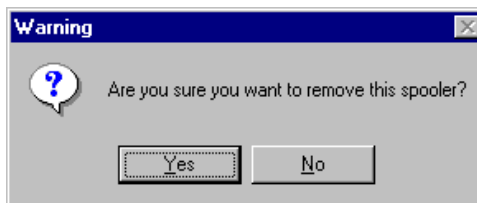
The spooler name is highlighted

2. **If applicable, click the start/stop icon to stop the spooler.**

The spooler status must be “Stopped” before you can remove it.

3. **Click the Remove Spooler icon on the PC MACLAN Print Server window.**

A message displays giving you a chance to change your mind.



4. **Click Yes to delete the spooler.**

The spooler is deleted from the PC MACLAN Print Server list.

Exiting the Print Server

When you exit the print server, the print spoolers that are running at the time will automatically start running when you open the PC MACLAN Print Server the next time.

Exiting will stop all AppleTalk spooling services. Therefore, it is wise to make sure that no one is in the process of using one of the print spoolers before you exit.

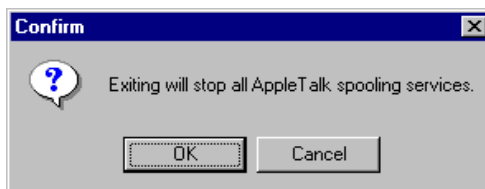
To exit the print server

1. **On the PC MACLAN Print Server window, click the Spooler menu in the menu bar.**

The Spooler menu displays.

2. **Click the Exit option.**

A warning message displays.



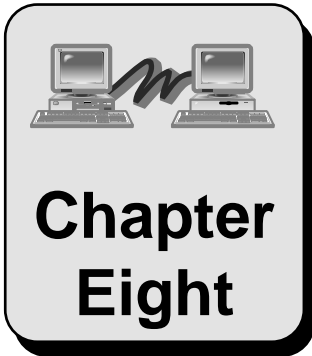
3. **Click OK.**

All AppleTalk spooling services are stopped.

Using Print Services

Printers spooled on the network using PC MACLAN Print Server are used the same way as any other printer connected to the network. To use a MACLAN printer connection from the Macintosh, you must select the printer in the Chooser dialog box first. (See Chapter 10.)

Another Windows 95 PC on the network running PC MACLAN Client can also print to a printer shared by a PC MACLAN spooler.



Using PC MACLAN Client

This chapter explains how to use PC MACLAN Client after you have logged onto the AppleTalk file server of your choice.

Topics include:

- Displaying Shared Files

- Copying Files

- Sharing Windows Applications

- Viewing File/Folder Properties and Privileges

- Defining a File Extension Map

Displaying Shared Files

Once you log onto an AppleTalk file server, you can display and access shared files using the Windows 95 interface or the Windows 95 Explorer.

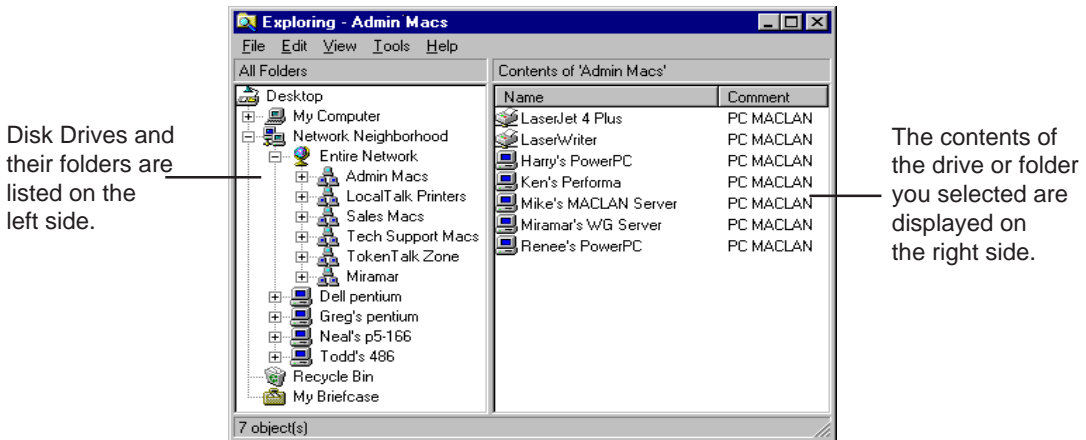
If you mapped the shared volume to a drive, you can access the files by selecting the letter of the mapped drive as it appears under My Computer in the Windows Explorer. If you did not map to a drive, you can access the files through the Network Neighborhood icon in Windows Explorer or through the Network Neighborhood icon on the desktop (see Chapter 5).

To display shared files using Windows 95 Explorer

1. **On the Task Bar:**

- Click Start
- Point to Programs
- Click Windows Explorer

The Explorer window displays a list of all the files available on each drive connected to your PC. For more details about the Explorer window, refer to the online Help for Windows 95.



2. **If you mapped to a network drive, open My Computer and scroll through the disk drives and folders listed on the left side of the Explorer window until you come to the drive to which you mapped your AppleTalk file server. Then click the drive icon.**

The files available on the disk drive are displayed on the right side of the Explorer window. For file naming conventions, see Chapter 2.



You may have to press <F5> to refresh the Explorer list.

3. **If you did not map to a network drive, scroll through the disk drives and folders listed on the left side of the Explorer window until you come to the Network Neighborhood icon.**

Click the + sign next to the Network Neighborhood icon. If your AppleTalk file server does not display, click the + sign next to the Entire Network icon.

The files available on the disk drive are displayed on the right side of the Explorer window. For file naming conventions, see Chapter 2.

Copying Files

You can use Windows 95 Explorer to copy files between your computer and another computer on the network. If you copy a file and then make changes to the file, the changes are not reflected in the original file.

To copy files using Windows 95 Explorer

1. **On the Task Bar:**
 - Click Start
 - Point to Programs
 - Click Windows Explorer

The Explorer window displays a list of all the files available on each drive connected to your PC.

2. **Click the drive letter for the AppleTalk file server volume.**

The files available on the volume display on the right side of the Explorer window.

3. **On the left side of the Explorer window, locate the folder to which you want to copy the file.**

Do not click the folder. If you do, the contents of the PC folder will display on the right side and you will no longer have access to the contents of the AppleTalk file server volume.

For example, if you mapped to drive F, look for drive F in the list. There may also be a name next to the drive letter if the drive is named on the AppleTalk file server.

4. **Drag the file you want to copy from the right side of the Explorer window to the destination folder on the left side of the Explorer window.**

A copy of the file is placed in the destination folder. You now have complete access to the file.

To copy a file from your PC to the AppleTalk file server, just reverse the procedure. That is, display the contents of the PC folder on the right side of the Windows 95 Explorer and drag the file you want to transfer to the destination Macintosh folder on the left side of the Windows 95 Explorer window.

Sharing Applications

You can share Windows applications with other users by storing them on an AppleTalk file server and then opening the application from the AppleTalk file server.

WARNING

Do not use the Windows Explorer (which uses DOS) to copy a Macintosh application to a different drive from the directory on which it currently resides, e.g., from E (the AppleTalk file server drive) to C (your PC hard disk drive). On computers running the Mac OS, Macintosh applications are stored in two files known as the *data fork* and the *resource fork*. If you move a Macintosh application on an AppleTalk file server to a different drive, only the data fork can be moved – the resource fork cannot be moved. Once the data fork is moved, the resource fork is deleted. The application **will not work** without its resource fork.

For more information about sharing network resources, refer to the online Help topic *Guidelines for Sharing Network Resources*.

To use a Windows application stored on an AppleTalk File Server

1. **Open the Windows Explorer or File Manager and display the AppleTalk file server drive contents.**
2. **Double-click the application name.**

The application is automatically started on your computer just as if the application were located on the disk drive connected to your computer. The application may run slower.

3. **When you save files created by the application, use the Save As feature to save to any drive on the network to which you have access.**

You do not have to save your files to the AppleTalk file server.

Viewing File/Folder Properties and Privileges

Windows 95 has Property pages that allow you to see information about a file or folder. PC MACLAN extends this functionality to the AppleTalk network. You can use this feature to see the long name icon for a file as well as other properties. In addition, you can use this feature to see the access privileges for a selected folder or directory. For more information about access privileges, refer to Chapter 2.

To view file or folder properties in Windows 95

1. **Open the Windows Explorer and display the AppleTalk file server icon on the left side of the window.**
2. **Click the AppleTalk file server icon.**

The contents of the selected volume displays on the right side of the Explorer window.

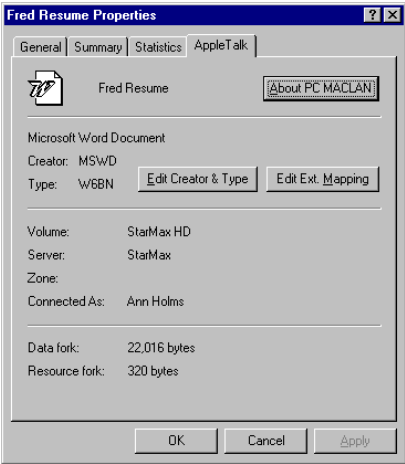
3. **In the contents list, click a file or folder name with the right mouse button.**

A shortcut menu displays.

4. **Click the Properties menu option.**
5. **When the Properties dialog box displays, click the AppleTalk tab.**

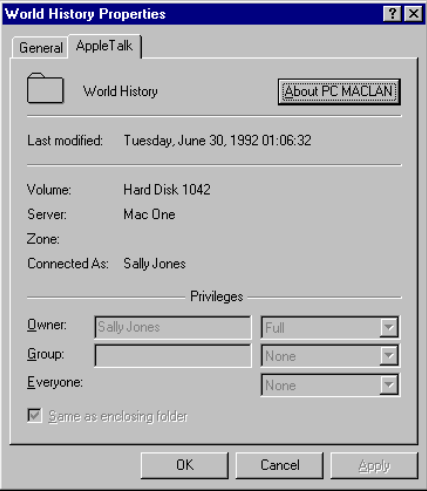
If you selected a file, the following dialog box displays.

**Properties
for a file**



If you selected a folder, the following dialog box displays.

**Properties
for a folder**



The privileges portion of the dialog box applies only to a folder or directory. The access privileges can be modified if you are the owner of the folder. Refer to the Windows 95 online help for information about each field on the dialog box. For more information about access privileges, refer to Chapter 2.

Defining a File Extension Map

When a document is created on the PC, the operating system identifies the file creator or application with a **file extension**. For example, a Microsoft Word document has a file extension of *.DOC*. If you double-click the file name, the document will open along with the application.

The Macintosh operating system provides this capability by storing specific information with every file. This includes a 4-character code called a **file creator** that uniquely identifies the application and another 4-character code called a **file type** that identifies the type of file. For example, a Microsoft Word document has a file creator code of MSWD and a file type code of WDBN.

If you create a file on your Macintosh and include the file extension, the PC will recognize the creator and display the file with the appropriate icon. For example, if you name a file *letter.doc*, the PC will recognize this as a Microsoft Word document. (You must have Microsoft Word on your PC.)

If you create a file on your PC, you can use the PC MACLAN file extension mapping feature to identify which Macintosh file creator and file type should be used with your PC file. As a result, the PC file, when transferred to the Macintosh, will display the correct application icon and will open the application when you double-click on the icon. The PC files that do not have extension mapping assigned are displayed on the Macintosh desktop using a generic PC icon.

To add or edit a file extension mapping

1. **Open the Properties dialog box for the selected file and click the AppleTalk tab. (See *Viewing File/Folder Properties and Privileges*.)**

The Properties dialog box displays.



Display AppleTalk properties.

The existing creator type and file type are displayed, if known. In addition, there are two buttons that allow you to add or edit the Macintosh creator and type and then map the selected codes to a specific PC file extension.

2. To add or edit the Macintosh creator and type:

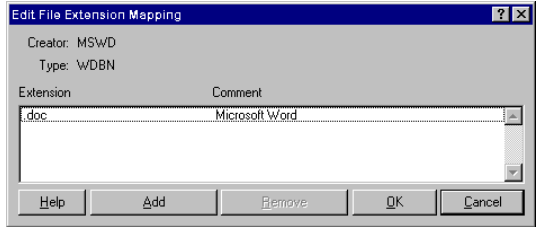
- Click the **Edit Creator & Type** button. The following dialog box displays:



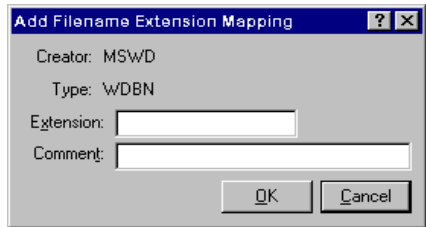
- In the **Creator** box, type in the file creator code.
- In the **Type** box, type the file type code.
- Click OK. The **Are You Sure?** message displays.
- If you want to make the change, click OK.
- If you do not want to make the change, click Cancel.

3. To map the Macintosh codes to a PC file extension:

- Click the **Edit Ext. Mapping** button. The following dialog box displays.



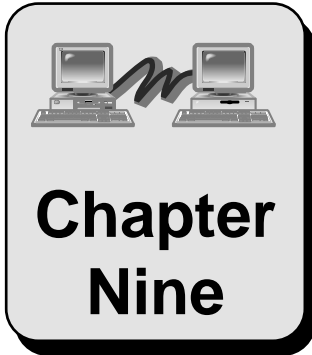
- Click the **Add** button. The following dialog box displays.



- In the **Extension** box, type the PC file extension you want to map.
- In the **Comment** box, type the name of the program represented by the file extension.
- Click OK. The PC file extension and comment display in the Edit File Extension Mapping dialog box.
- Click OK. The **Are You Sure?** message box displays.
- If you want to map the extension, click OK.
- If you do not want to map the extension, click Cancel.



Adding, modifying or removing a file extension mapping from this property page affects the file extension mapping for PC MACLAN File Server as well.



Using PC MACLAN File Server

This chapter explains how to use the PC MACLAN File Server after the set up is complete and how to display and access shared files.

Topics include:

- Start Server, Shutdown and Cancel Shutdown
- Display and Use Shared Files
- Real-Time Folder Update
- Disable and Enable Logins
- Display Connections and Send Messages
- Backup System Files
- Purge Volume
- Exit File Server

Start Server, Shutdown and Cancel Shutdown

When you open the PC MACLAN Server Console window, the status field indicates that the server is not running. In order for users to access shared files, you must first start the server. This is done using the Start/Stop icon or the Server pull-down menu on the PC MACLAN Server Console window.

The first option on the Server pull-down menu is a three-in-one menu button used to start the server, shutdown the server and cancel the server shutdown process. When the server is not running, **Start Server** displays. When the server is running, **Shutdown Server** displays. When the server is in the process of “shutting down”, the **Cancel Shutdown** option displays.

To start the PC MACLAN File Server



1. **Open the PC MACLAN Connect program group and click the Print Server program item.**

The PC MACLAN Console window displays with the Start/Stop icon dark.

2. **Click the Start/Stop icon or open the Server menu and select Start Server.**

The **Status** field displays messages then changes to “Running,” the Start/Stop icon changes to the brighter *day time* icon, and the Server menu option changes to *Shutdown Server*. The number of users connected to the server displays in the **Connections** field, ten is the maximum.

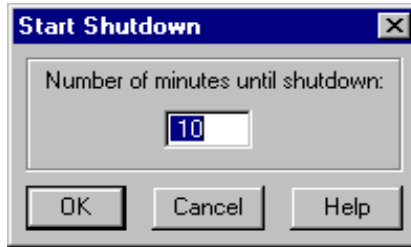
When the status field changes to “Running,” the file server is ready for users to log in and share the designated directories.

To shutdown the PC MACLAN File Server



1. **Click the Start/Stop icon or open the Server menu bar and select Shutdown Server.**

The Start Shutdown dialog box displays.



You may specify a time interval until the actual shutdown occurs (10 minutes is the default). The system notifies all users who are logged on that the server is shutting down in the designated time interval. If you enter zero, the server will shut down immediately. This is not a good idea if users are logged on.

3. **Type a time interval, or leave 10 minutes, and click OK.**

The Start/Stop icon turns to a darker *dusk* icon, and the PC MACLAN Console window displays the following message:

Shutting down in: XX mins

In addition, a message displays on the screen of each logged on user. When the shutdown process is complete, the Status field on the PC MACLAN Console window changes to “Not Running.”

To cancel the file server shutdown process



1. **Click the Start/Stop icon or open the Server menu and select Cancel Shutdown Server..**

The shutdown process is canceled immediately. A message about the cancellation displays on the screen of each logged in user. The Status field on the PC MACLAN Console remains as “Running” and the Start/Stop icon changes to the *day time* icon.

Display and Use Shared Files

Once you have set up the File Server (Chapter 6) and the Macintosh users have logged onto the server (Chapter 10), you may share files and transfer files across the network via the designated hard drive, CD-ROM, floppy drive or other removable media (A maximum of ten Macintoshes can be connected to the server at one time.)

For both the Macintosh and Windows environment, the folders and files appear as they usually would. Windows users may display and access the shared files using the Windows 95 Explorer. Macintosh users may display and access shared files by opening the shared folder icon that appears on their desktop (See Chapter 10 for details.)

Real-Time Folder Update

When more than one user has access to a shared directory, the files may be updated by several different users. The Macintosh and Windows environment handle real-time folder update differently.

Macintosh Real-Time Updates

Every 20 seconds, the Macintosh Finder automatically checks any volume that is open on the desktop and updates all open folders to reflect the changes made by other Macintosh or PhoneNet PC users. For example, if two Macintosh users have the same PC MACLAN shared folder open and one user deletes a file from the folder, the icon for the deleted file automatically disappears from the other Macintosh user's folder as well.

Windows Real-Time Updates

In the Windows PC environment, the update process is not automatic. Instead, the folder has to be closed and reopened, or the screen must be refreshed (F5) before the change is seen. For example, if a Macintosh user has a folder open from a shared volume and the user on the Macintosh deletes a file from that folder, the Windows PC owner will not detect the missing file until the folder is closed and reopened.

Disable or Enable Logins

You have the ability to allow or not allow users to log onto the PC MACLAN server. This is accomplished using the pull-down Server menu on the PC MACLAN Console window. This is a two-in-one menu item. When logins are allowed, **Disable Logins** displays. When logins are disabled, **Enable Logins** displays.

To disable or enable logins

1. **Open the PC MACLAN program group and click the File Server program item.**

The program name (PC MACLAN) may be different if you used the Custom option during installation. The PC MACLAN Console window displays.

2. **Click Server in the menu bar.**

The Server pull-down menu displays.



3. **Click the Disable Logins option.**

Users will not be able to log onto the server from this point on. The menu item changes to **Enable Logins**.

4. **To allow users to log on again, click the Enable Logins option.**

Users are now able to log on again.

Display Connections and Send Messages

You can use the Display Connections feature to display a list of all the users currently logged onto the server. From this list, you can send messages to a selected user and display a list of the shared directories being used by a selected user.

To display connections and send messages

1. **Open the PC MACLAN program group and select the File Server program item.**

The program group name (PC MACLAN) may be different if you used the Custom option during installation. The PC MACLAN Console window displays.

2. **Click **Server** in the menu bar.**

The Server pull-down menu displays.



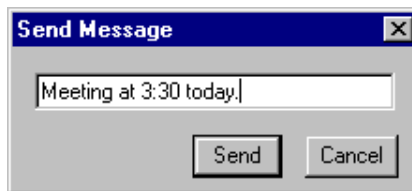
3. **Click the **Connections** option.**

The Connections window displays a list of all users currently logged onto the server.



4. **To send a message to a specific user:**

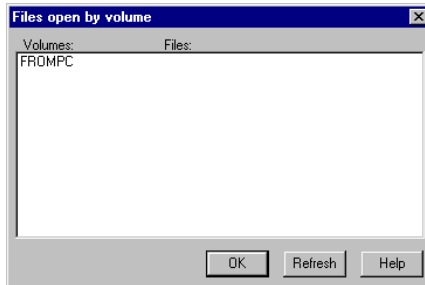
- Click the name of the user you want to send a message.
- Click the **Message** button. The Message dialog box displays.



- Type the message in the edit field.
- Click **Send**. The message displays immediately on the screen of the selected user.

5. **To display shared files being accessed by a selected user:**

- Click the name of the user you want to view.
- Click the **Files** button. The Open Files by Volume window displays.



This window lists the shared volume(s) for the selected user and the file(s) within the shared volumes that are currently open.

- Click **Refresh** to immediately update the files list.
- Click **OK** to close the window.

Backup System Files

PC MACLAN system files cannot be backed up while the server is running. This is because PC MACLAN opens its system files in the Deny Write mode so that another application can not accidentally change them while they are in use.

To solve this, the Backup System Files feature is included. It will copy the server's system files (*.DAT) to backup files (*.BAK). The backup files (*.BAK) can then be backed up by any backup utility.

If you restore system files that were made by using the Backup feature of PC MACLAN, you will need to do the following:

1. Make sure the PC MACLAN File Server is not running.
2. Move the existing .DAT and .IDX files to a backup directory.
3. Rename .BAK files to .DAT and map them into the MACLAN destination directory (default MACLAN6).
4. Start the PC MACLAN file server. When you start the PC MACLAN file server, the backed-up .DAT files will be rebuilt automatically.

To backup system files while PC MACLAN is running

1. **Open the PC MACLAN program group and select the File Server program item.**

The program name (PC MACLAN) may be different if you used the Custom option during installation. The PC MACLAN Console window displays.

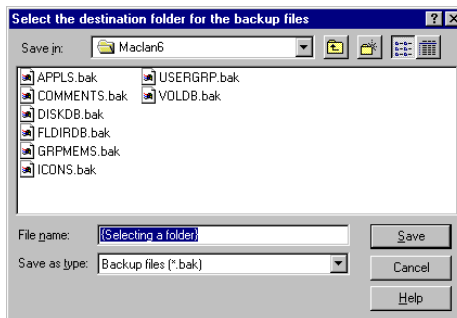
2. **Click Server in the menu bar.**

The Server pull-down menu displays.



4. **Click the Backup System Files option.**

The Backup System Files dialog box displays.



5. **Type the path of the backup directory in the File name field or leave the default shown in the Save in: field.**

6. **Click OK.**

The *.DAT files are copied to *.BAK in the specified directory.

Purge Volume

The purge volume feature allows you to remove, from the system files, the information pertaining to a drive that is no longer being used. When you select a drive in the Purge dialog box, all shared volumes on the selected drive display. It is important to keep in mind that if you purge the drive, **all** references to all volumes are removed from the system files.

To purge a volume

1. **Open the PC MACLAN program group and select the File Server program item.**

The program name (PC MACLAN) may be different if you used the Custom option during installation. The PC MACLAN Console window displays.

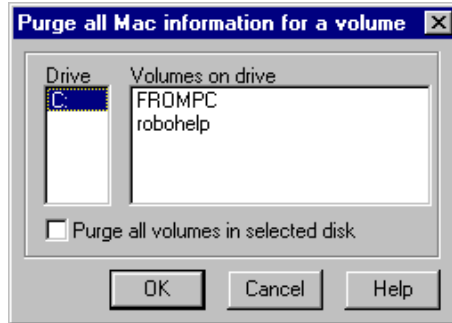
2. **Click Server in the menu bar.**

The Server pull-down menu displays.



3. **Click the Purge Volume option.**

The Purge all Mac Information for a Drive dialog box displays a list of the local drives and the shared volumes on a selected drive.



4. **Click the drive that you no longer want to share and click OK.**

A warning message displays.

5. **Click OK.**

All references to the drive and the files on the drive are removed from the system files.

Exit the File Server

If you attempt to exit Windows before you shutdown the PC MACLAN File Server, a warning message displays giving you the opportunity to shutdown the file server.

To exit the PC MACLAN file server

1. **Open the PC MACLAN console window from the Windows 95 Task Bar at the bottom of the screen.**

The PC MACLAN Console window displays.

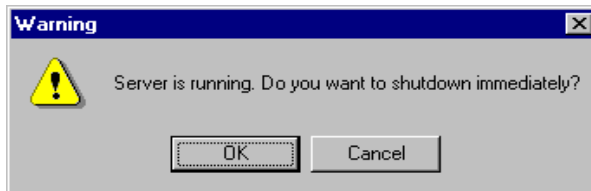
2. **Click Server in the menu bar.**

The Server pull-down menu displays.



3. **Click the Exit option.**

If the server is running, the following warning message displays.



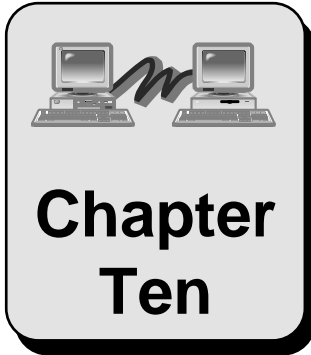
4. **To shutdown immediately, click OK.**

A message will display on the screen of each user logged into the server.

5. **If you want to allow a time interval before shutdown, click Cancel.**

The PC MACLAN Console window remains displayed and the file server remains running for the specified interval.

6. **Follow the instructions in the section titled Start, Shutdown and Cancel Shutdown first. Then exit the file server.**



Using a Macintosh with PC MACLAN

This chapter explains how to set up the Macintosh for a network, how to log on and off and how to use network files.

Topics include:

- About the Macintosh Network
- Turning on AppleTalk
- Selecting a Network Connection
- Naming Your Computer and Starting Sharing
- Sharing a Folder
- Logging Onto the PC MACLAN Network
- Working on the Desktop
- Setting Access Privileges for your Folders
- Logging off the PC MACLAN Network
- Using a Shared Printer

About the Macintosh Network

You can use LocalTalk, EtherTalk (Ethernet) or TokenTalk (Token-Ring) network connection types on the Macintosh. Every Macintosh computer comes with LocalTalk installed when you purchase it. Some also come with EtherTalk (Ethernet) already built-in. If you are uncertain about what your Macintosh contains, check the User Manual that came with the computer or check with your system administrator. (Or, you can follow the procedure in the section titled *Selecting a Network Connection Type*. This will also tell you what network types are built-in.)

If you are using Ethernet or Token-Ring on your PC, and they are not already installed on your Macintosh, you will have to install the proper adapter card and driver before you can connect to the Windows PC. Likewise, if you want to use LocalTalk on your Macintosh, you will have to install a LocalTalk adapter and driver on your Windows PC or have a router. (See Chapter 3.)

Once you have installed the proper hardware and connect the computer with the proper cables (see Chapter 3), you can set up your Macintosh to make use of the network. The remaining sections in this chapter explain how to do that.

For more detailed instructions on all of the procedures discussed in this chapter, refer to your Macintosh user manual.

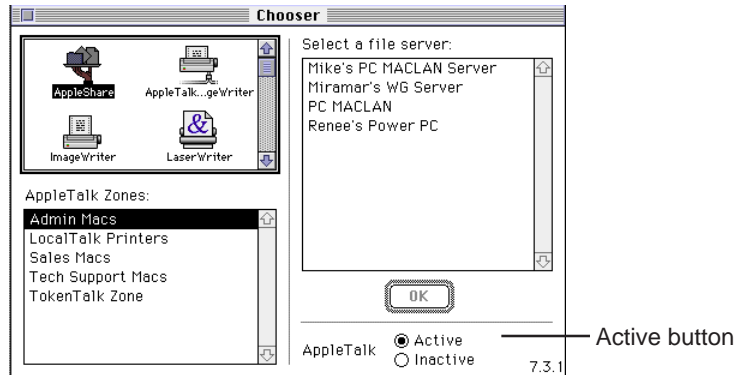
Turning on AppleTalk

AppleTalk is the protocol the network uses to communicate between your Macintosh and Windows PC. As soon as you connect to the network and turn on your computer, AppleTalk on the Macintosh is turned on for you. However, there may be a time when you have to turn AppleTalk off to use some other software and then turn it back on to use the network again.

To turn AppleTalk on and off

1. **Click the Apple icon and select Chooser.**

The Chooser window displays.



2. **Click the Active button to turn on AppleTalk. Or click the Inactive button to turn AppleTalk off.**
3. **Close the Chooser.**

If you leave the Inactive button selected when you shutdown your Macintosh, AppleTalk will automatically become active again when you restart your computer.

Selecting a Network Connection Type

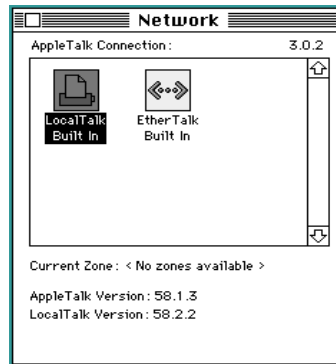
LocalTalk is the default network selection on the Macintosh. If you installed EtherTalk or TokenTalk networking hardware and software, you have to select that connection type to let the system know you plan to use something other than LocalTalk.

You can switch between two connections at any time. In other words, you can have access to both a LocalTalk and EtherTalk network by selecting the network connection you want to use at the time.

To select a network connection type

1. **Click the Apple icon and select Control Panels.**
2. **Click the Network or AppleTalk option.**

The Network control panel displays an icon for LocalTalk, labeled LocalTalk built-in, and icons for any other network connection software that is built-in or installed.



2. **Click the icon of the network connection type you want to use.**

If you are changing from a currently selected connection type, e.g., from LocalTalk to EtherTalk, a warning message displays. The message means that the connections that are currently established will be stopped and you will have to reconnect to the network services on the new network.

3. **Click OK.**

The network connection you selected is now in use.

4. **Close the Network control panel window.**

Naming Your Computer and Starting Sharing

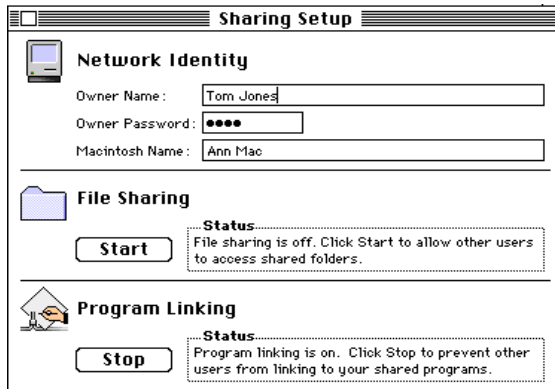
The next step is to give your Macintosh a name that will identify your computer on the network. You must also indicate who owns the computer and designate a password.

In the same dialog box, you can turn on the sharing capability for your Macintosh.

To name your computer and start sharing

1. Click the Apple icon and select **Control Panels**.
2. Click the **Sharing Setup** option.

The Sharing Setup dialog box displays.



3. **In the Network Identity section:**
 - Type your name in the **Owner Name** field.
 - Type your password in the **Password** field (up to 8 characters).
 - Type the name for your computer in the **Macintosh Name** field.
4. **In the File Sharing section:**
 - If the button reads **START**. Click the button to activate file sharing.
 - If the button reads **STOP**. Leave it as is. File sharing is already active.
5. **Close the Sharing Setup control panel option.**

You should next set up a shared folder or drive. You must indicate at least one shared folder or drive in order for someone (PC MACLAN Client) to login.

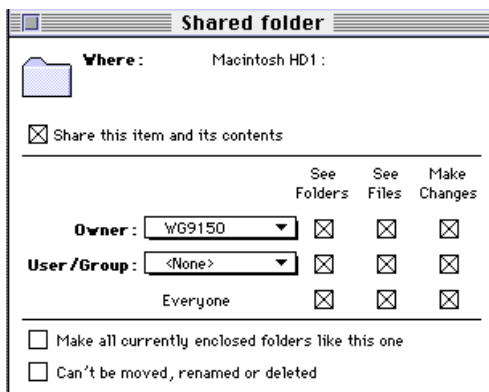
Sharing a Folder

If you are the owner of a folder on the Macintosh, a PC MACLAN client user cannot log onto the AppleTalk file server and share your folder unless you give the user permission.

To share a folder

1. **On the desktop, click the folder you want to share.**
2. **Open the File Menu and click the Sharing option.**

A dialog box displays with the name of your folder in the top portion of the box.



3. **Click the Share this item and its contents box.**

An X appears in the box. The selected folder can now be shared with PC MACLAN Client users. For more information about access privileges, refer to the section titled *Setting Access Privileges for Your Folder*.

Logging On to the PC MACLAN Network

If you are using PC MACLAN Client, you will need a valid login name, or `guest` access enabled on the Macintosh file server before you can access the Macintosh shared volumes. If you are using PC MACLAN File Server, the PC MACLAN File Server must be set up first (see Chapter 6) before you can see the shared directories on your Macintosh desktop.

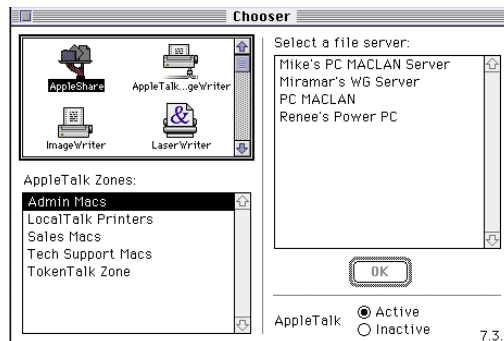
To use the PC MACLAN network features from the Macintosh, you must have completed the previous four sections in this chapter.

To log on to the file server

1. **Click the Apple icon and select Chooser.**

The Chooser window displays.

2. **Click the AppleShare icon.**



If AppleTalk Zones are available on the network, they appear in the AppleTalk zones list. When you click an AppleTalk zone, the file servers that are available appear in the Select a File Server box.

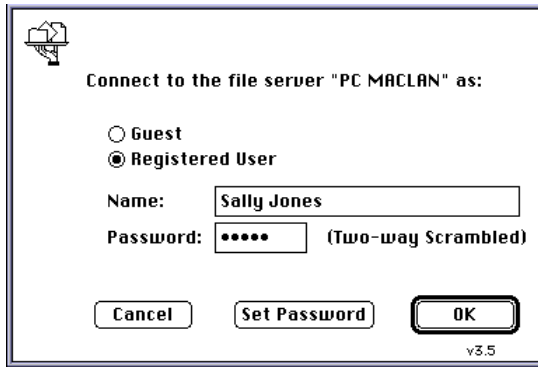
If your network does not use AppleTalk zones, only the file server list displays in the Select a File Server box.

3. **If AppleTalk zones appear, click the AppleTalk zone that contains the file server you want.**

The file server list displays in the Select a File Server box.

4. **Click the PC MACLAN file server and then click OK.**

The logon dialog box displays.



5. **To log in as a Guest, click the Guest button and then click OK.**

You do not have to enter a user name or password to gain access to the file server.

6. **To log on as a registered user, click the Registered User button, enter a user name and password and then click OK.**

The PC MACLAN Server volumes window displays all of the designated shared directories. (See Chapter 6 for details on how shared directories are set up.) If you logged on as Guest, you may not be allowed access to as many volumes as a registered user.

7. **Click the name of the shared directory (volume) you want to access.**

You must have access privileges for the selected volume.

8. **If you want your Macintosh to logon automatically at startup, click the box to the right of the volume.**

When you click the box, the logon Save settings display. If you do not select to save your name and password, you will be prompted to enter both at startup.

9. **Click OK.**

The PC MACLAN icon for the selected volume displays on your workstation desktop.

10. **Close the Chooser dialog box.**

Working on the Desktop

The PC MACLAN shared directory icons should now be displayed on your desktop. The icon may be used in the same manner as any other folder on the desktop.

To open the shared directory icon and files

1. **Double-click the icon**

The folder window displays the contents of the folder. If the Windows user has elected to use PC MACLAN's File Extension Mapping feature (see Chapter 2), you will see familiar icons for the various files and applications.

2. **Perform all Macintosh functions as usual.**

No new procedures are required to create new folders or open files. If you are unable to open a file or an application, you may not have the proper access privileges for the volume you selected or you may not have the application. See the person who set up the access privileges on the PC MACLAN server.

Setting Access Privileges for Your Folders

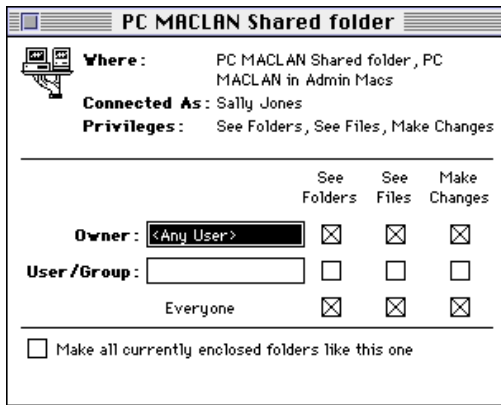
When you create a new folder in a shared directory, you are considered the owner of that folder. As a result, you may specify who can use the files in that folder and what access privileges they can have.

You can give access privileges to one **user**, to a specific **group** of users, or to **everyone**. A group is a logical organization of users according to an activity or resource. The user or group must already be defined on the PC MACLAN server. In addition, you can specify the type of access privileges you want to assign. (See Chapter 2 for details about access privilege.)

To set access privileges for your folders

1. **Click the folder you want to set access privileges for.**
2. **Open the File Menu and select Sharing (Get Privileges for system 6.x).**

The Shared Files dialog box displays with your user name in the Owner field.



3. **To remain as the owner, leave your user name in the Owner field. To transfer ownership, type the new owners user ID in the Owner field.**
4. **Type the name of the user or group you want to assign privileges to in the User/Group field.**

The user or group must already be defined on the PC MACLAN server. This does not include users and groups that are defined on the Macintosh Users and Groups control panel only.

5. **Click the box next to each access privilege you want to assign to the owner, user or everyone.**

If you do not want access privileges assigned, leave the box blank.

6. **To apply the same access privileges to all folders contained within the selected folder, click Make all Currently Enclosed Folders Like This One.**
7. **If you do not want this folder to be moved, renamed or deleted under any circumstances, check the final box at the bottom of the dialog box.**
8. **Close the dialog box.**

A message asking if you want to save the changes appears.

9. **Click Save.**

Logging Off the PC MACLAN Network

When you want to log off the server, drag all server shared directory icons to the Trash. The server shared directory icons are cleared from the desktop. You have now completed the log off procedure.

Server Shutdown

If the server is going to be shut down, all current users receive an on-screen message warning that the shutdown will occur in a specified amount of time. Be sure to close or quit any files or applications you are using that are located on the server before the server shuts down.

Using a Shared Printer

Selecting a PC MACLAN shared printer is handled via the Macintosh Chooser. You do not have to be logged onto the file server to make use of the print services.

To access a printer on the PC MACLAN network

1. **Open the Apple Menu and select Chooser.**

The Chooser window displays.

2. **Click the printer icon that represents the network printer you want to use.**

3. **If the AppleTalk zones list displays, click the zone in which the desired printer is located.**

All available printers and print spoolers display in the right-hand box.

4. **Click the name of the printer you want to use.**

The selected printer name is highlighted. From this point on, all print jobs are automatically sent to the selected printer until a new printer device is selected.

Glossary

access privileges Set of privileges assigned to users of shared directories or folders enabling those users to view and make changes to the folders and their contents.

adapter See network adapter card.

AppleTalk Apple Computer's network architecture and protocols. Any network that has more than one Macintosh workstation and a server running MACLAN functions as an AppleTalk network.

AppleTalk Filing Protocol (AFP) The protocol that allows Macintosh users to share data files and programs located on a file server. PC MACLAN uses this protocol on a Windows computer, enabling both Macintosh and PC users to share files on the server.

client A computer that has access to services, such as AppleShare, on a network. A user of a client computer requests services, such as file transfer, from a file server. The software that makes your computer a client is included in the PC MACLAN program.

default A value, attribute, or option that is assumed when no option is explicitly specified.

directory (1) A list of files stored on a disk or diskette. A directory also contains information about the file such as size and date of last change. (2) A named grouping of files in a file system. On the Macintosh, directories are synonymous with *folders*.

driver Software that allows a card, such as a network adapter card, to function.

EtherTalk AppleTalk running on Ethernet

file extension mapping The association of a PC filename extension with a Macintosh file type and file creator. This enables the sharing of data files on the server by applications that have both PC and Macintosh versions.

folder A group of files and other folders. A folder is the Macintosh equivalent of a PC directory.

group A logical organization of users according to activity or resource access authority.

guest A user who is logged on to an AppleShare server without a registered user name and password. As a guest, a user may have limited access to the files and folders on the file server.

local area network (LAN) (1) Two or more computing units connected for local resource sharing. (2) A network in which communications are limited to a moderate-sized geographic area, such as a single office building, warehouse, or campus, and that do not extend across public rights-of-way.

LocalTalk Apple's proprietary network hardware built into every Macintosh. It is an inexpensive way to connect Macs, printers and PCs.

NDIS Acronym for *Network Device Interface Specification*. A network driver architecture developed by Microsoft Corporation for Windows systems.

network A configuration of data processing devices and software connected for information interchange.

network adapter card A card that allows your computer to connect to a network. Also called a *network adapter*.

ODI Acronym for *Open Datalink Interface*. A network driver architecture developed by Apple Computer, Inc. and Novell, Inc. for DOS systems.

password A unique string of characters that a program, computer operator, or user must supply to meet security requirements before gaining access to data.

path The route used to locate a file on a disk or diskette. The route consists of a drive, directory and file name.

port Synonym for communication port or printer port.

print queue An ordered list of the data files waiting to be printed.

printer port A connector on a computer to which a printer is normally attached. Parallel data transmission is usually implied by this term.

protocol The “language” the computers use to communicate with one another. AppleTalk is the protocol used in the MACLAN network software.

registered user A user with a user name and password registered on an AppleShare server.

registry Contains Windows 95 network configuration information. Accessed through the Network Control Panel.

server (1) A workstation on a LAN that provides facilities to other workstations. (2) A computer that shares its resources with other computers on a network.

sharing The ability to see folders, files, or make changes to a shared disk or folder across a network. Access privileges are granted by the owner of the shared item and are used to determine what other network users can do with the disk or folder and its contents.

spooler program A program that runs in the background and sends print files, generated by the spool file, to the network printer for printing.

spool file A file that emulates a printer port. The spool file accepts print jobs as if it were a printer, but instead of printing the jobs, it writes each print job to a file on the disk. Then the spooler program sends each print file to the network printer for printing.

TokenTalk AppleTalk running on Token-Ring.

user name The unique name assigned to each user granted access to the LAN system. The system uses the user name to keep track of who is performing which operation.

volume A drive or directory that is made available to AppleTalk users and is defined and named as a place to store files. A volume has a name and a directory path associated with it.

zone (1) Logical subdivisions of a computer network. These groupings of computers, printers and file servers on a network allow devices to be organized by, for example, location in a building. (2) A group of two or more networks in a single large network of many interconnected networks.

Appendix A – Tips and Tricks

This section describes some common PC MACLAN configuration problems and solutions to them.

Troubleshooting Communication Errors

The most common causes of communication errors include:

- Drivers that are not compatible with the adapter or software
- Misconfiguration of IRQ and I/O setting of legacy adapters
- Cable malfunction

Drivers not Compatible with the Adapter or Software

PC MACLAN is compatible with NDIS3.1 and ODI drivers. The type of driver used depends on the cabling type used. PC MACLAN and Macintosh computers use the AppleTalk protocol which functions on three general cable types - LocalTalk, Ethernet or Token-Ring. If you are using LocalTalk cabling, PC MACLAN uses ODI drivers. With Ethernet or Token-Ring cabling, PC MACLAN uses NDIS3.1 drivers. When using ODI drivers, a custom PC MACLAN installation is needed instead of a standard installation.

If you have LocalTalk, check that you have LSL.COM, the network driver, and ODI.EXE (listed in that order) in your ATDRIVER.BAT file in the MACLAN6 directory or in your AUTOEXEC.BAT file.

If you have Ethernet or Token-Ring cabling, make sure the driver listed in the Network Configuration window is an enhanced mode driver and is the proper driver for your adapter. (Consult the adapter's documentation or the manufacturer to determine if the driver listed in the Network Configuration window is the correct driver for your adapter).

Also make sure that "Enhanced mode (32 bit or 16 bit) NDIS driver" is selected for your driver. To do this, open the Control Panel and double-click the Network icon. Highlight the adapter and click the **Properties** button. Select the **Driver Type** tab and verify that the "Enhanced mode (32 bit or 16 bit) NDIS driver" option is selected.

Misconfiguration of IRQ and I/O Setting of Legacy Adapters

Computer devices are assigned settings that enable access to computer resources, such as the processor and memory. Network adapters use IRQ and I/O settings. Some adapters use memory settings. (Check the documentation that came with the adapter or contact the adapter manufacturer for further information.)

IRQ is also known as “Interrupt Request” I/O refers to the input / output range (or may also be know as “Port Address”).

The following three criteria must be met for the network adapter to function properly.

- IRQ and I/O values are set on the adapter itself and must also be entered in Windows.
- IRQ and I/O values set in Windows must match the values set on the adapter.
- IRQ and I/O network adapter values set in Windows must not be used by another device.

The plug and play feature of newer network adapters is designed to choose settings that do not conflict with other devices and to adjust adapter settings to match settings chosen in Windows. However, it is important to double check the adapter settings in case the plug and play functionality was disrupted. Usually there are no error messages indicating adapter settings do not match the Windows 95 settings.

The following are general guidelines for checking adapter configuration and functionality. If you have further questions for your specific adapter consult the adapter documentation or manufacturer.

To view IRQ and I/O settings in Windows and to identify conflicts detected by Windows:

1. Open the **Control Panel**.
2. Double-click the **System** icon and select the **Device Manager** tab.
3. Select the **Network Adapters** section.

Installed adapters will display below the **Network Adapters** heading. If a yellow exclamation point or question mark appears, the adapter is not configured properly. If no exclamation or question mark appears, there may still be a malfunction such as the adapter not having the same IRQ setting that Windows reports.

4. To view Windows detection of the adapter status and configuration:
 - Select the adapter and then click the **Properties** button.
 - Select the **General** tab to view the Device Status.
 - Select the **Resources** tab to view the IRQ and I/O settings according to Windows. (Not all adapters list their settings here.)

5. To view and/or change IRQ settings and I/O port addresses currently used by devices:
 - Open the **Control Panel** and double-click the **System** icon.
 - Select the **Device Manager** tab.
 - Double-click the **Computer** icon to display the **Computer Properties** box.
 - In the **Computer Properties** window, select the **View Resources** tab.
 - Select the **Interrupt request (IRQ)** button. (This is the default view.)
 - If possible, assign your adapter to a value of eight or less.
 - Click the **Input/Output (I/O)** button to view the port addresses. Some adapters may need a memory range, for example: 0300-0330h.

After reviewing the settings in the System Control Panel, you may want to survey and/or change the settings on your card. To view the IRQ and I/O value set on the adapter, use the configuration program on the floppy disk that accompanied your adapter. This file is usually a program file that ends in .EXE (If you do not have this disk you must contact the manufacturer to acquire the diagnostic and configuration programs). The disk should have a text file (.txt extension) with further configuration information.

Cable Malfunction

To test cable functionality, you can swap a section of cabling that is currently working for the existing cable. Some network adapters provide diagnostic tests that can detect cabling malfunction. (Check on the floppy disk that accompanied the adapter or contact the adapter manufacturer for further assistance.)

10base 2 cabling (also known as Coax) requires a 50 ohm terminator at each end of the cable run unless one end is connected to a repeater. Never connect a coax cable directly into a network adapter. A 'T' connector must be used, instead.

10base T cabling (also known as Twisted Pair) requires either a hub or a crossover cable to function correctly. This is not true if you are using the Etherwave technology from Farallon.

General Comments

When troubleshooting a network installation, it is best to setup with only the primary and necessary components. Connecting the PC and a Macintosh directly provides tests for potential malfunction of intermediary devices such as hubs or routers. An improperly configured router for example, even though no need to communicate through it is required in an installation, can block the passage of information across the LAN just by the fact that it is part of the installation. Once determining that all parts are functioning properly, add other devices and components one at a time. In some cases a network card may appear to be functioning properly to Windows, but the component that transmits the data across the cable may be non-functional.

LaserWriter Bridge

Apple has a free network utility called LaserWriter Bridge that is included in Apple's Network Software Installer 1.5 or greater (you can download this off their web site). This great little utility allows a Macintosh to share a LocalTalk based LaserWriter while also being on the EtherTalk network for file sharing. PC MACLAN or other Mac OS users can also share the LaserWriter. LaserWriter Bridge will not work for Macs on the LocalTalk or non-LaserWriter type printers. You would need to get the Local Bridge product either from Apple or Sonic.

NetExchange

NetExchange is another great free utility from Apple for your Mac that will enhance your networking environment. It provides file extension mapping for any files copied from a Windows machine running PC MACLAN onto a Macintosh that is running System 7.5 with PC Exchange. You can download NetExchange from Apple's web site.

Cross-over Cable

If you have only one Macintosh and one Windows PC and you still want to run 10Base T (RJ-45) connectors for your network, you do not have to have an Ethernet hub. You can purchase a cross-over cable from most mail order catalogs or your dealer. It allows two machines to have a 10Base T network without a hub. To add a third machine, you will need a hub.

Alternate Font

If you have server or zone names which contain characters from the upper character set, the default Windows font may display these characters as a rectangular block. The default icon font is MS Sans Serif. Changing the icon font to any MonoType font will improve the look of the server and zone names. The icon font is changed in the Display Control Panel. Select the Appearance tab and select the Icon item from the Item: pulldown list. Change the font to any that contains "MT" such as 'Arial Rounded MT Bold.'

Appendix B – AppleTalk Protocol Installation

The Registry is modified as shown below when the AppleTalk protocol and client are added using the Network Control Panel. When MACLAN is installed, the three additional .INF files are added to enable the installation of the protocol and the client.

The following are the Registry keys added when the protocol and client are installed in the Network Control Panel in Windows 95.

HKEY_Local_Machine\System\Current Control Set\Control\Network
Provider\Order “ATNP32”

HKEY_Local_Machine\System\Current Control Set\ Services\ATNP32

HKEY_Local_Machine\System\Current Control Set\ Services\VxD\ATALK

HKEY_Local_Machine\System\Current Control Set\ Services\ VxD\ATFSD

Appendix C – Configuration Parameters

Parameters for AppleTalk Protocol

The AppleTalk protocol has several settings that can be adjusted by the user. Generally the default settings are appropriate, but if your site creates unique circumstances you may need to adjust these settings. These settings may be added to the APPLETALK key in the Registry.

The protocol Registry key string is:

HKEY_LOCAL_MACHINE\SOFTWARE\Miramar Systems, Inc.\AppleTalk\

Below is a table of the parameter options and their possible settings:

	<u>MAX</u>	<u>Min</u>	<u>DEFAULT</u>	<u>Explanation</u>
BUFS	200	16	90	The number of buffers the stack has to transmit and receive packets.
MEMPOOL	61440	12288	32768	Memory for internal uses.
ZONE				The zone you want your PC's servers registered.

If you have a complex networking environment, the settings below may need to be adjusted to improve address resolution. Do not change them unless you understand the ramifications.

AARPAGE	300	30	60	The number of seconds to age an AARP address entry before deleting it.
AARPRETRY	60	2	10	The number of times AARP will look for an address.
AARPINTERVAL	64	2	6	The number of increments (1/32 seconds) to wait between retries.
DDPCHECKSUM			FALSE	Determines whether to use checksums in DDP packet.

The protocol will save the currently used network and node number in the Registry. These settings do not need to be modified. They are shown for reference only.

During installation, the installer places the SERIAL key with the default value APPLLETALK in the Registry.

Parameters for PC MACLAN Client

The client Registry key string is:

HKEY_LOCAL_MACHINE\SOFTWARE\Miramar Systems, Inc.\<parameter name>

These parameters are located in the Windows 95 Registry.

<u>Key</u>	<u>DEFAULT</u>	<u>Description</u>
HIDERESFILES	FALSE	Files with resource forks are returned with hidden attribute set.
RETRY	75	Number of times to retry the request to the server.
INTERVAL	2	Number of seconds to wait between retries.
WARNDROPBOXENUM	FALSE	If TRUE, displays a warning if Drop Box is accessed.
WARNRESFILEOPEN	TRUE	If FALSE, displays a warning if a Macintosh file with a resource fork is accessed.
DEFAULTFILECREATOR	“dosa”	Passes this designator to the Macintosh OS for all PC files.
DEFAULTFILETYPE	TEXT”	Passes this designator to the Macintosh OS for all PC files.

Additional parameters are listed in the PC MACLAN Client help file.

Parameters for File Server

The file server setup parameters are saved in the Windows Registry. The following parameters may be added. Some of them are updated when you change the server configuration in the user interface. Boolean parameters requiring a yes or no answer can use: Yes/No, I/O, On/Off, or True/False.

The Registry key string is:

```
\HKEY_LOCAL_MACHINE\SOFTWARE\Miramar Systems, Inc.\FileServer\Profiles\
ServerParms\<parameter name>
```

<u>Key</u>	<u>DEFAULT</u>	<u>Description</u>
DIRAGE	20	The number of seconds to wait before checking for changes in a directory.
GUESTDISABLE	0	(Boolean) Disable guest logins.
IDLEINTERVAL	1	The time the server should wait to look for another message.
MACHINETYPE	0	The string is sent to the MAC when logging in.
MAXLOGINFAILS	5	The number of times a user can enter an incorrect password before being disabled.
MINPASSWORDLEN	0	The minimum length of a user's password.
NAME	PC MACLAN	The file server name.
OPENFILES	40	The number of files that can be opened at once by all users.
PASSWORDEXPIRATION	0	The number of days a user's password is valid. 0=Never expires.
SYSPATH	<installation directory>	The location of the .DAT and .IDX files.
SHUTDOWNTIME	10	The default time for shutdown in minutes.
SHUTDOWNQUERY	1	(Boolean) Determines whether to ask the user to shutdown when exiting.

Additional parameters are listed in the PC MACLAN file server help.

<u>Key</u>	<u>DEFAULT</u>	<u>Description</u>
RANGELOCKS	20	The maximum number of byte range locks available to multiuser applications.

Index

A

- access privileges
 - client services 8-6
 - definition 2-7
 - file server 6-14, 6-17
 - Macintosh 10-6, 10-9
- adapter
 - definition 2-3
 - requirements 3-4
 - troubleshooting (see Appendix A)
- Add
 - client services 5-2
 - file extension map 6-20
 - group on file server 6-9
 - printer (client) 5-9
 - printer (server) 7-3
 - security parameters 6-3
 - shared directory 6-14
 - users on file server 6-5
- AppleTalk
 - protocol 2-3
 - removing 3-7
- AppleTalk Messenger 2-3
- AppleTalk printer functions 5-13
- AppleTalk zones
 - change 5-16
 - display 5-2, 5-9
- Applications
 - sharing 8-5
 - moving 8-5
- atinstal.log 4-2
- ATSERVER console 6-2
- Audit trail log files 6-3
- AUTOEXEC.BAT file 4-2
- automatic launch of file server 6-3
- automatic start up (file server) 6-23
- Auto-spool Printing 5-16

B

- backup configuration files 4-2
- backup system files 9-8

C

- cables
 - definition 2-3
 - Ethernet (EtherTalk) 3-5
 - LocalTalk 3-5
 - Token-Ring (TokenTalk) 3-6
- cancel file server shutdown 9-3
- cancel installation 4-3, 4-6, 4-10, 4-18
- capturing printer ports (Print from MSDOS) 5-11
- change
 - AppleTalk zone 5-16
 - destination drive 4-9, 4-17
 - password 5-15
 - program group name 4-9, 4-17
- client
 - AppleTalk Messenger 2-3
 - definition 2-3, 5-2
 - logging on 5-2
 - logging off 5-5
 - map to network drive 5-6
 - print services 5-9
- CONFIG.SYS file 4-2
- configurations
 - network 3-4
 - system 3-3
- connection to server 9-6
- connections, type of 3-2
- copy files 8-3
- custom installation
 - defined 4-4
 - Ethernet 4-9
 - LocalTalk 4-17
 - Token-Ring 4-9

D

- data fork 8-5
- destination drive
 - change 4-9, 4-17
 - default 4-3
- disable server login 9-5
- disconnect mapped drive 5-9
- disk space requirements 3-3
- display
 - devices on network
 - shared files (client) 8-2
 - file server shared files 9-4
 - server connections 9-6
- drivers for adapters 3-4

E

- edit
 - file extension map 6-21
 - groups 6-11
 - users 6-6
- enable server logins 9-5
- errors (see Appendix A)
- Ethernet network
 - adapters and drivers 3-4
 - custom installation 4-9
 - network type 3-2, 10-2
 - standard installation 4-4
- exit
 - file server 9-11
 - installer 4-3
 - print server 7-10
- extension mapping 2-9, 6-18, 8-8

F

- file access (see access privileges)
- file extension mapping (client) 8-8
- file extension mapping (server)
 - add map 6-20
 - delete map 6-21
 - dialog box 6-19
 - duplicate map 6-22
 - edit map 6-21
- file properties 2-6

- file server
 - assign access privileges 6-13
 - define users and groups 6-4
 - definition 2-2
 - extension mapping 6-19
 - maximum users 2-5
 - security parameters 6-3
 - sharing directories 6-13
 - start automatically 6-23
 - window 2-4, 6-2
- file service (client)
 - logging on 5-2
 - logging off 5-5
 - using 8-1
- filenames 2-6
- files
 - access privileges 2-7, 6-13
 - backup files 4-2, 9-8
 - extension mapping 2-9, 6-19
 - names (conversion rules) 2-6
 - properties 2-7, 8-6

G

- Gator Pro 2-6
- guest user
 - client 5-4
 - disable guest 6-8
 - file server 6-4, 6-8
- groups (on file server)
 - add 6-9
 - add users to 6-10
 - delete 6-12
 - dialog box 6-4
 - edit 6-11, 6-12
- glossary G-1

H

hardware requirements 3-3
help, online 2-11, 4-3
HP DeskJet 5-12

I, J, K

installation log file 4-2
installation options 4-2
Installer program 4-2

L

LocalTalk
 adapters and drivers 3-4
 installation 4-170
 network type 3-2, 10-2
log in, disabling on file server 9-5
log in, client of file services 5-2

M

Macintosh applications, moving 8-5
Mapping to a network drive 5-6
 Disconnect map 5-9
maximum file server users 2-5
memory requirements 3-2
messages
 AppleTalk Messenger 2-3
 on server 9-6
microprocessor requirements 3-3
minimize at startup 6-3
moving Macintosh applications 8-5

N

NET.CFG file 4-2
network adapter cards 3-4
network
 components 2-2
 requirements 3-3
 types 3-2

O

ODI driver 3-4
online help 2-10, 4-3
open

shared applications 8-5
shared files 8-2, 9-4, 10-9

P

password, change 5-15
password protection of server 6-3
password, saving 6-3
print server
 add spooler 7-3
 definition 2-2
 edit 7-8
 exit 7-10
 remove spooler 7-9
 start/stop 7-7
 use printer 7-10
 window 2-5, 7-3
print services (client)
 printer functions 5-13
 set up 5-9
 use 5-12
print spooler 7-3, 5-16
printer log
 clear log 5-14
 create log 5-13
 view log 5-13
printer requirements 3-3
printer utilities 5-13
privileges (see: access privileges)
program group
 change name 4-9, 4-17
 items included 2-4
properties, file 8-6
properties, folder 8-6
protocol 2-3
purge volume 9-9

Q

quit the Installer 4-3

R

real-time folder update 9-4
rebuild data files 6-3

- registered user 5-4, 6-5
- remove PC MACLAN 4-26
- requirements for installation 3-3
- resource fork 8-5

S

- security parameters 6-3
- send messages 9-6
- server 2-2
- shared applications 8-5
- shared directories
 - assign privileges 6-14
 - change privileges 6-17
 - create 6-14
 - dialog box 6-13
 - unshare 6-18
- shared files
 - copy 8-3
 - view 8-2, 9-4, 10-9
- shutdown file server 9-2
- software requirements 3-3
- spool from a directory 5-16
- spoolers 7-2, 5-16
- standard installation
 - defined 4-3
 - Ethernet 4-4
 - Token-Ring 4-4
- start
 - file server 9-2
 - print spooler 7-6
- stop print spooler 7-6
- system files, changed by installation 4-2
- system requirements 3-3

T

- Token-Ring (TokenTalk)
 - adapters and drivers 3-4
 - custom installation 4-9
 - network type 3-2, 10-2

- standard installation 4-4
- Troubleshooting (see Appendix A)

U

- uninstall PC MACLAN 4-26
- unshare a directory 6-18
- upgrade software 4-30
- use print server 7-10
- Users and groups 6-4
- users (on file server)
 - add 6-5
 - delete 6-8
 - dialog box 6-4
 - disable guest 6-8
 - edit 6-6
 - edit several 6-7
 - maximum connections 6-2

V

- view
 - shared files 8-2, 9-4, 10-9
 - drive connections 5-6, 8-2
 - AppleTalk printer functions 5-13
 - AppleTalk devices on network A-4
- Volume, select 6-14

Z

- Zones, selecting (see: Appletalk zones)