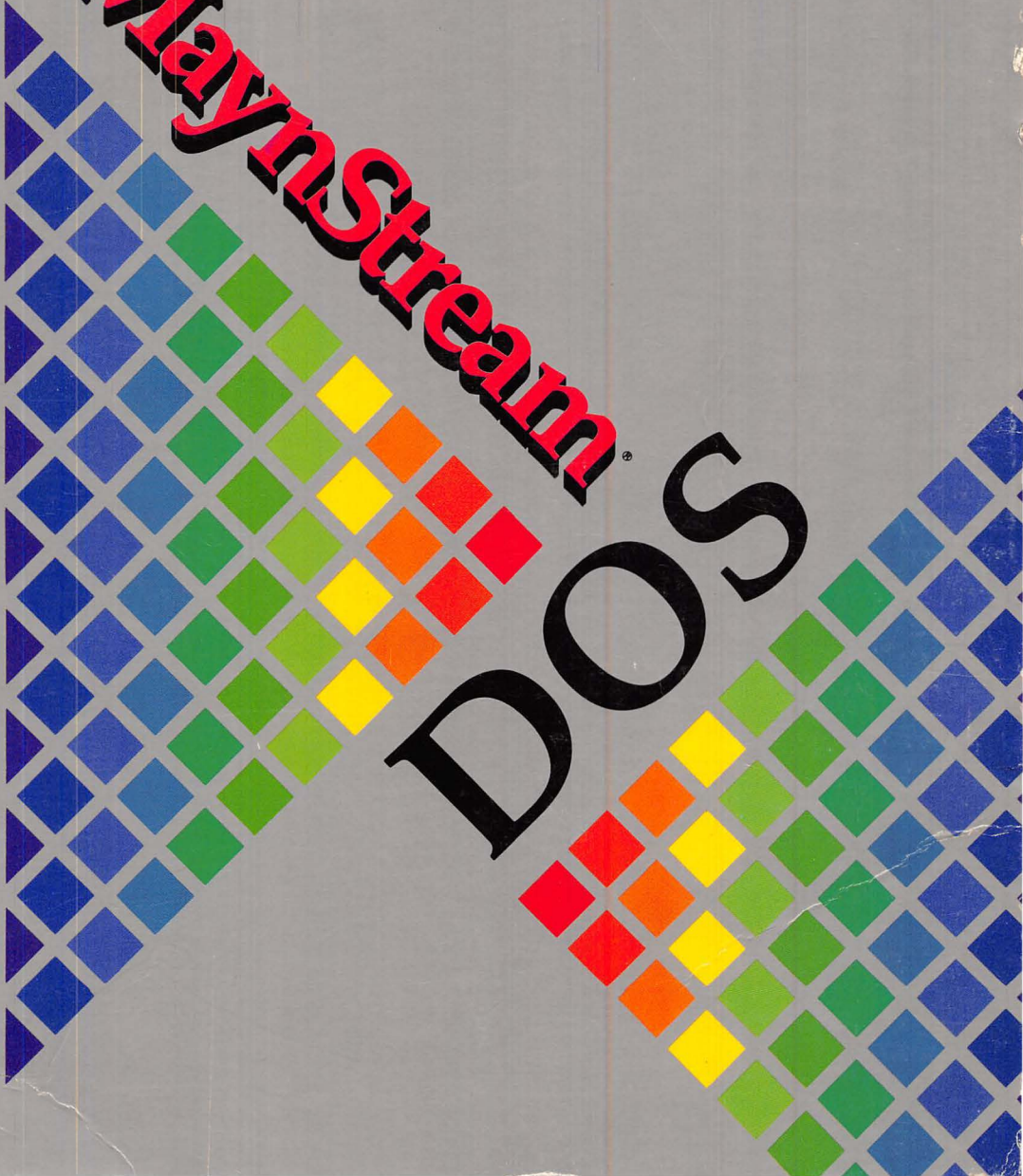


USER'S MANUAL

MainStream[®]

DOS



Federal Communications Commission Radio Frequency Interference Statement

NOTE:

You must use a shielded cable on any peripheral connected to the computer. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in strict accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

Maynard is not responsible for any interference caused by unauthorized modifications to this equipment. It is the users responsibility to correct such interference.

The user may find helpful a booklet prepared by the FCC, "How to Identify and Resolve Radio-TV Interference Problems." The booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock No. 004-000-00345-4.

Note: The controller cable is a shielded cable and must be used with the external system to meet FCC emissions limits.

Dear Customer,

Registering your product is important! This information will help us should you ever call for assistance. It will also help us create products to better meet the needs of our users. Please print the information below, or attach your business card, and drop it in the mail.

Your Name _____

Company _____

Address _____

Tape your business card here.

City _____

State _____

Zip _____

Phone _____

Job Title _____

Serial # _____

Model FasTape MaxStream MaynStream
 VP XL Model # _____

Date of Purchase _____

Software Version _____

Software Serial # _____

Where did you hear about Maynard/Archive?

- Mag ad/review A Friend My Dealer
 Direct Mail In-store Display
 Other _____

Did you consider any other brands before selecting your tape backup system?

- No Yes. Which ones? _____

Where did you purchase this backup system?

Dealer _____

City _____

Did you buy this drive when you bought your system? Yes No

Type of business _____

Number of Employees at site

- 1-49 50-99 100-499 500 or more

My computer is a:

- 8088/8086 based Mac Plus
 286 based Mac SE
 386 based Mac II (type) _____

My computer's / server's hard drive has a capacity of

- 0 - 40 MB 151 - 500 MB
 41 - 60 MB 501 - 1000 MB
 61 - 150 MB Greater than 1000 MB

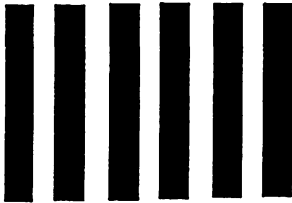
What kind of network do you have?

- AppleShare Novell NetWare
 DaynaNet TOPS 3-Com
 None Other _____

Who installed this tape backup system?

- Dealer Self
 Internal System Group Other _____

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED
STATES



BUSINESS REPLY MAIL

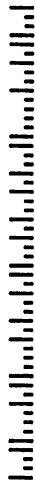
FIRST-CLASS MAIL

PERMIT NO 452

LAKE MARY FL

POSTAGE WILL BE PAID BY ADDRESSEE

MAYNARD ELECTRONICS, INC
36 SKYLINE DRIVE
LAKE MARY, FL 32746-9904



MaynStream® DOS

User's Manual

version #3.1

Federal Communications Commission Radio Frequency Interference Statement

You must use a shielded cable on any peripheral connected to the computer. This equipment has been tested and found to comply with the limits for a Class B computing device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in strict accordance with the instructions, may cause harmful interference to radio communications. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the computer and the receiver into outlets on different circuits.
- Consult the dealer or an experienced radio/TV technician for help.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

Maynard Electronics, Inc. is not responsible for any interference caused by unauthorized modifications to this equipment. It is the users responsibility to correct such interference. You are also warned — any changes to this certified device will void your legal right to operate it.

The user may find helpful a booklet prepared by the FCC, "How to Identify and Resolve Radio-TV Interference Problems." The booklet is available from the U.S. Government Printing Office, Washington D.C. 20402, Stock No. 004-000-00345-4.

Note: On external systems, the controller cable is a shielded cable and must be used to meet FCC emissions limits.

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Chapter 1

Introduction

Maynard Electronics is one of the largest manufacturers of data storage and retrieval systems in the world today. The MaynStream system has been designed to provide you with high performance information backup.

Installing the Maynard controller card in a computer brings the capabilities of the MaynStream system to that computer. Once installed, the system can copy or “back up” information that has been stored on a hard drive or network drive. This information is put onto a reliable magnetic tape as quickly as 40 megabytes in five minutes, file-by-file.

The MaynStream system is versatile. Backups can be tailored to your specific needs. Individual files or an entire hard drive can be backed up. Files can also be transferred (copied to tape and then deleted from the disk), restored (copied from tape to disk if information is lost), and verified (tape contents compared byte-by-byte to information on disk).

The Maynard portable drive is a self-contained drive that is designed to be moved from one system to another. All that is needed is a Maynard controller and a copy of the MaynStream software installed in the computers you wish to back up. This allows you even more versatility and the option to back up more than one system.

The MaynStream system is a technically advanced system designed for the beginner as well as the experienced user. It can be quickly and easily installed and does not require a computer background to operate.

Features of MaynStream 3.1

Fast File Restore The Fast File Restore (FFR) feature provides the capability to rapidly locate a file from any cataloged tape and begin restoring. FFR is supported on the Maynard 60Q, 150Q, 250Q and 525Q 1/4" cartridge drives, the 600 cassette, as well as the 4mm DAT drives and the Maynard 2200HS+ and 5000 8mm drives.

NetWare Server/Volume Name Support When the software is set to display server/volume names, you have the ability to select all known servers and volumes on the internet. You do not need to be logged into a server to back up that server, and with the Automatic Login Feature, MaynStream automatically logs you into the server if you are not already logged in. At the end of the MaynStream session (or if a user aborts an operation) you are logged out of the server. This Automatic Login/Logout feature provides maximum security for unattended backup of NetWare networks, eliminating potential security breaches.

Greater Network Support Additional network features include NetWare 386 support, and NetBIOS support for remote drive backup (via MaynStream's IsleLAN utility).

File Grooming With user-directed criteria, you can configure MaynStream to transfer unused, static files from server to tape; thereby reducing clutter on the server.

Other MaynStream Features

Automatic Backup Simply select a group of files to back up and MaynStream does the rest. Just enter any time over a 7-day period and MaynStream will automatically begin the backup at that time. (Refer to Chapter 5.)

Catalogs To make the restoration of files easier MaynStream has a cataloging feature. Cataloging provides the ability to select files from multiple tapes and backup sets as well as the ability to search for files on multiple tapes and backup sets. (Refer to *Catalogs* in Chapter 3.)

+/- Keys (Include/Exclude) The plus key <+> and the minus key <-> appear during Backup, Transfer, Restore, and Verify. Pressing the plus key will allow you to include groups of files by their name, the date they were created, or by the last time they changed. The minus key allows you to exclude groups of files or whole directories based on the same criteria. (Refer to Chapter 4.)

File Interchangeability MaynStream's DOS compatibility means that you can move data among any number of computers that use DOS. No matter if you have an IBM PC or a PC compatible, a PS/2 or a network, if your computer uses DOS, MaynStream can reliably transfer data file-by-file. MaynStream also offers interchangeability between backups performed by MaynStream for OS/2, LANStream (Maynard's network tape backup software), and MaxStream (Maynard's tape backup system for the Macintosh).

Compatibility with Your Computer

The MaynStream system is designed to be compatible with IBM PC/XT/AT models, Personal System/2 models, and compatible computers such as those produced by ALR, AST, Compaq, Dell, Hewlett-Packard, Zenith and most other leading manufacturers. Our compatibility lists are continually expanding. If you have a question about using a MaynStream system with a specific computer or network, please call our technical hotlines for immediate assistance.

For Network compatibility requirements refer to Chapter 8. For special compatibility issues, refer to Appendix D for more information.

System Requirements

- DOS version 2.1 or greater.
- 512K or more of available system memory.
- If you are using the IsleLAN/MaynLAN remote drive backup capability, an expanded memory manager may be necessary.

How to Use this Manual

Chapter 2 will familiarize you with the MaynStream system. There are several types of Maynard drives and each drive installation is discussed in this chapter. First determine if you are installing the Maynard drive in a PC or PS/2, then turn to the section that covers internal or portable installation and find the drive you are installing (i.e., cassette, cartridge, 4mm or 8mm).

Chapter 3 will instruct you on how to use the MaynStream Tmenu program.

Chapter 4 discusses the plus <+> and minus <-> keys which are used for file include and exclude operations in Tmenu.

Chapter 5 gives instructions on how to perform unattended and remote workstation backup.

Chapter 6 will instruct you on how to use the more advanced command line software.

Chapter 7 is designed to help you with any problems that might occur when using the MaynStream system.

Chapter 8 gives specific information on how to use the MaynStream tape backup system on a network.

Chapter 9 includes technical information and available options. The appendices and index follow this chapter.

NOTE: The "README.DOC" file included in your MaynStream software should be used as a supplement to this manual. You can view this file by entering **type readme.doc** at the DOS prompt, or you can import it into your word processor as an ASCII text file.

Advanced Users

If you have experience installing and using the MaynStream system, you can skip most of this manual. Check Chapter 3 and the Command Line Structure (Chapter 6), for more advanced features of the MaynStream software. Also look for a README.DOC file on the MaynStream installation disks for more current information.

Moderately Experienced Users

If you have installed other equipment in a computer, but you have never used a tape backup system before, you are a moderately experienced user. Read Chapter 2 for installation instructions. The Tmenu command and the Automatic Backup System are covered in Chapters 3 and 4. Read these chapters to gain an understanding of the software.

First Time Users

If you have never installed an option in a computer you should start with the installation instructions in Chapter 2. Once you have familiarized yourself with MaynStream, and have completed the installation go to Chapter 3. In Chapter 3 you will learn about Tmenu, the MaynStream menu system.

NOTE: On-line help is available by pressing <F1>.

Network Users

Refer to Chapter 8 for information concerning the use of the MaynStream software on a network.

Conventions Used in This Manual

When you are instructed to type a word, the keystrokes are in bold type:

tmenu

Special keystrokes are bold and in brackets. For example:

The return key: **<Enter>**
The spacebar key: **<Spacebar>**
The F1 key: **<F1>**

Keystrokes that are meant to be pressed at the same time are both bold and contained in one set of brackets. For example, the Control key and the Return key: **<Ctrl Enter>**

Messages appearing on your monitor are represented in this manual in green:

Do you wish to continue?

Registering MaynStream

Before you go any further, it is important that you complete the Warranty Registration Card found at the front of this manual.

Completely fill out the warranty card to ensure a full warranty. Be sure you enter the entire serial number found on the white label on the interface card or the Maynard serial number on the silver label on the back panel of the MaynStream unit.

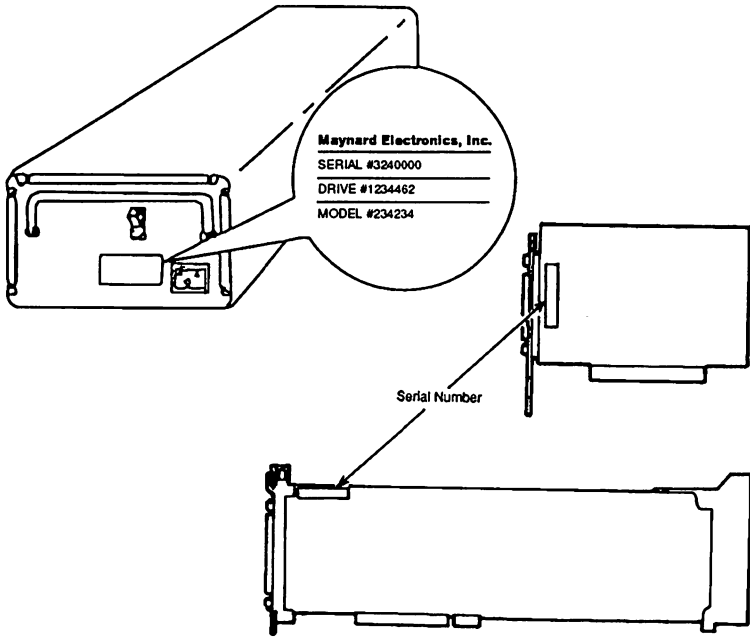


Figure 1-1. Location of serial numbers

Chapter 2

Where to Start

Before you can start enjoying the security that MaynStream provides, you must first connect the Maynard drive to your computer. This chapter supplies the basic instructions needed to install each component of the MaynStream system.

To go to the correct section for your installation, there are some questions you must be able to answer. First, into what kind of computer are you installing the tape backup system? Second, what kind of tape backup system are you installing: internal or portable?

To help you configure your MaynStream system, or to install a backup system with multiple controllers, you should also know which type of interface your tape backup system uses: QIC or SCSI. If you have any of the SCSI products listed in the table below, be sure to follow the instructions that relate specifically to SCSI installation in this chapter. Figure 2-1 will help you identify the type of controller you will be using.

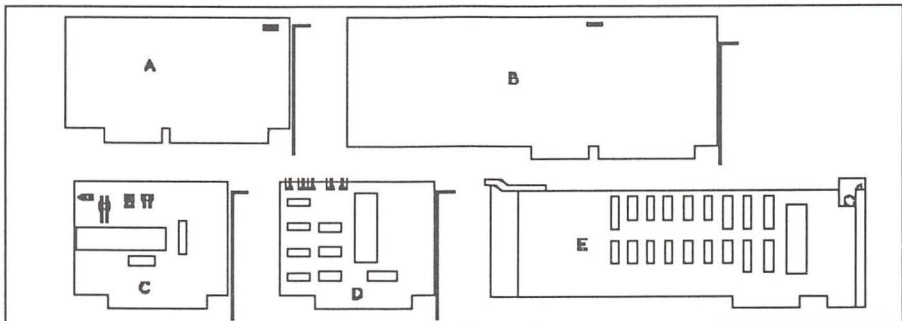


Figure 2-1. Maynard Controller Cards

Legend:

- A) 16-bit SCSI Card Rev 3 (blue)
- B) 16-bit SCSI Card Rev 2 (blue)
- C) 8-bit QIC-02 Card (green)
- D) 8-bit SCSI Card (blue)
- E) PS/2 QIC-02 (green) or PS/2 SCSI (blue)

Maynard QIC and SCSI Tape Drives	
<u>QIC</u>	<u>SCSI</u>
20 Cassette	525 Cartridge
60 Cartridge/Cassette	600 Cassette
150 Cartridge/Cassette	4mm DAT
250 Cartridge	8mm 2200HS
	8mm 5000HS

Table 2-1. Maynard QIC and SCSI Tape Drives

What is Included

Carefully remove each item from the box making sure everything is in good condition. Before using the MaynStream System you should first become familiar with what is included.

With every system you receive:

- Maynard controller card or PS/2 MicroChannel adapter
- One Maynard cassette or cartridge
- Software diskettes
- Operations manual

In addition to the above, you receive one of the following:

If you purchased a portable system you receive:

- Maynard tape drive in chassis
- Power cord
- External data cable

If you purchased an internal PS/2 system you receive:

- Maynard tape drive with bracket attached and 60/80 faceplate
- Internal data cable
- Internal power cable
- Ground wire
- 50/70 faceplate kit

If you purchased an internal PC system you receive:

- Maynard tape drive
- One internal data cable
- One "Y" power cable
- Two sets of rails (one for Compaqs, one for ATs)
- Two sets of 4 screws (metric and standard)
- One beige and one black faceplate and a button for cassette versions

If you purchased a separate controller card you receive:

- Maynard controller or adapter
- MaynStream software disks
- Operations manual

If you have a Maynard controller card and it was not installed by your dealer, continue with the installation of the card below.

Standard Bus Installation (PC, AT)

The installation instructions on the following pages are for standard bus computer systems. If you have an IBM compatible computer, refer to the manual for that computer concerning cover removal and replacement.

1. Turn off the computer, disconnect the power cord, and remove the cover.
2. Check the jumpers on the controller card to be sure they match the drawings below. These jumpers should not be moved unless you have difficulty using a specific application after the Maynard controller is installed (refer to Appendix D).

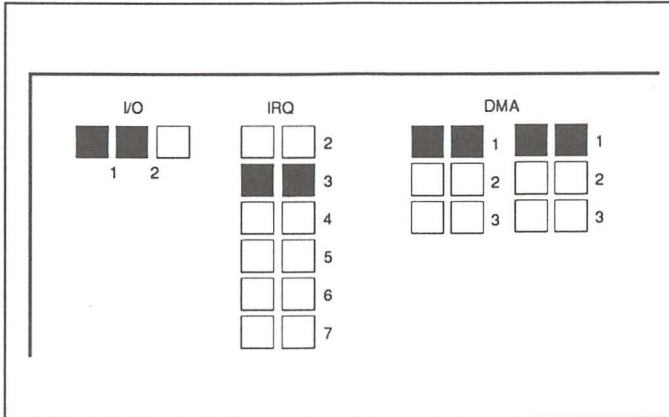


Figure 2-2. ISA QIC controller card jumpers

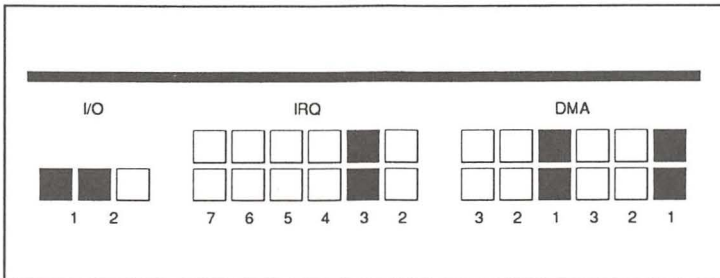
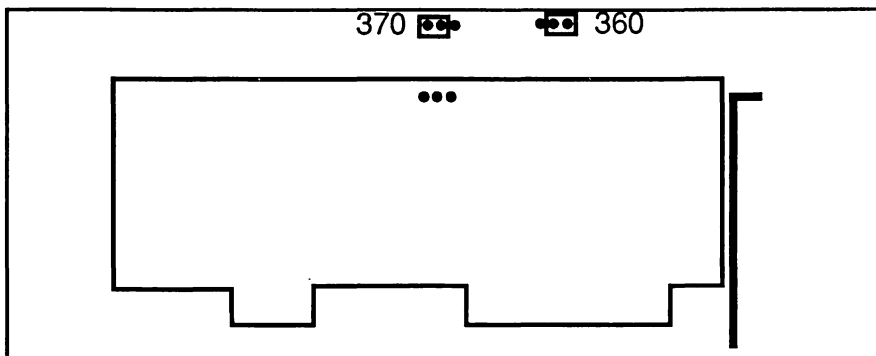


Figure 2-3. PC 8-bit SCSI controller card jumpers

NOTE: In the IBM PC XT, do not use slot 8 (the slot closest to the power supply). This slot is reserved for the IBM expansion unit. Slot 8 in the IBM PC XT 286 is okay.



*Figure 2-4. PC 16-bit SCSI controller card jumpers
(Rev. 3 or later)*

NOTE: The 16-bit SCSI controller card is only compatible with 286 and 386 computers that have 16-bit expansion slots. If you are using an 8-bit memory card to upgrade your computer from 512K to 640K there may be an incompatibility problem and you will have to remove the memory card to use the Maynard controller.

3. Remove the screw holding the filler plate of an empty card slot, and take the plate out of the computer. Save the screw.
4. Carefully seat the Maynard controller card and replace the screw.

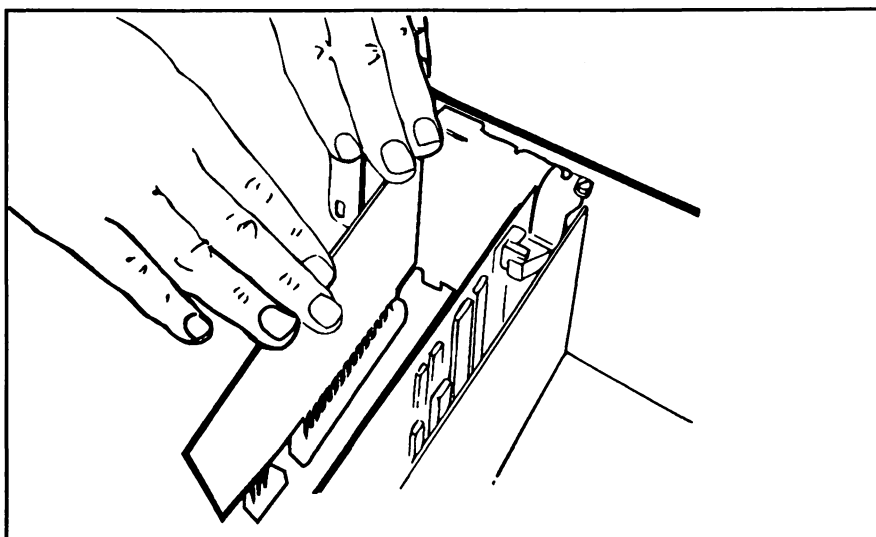


Figure 2-5. Inserting the Maynard controller card

NOTE: When installing internal systems, place the internal data cable on the set of pins located near the card bracket. The cable attaches with the colored line on the bottom. If the controller card is not going to be in the slot closest to the power supply, fold the cable 90° so it can be draped over other controller cards.

If you have an external unit, replace the cover of the computer, and continue with the following directions. Otherwise proceed to *Internal Maynard Drive Installation* later in this chapter.

Portable Maynard Drive Installation

1. Connect the external data cable to the back of the Maynard drive.

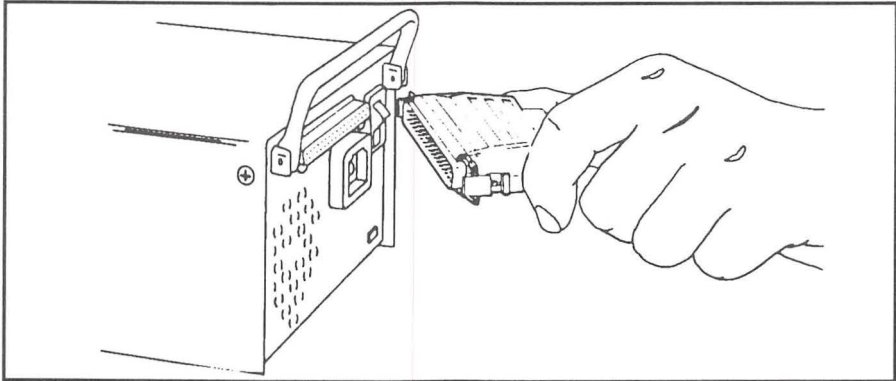


Figure 2-6. Connecting the cable to the Maynard drive

2. Connect the external data cable to the Maynard controller.

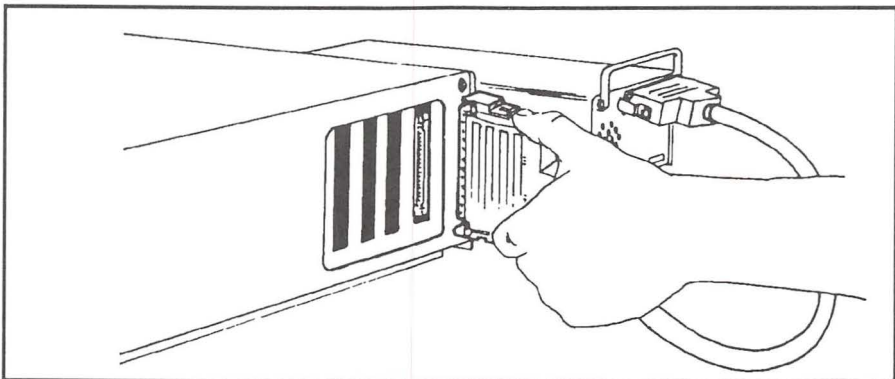


Figure 2-7. Connecting the cable to the Maynard card

NOTES FOR SCSI DRIVES: If you are installing a Maynard 525Q, 600, 4mm, or 8mm drive, refer to *SCSI Drive Installation* found later in this chapter for more specific information.

3. Plug the power cord into the back of the Maynard drive and plug the other end of the Maynard power cord into an electrical outlet.

Go to *First Time Software Installation* to complete the MaynStream software installation.

Internal Maynard Drive Installation

With the controller installed, the next step is to install the Maynard internal drive. The instructions below describe a generic installation for all computers except the Compaq Portable 286. The installation for the Compaq Portable 286 can be found in Appendix D of this manual.

NOTE: For better ventilation it is recommended that the Maynard drive be placed in the lower part of a full-height opening.

NOTE: Maynard tape drives come with either a beige or black faceplate. If you wish to change the color of the faceplate to better match your computer refer to Appendix G for these instructions.

1. If there is a filler plate or mounting clips covering the slot where the drive will go, remove them at this time.
2. Attach the large rails to the drive before sliding the drive into an NCR 8 or the Compaq Deskpro. The smaller set of rails should be connected to the drive when installing it in an IBM PC AT. Slide the Maynard drive part way into the open slot.

NOTE: If there is a drive already in the computer above the slot where the tape drive will go, slide this drive forward about 2 inches without disconnecting the cables. This will make it easier to cable the Maynard drive.

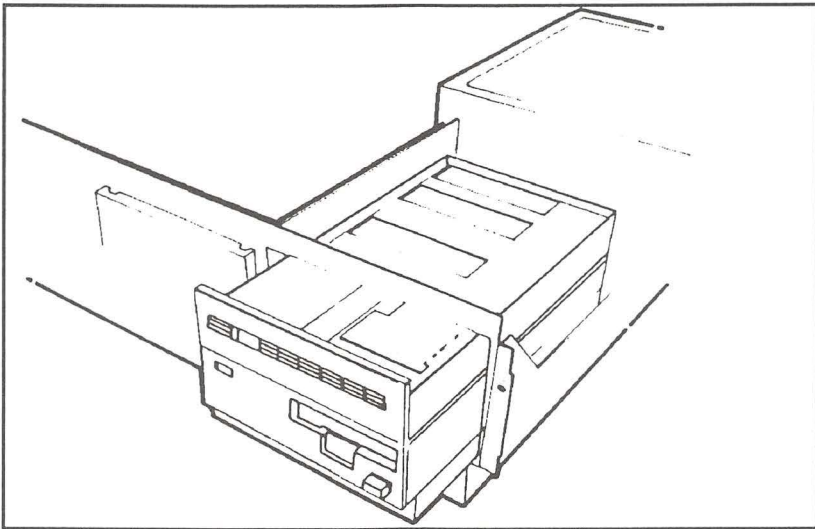


Figure 2-8. Placing the drive in an internal PC

3. Plug the cable coming from the Maynard controller onto the edge connector on the rear of the drive. The cable attaches with the colored line on the same side as the keying slot in the edge connector.

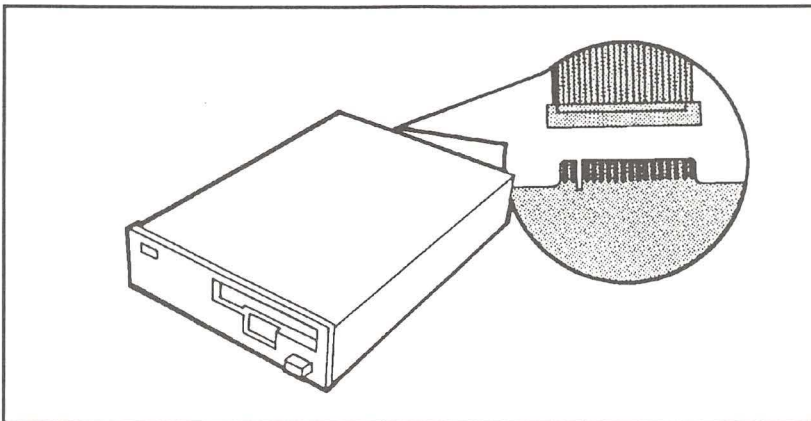


Figure 2-9. Connecting the data cable to the Maynard drive

If you are installing a Maynard 150 or 600 internal cassette drive (see Figure 2-10), connect the data cable (A) to the drive. The flat data cable attaches with the colored line closest to the power connector (B).

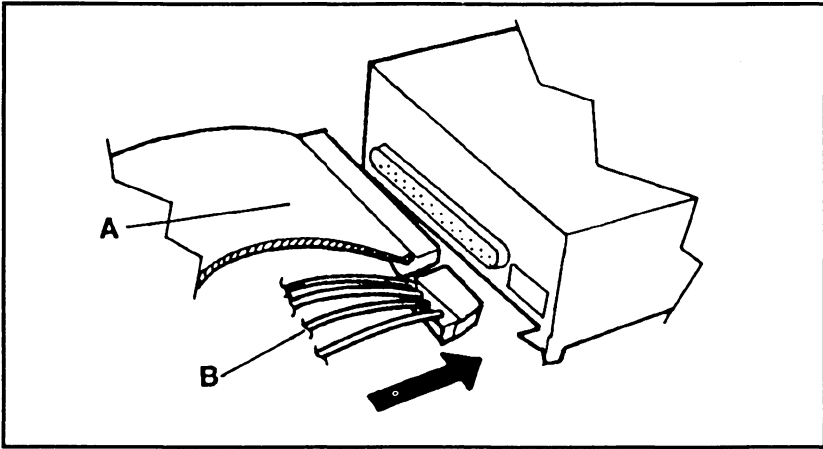


Figure 2-10. Connecting the cables to the Maynard 150 drive

4. Plug any available power cord into the power connector on the back of the drive. If you have no available power cords, plug one of the two split ends of the "Y" power cable into the power connector on the back of the drive. The connectors are keyed and can only be installed one way. Attach the other two connectors of the "Y" cable to the power supply cable and any available option (i.e., floppy drive, hard drive, etc.)
5. Slide the tape drive all of the way into the computer.

NOTE: If you had to move a drive to install the Maynard unit, replace that drive now.

6. Depending on your computer, you will need metric or standard screws to mount the drive. Secure the drive using the appropriate screws.
7. Replace the cover of the computer.

This completes the hardware installation. Continue with the software installation before you begin using the MaynStream system.

MicroChannel Installation

If the Maynard adapter has not already been installed by your dealer, you will need to install the adapter in the computer you wish to back up.

NOTE: After installing the adapter you will get a 165 error when you first turn on the computer. This is normal and can be handled by following the “MicroChannel Configuration” instructions found later in this chapter.

Portable Maynard Tape Drive Installation

1. Turn off the computer, disconnect the power cord, and remove the cover.
2. Loosen the thumb screw securing the slot cover, then insert the adapter in any available slot, and tighten the thumb screws.
3. Connect the external data cable to the Maynard drive.
4. Connect the external data cable to the Maynard adapter.
5. Connect the power cord to the drive and plug the other end into an electrical outlet.
6. Replace the cover of the computer.

NOTES FOR SCSI DRIVES: If you are installing a Maynard 525Q, 600, DAT, 2200HS+ or 5000, refer to *SCSI Drive Installation* for more specific information on installing SCSI drives.

This completes the external hardware installation. Continue with the PS/2 MicroChannel configuration and software installation instructions before you begin using the MaynStream system.

Internal Maynard Drive Installation for MicroChannel Models 60 and 80

The instructions on the following pages describe the installation of an internal Maynard drive in the full height bay of a PS/2 Model 60 or 80. If you are installing a 3 1/2" drive in the blank floppy bay, see the instructions that come with the 3 1/2" drive.

1. Turn off the computer, disconnect the power cord, and remove the side and front unit cover.

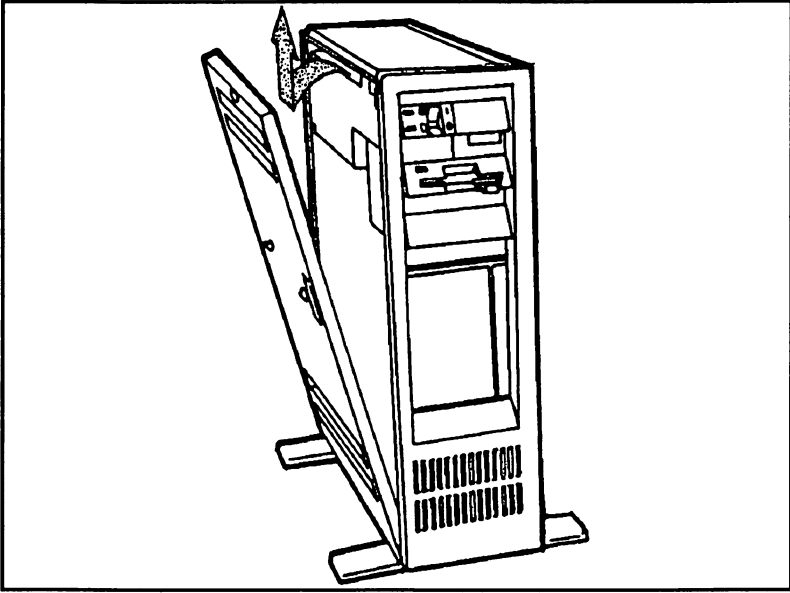


Figure 2-11. Removing the PS/2 covers

2. Insert the adapter (with cable), in any available slot. If the cable becomes detached it connects to the adapter with the colored line near the gold edge connector of the adapter.

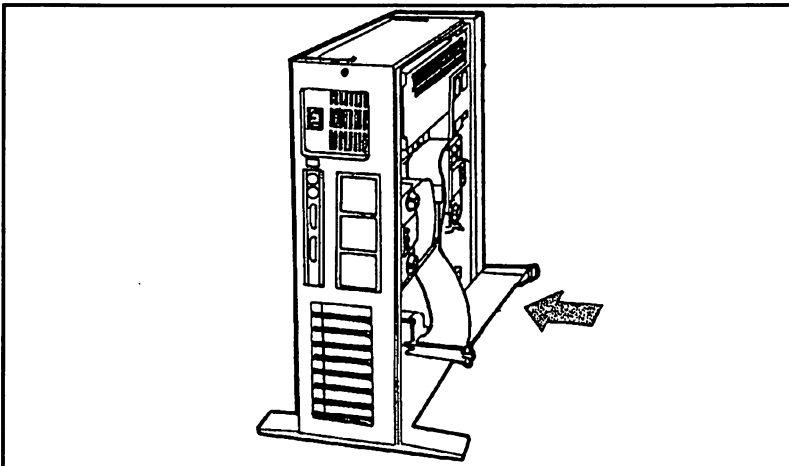


Figure 2-12. Inserting the adapter card

- Slide the Maynard drive part way into the open slot. The tape eject button should be closest to the computer's power switch.

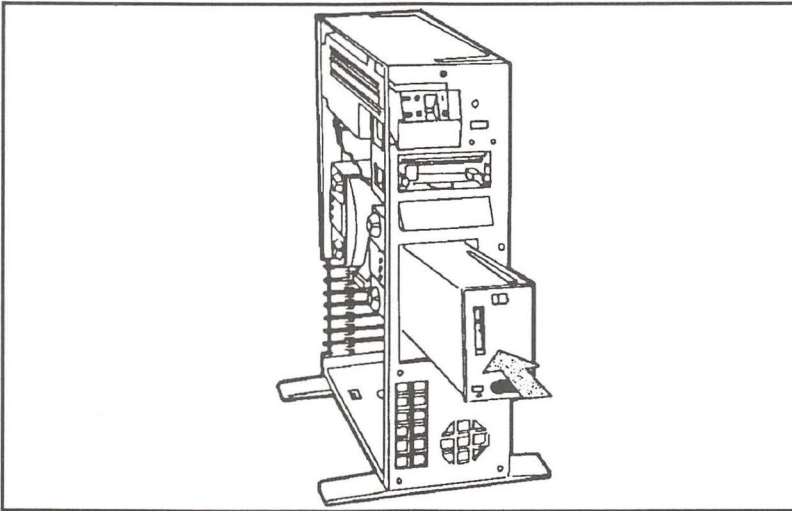


Figure 2-13. Sliding the Maynard drive into the PS/2

- Connect the adapter data cable (A), the power cable (B), and the ground wire (C). The flat data cable attaches with the colored line on the same side as the notch in the edge connector on the drive.

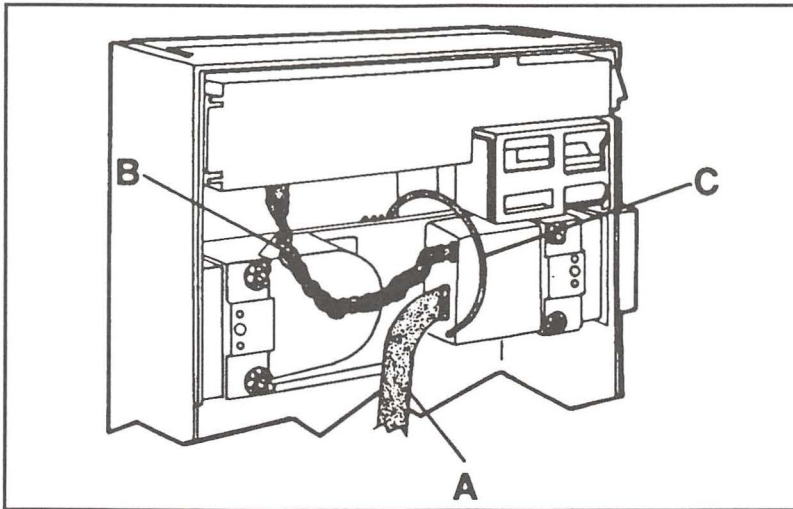


Figure 2-14. Connecting the cables to the Maynard drive

- Slide the drive in the rest of the way. When the drive is almost completely in, the rail closest to the ground tabs will touch a metal tab. To fully insert the Maynard drive, press the metal tab away from the drive and continue sliding the drive in until the back of the Maynard faceplate is flush with the computer. Turn the large blue knobs clockwise to secure the drive, being careful not to overtighten.

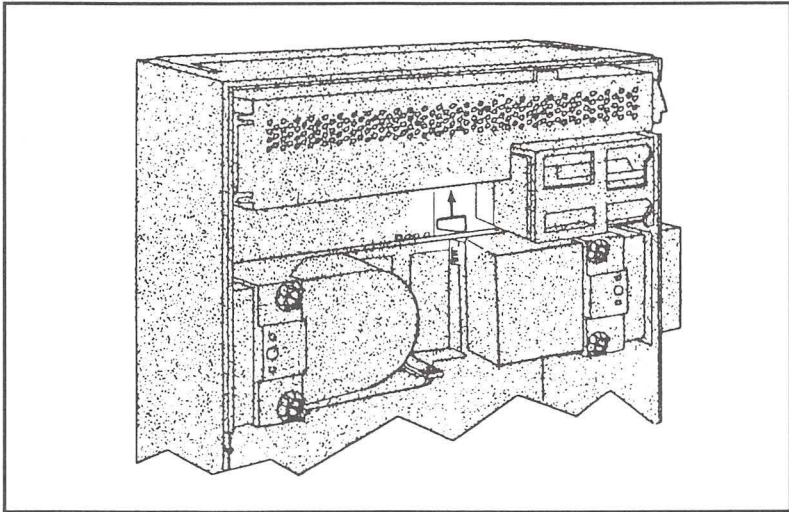


Figure 2-15. Securing the Maynard drive in the PS/2

NOTE: The back of the Maynard faceplate may not be flush with the computer. When the side cover is installed, it becomes flush.

6. Replace the side cover.
7. Remove the blank plate in the front cover that occupies the space where the drive is now located. To remove the blank plate, press firmly on the front edges. Secure the front cover.
8. Re-connect the power cord and turn on the computer.

This completes the internal hardware installation. Continue with the PS/2 configuration and software installation before you begin using the MaynStream system.

Internal Maynard Drive Installation for MicroChannel Models 50 and 70

The instructions on the following pages describe the installation of an internal Maynard drive.

1. Turn off the computer, disconnect the power cord, and remove the unit cover.
2. Connect the data cable (A), and the power cable (B) to the drive. The flat data cable attaches with the colored line closest to the power connector.

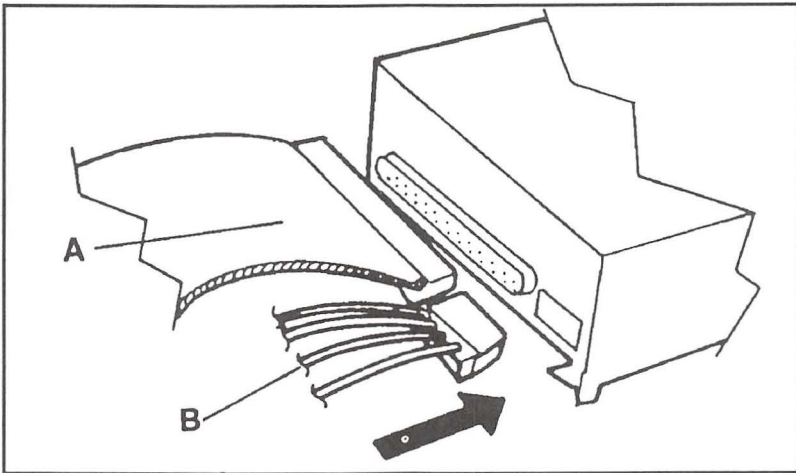


Figure 2-16. Connecting the cables to the Maynard drive.

3. Slide the Maynard drive part way into the open slot.
4. Put the power cable card into the floppy drive connector.

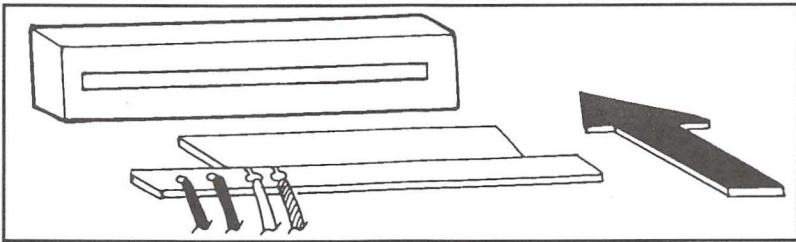


Figure 2-17. Connecting the power cable to the floppy connector

5. Slide the drive all of the way into the slot until it presses the flat data cable against the floppy drive connector and locks in place.

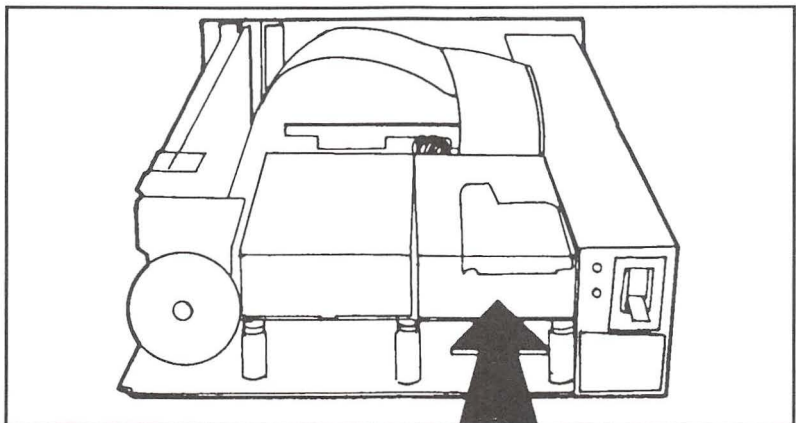


Figure 2-18. Inserting the Maynard drive

6. Attach the flat ribbon cable to the adapter. The cable connects to the adapter with the colored line near the bottom of the adapter.
7. Insert the adapter (with cable), in any available slot.
8. Remove the blank plate in the front cover that occupies the space where the Maynard drive is now located. Press on the two large clips that hold the bottom of the faceplate. Once the bottom is free, pull the faceplate down until the top two clips no longer hold the faceplate.
9. Reverse the instructions in step 8 to insert the Maynard drive faceplate into the opening. Replace the cover.
10. Place the blue knob on the D-shaped bar extending from the drive.
11. Replace the power cords and turn on the computer.

This completes the internal hardware installation. Continue with the PS/2 MicroChannel configuration and software installation instructions on the following pages before you begin using the MaynStream system.

MicroChannel Configuration

To inform the computer of the addition of the Maynard adapter, and to be sure that the computer is properly configured, follow the steps below. There is a file on the MaynStream diskette that needs to be copied to the IBM Reference diskette. If it is not copied, the configuration software will not function correctly.

1. Place a backup copy of the Reference diskette in drive A: and turn on the computer. You will see a "165" error message telling you an unknown adapter has been installed. Press <Enter> at the main screen. Press <PgDn> to read the entire message and answer <N> to the Automatic Configuration question.

You will see:

1. Learn about the computer
2. Backup the Reference Diskette
3. Set configuration
4. Set features
5. Copy an option diskette
6. Move the computer
7. Test the computer

2. If you do not have a backup copy of your IBM Reference Diskette, select option 2. Create the backup copy then continue with these instructions.

3. Select option 5 "Copy an option diskette." When prompted for the "option diskette" insert the MaynStream Installation diskette. Follow the steps required to place the necessary MaynStream .ADF file on your backup copy of the Reference Diskette.
4. When you return to the main menu, continue with Step 3 of "Changing the MaynStream Configuration for MicroChannel computers" below.

Changing the MaynStream Configuration for MicroChannel Computers

After installing the Maynard Tape Adapter, the IBM configuration for this adapter allows you to change three things:

- The adapter address
- The DMA Arbitration Level
- The Interrupt Level

In the event of a conflict, follow these steps to change the MaynStream configuration.

1. Place your backup copy of the IBM Reference Diskette in drive A. Be sure this copy includes the MaynStream .ADF file.
2. Turn on the computer. You will see:
 1. Learn about the computer
 2. Backup the Reference Diskette
 3. Set configuration
 4. Set features
 5. Copy an option diskette
 6. Move the computer
 7. Test the computer

3. Select option 3 "Set configuration." You will see:

- 1. View configuration
- 2. Change configuration
- 3. Backup configuration
- 4. Restore configuration
- 5. Run Automatic configuration

4. Select option 2 "Change configuration."

You will see a listing of each installed option. Move the cursor down to the Maynard description that looks like this:

Slot x - Maynard Tape Adapter

Adapter Address.....[FF70 to FF77]
DMA Arbitration Levels.....[Level 1]
Interrupt Level.....[Level 5]

Using the following notes, set the Maynard Adapter configuration.

Changing the Adapter Address

The Maynard Adapter is capable of using two addresses: FF70_H to FF77_H, or FF60_H to FF67_H. The default address is FF70_H to FF77_H. Use the <F5> and <F6> keys to toggle between the two addresses. When you have selected an address that does not conflict, press <F10>.

Changing the Interrupt Level

The Maynard Adapter can use interrupts 2, 3, 5 or 7. The default interrupt is 5. Use the <F5> and <F6> keys to select an interrupt, but do not share an interrupt with another option. When you have selected the best interrupt for your system, press <F10>.

Changing the DMA Arbitration Level

The Maynard Adapter is capable of using six DMA arbitration levels: 1, 3, 4, 5, 6, or 7, or a non-DMA mode. (Exception: the Maynard SCSI Adapter cannot be configured for non-DMA mode.) The default DMA arbitration level is 1. As a last option, the non-DMA mode will not conflict with any other option, but slower MaynStream performance will result. Use the <F5> and <F6> keys to select an arbitration level. When you have selected the best arbitration level for your system, press <F10>.

NOTE: An asterisk (*) indicates a conflict for any of these options.

Once you have selected the Maynard Adapter settings, press <F10> to save your configuration.

First Time Software Installation

If this is a Novell network installation refer to Chapter 8.

1. Place the diskette labeled “MaynStream Installation” in drive A:.
2. From the C: prompt type:

A: INSTALL [drive:\path] <Enter>

Typing **INSTALL** will install the MaynStream software on drive C: in the \maynard subdirectory.

Typing `INSTALL [drive:\path]` is an optional way to install the MaynStream software in the drive and subdirectory of your choice.

The Install program will:

- 1) Begin a first-time installation
- 2) Copy the software to your hard drive
- 3) Create the Tmenu batch file
- 4) Update your `CONFIG.SYS` file (if one exists) or create one (if none exists)
- 5) Display drives on the network that are using the MaynStream remote workstation software

When the `INSTALL` procedure is complete you will be able to run the MaynStream software from your hard drive.

After the MaynStream system is completely installed, use `Backup` from the Tmenu system or `TBACKUP` from the command line to back up the information on your hard drive. Then use `Verify` from the Tmenu system or `TVERIFY` from the command line, to be sure the tape drive is properly installed and operating correctly. `Backup` and `Verify` are explained in Chapter 3. `TBACKUP` and `TVERIFY` are in Chapter 6.

Installing the Software in Another Directory

When you install the MaynStream software on a computer that does not have a hard drive, or a computer that has no hard drive but is part of a network, you will see this message:

The installation requires a hard drive, or if you are on a network, refer to the appendix in the manual that covers placing the software in another directory.

To install the software on a network there is a special installation. This installation includes two steps:

1. Type “`INSTALL`” followed by the name of the drive and directory where you want the software installed.
2. Place the statement “`set msii=x:\xxxxxxx`” in your `AUTOEXEC.BAT` file. In the case of a Novell NetWare network, your login script would read “`DOS SET MSII = "x:\xxxxxxx"` (where `x:\xxxxxxx` is the drive and directory where the software is installed).

For example, to place the software on a drive and directory other than the default (your first hard drive and the `\MAYNARD` directory), you would type something like this: `install f:\tape <Enter>`

Then you would add `DOS SET MSII = "f:\tape"` to your NetWare login script or “`set msii=f:\tape`” to your `AUTOEXEC.BAT`:

Existing
AUTOEXEC.BAT

Mode COM1:
Date
Time
Set Prompt=\$P\$G
Mouse

Modified
AUTOEXEC.BAT

Set msii = f:\tape
Mode COM1:
Date
Time
Set Prompt=\$P\$G
Mouse

“Set msii=f:\tape” tells the MaynStream software to run from drive F in the \tape subdirectory.

NOTE: To change your AUTOEXEC.BAT file use your text editor, to display your AUTOEXEC.BAT file. Then insert the statement at the top of the file. When you are finished, reboot the computer to install the new AUTOEXEC.BAT file.

NOTE: If you are using DOS 3.2, and you get a message saying you are out of environment space, refer to the DOS manual for instructions on how to increase the environment space.

Using the Tape

IMPORTANT: For cassette and cartridge media (not 8mm or DAT) use the MaynStream Tmenu ERASE option or the Tension /e command to erase the tape before using the tape. ERASE should be run once, prior to the first use of the tape. The ERASE process re-tensions the tape and initializes the tape’s magnetic surfaces.

Inserting the Tape

Maynard 60 Cassette

Remove the tape from the protective plastic case.

Insert the tape into the Maynard drive.

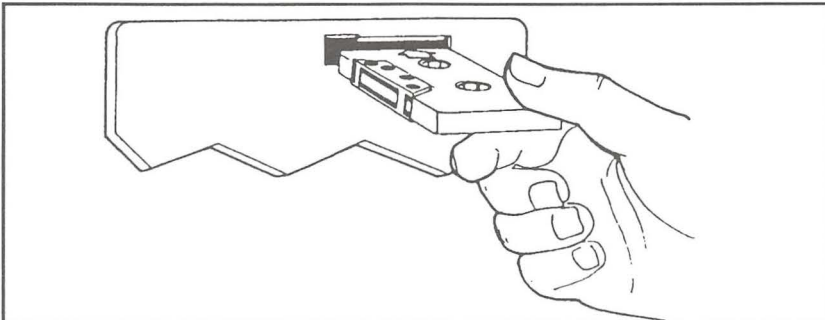


Figure 2-19. Inserting the 60 cassette

NOTE: If the tape stops before it is all the way in the drive, the tape is upside down. Remove it and re-insert the tape with the arrow and the words “THIS SIDE IN,” up. Do not force the tape.

Maynard 150 Cassette

Remove the tape from the protective plastic case.

Insert the tape into the Maynard drive.

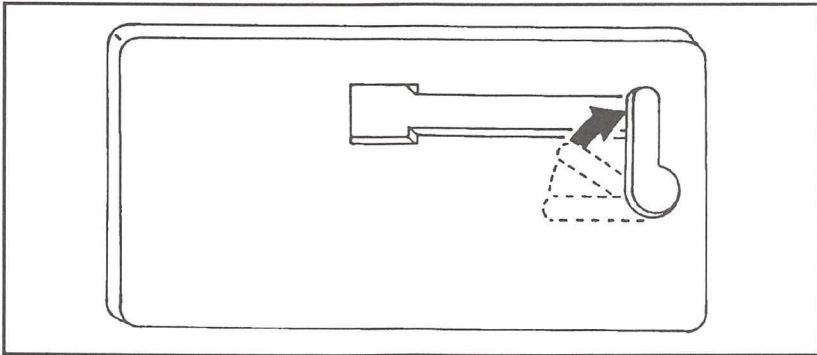


Figure 2-20. Inserting the 150 cassette

IMPORTANT: The 150 tape can be inserted backwards. To prevent this from happening always be sure that the “THIS SIDE IN” arrow points toward the back of the drive, and the end with the write protect tab goes in first. If the tape is inserted upside down the tape drive will not operate.

Turn the lever clockwise until the tape locks in place or the lever is perpendicular to the tape slot.

Maynard 600 Cassette

Remove the tape from the protective plastic case.

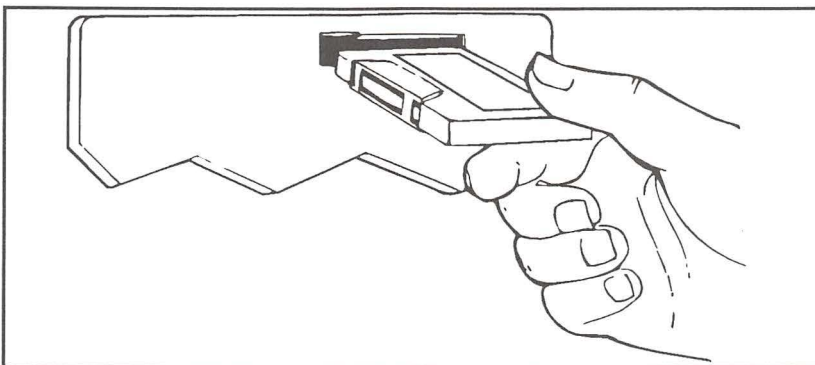


Figure 2-21. Inserting the 600 cassette

The power must be ON to insert the tape. Insert the tape into the Maynard drive.

Maynard Cartridge

Remove the tape from the protective plastic case.

Insert the tape into the Maynard drive.

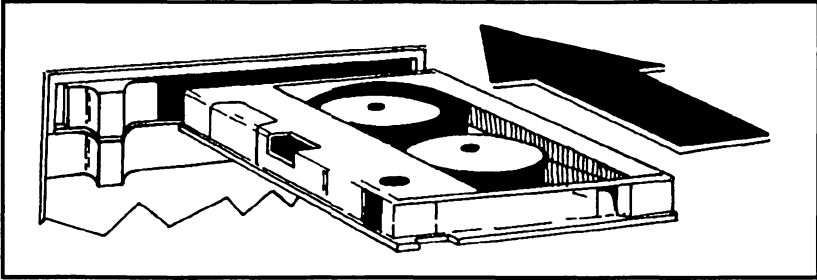


Figure 2-22. Inserting the cartridge

Slide the lever toward the tape until the tape locks in place.

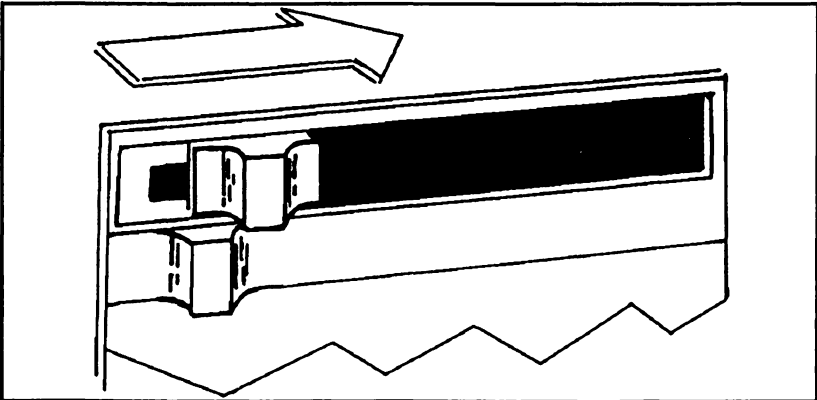


Figure 2-23. Securing the cartridge with the sliding lever

Maynard 4mm DAT and 8mm

Remove the tape from the protective plastic case. Insert the tape with the arrow pointing toward the Maynard drive. **DO NOT FORCE THE TAPE.**

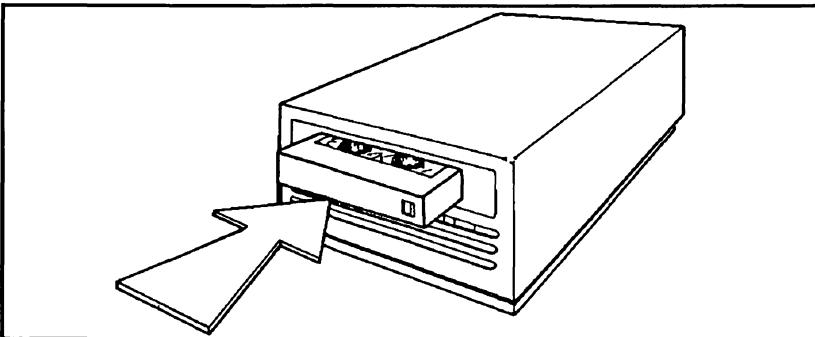


Figure 2-24. Inserting the 4mm DAT tape

On 8mm drives, close the drive door.

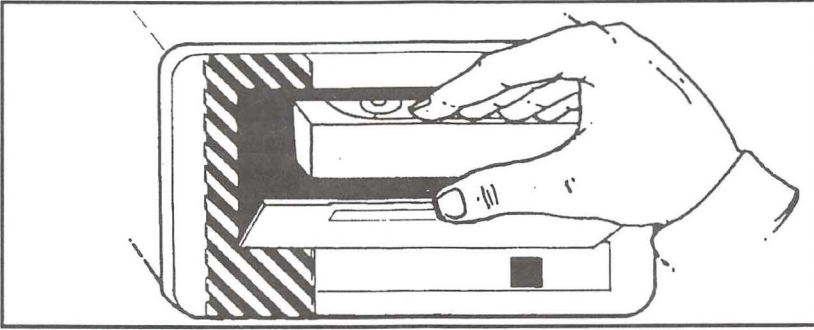


Figure 2-25. Inserting the 8mm tape

Removing the Tape

Maynard 60 Cassette

To remove the tape simply push the button until the tape is ejected.

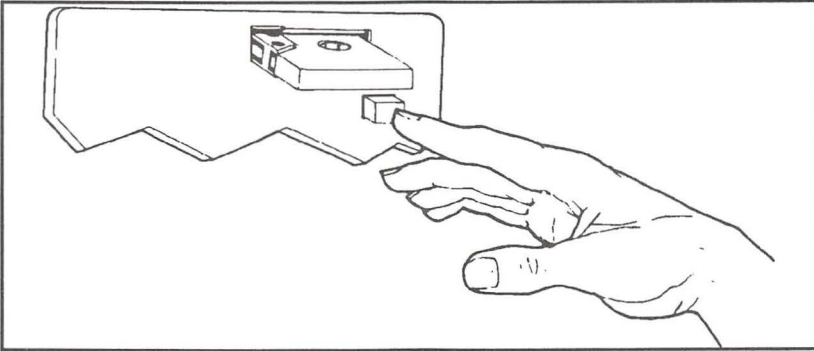


Figure 2-26. Ejecting the 60 cassette

Maynard 150 Cassette

To remove the tape turn the lever counter-clockwise until the tape is ejected.

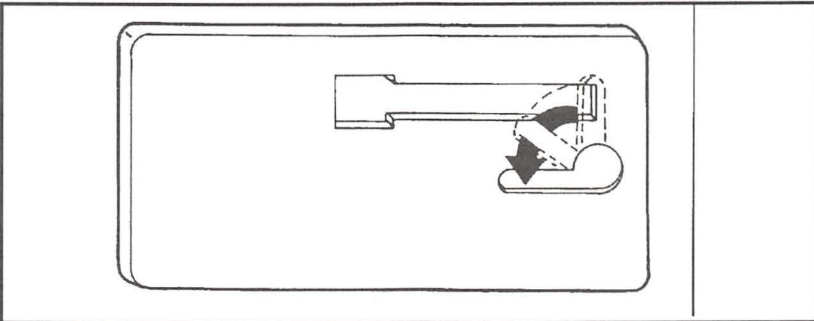


Figure 2-27. Ejecting the 150 cassette

Maynard 600 Cassette

The power to the tape drive must be ON to eject the tape. Simply push the eject button and remove the tape.

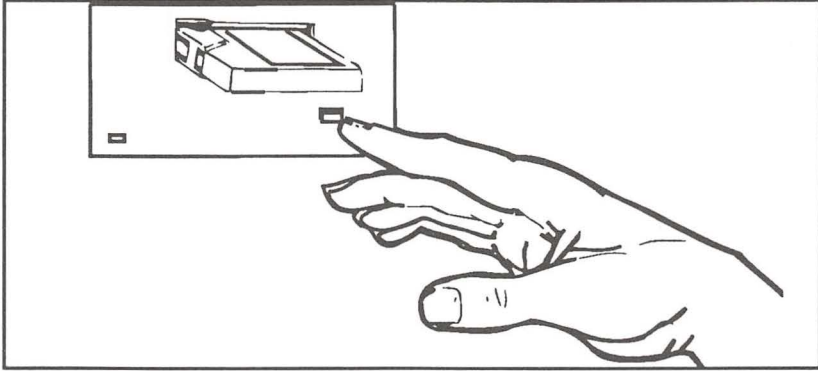


Figure 2-28. Ejecting the 600 cassette

Maynard Cartridge

To remove the tape slide the lever away from the tape until the tape is ejected.

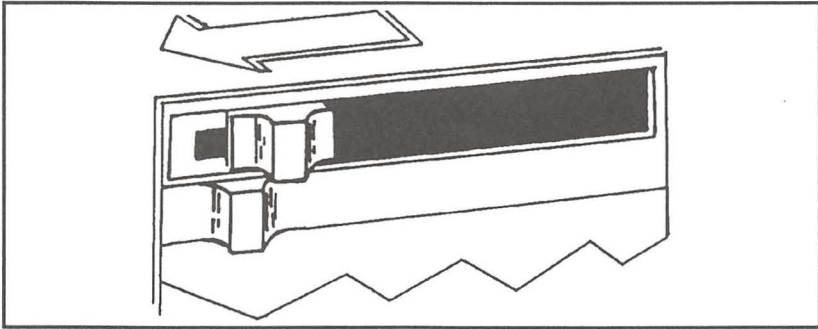


Figure 2-29. Ejecting the cartridge

CAUTION: The tape should not be ejected when the “tape backup” light is on. Never turn off the Maynard drive while the tape is running.

Maynard 4mm DAT and 8mm

The power must be ON to remove the 4mm DAT tape or 8mm tape. To remove the tape simply push the button.

CAUTION: It may take up to 20 seconds for the tape to eject after the button is pressed. If the tape does not eject, wait another 20 seconds and press the eject button again. If the tape fails to eject when you press the button, power off the drive. **Never turn the tape drive off if both drive lights are on.** Then, while pressing the eject button, turn on the power.

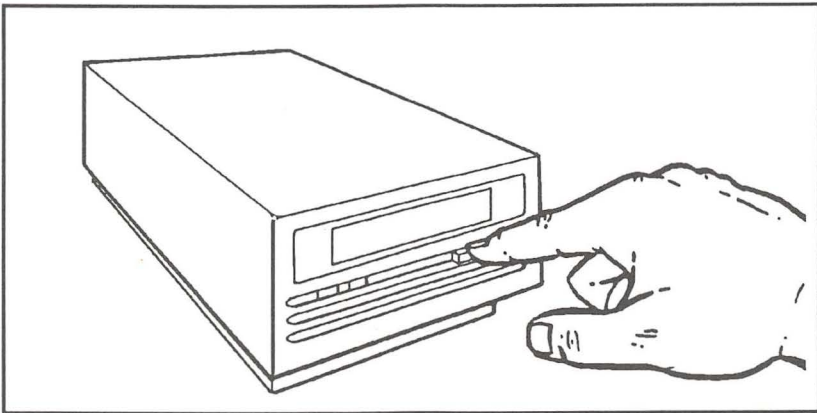


Figure 2-30. Ejecting the 4mm DAT tape

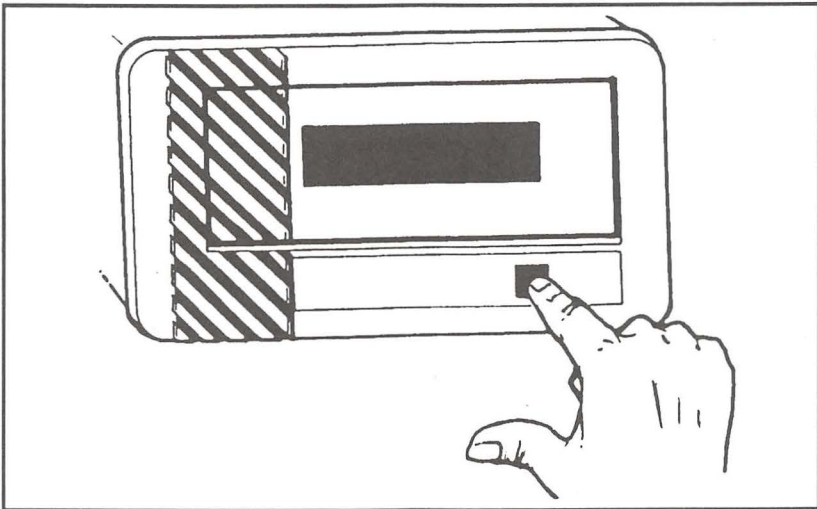


Figure 2-31. Ejecting the 8mm tape

Write Protecting the Tape

To write protect the tape (prevent the tape from being accidentally erased or overwritten) follow the instructions below. You will wish to do this only after you have stored information on the tape.

Maynard Cassette

Flip open both of the red tabs to expose the holes beneath, or remove the red block from the top edge of the tape.

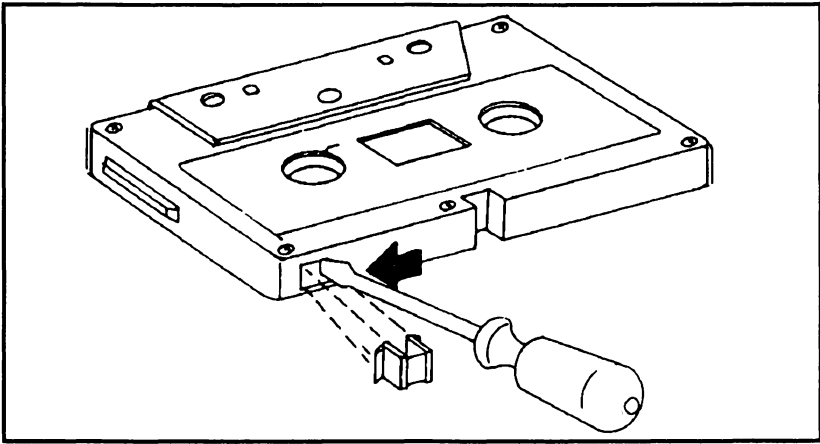


Figure 2-32. Write-protecting the cassette tape

Maynard 600 Cassette

To write protect the cassette, slide the door open to uncover the hole (on the back edge of the cassette). To erase or write on the tape again, slide the door closed.

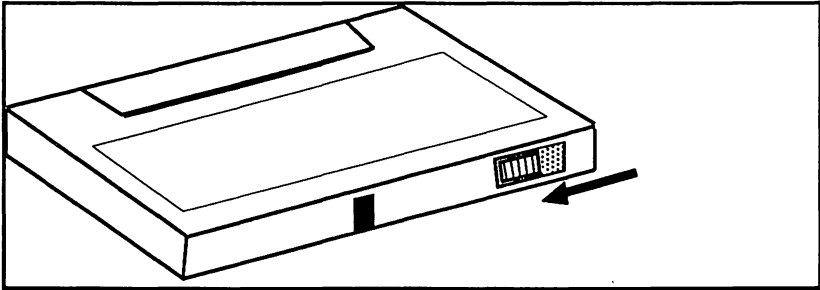


Figure 2-33. Write-protecting the 600 cassette tape

Maynard Cartridge

Locate the black circle marked "SAFE" on the tape. Insert a screwdriver into the black circle and rotate it so the arrow points toward "SAFE."

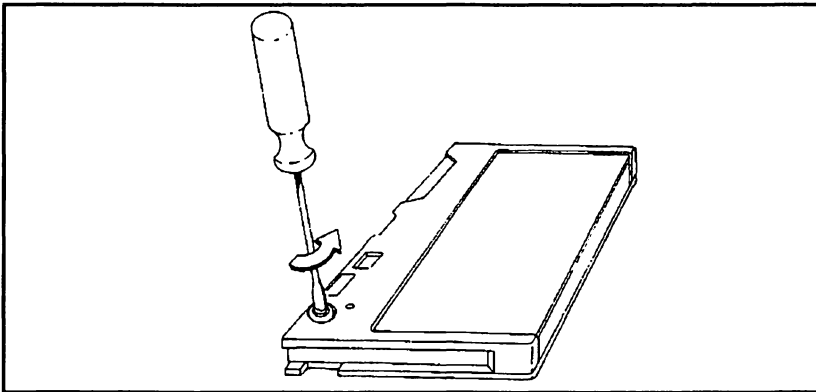


Figure 2-34. Write protecting the cartridge tape

Maynard 4mm DAT and 8mm

Find the hole on the back of the tape. Slide the door closed to cover the hole. (See figures 2-36 and 2-37.)

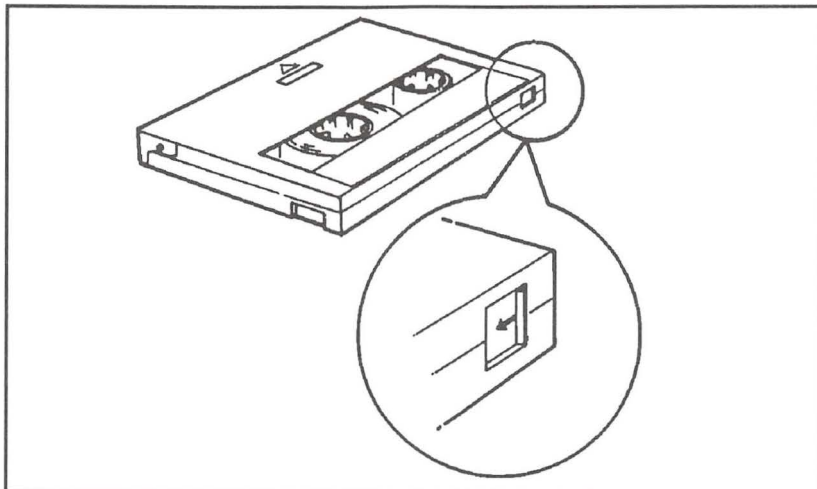


Figure 2-35. Write protecting the 4mm DAT tape

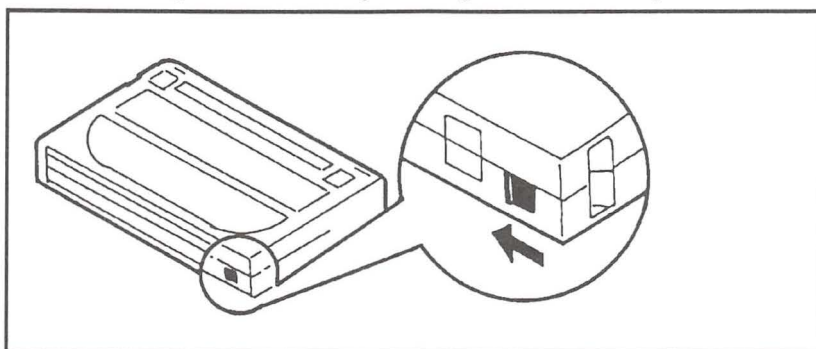


Figure 2-36. Write protecting the 8mm tape

Tape Compatibility

It is important to use the correct tape with the tape drive you have purchased. Refer to the following pages for a listing of the tapes that are compatible with your Maynard drive.

Maynard 60 Cassette

Compatible Tapes:

Maynard Cassette 60 (Part #90502)
TEAC CT-600, CT-500
Maxell CS-600, CS-500, CS-600HD

Tapes created by these drives can be read by the Maynard 60

20 - Yes
60 - Yes
150 - No

Maynard 150 Cassette

Compatible Tapes:

Maynard Cassette 150 (Part #90506)

TEAC CT-600N

Maxell CS-600XD

The Maynard 150 cassette drives must use a Maynard 600XD or equivalent media.

The 150 drive cannot write on the CS-600HD cassettes.

Tapes created by these drives can be read by the Maynard 150

20 - Yes 150 - Yes

60 - Yes

Maynard 600 Cassette

Compatible Tapes:

Maynard cassette 600 (Part# 90510)

TEAC CT-600F, MAXELL CS-600SX

Tapes created by these drives can be read by the Maynard 600

20 - Yes 150 - Yes

60 - Yes

Maynard 60Q Cartridge

Compatible Tapes:

Maynard Data Cartridge 600XTD/6150 (Part #90504)

3M DC-300XLP, DC-450, DC-600A, DC-600XTD, DC-6150

Tapes created by these drives can be read by the Maynard 60Q

60Q - Yes 250Q - No

125Q - No 525Q - No

150Q - No

CAUTION: Backups created on 125Q or 150Q drives appear blank on the 60Q drive. You will not be informed that there is a backup on the tape. This means smaller drives cannot append data to, or restore data from, backups created on larger drives. Attempting to append to backups created on larger drives will erase the data on the tape.

Maynard 150Q Cartridge

Compatible Tapes:

Maynard Data Cartridge 6150 (Part #90504)

3M DC-600XTD, DC-6150

3M DC-600A

Maynard Data Cartridge 6250 (Part #90507)

3M DC-6250

Capacity:

150 MB

150 MB

125 MB

250 MB

250 MB

CAUTION: The 150Q drive will always be able to read 600' and 1000' tapes. However, once you use the 1000' (6250) tape with the 150Q drive you should not change to a tape of a different capacity.

NOTE: To use both 600A and 6150 tapes on the 150Q drive you must have one of these Maynard model numbers; 115R11H, 515R11H, or 215R10H (see *Registering MaynStream* in Chapter 1 for the location of model numbers).

Tapes created by these drives can be read by the Maynard 150Q

60Q - Yes 150Q - Yes

125Q - Yes 250Q - Yes

NOTE: 150Q drives cannot append data to backups created on the Maynard 27 or 60Q.

Maynard 250Q Cartridge

<u>Compatible Tapes:</u>	<u>Capacity:</u>
Maynard Data Cartridge 6250 (Part #90507)	250 MB
3M DC-6250	250 MB
Maynard Data Cartridge 600XTD/6150 (Part #90504)	150 MB
3M DC-600XTD, DC-6150	150 MB
3M DC-600A	125 MB

CAUTION: The 250Q drive will always be able to read 600' and 1000' tapes. However, once you use the 1000' (6250) tape with the 250Q drive you should not change to a tape of a different capacity.

Tapes created by these drives can be read by the Maynard 250Q

60Q - Yes	150Q - Yes
125Q - Yes	250Q - Yes

Maynard 525Q Cartridge

<u>Compatible Tapes:</u>	<u>Capacity</u>
Maynard Data Cartridge 6525 (Part #90507)	525 MB
3M DC-6525	525 MB

Tapes created by these drives can be read by the Maynard 525Q

60Q - Yes	150Q - Yes	525Q - Yes
125Q - Yes	250Q - Yes	

Maynard DAT

<u>Compatible Tapes:</u>	<u>Capacity:</u>
Maynard Computer Grade DAT Cassette (Part #31300)	1.3 GB (60m)
Maynard Computer Grade DAT Cassette (Part #32000)	2.0 GB (90m)

Maynard 2200HS\+ and 5000

<u>Compatible Tapes:</u>	<u>Capacity</u>	
	<u>2200+</u>	<u>5000</u>
Maynard 8mm Data Cassette (Part #90522)	2.2 GB	5.0 GB
Maxell P6-120	2.2 GB	5.0 GB
Sony P6-120MP	2.2 GB	5.0 GB
P5 90 (European)*	2.2 GB	5.0 GB

CAUTION: Backups created on the Maynard 5000 drive appear blank on the 2200HS/+ drive. You will not be informed that there is a backup on the tape. This means the 2200HS/+ cannot append data to, or restore data from, backups created on the 5000.

* The 90 minute version of the P5, 8mm tape is an acceptable substitute for the P6 120 tape. Due to the recording format of these tapes the P5 90 will hold the same amount of data as the P6 120 tape. The P6 tape is preferred over the P5 tape and should be used whenever possible.

Power and Indicators for Portable Drives

Except in the case of an automatic backup, the Maynard tape drive should be powered on just prior to use, and turned off when not in use.

SCSI drives **must** be powered on before the computer.

General Notes

There are two indicator lights on the front panel of the drive. The POWER indicator is lit when the Maynard drive is plugged in and turned on. The TAPE BACKUP indicator is lit whenever the tape is being accessed.

The power switch is a black switch located on the back panel of the Maynard drive. The switch is labeled with a "0" and a "1". When the top part of the switch is depressed (the side with the "1"), the drive is on.

5000 Notes

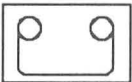
The amber and green LEDs on the Maynard 5000 function as follows:

<u>Amber LED</u>	<u>Green LED</u>	<u>Status</u>
On	On	Power-on initialization
Off	Off	Passed self test
Fast Flash	Off	Failed self test
On or Off	On	Ready with tape loaded
Random flash	On or off	SCSI bus activity
On or Off	Slow flash	Normal tape motion
On or Off	Fast flash	High speed search/rewind

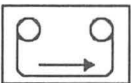
Slow flash = 1 flash per second

Fast flash = 4 flashes per second

2200HS+ Notes



This indicator is lit when the Maynard drive is plugged in and turned on with a tape installed.



This indicator is lit whenever the tape is accessed.

2200HS+ NOTE: If a tape has been inserted and the door is closed, both LEDs will go out and the tape will be loaded. The tape takes approximately 35 seconds to load. Once loaded the GREEN LED will be ON. If no tape is inserted after turning on the drive, both LEDs will go out.

DAT Notes

IMPORTANT: After rebooting your computer, you must power off and power on the DAT drive.

There are two indicator lights on the front panel of the Maynard DAT drive. One indicates the drive status; the other indicates the cassette status. These two indicators provide operational information for normal as well as error conditions. The amber Drive Status indicator signifies the following conditions:

- When ON (lit), the drive is reading or writing the tape.

IMPORTANT: Do not push the eject button while this light is ON. If you do, the operation in progress is aborted and the cassette is ejected, possibly causing the loss of data.

- When the green light is flashing rapidly, a hardware error has occurred or dew was detected (if dew is detected, the cassette is ejected). If this situation occurs immediately after power-on, the power-on self-test may have failed, in which case, the drive will not operate.

The green Cassette Status indicator signifies the following:

- When ON (lit), a cassette is inserted.
- When flashing slowly, a cassette is inserted but generates excessive errors beyond a predefined error threshold. A new tape should be used for future writes or the heads may need to be cleaned. Otherwise, operation is proceeding normally. **This signal is a warning only.**
- When flashing rapidly, the drive could not write the tape correctly (maximum rewrite count exceeded). The WRITE operation failed and you should replace the cassette or the heads may need to be cleaned. Refer to Appendix F for more information on tape care.

SCSI Drive Installation

The Maynard 525Q cartridge, 600 cassette, 4mm and 8mm drives are all SCSI peripherals. Drives of like capacity can be linked together ("daisy-chained") for increased storage. This section will instruct you on how to properly cable and terminate your SCSI drives.

SCSI Cables and Terminators

The last drive in a SCSI chain must be terminated. Maynard SCSI systems are shipped with the SCSI terminator attached to the SCSI cable. Each drive also has two connectors to accommodate daisy-chaining.

CAUTION: Never connect an RS-232 device to the SCSI port. Even though the SCSI port looks like an RS-232 connector, it is not a serial or parallel printer interface.

There are two possible methods for connecting SCSI Maynard drives. Refer to figures 2-37 and 2-38 below.

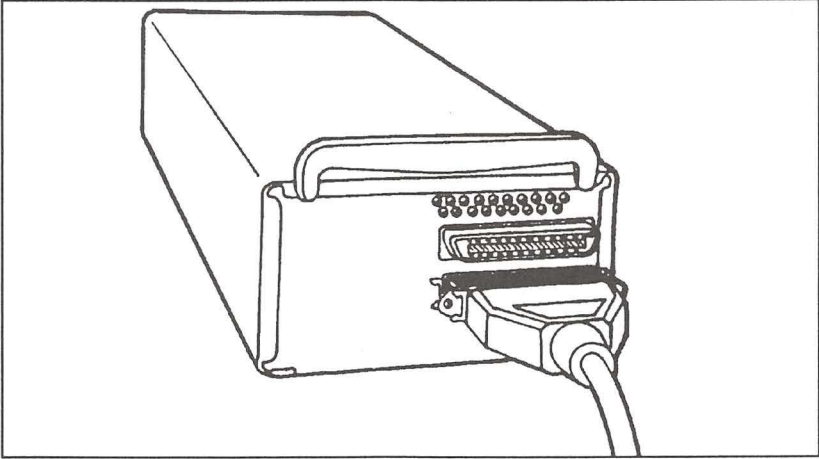


Figure 2-37. Terminator between the SCSI cable and the SCSI connector on the drive

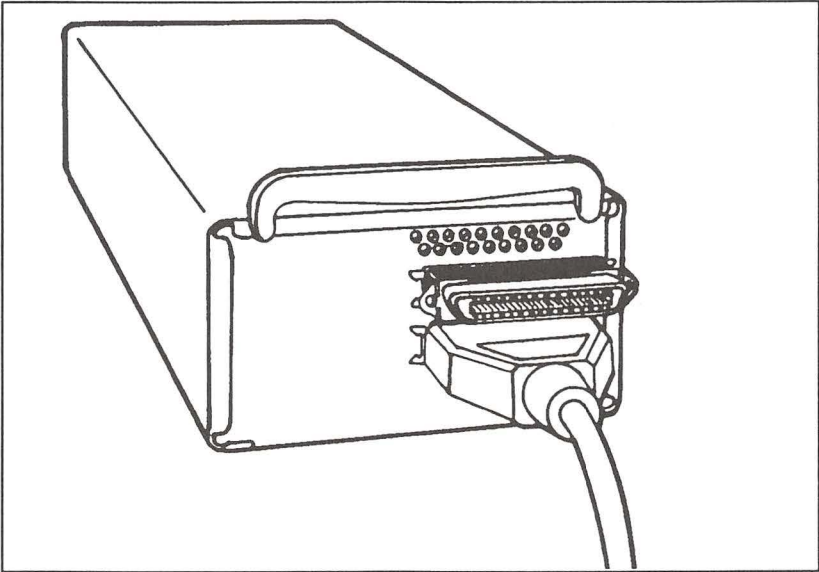


Figure 2-38. Terminator added to the last available port

If you are adding an additional SCSI Maynard drive (or drives), connect a terminator to the last Maynard drive on the chain. Connect the other Maynard drive(s) with the SCSI interface cable. Refer to figure 2-39.

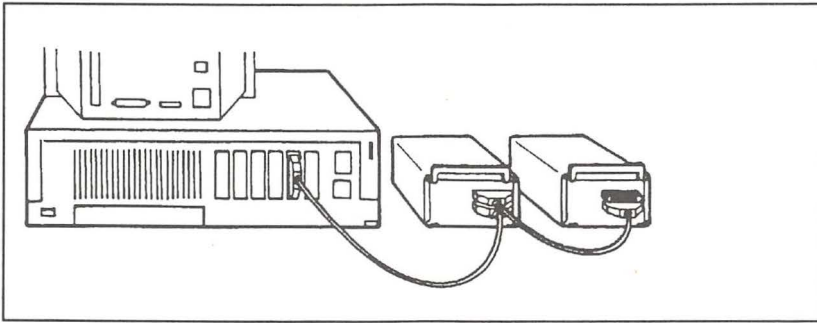


Figure 2-39. Two (or more) drives on a SCSI chain

Setting the SCSI ID Switch

The Maynard SCSI drives have a SCSI switch that can be set to any SCSI address. If you only have one drive connected to the card you may select any address (0-6).

NOTE: If there is a SCSI internal hard drive in your computer it is probably using SCSI address 0. If this is the case, select SCSI address 2-6 for your Maynard drive.

All SCSI drives in a chain must have different ID numbers. If you have connected two or more drives to the SCSI chain, set the SCSI switch on each drive to a number not used by any other drive on your SCSI chain.

If you need to assign a different SCSI address to a drive be sure the drive is turned off, then move the switch to an unused address and turn the drive back on.

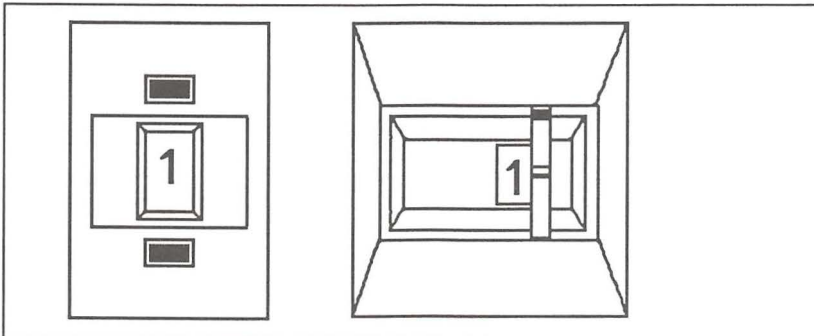


Figure 2-40. The SCSI address switch



Chapter 3

Introduction to the Software

The MaynStream Tape Backup Software has three different levels; the Tmenu system, the Automatic Backup System, and the Command Line Structure. Each level is different in use and in flexibility.

The first level is the Tmenu system. Tmenu includes a list of seven menu driven options: Backup, Transfer, Restore, Verify, Utilities, Configuration, and Quit. These options give you flexibility to specifically tailor the MaynStream options to your needs.

The Automatic Backup program (Chapter 5) allows you to select scripts that are created in the Tmenu system. These scripts can then be automatically executed at a pre-selected day and time. See *Name Script* later in this chapter.

The Command Line Structure (Chapter 6) is the third level of the tape backup software. The advanced commands are a selection of MaynStream operations that may be invoked from the DOS prompt, or used in command files.

The Tmenu System

To enter the Tmenu program type: `Tmenu <Enter>`

You will see:

```
TMENU (V 3.1)
Backup Transfer Restore Verify Utilities Configuration Quit
Select
Name Script
MODIFIED
Go
```

If you get the message **Bad Command or file name**, type: `CD\ <Enter>`, then repeat the Tmenu command.

The command line parameters for Tmenu are: `/config`, `/page`, `/wide` and `/lock`. The `/config` parameter should be used after you change the jumper settings on your Maynard controller. The `/page` and `/wide` parameters are useful when you want directory listings of tapes to be displayed one page at a time (with a prompt to continue), or in columns across the screen. The `/lock` parameter initializes the automatic login feature.

Moving and Selecting in the Menu

When you are in Tmenu, the arrow keys are used to move the cursor.

TIP: Typing the indicator letter (capitalized) of each command will also move the cursor to that command. The software is smart enough to know if files have been selected. In other words, if you are in the main menu and you press **B** without any files selected, the cursor will move to **Backup/Select**. If you have the same conditions, but files are selected, the cursor would highlight **Go** under **Backup**.

Press <Q> to exit the MaynStream Software.

In the pull-down menus, cursor movement is controlled by the up and down arrow keys. <Enter> is used to execute a highlighted option or it will move you to a sub-menu. The <Esc> key will move the cursor to the menu above the menu you are in. When you make selections or changes press <Ctrl Enter> to save those selections. Options can also be selected by pressing the first capitalized letter of the option. Each of the main menu options is described in this chapter.

When you are viewing files on a drive or on a tape use the <PgUp>, <PgDn>, <Home>, and <End> keys as well as the arrow keys to move among files. The right and left arrow keys, <Enter> and <Esc> keys will move you between subdirectories.

Help

On-line help is available whenever you see the <F1> key described in the instruction window at the bottom of the Tmenu screen. Once you have started the Tmenu system you can press the <F1> key for help. The help window that appears is context sensitive; that is, the information in the window will relate directly to the part of the Tmenu system you are about to use.

For example, if you want help on Backup, move the cursor over Backup and press <F1>. If you want an explanation of DOS Image you would move the cursor over DOS Image in the Utilities sub-menu and press <F1>.

If a help session is larger than the window use the up and down arrow keys, <PgUp>, <PgDn>, <Home>, and <End> keys to view the entire help session. To exit a help window press <Esc>.

The Drive Selection Status

On the right side of the screen you will see the Drive Selection Status window. This window displays the selection status of each drive available for backup by your computer:

```
Drive Selection Status
[A] C:          [Local Drive]
[S] D:          [Local Drive]
[N] H:          [Network Drive]
[N] ACC:        [Server]
[N] ACC/CRED:   {Volume}
[N] Model 60:  [IsleLAN]
                <PgDn>
```

NOTE: Server/volume names will never appear in the same menu as mapped drives. The drives displayed in the above window are for example only.

After you have selected files to back up or transfer, the Drive Selection Status window is updated to indicate the changes. Each possible status is described below.

<u>File Selection</u>	<u>Drive Letter</u>	<u>Drive Description</u>
[N]	C:	[Local Drive]

The file selection status may be any of the following:

- [N] No files are selected from this drive
- [A] All files on this drive have been selected
- [S] Some files have been selected

The drive description may be any of the following:

- [Local Drive] A physical or logical DOS drive that resides at the computer where MaynStream is installed (excluding floppy drives).
- [IsleLAN] A published drive located at another workstation on the network.
- [Network Drive] A Novell mapped drive.
- [Image Drive] A partition that will be backed up in the image mode.
- [Server] A network server
- [Volume] A single volume on a network server

When using MaynStream with a network, you may have many drives. To view all of the drives to determine if files have been selected, press the <PgUp> and <PgDn> keys to scroll through the drives.

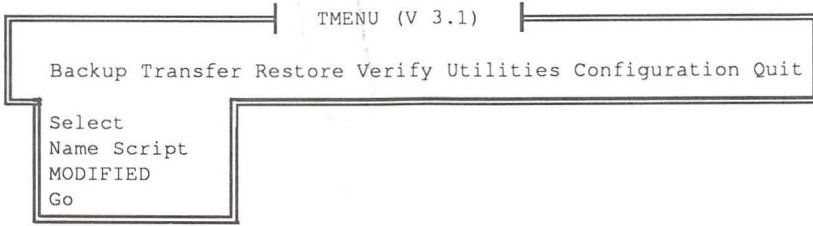
NOTE: The Drive Selection Status window (when using scripts or the <+> or <-> keys), may say “some” when actually “all” files are selected. All files will be backed up.

If the MaynStream software can determine the names of partitions containing non-DOS operating systems, they are displayed in this window. If the non-DOS operating system cannot be identified, it will appear as "Unknown." To change the name of a non-DOS operating system see: **Configuration/Hardware Options/Partition Names**.

+/- Window

Pressing the plus <+> or minus <-> keys when the +/- box appears in the lower right corner of the screen, will bring up windows that allow you to select or de-select groups of files or subdirectories. These windows can speed up selections for Backup, Transfer, Restore, and Verify but you should have a good understanding of DOS hierarchical file structure and file naming conventions before you use them. For more information on <+> and <-> refer to Chapter 4.

Backup and Transfer



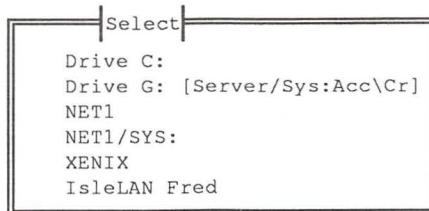
In many instances, **Backup** and **Transfer** are identical in their operation, so both options are described in this section. For information on the differences between **Backup** and **Transfer** refer to *Transfer Notes* later in this chapter.

The backup option is used to copy files from your hard drive to tape. If you press <Enter> when the cursor is over **Backup** or **Transfer**, the cursor will default to **Go** if any files are selected, otherwise the cursor will move to **Select**. The default of **Backup** is to select all files on all default drives. (The first time you start Tmenu, this will be the first hard drive on your system.)

Backup described on the following pages is a file-by-file backup that can be used with any DOS partition, or network drive.

Select

This option allows you to customize your backup so that only certain drives, directories, or files are backed up. Enter **Select** by using the cursor movement keys to highlight **Select** and press <Enter>. When you choose **Select** a list of available drives (similar to the one below) will be displayed.



- Drive C:a local DOS drive
- Drive G: [Server/Sys:Acc\Credit]a Novell mapped drive
- NET1a network server
- NET1/SYS:a single volume on a network drive
- XENIXa non-DOS partition (XENIX)
- IsleLAN Fred.....a published workstation

NOTE: Server/volume names will never appear in the same menu as mapped drives. The drives displayed in the above window are for example only.

Once in the Select window, move the cursor over the drive you wish to view and press <Enter>. When you select a workstation you will see a list of published drives on that workstation listed by their aliases.

Backing Up an Entire Drive

To select an entire drive for backup, move the cursor over the drive and press <Spacebar>. This will highlight the selected drive. Pressing the <Spacebar> again when the cursor is over a highlighted drive will de-select the drive. Continue selecting other drives and press <Ctrl Enter> when you have finished selecting.

Selecting Files for Backup or Transfer

To view the files on a drive use the up and down arrow keys to move the cursor over the desired drive. Press <Enter> or the right arrow key.

NOTE: If you select a drive by pressing <Spacebar> and then you press <Enter> to view the drive, remember that every file has been selected. On a monochrome monitor the selected files will be highlighted in reverse video (black letters on a white background), while a color display will highlight the files in red.

When you move the cursor over a drive and press <Enter>, you will see a window similar to this:

```
— Directory Listing —
Drive: C:
Path: \
FILE1.EXT  <HRS>  9554  1-01-80 13:43a
FILE2.EXT  <HRS>  27732 1-01-80 01:01a
FILE3.EXT          36543 8-21-89 16:45p
FILE4.EXT          8770  8-21-89 16:45p
```

Use the up and down arrow keys, <PgUp>, <PgDn>, <Home>, and <End> keys to scroll through the selections. To back up a file or directory move the cursor over your selection and press <Spacebar>.

If you select a directory, you will be asked:

```
Include all its Subdirectories? (Y/N) Y
```

If you press <Enter> or <Spacebar> all files and subdirectories contained in the highlighted directory will be selected. If you press N, only the files in the highlighted directory will be selected.

If you wish to select several files in a row, keep <Spacebar> depressed. To de-select a file or directory move the cursor over the selected item and press <Spacebar> again.

TIP: You can move quickly among directories and file names by pressing the first letter of the file name (i.e., pressing C moves the cursor over the first file that begins with the letter C; S moves the cursor over the first S file, etc.).

TIP: After selecting files on one drive you can select files from another drive before starting the backup. Just go back to the Select window and move the cursor over another drive and follow the instructions above to select files. Multiple drive selections are automatically appended to the tape as a new backup set. Backup sets are placed on the tape in alphabetic order: A:, B:, C:, D:, etc.

When you are finished selecting your customized backup you have two options: you can execute the backup, or you can save the backup as a script. Refer to the section on scripts in this chapter.

Clearing Marked Files and Directories

To clear all selections press <Esc> the appropriate number of times to return to the drive selection window. Select the appropriate drive and press the <Spacebar> to de-select all selections.

Executing the Backup or Transfer

To execute the backup, return to the main backup menu by pressing <Ctrl Enter>.

To save the current selections for future use, refer to *Name Script* in this chapter. Then (with Go highlighted) press <Enter>.

CAUTION: You will see the prompt “Do you wish to replace the information on this tape?” If you remove the tape and put in another tape and answer **Y** to this question, the software will not recognize that a new tape was inserted and will overwrite all of the data on the tape.

NOTE: The more data selected, the longer the backup time.

IMPORTANT: Verify tapes after every back up. Verifying assures you that the information on the tape is the same as the information on the drive. (See *Auto-Verify Backup* in the Configuration/General section of this chapter for information on setting up an automatic verify after backup.)

Labeling a Backup or Transfer

There are three levels of labeling available. These include: tape name, backup set name and backup set description. The default is to prompt for a backup set description only. If you want to be prompted for the other information refer to **Configuration/General** later in this chapter.

With all of the prompts active, when you begin to execute a backup you will see:

Backup Set Name _____ Enter the backup set name for (Device):
--

Type in the name you wish to give the backup set (up to 32 characters). Ideally you want this name to distinguish this backup set from other sets on the same tape (e.g., "Backup Set #1"). If you do not wish to enter a name press <Enter>. Should you choose not to enter a name, the default is the volume name ("Drive:Partition Name" for DOS drives, "Server Name/Volume Name" for network drives, and "Workstation/Alias" for IsleLAN drives).

Next you will see:

Backup Description _____ Enter the backup description for (Device name):

The backup description can be used to identify the contents of a backup set. This description can be up to 60 characters long and will be displayed when you view the contents of a tape.

In the case of backing up multiple drives, each drive is treated as a separate backup set. Therefore, if you select more than one drive for backup you will be prompted to enter a backup set name and backup description for each drive. Press <Enter> if you do not wish to give the backup a description.

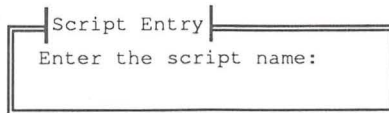
If this is a new tape or you are overwriting a tape that already has data on it, you will be prompted to enter a tape name. If you are appending to a tape you cannot change the tape name. The tape name uniquely identifies the tape (e.g., "Monday's backup, Backup from 7/1,"). If you do not wish to give the tape a name press <Enter>.

Tape Name _____ Enter the tape name:

Name Script

The Tmenu system allows you to create your own backup script after selecting individual drives, directories, and files. Once you have made the selections for a customized backup, the list of selections can be saved under a name of your choice (up to eight letters). The list is called a script, and the name you give the script will be added to the **Backup** or **Transfer** menu.

Scripts may be selected quickly and easily, and may save you time. To back up or transfer a group of files on a regular basis, select these files once (or the directory that contains the files), and then name them as a script. When you select **Name Script** you will see:



Script Entry
Enter the script name:

Type in a name (up to eight letters) and press **<Enter>**. For a list of acceptable characters refer to “The File Specification” in your DOS manual. The **Backup/Transfer** list of options will be updated to include this new script.

TIP: Individually selecting all of the files in a directory is different from selecting the directory itself. If you go into a directory and select files one-by-one, and save these files as a script, each time you use the script only the marked files will be backed up. Files added to the disk after the script was created will not be backed up. When you select a directory, you will back up any files or subdirectories that are added to the directory. To select individual directories or groups of files for backup scripts, use the plus and minus keys described in Chapter 4.

NOTE: Scripts are identified by a square next to the name. Scripts are also used in the Automatic Backup. See Chapter 5.

NOTE: If you create a script that uses mapped drives it will not be readable if the server/volume name option is enabled. Likewise, scripts created with server/volume names will not be readable if the server/volume name option is set to display mapped drives. See “Displaying Server/Volumes vs. Mapped Drives” in Chapter 8 for more information.

Executing a Backup or Transfer Script

To back up the files specified by a script, move the cursor over the script name and press **<Enter>**. The files for this script will be selected and the cursor will move to **GO**. Press **<Enter>** to begin backing up the files defined by the script.

EXAMPLE: If you created a backup that included a list of files representing the data for your spreadsheet, you could select those files (or the directory that contained those files), and name it SS_FILES. After naming the script, the list of **Backup** or **Transfer** options would read:

```

Select
Name Script
■ SS_FILES
Go

```

When you want to back up the spreadsheet data files you would move the cursor over **SS_FILES** and press <Enter>. Then press <Enter> to go.

If you have 2 or more scripts that begin with the same letter, press the letter once or use arrow keys to move to the first script name that begins with that letter. Press the letter again to move through the similarly named scripts. Press <Enter> when the correct script is highlighted.

Saving Backup or Transfer Script Names

When you create a backup script it is automatically saved in the MaynStream directory under the name you entered for the script along with the extension “.BKS”. Transfer scripts are given the “.TKS” extension. For example: if you have a backup script called **WORD**, this script would be in the **MAYNARD** subdirectory as **WORD.BKS**.

Reserved Backup Script Names

Certain script names have been included with the MaynStream software for your convenience. These scripts and a description of their function are given here:

MODIFIED.BKS	This script backs up only files that have changed since your last backup. Only the default drives will be included if this script is used.
SKIPPED.BKS	This script contains a list of files that were skipped during a backup.
VERIFY.BKS	This script contains files that failed to verify.

Number of Scripts

The maximum number of scripts that can be displayed is determined by the video mode you select. For example, if Tmenu is running on an EGA monitor and the current video mode is set to the default of 25 lines, a maximum of 13 scripts can be displayed.

Deleting a Script

To delete a script use the arrow keys to move the cursor over the script name. Press . You will see:

```
Delete Script
Do you really want to DELETE the
script file (script name)? (Y/N)
```

To delete the script press Y.

The EXCLUDE.RSS Script

The EXCLUDE.RSS file is a special script file that may contain any files you want automatically excluded from a restore operation. Files may be added to EXCLUDE.RSS using a line editor, and by following the same syntax as the files already contained in the script.

WARNING: So you do not copy older versions of your operating system software from a tape onto your drive, EXCLUDE.RSS must contain the files IBMIO.COM, IBMDOS.COM, COMMAND.COM, or IO.SYS and MSDOS.SYS.

Backup - Go

Selecting **Go** will begin a backup. If you have selected files to back up and you are ready to execute the backup, move the cursor over this option and press <Enter>.

Go under **Transfer** is described in *Transfer Notes* later in this chapter.

Appending a Backup Set

It is possible to add (or append) a backup set to a tape instead of writing over the existing data on the tape.

To append a backup set to an existing backup on the tape, follow the same steps as you would for a normal backup:

- Select **Backup** from the main menu.
- Select the files you wish to back up.
- Move the cursor over **Go** and press <Enter>
- You will see:

Do you wish to replace the information on this tape? (Y/N)

- Press N. You do **not** to replace the information. You will see:

Do you wish to append information to the end of this tape?
(Y/N)

- Press Y and the tape will move to the end of the last backup set on the tape. Then the new backup set will be added.

Impact of Append on Catalogs

When the cataloging level is set to create full or partial catalogs and you append to a tape, unknown backup sets will be created as partial entries in the catalog. (See the *Catalogs* section in this chapter for more information.) If the tape you are appending data to fills up, you will be prompted to insert another tape.

NOTE: If you wish to append to a backup set that spans more than one tape, insert the last tape of the backup and begin the append. See “Backup Sets” below.

Backup Sets

Selected files placed together on a tape constitute a “backup set.”

EXAMPLE: If you choose directories \cat, \dog, and \tree from drive C: and select **Go** under **Backup**, the contents of all three directories will be contained in one backup set on the tape.

Backup sets can be any size. A tape may hold one or more backup sets. If you select enough files so that the backup set is larger than the capacity of one tape, the tape will stop, you will be asked to insert another tape, and then the backup set will be continued on the new tape. Thus a backup set may span multiple tapes.

If you back up onto a tape and then append to that same tape at a later time, the appended backup will constitute a different backup set.

If you were to select files from two drives (e.g., C: and D:), two backup sets will be created on the tape. The files from drive C: will be in one backup set and the files from drive D: will be in another backup set.

Establishing a Backup Routine

Whether you are a novice backup user or an experienced user, once you become familiar with the MaynStream Tape Backup System it is important that you start backing up on a regular basis. Here are two backup techniques which you may find useful:

Technique 1

- Using five tapes, label them Monday, Tuesday, Wednesday, Thursday, and Friday.
- On every workday, back up your computer using the tape with the appropriate day's label.

Technique 2

- Using three tapes, mark them 1, 2, and 3.
- Starting with tape 1, back up the data on your computer at the end of day on Monday. Use tape 2 on Tuesday.
- On Wednesday, back up onto tape 1 again. You will be writing over the information that was put on the tape on Monday. Continue rotating tapes 1 and 2.
- At the end of the week (or end of the month depending on the amount of information you are backing up), back up onto tape 3. Take this tape off-site and return it on that weekly or monthly basis. Store this tape in a safe place where it will not be destroyed if something were to happen to the other tapes. In the event of some loss or damage to tapes 1 and 2, tape 3 can be used to restore. You should always verify your last backup tape.

Network or Remote Drive Backup Routine

- Back up the entire network once a week at a time when all users are logged out (i.e., Saturday or late at night). Be sure the remote workstations to be backed up are left on.
- Use four different tapes for the weekly backup and move the tapes off-site or place them in a secured area.
- Using two tapes, do an incremental daily backup. Use the first tape on Monday, the second tape on Tuesday, the first tape again on Wednesday, etc. During these daily incremental backups it is important that you are able to keep the modified bit from being turned on for each backed up file. This way, the incremental backups will back up every file that has changed since your weekly backup, not just changed files from the previous day.

TIP: Don't rely on a single tape for your only backup. Always use more than one tape and, in case of fire or theft, keep a current, verified tape off the premises.

Files that are not Backed Up

The TMENU.EXE and MSII.RES files are not backed up. These files are in use at the time of the backup and can not be included in the backup. TBACKUP.EXE is not backed up if you are running TBACKUP.

Corrupt Files

While performing a backup, if the operating system is unable to read a file successfully (after performing several retries), MaynStream will consider the file as corrupt on the disk. In this instance, an error message will be displayed informing you that a corrupt file has been found. MaynStream will then attempt to salvage as much of the file's contents as is possible. Corrupt files found during backup are listed in a special log called CORRUPT.LST (in the MaynStream directory).

MaynStream denotes corrupt files with a "<C>" attribute character during file selections from tape or directory listings. Do not restore these files.

See *Handling Corrupt Files* in Chapter 7 for more information.

Transfer Notes

The **Transfer** option backs up files in the same manner as **Backup**. However, when **Transfer** has completed the backup, the files are automatically verified, and you are given the option to create additional backups. Then you are given the option to delete the selected files from the disk. **Transfer** also potentially removes empty directories from the disk.

The **Select** and **Name Script** options for **Transfer** are described earlier in this chapter. When using scripts, files that are listed in the EXCLUDE.RSS script will not be transferred.

Transfer Restrictions

To insure the security and integrity of transferred files there are some transfer restrictions:

- Transfer can only be accomplished by using a DOS file-by-file backup.
- You cannot append a transferred backup to a tape that already contains a regular backup. However, a transferred backup may be appended to a tape that contains other transferred data.
- If you answer **Yes** to backing up and restoring empty directories, there is a potential of deleting empty directories even though they are not selected for **Transfer**. This potential exists when you use the "+" key to include files from many directories. To avoid this problem, you can temporarily disable empty directory processing, or explicitly mark directories for the transfer operation.

Transfer - Go

This option will begin the transfer. If you have selected specific files to transfer and you are ready to begin the transfer, move the cursor over this option and press **<Enter>**.

When all of the selected files have been backed up, these files are immediately verified.

After verifying the files you will see:

```
Do you want to make another copy? (Y/N)
```

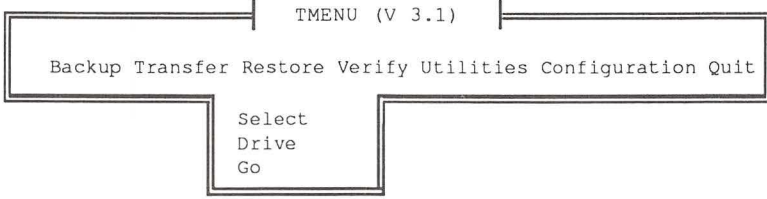
If you press **Y** the backup and verify will be repeated on another tape. When you press **N** you will see:

```
Do you want to ERASE all of this information  
from your drive? (Y/N)
```

IMPORTANT: If you are sure you want to delete the files press **Y <Enter>**. If you do not wish to delete the files press **N <Enter>**.

NOTE: Any tape containing transferred data will warn you twice before allowing you to overwrite or erase the data on the tape.

Restore and Verify



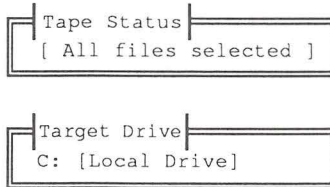
In many instances, **Restore** and **Verify** are identical in their operation so both options are described in this section. For information on the differences between **Restore** and **Verify** refer to *Verify Notes* in this chapter.

Restore

The **Restore** command allows you to copy information from the tape to any drive. When you move the cursor over this option and press <Enter> the cursor will move over **Go**.

Select

This option allows you to select backup sets, directories, and/or files to restore. When you move the cursor over **Select** you will see:



Viewing the List of Tapes

When you move the cursor over **Select** and press <Enter> you will see a list of cataloged tapes as well as the tape currently in the drive. This list is presented chronologically with the most recently cataloged tape appearing first. Backups that span more than a single tape appear as a single tape in this list.

Identifying the Tapes

- The tape currently in the drive(*)
- Blank tapes[blank tape]
- Tapes whose contents cannot be read[foreign tape]
- Tapes that are fully catalogedhighlighted
- Tapes that are partially catalogedlow intensity white

If the tape in the drive is not cataloged and the cataloging level is set to none, a temporary, partial catalog is created of the tape. This temporary catalog will be accessible until you quit Tmenu.

NOTE: You may need to adjust the contrast controls of your monitor to determine if a line is highlighted or low intensity.

Viewing the List of Backup Sets

Since you can append backup sets, a tape may contain one or more backup sets. To view all of the backup sets contained on a tape, move the cursor to the tape you wish to view and press <Enter>.

If you choose to view the contents of the tape in the drive and this tape is not cataloged, only the first backup set on the tape will be displayed. You can search the tape for other backup sets by pressing <F10> for each set.

Identifying Backup Sets

Backup sets that are fully catalogedhighlighted
Backup sets that are partially catalogedlow intensity white

Viewing the Contents of a Backup Set

If a backup set is fully cataloged, you can move the cursor to the backup set and press <Enter> to view the contents.

If the backup set is not fully cataloged you will be prompted to insert the appropriate tape. The tape will position itself to the backup set and the contents will be generated.

Searching for Files

With cataloging you have the ability to keep a list of contents of every tape you ever use. However, finding a single file or group of files among many tapes could be difficult and time consuming. To help you quickly search for files MaynStream offers you a way to specify the file(s) you wish to find.

When you are viewing a tape list, a backup set list, or the contents of a fully cataloged backup set, the <F4> key is available to display a search window. This window allows you to search fully cataloged tapes and backup sets for whatever file(s) you may wish to restore. The search window displayed is similar to the following:

Search	
Tape:	(current tape name)
Set:	[All backup sets selected]
Path:	\
File:	*.*
Date:	Begin End (MM/DD/YY)

Search: Tape Option

This option allows you to choose from any cataloged tape that contains at least one fully cataloged backup set. The default of this option is to select the tape that was selected in the Tapes window. If you wish to select a different tape move the cursor to the Tape field and press <F3>. You will be given a list of available tapes from which to choose.

NOTE: After pressing <Ctrl Enter> the selected tape label will appear in the search window.

Search: Set Option

This option allows you to choose from any backup set(s) on cataloged tape(s). The default of this option is to select all of the backup sets on the current tape. If you wish to select a particular backup set, move the cursor to this option and press <F3>. You will be given a list of available backup sets from which to choose.

Search: Path Option

By specifying "Path:" you can search any available directory, or subdirectory. To include the "games" subdirectory found in the directory called "\work\games\" you would:

- move the cursor to **Path:**
- type: \work\games\ <Enter>
- enter the name of the file(s) you are searching for
- press: <Ctrl Enter>

Search: File Option

This option is used to search for any specific file or files. To search for all files with the extension "bak" you would type *.bak after **File:**.

The asterisk "*" in a file name or extension is a wildcard character that represents all characters occupying any remaining position in the file name or extension. Wildcard characters are interpreted as they would be interpreted by DOS. The default for this option is *.* meaning you are searching for every file name with every extension.

TIP: Specifying at least the first character of the file name(s) will speed up the search process.

Search: Date Option

When a file is created, it is given a date by the operating system. This option allows you to search for files within a specific time period. This option does not enter a default for the date field. If you wanted to search for all files that were last modified (or created) between 5/1/90 and 10/1/90 (inclusive), you would:

- move the cursor over **Date:**
- type: 5/1/90 <Enter> 10/1/90
- press: <Ctrl Enter>

Conducting the Search

Once you have entered the criteria for the search press <Ctrl Enter> to begin the search. The screen will change to display a directory listing with the cursor positioned at the first file that matches the specified criteria. The exact location of the file is given at the top of the directory listing window. To search for additional files that meet the criteria, press the <F6> key. If you wish to search for the previous matched file, press the <F5> key. As you search you can mark the files for restore or verify by pressing the <Spacebar>.

Restoring or Verifying an Entire Tape

To restore or verify an entire tape move the cursor over **Select** and press <Enter>. You will see a list of cataloged tapes. Move the cursor over the tape you wish to restore or verify and press <Spacebar>. Press <Ctrl Enter> to return to the main menu. Move the cursor over **Go** and press <Enter>. The tape will re-position itself and you will be asked:

```
WARNING: You are about to restore (verify) information to (device)
Do you wish to continue? (Y/N)
```

“(device)” represents the device to which files are being restored or verified (e.g., Drive C:). If this is the correct tape press **Y**. If this is the wrong tape, press **N** and return to select. You will be asked to insert the correct tape if it is not currently in the drive.

When the restore is complete you will return to the main menu.

If you choose to restore or verify the contents of the tape in the drive and this tape is not cataloged, then only the first backup set on the tape will be displayed. You can search the tape for other backup sets by continuing to press <F10>.

Select the files you want restored or verified by moving the cursor over the file and pressing <Spacebar>. Selected files are highlighted. If you wish to select several files in a row, keep the <Spacebar> depressed. To de-select a file or directory move the cursor over the file and press <Spacebar> again.

NOTE: The <+> and <-> keys are also available for the selection of groups of files. For more information about <+> and <-> refer to Chapter 4. If you need assistance in finding files, use the Search option (the <F4> key) to search for files. When you have finished selecting files, press <Ctrl Enter> to return to the main menu. Move the cursor over **Go** and press <Enter>. You will see:

```
WARNING: You are about to restore (verify) information to (device)
Do you wish to continue? (Y/N)
```

“(device)” represents the device to which files are being restored (e.g., Drive C:). Press **Y** to begin restoring or verifying files.

Drive

Drive under **Restore** or **Verify** allows you to select the device to which you will restore or the device you will verify against. When you move the cursor over **Drive** and press <Enter> you will see a list of drives:

```

|-----|-----|
| Select |
|-----|-----|
Drive C:
NET1
NET1/SYS:
XENIX
IsleLAN Fred
```

Move the cursor over the target device and press <Enter>. Press the <Spacebar> to view drives. The Target Drive Window will be updated to the device you selected.

Go

Selecting this option will begin to restore or verify selected files. If you have selected the files you wish to restore or verify, and you are ready to begin, move the cursor over this option and press <Enter>.

After the selected backup set has been located, you will see:

```
WARNING: You are about to restore (verify) information to (device)
Do you wish to continue? (Y/N)
```

“(device)” represents the device to which files are being restored or verified (e.g., C:\). Be sure this is the correct backup set and press **Y**. The selected files will be restored to or verified against the drive you selected. If you press **N** you will see:

Do you wish to search for another backup set
on this tape? (Y/N)

If you press **Y** the tape will position itself at the next backup set (if another exists on the tape). Repeat the above procedure until you locate the backup set you wish to restore or verify. If you press **N** you will be asked if you wish to continue. Press **Y** to scan a new tape. Press **N** to escape from the restore procedure.

NOTE: A list of corrupt files found during backup (if applicable) is written to a file called CORRUPT.LST on your hard drive. You should look at this list and check the status of the files before you proceed to restore them. For more information on corrupt files, refer to “Handling Corrupt Files” in the Help section.

Fast File Restore (FFR)

MaynStream software supports Fast File Restore through Tmenu. This feature allows you to locate a file on a tape and begin restoring or verifying it in less than 30 seconds (on DAT drives). FFR is supported on the Maynard 60Q, 150Q, 250Q and 525Q 1/4" cartridge drives, the 600 cassette, as well as the 4mm DAT drives and the 8mm 2200+ and 5000HS drives. FFR will only be used when the selections are made from **fully cataloged backup sets**. Given a drive that supports FFR and fully cataloged backup set information, restore and verify operations result in faster processing of data from the tape drive due to the direct access nature of this process.

NOTE: The tape must be cataloged with the same capacity tape drive you are using for the restore. For example, a tape originally backed up and cataloged with a 60Q that you want to restore with a 250Q, must be recataloged with the 250Q.

Restoring Macintosh and OS/2 Files

MaynStream for DOS, MaxStream (Maynard's tape backup software for the Macintosh) and MaynStream OS/2 are compatible. Macintosh files can be restored to a DOS drive if the files were backed up using MaxStream version 2.0 or later. Be sure to answer **Yes** to the “Backup/ Restore Macintosh resource information” question.

If a Macintosh or OS/2 file does not meet DOS naming conventions, inappropriate characters will be deleted and long Macintosh or OS/2 names will be truncated. If a file name exists on the DOS drive which matches a truncated file name, you will see the message, “Insufficient Privilege for file xxxxxxxx.xxx - SKIPPED”.

OS/2 NOTE: Extended attributes for OS/2 files will not be restored by the DOS version of MaynStream.

Excluding Files from a Restore

The EXCLUDE script is a special script file that automatically excludes files from a restore. For more information on the EXCLUDE script, refer to EXCLUDE.RSS in this chapter.

NOTE: The minus key (<->) can also be used to exclude files from a restore. Refer to Chapter 4 for more information on the exclude feature.

Verify Notes

The Verify option assures you that the information on the tape is the same as the information on the drive. Three types of verify errors are detected:

- 1) data comparison errors
- 2) file security information comparison errors
- 3) file on tape no longer exists on disk errors

TIP: Use the **Verify Last Backup/Restore** after every backup or restore operation to “double check” that the MaynStream system is operating correctly. Verify should also be used whenever you change your computer’s configuration.

Verify Last Backup/Restore

This option will appear in the menu immediately after you have done a backup or a restore operation, and disappears after any other operation is performed.

This option gives you the opportunity to immediately verify your last backup/restore to be sure the data was correctly transferred from the drive to tape or vice versa.

Once you select this option, the software will begin to compare files and directories on the tape against the files and directories on the drive. If there are any discrepancies, a message describing the problem will appear during this comparison.

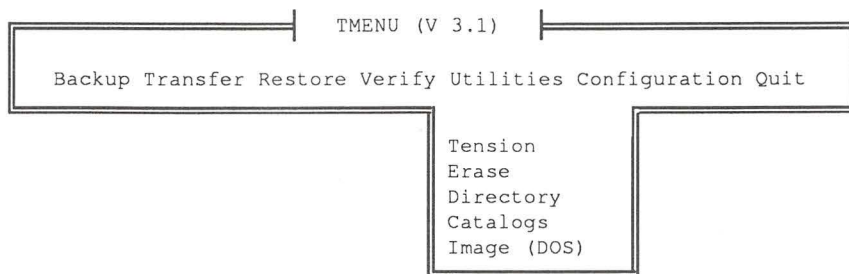
If you wish to automatically verify after a backup or restore, refer to the auto verify options found in the **Configuration/General** menu.

Files that Fail to Verify

All files that fail to verify are listed in a script called VERIFY.BKS. This script will contain the name of the file that failed to verify as well as an explanation of the verify differences and the date and time the verify error occurred.

The VERIFY script will be added to the menu under **Backup**. When the next backup is performed using this script, it will be removed from the **Backup** menu.

Utilities



These utilities give you the ability to re-tension a tape, erase a tape, list the files contained on a tape, or maintain the catalog of the files backed up. The utility called **Image** allows you to do an image backup (as opposed to a file-by-file) backup, of any DOS partitions.

Tension

The Tension command signals the tape drive to run the tape its entire length (without stopping), at a fast speed. This procedure evenly winds the tape so it will run more smoothly past the heads. This should be done after every twenty backups on the same tape.

To re-tension the tape, simply insert the tape into the tape drive, move the cursor over **Tension**, and press <Enter>. The tape will automatically begin to re-tension.

NOTE: The Tension command is not required for the DAT drives, or 8mm drives.

Erase

Tapes do not need to be erased to be reused, but a brand new tape with no data on it should be erased to retension the tape and initialize its magnetic surfaces. The erase option also allows you to remove outdated and sensitive information from a tape.

The erase option does not actually erase files on 8mm or DAT tapes, but it does make the data unreadable. To completely erase (security erase) the contents of tapes you must use the Tension /e/l0 command from the DOS prompt. This command is described in Chapter 6.

TIP: The only way to use a tape that is protected by an unknown or forgotten password is to erase the tape. **Erase** will allow you to remove the password from a tape, BUT THE DATA CONTAINED ON THE PASSWORD-PROTECTED TAPE WILL ALSO BE LOST.

When you select this option you will see:

```
Do you wish to erase the information on this tape? (Y/N)
```

If you wish to have the information erased, select **Y**. If you wish to return to the MaynStream Menu, select **N**.

Erasing the tape erases **ALL** of the information on the tape, not just a single backup set.

Erasing will remove any cataloged backup sets from the catalog.

Tape Directory

The **Tape Directory** command will allow you to list the files contained on a tape.

To get a directory of a tape insert the tape into the tape drive. Move the cursor over **Tape Directory** and press **<Enter>**. You will see:

Would you like a directory of this information? (Y/N)

If you want a directory press **Y**. If you do not want a directory press **N**. If you say no you will see:

Do you wish to search for another backup set on this tape?
(Y/N)

If you press **Y** and there is another backup set on the tape, the tape will move to the next backup set. Repeat the procedure above until you find the backup set you wish to list. If you do not wish to search for another backup set press **N**. You will see:

Do you wish to continue? (Y/N)

If you answer **N** you will return to the main menu. If you answer **Y** you will be asked to insert a new tape.

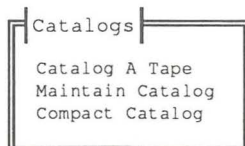
Repeat the above process.

TIP: If you are familiar with DOS commands, the TDIR command can be used from the DOS prompt. The TDIR command will get the same results as the steps above, but it can be quicker when searching for appended backup sets. Refer to Chapter 6 for more information on TDIR.

Catalogs

Catalogs are files on disk that contain information about the contents of a tape. A tape may be partially cataloged (backup set information only), or it may be fully cataloged (backup set and file information). These catalog options are used to create and maintain your catalogs.

When you select this option you will see:



To select one of the Catalog options, use the arrow keys to move the cursor over the desired option and press <Enter>.

Catalog a Tape

Catalog A Tape allows you to create a catalog of an uncataloged tape, or to catalog unknown sets on a previously cataloged tape.

This utility creates a partial or full catalog of the tape, depending on how you have responded to the "set catalog level" configuration question. The catalog level question can be found under **Configuration/Catalog Options**.

You will be prompted to insert each tape in the tape "family" to complete the cataloging of the backup. If the current tape contains fully cataloged backup sets, they will be skipped and only the uncataloged backup sets will be cataloged.

Cataloging an Uncataloged Tape

- 1) To create a catalog of a tape, insert the tape into the tape drive. Select **Catalogs/Catalog Tape** and press <Enter>. You will see:

```
Do you wish to catalog the uncataloged backup sets on this
tape? (Y/N)
```

- 2) To create a catalog of this tape press **Y**. If you do not want a catalog press **N**. If you say no you will see:

```
Do you wish to continue? (Y/N)
```

- 3) If you answer **N** you will return to the **Catalogs** menu. If you answer **Y** you will be asked to insert a new tape.
- 4) Repeat the above process.

NOTES: If there is insufficient disk space to create the catalog, you will have to make more disk space available and then repeat this process.

To fully catalog a partially cataloged tape, you must delete the partial catalog information (with **Maintain Catalog**), set the catalog level to full (using **Configuration/Catalog Options**), and then re-catalog the tape (using **Catalog A Tape**).

Maintain Catalog

Since catalogs consume disk space and can become dated, the **Maintain Catalog** option allows you to remove unwanted cataloged tapes and backup sets. You may see that a tape you have cataloged on your computer is now being used elsewhere, or has been lost or destroyed. In these instances, you can use this option to remove the tapes from the catalog. Disk space is actually freed up when you run **Compact Catalog**.

The date the tape was created also appears in the catalog maintenance window to differentiate between tapes with the same name. This is also true for backup sets.

Removing Cataloged Tapes

When you select **Maintain Catalog** you will see a list of cataloged tapes. This list is presented chronologically with the most recently cataloged tape appearing first. Backups that span more than a single tape appear as separate tapes in this list.

Select the tape name that you wish to remove and press **<Enter>** to view the backup sets on the tape or press the **** key to delete the catalog information for that entire tape.

If you have chosen to view the backup sets on the tape, you can move the cursor over any backup set and press the **** key to delete the file detail information. This will change the status of the backup set from fully cataloged to partially cataloged. The other backup sets on the tape will not be affected. Before the backup set detail information is actually deleted, you will be prompted before continuing.

You can get a directory listing of fully cataloged backup sets by pressing the **<Enter>** key on a fully cataloged backup set name. This information will also be written to the log file if logging is enabled.

Deleting the file detail information or deleting the entire tape will reduce the number of entries within the catalog, but catalog size reduction will not occur until **Compact Catalog** is performed.

Compact Catalog

Since catalogs consume disk space, the **Compact Catalog** option allows you to remove deleted catalog information and free up disk space.

When you replace the contents of a tape or erase the contents of a tape, the catalog is updated to reflect these changes. In the catalog, the files that used to exist on the tape are marked as deleted, **but they are not actually removed from the catalog** until you use the **Compact Catalog** option or you answer **Yes** to the “Cleanup catalog after backup” option. When you select this option, all of the files marked as deleted are removed from the catalog.

NOTE: The amount of disk space needed to compact the catalog is roughly the same size as the current catalog, assuming that most of the information in the catalog is current and not deleted. If the MaynStream software determines that insufficient disk space is available, the catalog compaction is aborted and an error message is displayed.

Image (DOS)

MaynStream can back up a drive in file-by-file or image mode. The file-by-file backup mode recognizes individual files and backs up all or part of the information on the hard drive. The Image (DOS) option will do an image backup of one or more DOS partitions. Image mode takes an “electronic picture” of the entire drive. Image mode does not differentiate between individual files, cannot restore individual files, and therefore is less versatile than file-by-file backup. However, because image mode does not differentiate between files and empty disk space it may back up quicker than a file-by-file backup.

The MaynStream system can back up both DOS and non-DOS partitions in image mode, but image is mostly recommended for backing up non-DOS partitions. An image backup of a DOS partition can be useful when you have installed programs with copy-protection schemes. Copy-protected programs may not run if you restore a failed disk with a file-by-file backup.

DOS image is recommended for systems where copy-protected software has been installed, since it is difficult to restore copy-protected programs with a file-by-file backup..

To back up your copy-protected files follow these steps:

1. Create an EXCLUDE.RSS file that contains your copy-protected files
2. Back up the hard drive in image mode
3. Regularly back up the hard drive in file-by-file mode

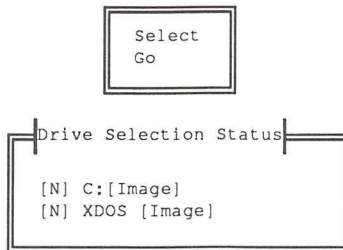
NOTE: As you add copy-protected files to your disk, repeat steps 1 and 2 to update your image backup.

If your drive crashes and you lose your copy-protected files:

1. Boot your computer from a DOS diskette
2. Partition and reformat your drive
3. Re-install DOS and the MaynStream software
4. Restore the image backup
5. Restore your latest file-by-file backup

An image backup of one drive **cannot** be restored to a drive of a different size. For example an image backup of a drive with 4 heads and 612 cylinders cannot be backed up and then restored to a drive with 6 heads and 400 cylinders. An image backup has to be restored to a drive that has the same partition size and the same bad sector map (or no bad sectors at all).

When you select this option you will see:



Press **Select** to choose which partition to back up.

Move the cursor over the drive you wish to back up in image mode and press the <Spacebar> to highlight the drive. Once the drive is selected press <Ctrl Enter> to save your choice. The cursor will return to **Go** and the drive status will be updated to [A] for the selected image(s). Press <Enter> to begin the image backup. A "% complete" indication will be displayed as the image backup is performed.

You must reboot after restoring a DOS image partition to ensure that the partition is recognized.

TIP: After performing an image backup always use **Verify Last Backup** to verify. Because MaynStream writes to the disk when the backup is complete, a selective verify will always report that the image is different.

Restoring an Image Backup

With an image restore, information is restored regardless of defective areas on the drive. To restore an image backup you must use the same drive from which the backup was taken, or restore to an error free drive with the same parameters.

Configuration

```
TMENU (V 3.1)
Backup Transfer Restore Verify Utilities Configuration Quit
General
File Options
Hardware Options
Catalog Options
Save Changes
Notices
```

The Configuration command allows you to customize the MaynStream configuration file. To select an option use the arrow keys to move the cursor over the option and press <Enter>.

General

The general options help customize the MaynStream software for your computer. When you select this option you will see the following questions:

```
General
Prompt for tape names? (Y/N) [N]
Prompt for backup set names? (Y/N) [N]
Prompt for backup set description? (Y/N) [Y]
Password protect tapes? (Y/N) [N]
Display file names? (Y/N) [Y]
Auto-backup all NON DOS partitions? (Y/N) [N]
Auto-verify backup operations? (Y/N/P) [N]
Auto-verify restore operations? (Y/N/P) [N]
```

When you are sure that the answers you have specified are correct press <Ctrl Enter>. Each question is discussed on the following pages. After making changes to these selections you should save the changes in the MaynStream configuration file (MSII.CFG). This is accomplished by selecting **Save Changes** from the Configuration menu.

Tape Name (Default is no)

The tape name is prompted for when you are backing up onto new tapes, blank tapes, or overwriting tapes. After you've entered the backup set name and backup description you will be prompted to enter a tape name. The tape name uniquely identifies the tape (e.g., "Monday's backup, Backup from 7/1").

If you wish to be prompted to enter a tape name when backing up, move the cursor over the tape name question in this menu and press **Y**. If you do not enter a tape name the default is "Tape created on (today's date)".

NOTE: Setting Catalogs to **Full**, will set the default of the tape name option to **Yes**.

Backup Set Name (Default is No)

To help you better identify the contents of a tape, it is possible to enter a backup set name. The backup set name can be up to 32 characters long (including spaces). Ideally you want this name to distinguish this backup set from other sets on the same tape (e.g., "Backup of Accounting Files"). If you do not enter a name, the default is the "Drive letter:Drive name" for DOS drives.

In the case of backing up multiple drives, each drive is treated as a separate backup set. Therefore, if you select more than one drive for backup you will be prompted to enter a backup set name and backup description for each drive.

If you wish to be prompted to enter a backup set name when backing up, move the cursor over the backup set name question in this menu and press **Y**.

NOTE: Setting Catalogs to **Full** will set the default of the Backup set name option to **Yes**.

Backup Set Description (Default is Yes)

The backup description can be used to identify the contents of a backup set. This description can be up to 60 characters long and will be displayed when you view the contents of a tape.

In the case of backing up multiple drives, each drive is treated as a separate backup set. Therefore, if you select more than one drive for backup you will be prompted to enter a backup set name and backup description for each drive.

If you do not wish to be prompted to enter a backup set description when backing up, move the cursor over the backup set description question in this menu and press **N**.

Password (Default is No)

Passwords can be used to protect the data on a tape by preventing unauthorized access. If you wish to be prompted to define a password for a tape, move the cursor over the password question and press **Y**. A password can be comprised of any characters from the DOS character set and may be up to eight characters in length.

Once a tape is protected by a password, you must enter the password exactly to read the data on the tape. A tape that is protected with a password will retain the password until the tape is overwritten, or until the whole tape is erased.

If you have asked to be prompted for passwords, but you do not wish to assign a password to a particular tape, press <Enter> at the password prompt. You will see:

This tape will have no password.

You will not need to enter a password to use this particular tape.

NOTE: IF YOU BACK UP A TAPE WITH A PASSWORD AND FORGET THE PASSWORD, THE DATA CANNOT BE RECOVERED. Maynard will be unable to assist you in this matter.

The purpose of the password is to stop unauthorized access to the information on the tape. A password **cannot** stop anyone from destroying the information on the tape. For this reason, the tape can be erased without entering the password.

Display Filenames (Default is Yes)

The “display filenames” question gives you the option to display every filename on the monitor as it is processed or just display the names of subdirectories. If you do not want all of the files to be displayed on the monitor, move the cursor over this question and press N.

Auto-Backup NON DOS Partitions (Default is No)

If you wish the default drive selections to include all non-DOS partitions, place a **Y** after this question. Non-DOS partitions are backed up in image mode.

Auto-Verify Backup (Default is No)

If you wish to automatically verify after every backup operation, answer Yes to this question. If you wish to be prompted to verify backups, answer “P” (prompt) to this question. It is recommended that you always verify after a backup.

Auto-Verify Restore (Default is No)

If you wish to automatically verify after every restore operation, answer Yes to this question. If you wish to be prompted to verify restores, answer “P” (prompt) to this question. It is recommended that you always verify after a restore.

File Options

When you select this option you will see:

```
File Options
Backup and restore special files? (Y/N) [Y]
Backup and restore hidden files? (Y/N) [Y]
Change the modified bit? (Y/N) [Y]
Backup and Restore empty directories? (Y/N) [Y]
Prompt before restoring "Read Only" or
"Modified" files? (Y/N) [N]
Replace files that exist on the disk? (Y/N) [Y]
```

Special Files (Default is Yes)

Special files include files that are marked with any combination of “hidden” <H>, “system” <S>, or “read-only” <R> attributes. The default for this question is **Yes**, so special files will normally be backed up and restored.

NOTE: If you select **No** for this option, special files can still be backed up by entering the directory that contains the file and highlighting the special file.

Hidden Files (Default is Yes)

These files are used by DOS and some applications. Hidden files do not appear in a normal DOS directory of the disk. However, when you access the disk through Tmenu, these files will appear and are identified by <H>. The default for this question is **Yes**, so hidden files will normally be backed up and restored. Because Hidden files are a subset of special files, you must also say **Yes** to the “Backup and restore special files?” question (described above).

If you select **No** for this option, hidden files can still be backed up or restored by entering the directory that contains the file and highlighting the hidden file.

Change the Modified Bit (Default is Yes)

When you create a new file or change an existing file, DOS's modified bit is turned on. Modified files (files with the archive bit turned on), are marked by <M>. When the MaynStream software backs up a file, the modified bit will be turned off (depending on how you set this option) to signify that the file has been backed up.

If the device cannot be written to (as in a network drive), answer **N** to this question to stop the MaynStream software from trying to clear the modified bit.

NOTE: If you are backing up a device that is write-protected, answer **N** to the modified bit question, otherwise the software will try to clear the modified bit by writing to the device and an “Abort, Retry” error message will be generated.

Empty Directories (Default is Yes)

Empty directories are directories that contain no files or other directories. If you wish to back up and restore empty directories you must answer **Y** to this question. If you do not want empty directories backed up or restored answer **N** to this question.

If you answered **Yes** to backing up and restoring empty directories, there is a potential during a transfer operation of deleting empty directories even though they are not explicitly selected for transfer. This potential exists when you use the “+” key to include files from many directories. To avoid this problem, you can temporarily disable empty directory processing, or explicitly mark directories for the transfer operation.

Prompt Before Restoring (Default is No)

If you are restoring a file from the tape and the same file exists on the disk, or the file has been changed since the last backup, you will be prompted before the file is restored. In addition, if the file on the disk is marked “read-only” you will be prompted as well. Placing a **Y** after the “Prompt before restoring...” question will give you the opportunity to skip files if you do not want them restored.

TIP: Prompting for files slows the software and requires user intervention. If you want an even faster restore and you are not concerned about read-only or modified files, answer **N** to this question.

Replacing Existing Files (Default is Yes)

When restoring files from tape to a disk, there may be files that already exist on your disk that you might not want restored. Updated files on the disk may be of a later date than the files on the tape. For example, when you upgrade your operating system or a software package, you do not want to restore old versions of the software. In this case, answer **N** to this question.

If you place an **N** after this question, only files that appear on the tape and not on the disk will be restored.

TIP: Checking for existing files slows the software. If you want an even faster restore and you are certain that the files on the tape are the files you want on the disk, answer **Y** to this question.

Hardware Options

When you select this option you will see:

```
Hardware Options
Output Options
Monitor Options
Network Type
Network Options
Partition Names
Select Controller
Controller Options
```

Controller Options is present when running on a PS/2, but its capabilities are limited due to the reference disk configuration.

To select one of the **Hardware** options use the arrow keys to move the cursor over the desired option and press <Enter>, or press the first letter of the option.

Output Options

Output options allow you to duplicate the output of any Tmenu option or advanced command to a file or printer. When you select this option you will see:

```
Output Options
Do you want the OUTPUT to also print to a
File, Printer or Nowhere but the monitor?
(F/P/N) [F]

Which output level do you wish? [1]
1. Backup set information
2. Directory names plus Level 1
3. File names plus Level 2
4. File detail plus Level 3

OUTPUT filename: msii.prt

Do you want to append to the log (Y/N) [N]
```

Output to a file, Printer or Nowhere but the Monitor (Default is F)

If you wish the output to only be shown on the monitor, press N. If you wish to duplicate the output to a printer, press P. This question will default to F, meaning that this will duplicate the output to a file in the directory where your MaynStream files are stored.

Output Level (Default is 1)

If the output is sent to a file or a printer, you can select from four output levels (the default is level 1). Each successive level includes the previous level's output in addition to more directory or file detail.

Level 1 includes a volume specification, the drive letter, the backup set number on the tape, the tape number, the tape label, the starting date and time, any errors encountered, ending date and time and completion statistics. Level 2 includes level 1 plus a list of all processed subdirectories. Level 3 includes levels 1 and 2 plus a "wide" listing of all the files processed. Level 4 includes levels 1 and 2 plus filenames, file sizes, file date/time and file attributes.

Level 1 Sample:

```
Backup of C: <<No Name>>
Backup set 1 on tape 1
LABEL: "Log level 1"
```

```
Backup started on 12/24/90 at 10:00a
```

```
Backup completed on 12/24/90 at 10:00a
Backed up 11 files in 2 directories.
Processed 122,912 bytes in 3 second(s).
```

Level 2 Sample:

```
Backup of C: <<No Name>>
Backup set 1 on tape 1
LABEL: "Log level 2"
```

```
Backup started on 12/24/90 at 10:00a
```

```
Directory \
```

```
Directory \DOS
```

```
Backup completed on 12/24/90 at 10:00a
Backed up 11 files in 2 directories.
Processed 122,912 bytes in 3 second(s).
```

Level 3 Sample:

```
Backup of C: <<No Name>>
Backup set 1 on tape 1
LABEL: "Log level 3"
```

```
Backup started on 12/24/90 at 10:00a
```

```
Directory \
```

```
IBMBIO.COM IBMDOS.COM CONFIG.SYS AUTOEXEC.BAT
```

```
Directory \DOS
```

```
APPEND.EXE ASSIGN.COM ATTRIB.EXE BACKUP.COM BASIC.COM
BASICA.COM XCOPY.COM
```

```
Backup completed on 12/24/90 at 10:00a
Backed up 11 files in 2 directories.
Processed 122,912 bytes in 3 second(s).
```

Level 4 Sample:

```
Backup of C: <<No Name>>  
Backup set 1 on tape 1  
LABEL: "Log level 4"
```

Backup started on 12/24/90 at 10:00a

```
Directory \  
IBMBIO.COM           23740  05-08-90  12:00p  
IBMDOS.COM           30650  05-08-90  12:00p  
CONFIG.SYS           154    12-24-90   9:10a  
AUTOEXEC.BAT         790    12-24-90   8:12a
```

```
Directory \DOS  
APPEND.EXE           5810   05-08-90  12:00p  
ASSIGN.COM            1530   05-08-90  12:00p  
ATTRIB.EXE           10656  05-08-90  12:00p  
BACKUP.COM            30738  05-08-90  12:00p  
BASIC.COM             3534   05-08-90  12:00p  
BASICA.COM            3534   05-08-90  12:00p  
XCOPY.COM             11776  05-08-90  12:00p
```

```
Backup completed on 12/24/90 at 10:00a  
Backed up 11 files in 2 directories.  
Processed 122,912 bytes in 3 second(s).
```

NOTE: The greater the output level the slower the tape process.

Output Filename (Default is MSII.PRT)

When you duplicate the output to a file, the log information is written to a file in the MaynStream directory. The default log name is MSII.PRT, but if you want this file to have some other name, enter the new file name (maximum 8 characters and a 3 character extension). Do not enter a complete path name. The file is automatically put in the subdirectory that contains all of your MaynStream files.

Appending to a Log File (Default is No)

As you create a logfile, you have the option to append the information or to replace the existing information with new information. The default of this option is to not append. If you are not appending, the output file will be rewritten each time you use Tmenu.

NOTE: Be careful when appending to a logfile. This file can grow rapidly depending on the amount of information you are logging. Occasionally you may want to edit the logfile using a word processor or editor to delete old information.

Monitor Options

The monitor options allow you to customize the MaynStream software for your monitor. When you select this option you will see:

```
Monitor
Are you using a COLOR monitor? (Y/N/A)
[A]
    [ A = Auto determine ]

When the screen is updated, does the
screen FLICKER? (Y/N) [N]
```

Color (Default is to auto-determine the monitor type)

If you have a color monitor place a Y after the monitor question. If you have a monochrome monitor press N. A is the default. If however, MaynStream is auto-determining the monitor type while running on a monochrome VGA monitor, DOS will instruct MaynStream that the monitor supported is color, not the actual monochrome. This can result in the menu cursor bar not appearing on the screen, thereby making it difficult to operate MaynStream. To remedy the problem, start Tmenu and advance to “**Configuration/Hardware Options/Monitor Options,**” and answer No to the question “Are you using a COLOR monitor?” Running MaynStream on a monochrome VGA monitor should now function correctly.

Flicker (Default is No)

The MaynStream software writes directly to video memory. With some video cards you may get “snow” on the screen when the software begins screen writes. Snow is a harmless flickering effect that appears when the screen is being updated. It does not remain on the screen.

If the screen does not flicker when you use MaynStream with your video card, move the cursor over the flicker question and press N.

Network Type (Default is None)

When you select this option you will see:

```
Network Type
Which Network Software are you using? [0]
0. None                3. IBM PC Network
1. Novell NetWare      4. Other
2. 3Com 3+
```

Enter the number that corresponds to the network you are using. If your network is not listed, select **Other**. The default for this option is 0, no network.

Network Options

When you select this option you will see:

```
Network Options

Skip OPEN files? (Y/N) [N]

Create the SKIPPED script? (Y/N) [Y]

Backup/Restore Macintosh resource information? (Y/N) [Y]

Back up "Published" IsleLAN drives? (Y/N) [N]

Display Novell servers instead of mapped drives? (Y/N) [Y]

Preserve Novell files' last accessed date? (Y/N) [Y]

Maintain a Server and IsleLAN Password Database? (Y/N) [N]
```

Skip OPEN Files (Default is No)

This gives you the option to skip open files during the backup, or to wait for open files to close before the backup continues. The default for this question is **NO**, open files will not be skipped. Enter **Y** to back up only closed files. Enter **N** for the backup to wait for open files to close before continuing.

Create the SKIPPED Script (Default is Yes)

This gives you the option to create a script that will contain a list of all the files that are skipped during the network backup. The default for this question is **YES**, to create the script. If you answer **Y**, open files encountered during the backup will be written to the skipped file script. This file will appear as an option under Backup in Tmenu.

NOTE: Before you select SKIPPED from Backup in Tmenu you must deselect the default drives. If the default drives are not deselected, all files will be backed up.

After the backup is completed the script will be deleted. This will be done to create a new SKIPPED script in the event that other open files are encountered during the backup of the skipped files. If no files are skipped, this file is not necessary and thus, not created.

Backup/Restore Macintosh Resource Information (Default is Yes)

This option allows you to back up and restore Macintosh resource information on Novell NetWare 2.15 or greater. If you answer **YES** (the default of this option), Macintosh resource information will be backed up or restored if present. If you answer **NO** the Macintosh resource information will not be backed up or restored.

Macintosh resource information will be identified in Tmenu by an "<A>" attribute.

Back up “Published” IsleLAN Drives (Default is No)

This option allows you to back up remote workstation drives. If you answer **Yes** to this option all of the published remote drives will be listed in the Drive Selection Status window and they will be available for any of the Tmenu operations. If you answer **No** to this option only the available local and network drives will be displayed in the Drive Selection Status window.

Display Novell Servers Instead of Mapped Drives (Default is Yes)

If you wish to view all servers on the network (whether you are logged into and mapped to them or not), answer **Yes** to this question. If this question is set to **No**, the only NetWare drives that will be listed in your Drive Selection Status window are those drives to which you are attached and to which you are mapped (prior to starting MaynStream).

NOTE: If you have created scripts that use mapped drives, you should convert those scripts to server/volume names before answering **Yes** to the server/volume question.

Preserve Novell Files' Last Accessed Date (Default is Yes)

When a file is accessed on a Novell network, the “last accessed date” field is modified to indicate the last time someone accessed that file. Normally MaynStream would change this date when it backs up the file. If you wish for Novell’s “last accessed date” field to remain unchanged, answer **Yes** to this question.

Maintain Password Database (Default is No)

The password database is a list of user/device names and passwords used to log in to network servers and attach to remote (IsleLAN) drives. If you answer **Yes** to this question, the passwords you enter to gain access to remote drives will be kept in the database, so the next time you access the remote drive the password will be entered for you. If you answer **No** to this question you will be prompted to enter the password each time you access a remote drive. The contents of the password database are encrypted for security purposes.

NOTE: If a password changes, you will need to re-enter the Username/Password for the server.

HINT: To make sure all of the usernames and passwords you want to keep in your password database are set up properly, create a backup script for all of the remote workstations and servers you wish backup. Log out of all servers and run the script. You will be prompted to enter any passwords not already in the database; thus installing them for the next time you run the script.

Partition Names

If all partitions are known an error message is produced. If all partitions are not known, when you select this option you will see:

```
Name Partitions
The following drive(s) have undefined
partitions:
    Drive 0
    Drive 1

Which drive number contains the
partition name(s) you wish to change?
```

Enter the number of the drive (0, 1, 2, etc.) and press <Enter>. You will see something similar to this:

```
Name Partitions
    Drive (# 0-7)
    Partition    Name
    1            Unkn0:1
    2            Unkn0:2
```

The undefined partitions on the hard drive will be displayed here. You can have a maximum of four partitions per drive. “UnknX:X” is the name given to any non-DOS operating system that cannot be identified by the software. The first “X” is the drive number and the second “X” is the partition number.

To name the unknown partition, move the cursor over the existing partition name and type in the new name. Press <Ctrl Enter> to save your change.

When you have correctly named all of the unknown partitions press <Ctrl Enter> to return to the **Configuration** option.

NOTE: If you use a DOS partitioning utility, DOS partitions may be identified as **Unknown**. The unknown DOS partition can be named as a DOS drive letter (e.g., E, F, etc.), using this option. The Unknown partition that is renamed will be removed from the Drive Selection Status window and will be added to the list of DOS image drives.

Select Controller

This option lists the controllers that are compatible with this version of the MaynStream software. Move the cursor over the controller that was provided with your MaynStream system and press <Enter>. If you are unsure of the type of controller that was supplied with your system, refer to Chapter 2 for more information. If you change controllers, you must update the controller options.

Controller Options

These options are used to match the software to the settings on the controller card(s) installed. The available settings are different for QIC and SCSI, ISA or MCA controllers, so the type of controller installed will determine the settings you see in this window. However, the look of the window will be the same. If you installed a SCSI ISA controller card(s), and you select this option you will see:

Maynard SCSI Controller Card Options		
	Controller 1	Controller 2
Current Status	AUTO	DISABLED
Controller Type	Maynard SCSI 8-bit	Maynard SCSI 8-bit
Attached Drives	AUTO	AUTO
I/O Address	AUTO	AUTO
Interrupt Number	AUTO	AUTO
DMA Channel	AUTO	AUTO
Card Slot	N/A	N/A

* indicates there is a conflict.

To change a setting, move the cursor over the option and press <F3> to select from a list. When you have completed your selections press <Ctrl Enter> to save your changes and exit from this menu.

NOTE: Changing the hardware settings under **Controller Options** does **not** override the jumper settings on the controller card (i.e., you must set the software to the way the card is jumpered).

You can select from the list of controller characteristic options by pressing the <F3> key. The controller card options that will be presented to you are as follows:

Current Status

Auto, Disabled, Enabled. Auto indicates that if a controller is found by the system it is to be used. Disabled tells the system to not use that particular controller even if located. Enabled requires the system to locate that controller.

Controller Type

Specific controller type (Example: QIC, 8 or 16-bit SCSI, etc.).

Attached Drives

For QIC-02 controllers the value is **1**. For SCSI controllers, the **AUTO** default indicates to use all drives found at initialization that are properly connected and installed. If you specify a particular number of drives and that number is not found by MaynStream, an error message will occur (this can occur with too many or too few drives found).

I/O Address

The default is 370. You will be offered a valid list of values for your particular controller. On MicroChannel systems the default is **AUTO** and cannot be changed.

Interrupt Number

The default is 3, and **AUTO** (IRQ 10) for Maynard 16-bit SCSI controller cards. You are provided with a list of valid values for your controller. On MicroChannel systems this value is **AUTO** and cannot be changed.

DMA Channel

The default is **AUTO**, and **AUTO** (DMA 5) for Maynard 16-bit SCSI controller cards. You are provided with a list of valid values for your controller. On MicroChannel systems this value is **AUTO** and cannot be changed.

Card Slot

This option is only applicable to MicroChannel systems and displays the determined card slot location of the controller. **N/A** on other systems.

NOTE: Tmenu provides you with the configuration options for up to two controllers for each device driver supported. The default for the second controller is **DISABLED**. Refer to Appendix C for multi-controller or multi-drive installation issues and recommendations.

Catalog Options

When you select this option you will see:

```
Catalog Options |
Set catalog level? (Full/Partial/None) [N]
Cleanup catalog after backup? (Y/N) [Y]
```

Set Catalog Level (Default is None)

The catalog level determines the type of information that will be stored in the catalog database regarding the backup sets and files on tape. If you highlight **Full**, the catalog will include the tape name and date, all backup set names and dates, all subdirectories, and all file names and file detail.

If you select **Partial**, the catalog will include tape and backup set information only. File information is not included in this level.

If, at a later time, you decide you would like to catalog the information for an uncataloged tape, select full or partial cataloging and then use the **Catalog Tape** option found under **Utilities/Catalogs**.

When you change from None to Partial or Full, the tape name prompt and backup set name prompt are enabled. This is done so you will have a more accurate description of the contents of your catalog.

NOTE: For Fast File Restore to be available, the tape must be fully cataloged.

Cleanup Catalog (Default is Yes)

This option can be set to **Yes** (the default) to clean up the catalog after you run a backup, or transfer function. The “cleaning up” is an automatic deletion of catalog information that is no longer current because backup sets and/or files on a tape have been replaced or erased. Select **Yes** to enable the automatic catalog clean up. If you select **No**, deleted catalog information will accumulate and you will need to manually remove them using the **Compact Catalog** option found under **Utilities/Catalogs**.

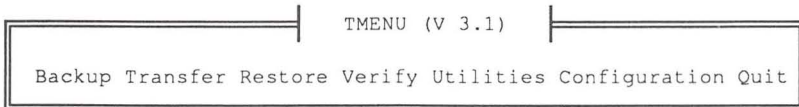
NOTE: Cleaning up the catalog after each backup will lengthen the backup process.

Save Changes

Changes made in the **Configuration** menu can be saved in the MaynStream configuration file by selecting **Save Changes**.

If you make any changes while in **Configuration**, the changes go into effect immediately and last for as long as you continue the MaynStream session. If you wish to make these changes permanent so they go into effect every time you load the MaynStream software, select this option. For the most part, save your changes!

Quit



The Quit command exits you from the Tmenu program.

Chapter 4

+/- Keys

The plus <+> (include) and minus <-> (exclude) keys are a quick way to select groups of files for Backup, Transfer, Restore, and Verify. These keys are used to bring up windows that allow you to include or exclude specific directories or files.

In Backup and Transfer, the selections you make with the <+> and <-> keys can be saved as scripts.

General Instructions for +/- Windows

Use the up and down arrow keys to move from one option to another. Use the left and right arrow keys, or the <home> and <end> keys to move horizontally in an option. Use the key to delete existing text. will remove the character the cursor is highlighting. If the cursor is at the end of text, will remove the character preceding the cursor.

When you have entered your selections for the include/exclude window, these selections can be saved by pressing <Ctrl Enter>. The drive or tape from which you selected the files will be highlighted. To escape from the include/exclude windows without saving any selections press <Esc>.

Including Files for Backup or Transfer

When selecting files for backup or transfer, the <+> key has the advantage of speed in specifying groups of files that would take much longer to select individually.

To view the “Include” window move the cursor over **Select** and press <Enter>. Select the drive you wish to back up or transfer by positioning the arrows next to the drive letter, then press <+>. (Do not press <Spacebar> or <Enter> when you are in the Drive Select window.) You will see:

```

|-----| Include |-----|
|
| Drive: C:
|
| Path: \
|
| File: *.*
|
| Include ALL subdirectories? (Y/N) [Y]
|
| Include only files modified? (Y/N) [N]
|
|           Begin   End
| Date:                (MM/DD/YY)
|
| Include only files NOT accessed in      days
|
|-----|-----|
```

<+> for Backup/Transfer: Drive

The Drive option automatically defaults to the drive that was selected before you entered the Include window. If you wish to change the drive, press <Esc> to return to the Select menu and move the arrows to another drive.

<+> for Backup/Transfer: Path

Next to “Path:” you can enter any available directory, or subdirectory. To include the “apps” subdirectory found in the directory called “\dos” you would:

- press: <+>
- move the cursor over **Path:**
- type: \dos\apps
- press: <Ctrl Enter>

Every file in the “\dos\apps” subdirectory (including any subdirectories in the \apps directory), would be included in the backup.

<+> for Backup/Transfer: File

This option can be used to include a group of files with unique attributes. To include all files with the extension “bak” in a backup you would:

- press: <+>
- move the cursor over **File:**
- press the backspace key <←> to delete the rightmost “*”
- type: bak
- If this completes your selection press: <Ctrl Enter>

The asterisk “*” in a file name or extension is a wildcard character that represents all characters occupying any remaining position in the file name or extension. The question mark “?” (wildcard for single characters) is also supported. Wildcard characters are interpreted as they would be interpreted by DOS. The default for this option is *.* meaning every file name with every extension will be selected.

<+> for Backup/Transfer: Include ALL subdirectories

This option relates directly to the path and files you have entered. If you wish to back up all files in drive C: that have the .EXE extension you would:

- move the arrows in the Select menu to Drive C:
- press: <+>
- change *.* to *.EXE
- be sure “Include ALL subdirectories” says: Y
- press <Ctrl Enter>

This option automatically defaults to **Y**. This means that all of the subdirectories found in your path statement will be included.

<+> for Backup/Transfer: Include only files modified

If you wish to back up only the files that have changed since the last time you did a backup you would:

- press: <+>
- move the cursor to **Include only files modified?**
- press: **Y**
- If this completes your selection press: <Ctrl Enter>

Only the files that have changed since the last backup will be backed up this time. If you answer **N**, all files will be backed up. The default when you enter **Include** is for all files on the default disk drive to be included for backup.

<+> for Backup/Transfer: Date

When a file is created or modified, it is given a date. The date option allows you to select files from a specific time period. The default for this option is not to specify a date. If you want to back up all files that were created between 5/1/90 and 10/1/90 (inclusive), you would:

- press: <+>
- move the cursor over **Date:**
- type: **5/1/90** <Enter> **10/1/90**
- If this completes your selection press: <Ctrl Enter>

<+> for Transfer: Include only Files Not Accessed in _Days

This option only appears in the Transfer/Include window. This option allows you to transfer files that have not been accessed in some time. Since this option is intended for use on NetWare devices only, you must be logged into the server and select files at the volume level or lower before this option will appear in the Transfer/Include window.

Enter the number of days that the file has been inactive (1-9999) to include the file in the Transfer.

Including Files for Restore or Verify

When selecting files for restore or verify, the <+> key has the advantage of speed in specifying large groups of files that would take much longer to select individually. The <+> key is active during any part of the selection process (i.e., while viewing tapes, backup sets or files).

Pressing <+> after Select <Enter>

When you move the cursor over **Select**, a window containing “+/-” will appear in the lower right corner of the screen. Press <Enter> to view a list of tapes. Then press <+> to bring up the include window.

The include window allows you to select from a list of tapes or backup sets by pressing the <F3> key.

Include
Tape: [Name of the first cataloged tape]
Set: [Some sets selected]
Path: \
File: *.*
Include ALL subdirectories? (Y/N)
Include unknown Backup Sets? (Y/N)
Begin End
Date: (MM/DD/YY)
Target Path:

IMPORTANT: If you move the cursor over **Select** (in **Restore** or **Verify**) and press <+> without first pressing <Enter>, the <F3> key will not be active and you will only be able to select files from the first backup set on the current tape.

<+> for Restore/Verify

This option can be changed if you pressed <Enter> with the cursor on **Select**. Otherwise the default of this option is to select the current tape.

This option allows you to verify or restore files from any cataloged tape. If you wish to select a different tape (or multiple tapes) move the cursor to **Tape:** and press <F3>. You will be given a list of available tapes from which to choose.

Include Tapes	
Tape 1	02/01/90
Tape 2	03/01/90
Budgets	01/15/90

Move the cursor over the tape you would like to include in the restore or verify. Press the <Spacebar> to select the entire tape for restore or verify.

<+> for Restore/Verify: Set

This option can be changed if you pressed <Enter> with the cursor on **Select**. Otherwise, the default of this option is to select the first backup set on the tape.

This option allows you to verify or restore files from any backup set on any cataloged tape. If you wish to select a different backup set (or multiple backup sets) move the cursor to the Set: option and press <F3>. You will be given a list of available backup sets from which to choose.

Include Backup Sets	
Set 1 on Tape 1	02/01/90
Set 1 on Tape 2	03/01/90
Sales	01/15/90

<+> for Restore/Verify: Path

Next to "Path:" you can enter any available directory, or subdirectory. To include the "apps" subdirectory found in the directory called "\dos" you would:

- press: <+>
- move the cursor over **Path:**
- type the complete path except for filenames: \dos\apps
- press: <Ctrl Enter>

Every file in the "\dos\apps" subdirectory would be included in the restore or verify.

<+> for Restore/Verify: File

This option can be used to include any specific file or files. To include all files with the extension “bak” in a restore or verify you would:

- press: <+>
- move the cursor over File:
- change *.* to *.bak
- press: <Ctrl Enter>

The asterisk “*” in a filename or extension is a wildcard character that represents all characters occupying any remaining position in the filename or extension. The question mark “?” (wildcard for single characters) is also supported. Wildcard characters are interpreted as they would be interpreted by DOS. The default for this option is *.* meaning every filename with every extension will be selected.

<+> for Restore/Verify: Include ALL subdirectories

This option relates directly to the path and files you have entered. If you wish to restore or verify all of the files on the current tape that have the “.EXE” extension you would:

- press: <+>
- be sure the current tape is selected
- change *.* to *.exe
- be sure “Include ALL subdirectories” says: Y
- press <Ctrl Enter>

This option automatically defaults to Y. This means that all of the subdirectories found in your path statement will be included.

<+> for Restore/Verify: Include unknown backup sets

This option gives you the ability to include other backup sets that may exist on the tape in the restore or verify. For example, if you wish to restore or verify all the files on the current tape that have the .EXE extension but you are not sure if they are all in the first backup set you would:

- press: <+>
- be sure current tape is selected
- change *.* to *.exe
- be sure “Include ALL subdirectories” says: Y
- be sure “Include unknown Backup Sets” says: Y
- press <Ctrl Enter>

This option defaults to N. This means that only the single backup set you selected will be included.

<+> for Restore/Verify: Date

When a file is created or modified it is given a date. This option allows you to select files from a specific time period. The default for this option is not to give a date. If you wish to restore or verify all files on a tape that were created between 5/1/90 and 10/1/90 (inclusive), you would:

- press: <+>
- move the cursor over **Date:**
- type: 5/1/90 <Enter> 10/1/90
- press: <Ctrl Enter>

<+> for Restore/Verify: Target Path

When you restore files from tape to disk, the Include window gives you the ability to restore the files to a directory different than the directory from which they were originally backed up. Likewise, files backed up from one directory can be compared (verified) against files in a different directory. This does not mean that you can rename the file, only that the location of the file can be changed.

If you backed up all the files in the \work subdirectory and now you want to restore them to the \home subdirectory you would:

- Select Restore
- Move the cursor over Select (you do not need to press <Enter>)
- press: <+>
- change your path statement to: \work
- be sure “Files:” includes everything: *.* and “Include ALL subdirectories” is set to [Y]
- move the cursor over **Target path** and type: \home
- press <Ctrl Enter>

Excluding Files for Backup or Transfer

Excluding files is similar to including files. By pressing <-> when the +/- box appears on the screen, you will see this menu:

```
Exclude
-----
Drive: C:
Path: \
File: *.*
Exclude ALL subdirectories? (Y/N)
```

<-> Key for Backup/Transfer: Drive

The Drive option automatically defaults to the drive that was selected before you entered the Exclude window. If you wish to change the drive, press <Esc> to return to the Select menu and move the arrows to another drive.

<-> Key for Backup/Transfer: Path

Next to "Path:" you can enter any available directory, or subdirectory. To exclude the "apps" subdirectory found in the directory called "\dos" on drive C: you would:

- move the arrows in the Select menu to Drive C: and press: <Spacebar>
- press: <->
- move the cursor over Path:
- type: \dos\apps
- press: <Ctrl Enter>

Every file in the "\dos\apps" subdirectory (including any subdirectories in the \apps directory), would be excluded from the backup.

<-> Key for Backup/Transfer: File

This option can be used to exclude a group of files with unique attributes. To exclude all files with the extension "bak" in a backup you would:

- move the arrows in the Select menu to Drive C: and press: <Spacebar>
- press: <->
- move the cursor over File:
- change *.* to *.bak
- press: <Ctrl Enter>

The asterisk "*" in a file name or extension is a wildcard character that represents all characters occupying any remaining position in the file name or extension. The question mark "?" (wildcard for single characters) is also supported. Wildcard characters are interpreted as they would be interpreted by DOS. The default for this option is *.* meaning every file name with every extension will be excluded.

<-> Key for Backup/Transfer: Exclude ALL subdirectories

The subdirectories, or files that are entered here will be excluded from the command you are using. If you wish to back up all files on drive C that have the .EXE extension except for the .EXE files in the \apps directory and its subdirectories, you would:

- move the arrows in the **Select** menu to Drive C: and press: <Spacebar>
- be sure the drive you have selected is C:
- press: <->
- set the path to \apps
- change *.* to *.exe
- be sure “Exclude ALL subdirectories” says: Y
- press <Ctrl Enter>

This option relates directly to the path you have entered. If your path is the root directory (\) and you answer Y to this question, and *.* is in Files:, nothing will happen because all files are excluded.

Excluding Files for Restore or Verify

Excluding files is similar to including files. By pressing <-> when the +/- box appears on the screen, you will see this menu:

```
Exclude
Tape:[ Current tape selected ]
Set: [ First backup set selected ]
Path:\
File:*.*
Exclude ALL subdirectories? (Y/N)
```

Pressing <-> after Select <Enter>

When you move the cursor over **Select** a window containing “+/-” will appear in the lower right corner of the screen. Press <Enter> to view a list of tapes. Then press <-> to bring up the exclude window.

The exclude window allows you to select from a list of tapes or backup sets by pressing the <F3> key.

IMPORTANT: If you move the cursor over **Select** (in **Restore** or **Verify**) without first pressing <Enter>, the <F3> key will not be active and you will only be able to select files from the first backup set on the current tape.

<-> for Restore/Verify: Tape

This option can be changed if you press <Enter> with the cursor on **Select**. Otherwise the default of this option is to select the current tape.

This option allows you to exclude directories/files from any cataloged tape. If you wish to select a different tape (or multiple tapes) move the cursor to this option and press <F3>. You will be given a list of available tapes from which to choose.

Exclude Tapes	
Tape 1	02/01/90
Tape 2	03/01/90
Budgets	01/15/90

Move the cursor over the tape you would like to exclude from the restore or verify. Press the <Spacebar> to exclude the entire tape from the restore or verify.

<-> for Restore/Verify: Set

This option can be changed if you press <Enter> with the cursor on **Select**. Otherwise, the default of this option is to select the first backup set on the tape.

This option allows you to exclude directories/files from any backup set on any cataloged tape. If you wish to select a different backup set (or multiple backup sets) move the cursor to this option and press <F3>. You will be given a list of available backup sets from which to choose.

Exclude Backup Sets	
Set 1 on Tape 1	02/01/90
Set 1 on Tape 2	03/01/90
Sales	01/15/90

<-> for Restore/Verify: Path

Next to “Path:” you can enter any available directory, or subdirectory. To exclude the “apps” subdirectory found in the directory called “\dos” you would:

- press: <->
- move the cursor over **Path:**
- type: \dos\apps (do not include drive or filenames)
- press: <Ctrl Enter>

Every file in the “\dos\apps” subdirectory (including any subdirectories in the \apps directory), would be excluded in the restore or verify. The tape will no longer be highlighted.

<-> for Restore/Verify: File

This option can be used to exclude a file or group of files with unique attributes. To exclude all files with the extension “bak” in a restore or verify you would:

- press: <->
- move the cursor over **File:**
- change *.* to *.bak
- press: <Ctrl Enter>

The asterisk “*” in a file name or extension is a wildcard character that represents all characters occupying any remaining position in the file name or extension. The question mark “?” (wildcard for single characters) is also supported. Wildcard characters are interpreted as they would be interpreted by DOS. The default for this option is *.* meaning every file name with every extension will be excluded.

<-> for Restore/Verify: Exclude ALL subdirectories

This option relates directly to the path you have entered. If your path is the root directory (\) and you answer **Y** to this question, and *.* is in **Files:**, nothing will happen because all files are excluded.

The subdirectories, or files that you choose here will be excluded from the command you are using.

If you wish to restore or verify all files on drive C: that have the .EXE extension except for the .EXE files in the \apps directory and its subdirectories you would:

- be sure drive C: is the target drive
- move the cursor over **Select**
- press: <+>
- leave your path statement set to \
- change *.* to *.exe
- be sure “**Include ALL subdirectories**” says: **Y**
- press <Ctrl Enter>

Then, to exclude the \apps directory:

- press: <->
- add **apps** to the c:\ in your path statement
- change *.* to *.exe next to **File:**
- be sure “**Exclude ALL subdirectories**” says: **Y**
- press: <Ctrl Enter> to save your selections

Chapter 5

The Automatic Backup System

The Automatic Backup System provides a method for scheduling special backups to be executed on a specific day and time. This system lets you select up to 8 events (specific scripts backed up at a certain time), over a 7-day period.

NOTE: Before using the Automatic Backup System, create scripts using Tmenu. If you wish to do a full automatic backup, you do not need to create scripts. Refer to *Name Script* in Chapter 3 for information on creating scripts.

Automatic Backup Setup

Be sure you are in the directory that contains the MaynStream software (typically this will be `MAYNARD` unless you specified another directory during the software installation). Type: `AUTOBACK <Enter>`

You will see:

Automatic Backup						
Event	Script	Type	Append	Verify Backup	Day	Time
#1	<Full>	Backup	No	Yes	Weekdays	0800pm
#2	SKIPPED	Backup	Yes	Yes	Weekdays	1100pm
#3	MODIFIED	Backup	Yes	Yes	Weekdays	1200pm
#4	Unused					
#5	Unused					
#6	Unused					
#7	Unused					
#8	Unused					

Use the arrow keys to move to the number of the event where you want to enter the script, the day, and the time you want the script executed. The `<F9>` and `<F10>` keys are used to scroll through the selections for each option.

Script

Use the `<F9>` or `<F10>` key to select any of the Backup or Transfer scripts you have created in Tmenu, or for a full or modified backup. The `<FULL>` selection backs up all files on all of your default drives as specified by “`Default_backup_drives =`” in your MaynStream configuration file. The `<MODIFIED>` selection backs up files on your default drives that have changed since your last backup.

The SKIPPED script contains a list of the files that were skipped during a backup. The VERIFY script contains a list of files that failed to verify during a backup.

Type

This option is not selectable. If the script is created under the Backup menu, this option will state **Backup**. If the script was created under the Transfer menu, this option will state **Transfer**.

Append

Use the <F9> and <F10> keys to select between **Yes** and **No**. Answer **Yes** to append the backup to the backup(s) that already exist on the tape. Answer **No** to write over any existing backups. **Remember that answering No will overwrite ALL existing data on the tape in the drive.**

Verify Backup

Use the <F9> and <F10> keys to answer **Yes** or **No**. **Yes** automatically verifies after the backup. Answer **No** to do the backup only. It is recommended that you verify after every backup.

Day

Use the <F9> and <F10> keys to select the day of the backup. Your choices include:

Monday	Tuesday	Wednesday	Thursday	Friday
Saturday	Sunday	Every day	Weekdays	

Time

Use the <F9> and <F10> keys to select the time of the backup. The time can be specified in 5 minute increments. After the time specify AM or PM.

Setup Continued...

To enter another script, day, and time for another event, move the cursor to an unused event and begin using the <F9> and <F10> to make your selections.

Press <Ctrl Enter> to save your selections. If this is the first time you have used the Automatic Backup you will see:

For the Automatic Backup System to work properly, the following statements need to be added to your AUTOEXEC.BAT file:

```
DATE
TIME
CD \MAYNARD
AUTORES
AUTOBACK /CHECK
CD\
```

The installation will allow you to either place the statement in the AUTOEXEC.BAT file, or they can be automatically added to the AUTOEXEC.BAT file.

Do you wish to continue? (Y/N)

If you are installing the Automatic Backup on a Novell network press N to quit without modifying your AUTOEXEC.BAT file. Otherwise, press Y to continue. You will see:

```
Do you have to type in DATE and TIME to set the
computer's current date and time? (Y/N)
```

If you press Y, these two statements will be added to your AUTOEXEC.BAT file so you will be prompted for the date and time every time you turn on the computer. If you press N, DATE and TIME will not be added. If you have different statements in your AUTOEXEC.BAT file or your computer has a built-in clock/calender that load the date and time, you can answer N to this question. You will see:

```
Do you want the statements to be automatically added to the
end of your AUTOEXEC.BAT file? (Y/N)
```

DOS 4.0X NOTE: Answer N to this question. You must insert the Autoback statements before the DOSSHELL statement.

If you press Y your AUTOEXEC.BAT file will be updated to include the required statements (at the end of the AUTOEXEC.BAT file). If you press N, your AUTOEXEC.BAT file will be displayed. Using the cursor arrow keys move the arrows to the spot where you want the statements inserted. Press <Ctrl Enter> to insert the statements.

```
Automatic Backup Installation
MODE COM1:9600,N/8/1/P
SET PROMPT=$P$G
SET MSII=C:\MAYNARD
PATH=C:\;C:\MAYNARD;C:\DOS
```

You will be prompted to re-boot the computer so the Automatic Backup System files can be loaded.

Using the Automatic Backup

At the appointed time, the MaynStream software will be activated and the selected files will be backed up.

If you are in an application at the time the backup is scheduled to start, the software will issue three short beeps to let you know a backup is ready to begin. When you exit the application and return to the DOS prompt the MaynStream software will wait for approximately one minute of keyboard inactivity before it begins the backup. (The one-minute wait is re-started each time you use the keyboard.)

WARNING: The computer date and time must be set for the automatic backup to work properly. If you do not have a clock, be sure you enter the correct date and time when you turn on the computer.

NOTE: If you turn off the computer before the backup begins, you will see this message the next time you turn on the computer:

```
Your "(DAY)" backup, of "(SCRIPT NAME)" did not take place as  
scheduled. Would you like to do it now? (Y/N)
```

If you want to run the backup at this time, make sure the drive is installed and turned on, and that there is a tape inserted. Press Y. If you press N, you will be returned to the DOS prompt.

NOTE: Automatic backups will overwrite data on the tapes unless the tape is password protected, the tape was last used to transfer data off the hard disk, or you said YES to the append option on the Automatic Backup menu.

Using the Automatic Backup with Networks

You can install the MaynStream software onto the server or on the local hard disk of the workstation where the drive is installed. If you need to install on a server, make sure you do not detach it when you attach other servers during the backup.

AUTORES and AUTOBACK have to be installed after all of the other TSR programs and cannot be run from the login script directly. To get around this, put the AUTORES and AUTOBACK /CHECK in a DOS batch file. To create a batch file called BACKUP.BAT type:

```
copy con: backup.bat <Enter>
set msii=(MaynStream software drive and path)
autores <Enter>
autoback /check <Enter>
<F6> <Enter>
```

The “set msii=” statement is required so the MaynStream software knows where to look for the MaynStream configuration file and any scripts you may create and use.

Execute this batch file as the last thing in the login script using the Novell EXIT command.

Remote Workstation Backup

The remote workstation backup software provides information storage and retrieval for networked DOS environments without requiring a backup device at every workstation. A computer directly connected to the tape drive can back up and restore data stored on any workstation running the MaynStream remote workstation software. This version of the MaynStream remote workstation software is compatible with Novell networks running NetWare version 2.0 and later and all networks using NetBIOS protocol.

The remote workstation software allows a single, local workstation to back up any remote workstations (see *Figure 5-1*). The local workstation is the computer to which the tape drive is directly connected. Remote workstations are any other computers on the network.

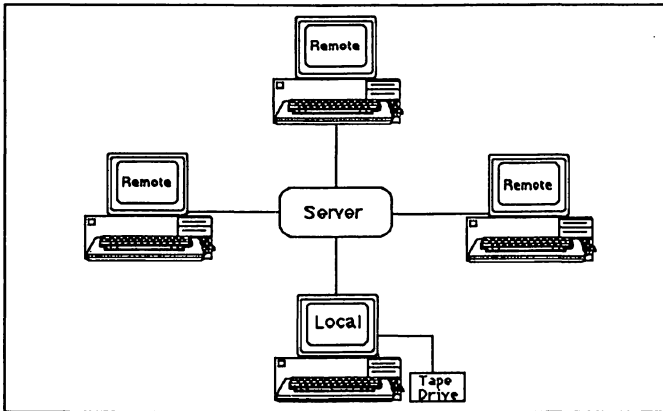


Figure 5-1. Local and Remote workstations on a network

A local workstation can back up remote devices, even on different servers, if the servers are connected or bridged (see *Figure 5-2*). Remote backups and restores are done transparently to the remote user.

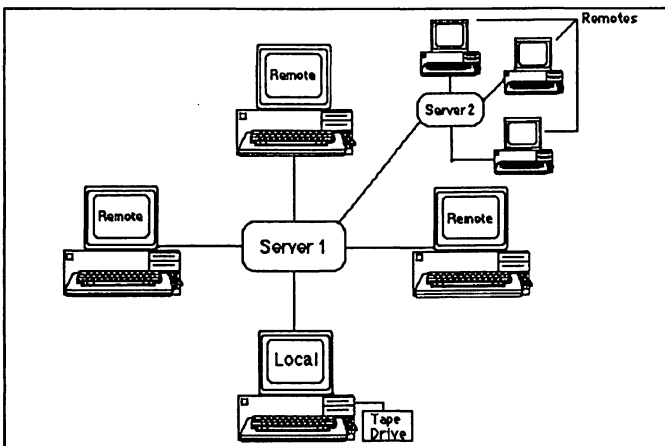


Figure 5-2. Bridged network with remote workstations

Remote workstations can be backed up only after the proper steps have been taken to publish the drive (i.e., tell the local workstation that the remote drive, or part of the remote drive, can be accessed). This is accomplished by installing the MaynLAN software on the local drive and installing the IsleLAN software on the other remote drives.

IMPORTANT: Although *Figure 5-2* shows each workstation connected to the server, the MaynStream remote workstation software “talks” directly from computer to computer. Neither the local nor the remote drives have to be logged onto the network to perform a remote drive backup. The only requirement is that you run ANET3 for Novell 2.0x, IPX for Novell 2.1x or later, or NetBIOS before you run the IsleLAN software. If you are running Novell 2.1x or later, and you are connected to an internet, NETx and the MaynStream software are required.

NOTE: An expanded memory manager may be required to run Tmenu with the IsleLAN/MaynLAN software if you have less than 512K of RAM after loading all TSR programs (including IsleLAN and MaynLAN).

IsleLAN Remote Workstation Installation

Software installation must be performed at each remote workstation as well as the local workstation. The procedure to install the IsleLAN portion of the MaynStream software on remote workstations is as follows:

1. Place the diskette labeled “MaynStream Installation” in drive A: and type:

```
a: <Enter>
isleinst [path] <Enter>
```

Typing `isleinst` only will install the software on drive C: in the \MAYNARD subdirectory.

Typing `isleinst [path]` is an optional way to install the software in the drive and subdirectory of your choice. If you install the IsleLAN software in a different directory you will need to place a “set msii = [path]” statement in your AUTOEXEC.BAT file before running ISLECFG.EXE.

If this is the first time you have installed the software you will be required to enter the type of interface you are using (if the software is unable to detect IPX or NetBIOS). Select NetWare IPX or NetBIOS. If you are using the NETBIOS interface you will be prompted to enter a unique name for your workstation. You will then be asked to enter the name of the backup workstation you wish to use. Enter the name of the workstation to which the tape drive is connected and press <Enter>.

NOTE: The 3.1 version of IsleLAN/MaynLAN will not work with older versions of the software. The 3.1 version of IsleLAN must be installed on all remote workstations and run with the 3.1 version of MaynLAN.

After the files have been installed, you will see a screen similar to the one below. A description of each of the fields follows.

Publish	Path	Alias	Access	Backup
			Password	Only
Yes	C:\	Drive-C		Yes
Yes	D:\	Drive-D		Yes

Publish

This field allows you to temporarily keep the drive from being published. If you do not wish to have the drive and path published select **No**. If you want to delete the drive entry completely press <F5>. The maximum number of published drives per remote workstation is eight.

Path

The path specifies the full path of the remote drive to be published. In most cases, this will be the root directory (e.g., C:\). If you enter an invalid path, you will get an error message telling you the path does not exist.

This path will always “appear” to the local workstation as the root directory of the published drive. Any directory above the published path cannot be accessed remotely.

Alias

The local workstation identifies the published drive by the alias. The alias should indicate the contents of the published path. For example, your published path may be `c:\accting\invoice\outstand`, but your alias for this path may be `acct-inv`. The alias can be up to eight characters in length.

Access Password

To restrict access to the workstation's published drive, a password can be specified. As you type in the password, each character will be represented by an asterisk (*). If a password is entered, you will be prompted to confirm the password by re-entering it.

Backup Only

This option restricts the local workstation from restoring to the published drive. The software default is **Yes**, but if you want the local workstation to have the capability of restoring backup data to the remote workstation, change the field to **No**.

2. Press <F2> to save your selections and exit to DOS. If this is the first time you have used the IsleLAN software you will see:

```
Workstation Name Entry
Enter a unique name for your
workstation, below:
Workstation name:
```

NOTE: The Source Select window on the local workstation will display the names of all workstations currently running IsleLAN, but if you accidentally publish your workstation with the same name as another, you will get an error when the second IsleLAN TSR is loaded. If this happens, one of the published drive names must be changed. Do this by deleting the ISLELAN.CFG file and then running ISLECFG.EXE to enter a new workstation name. Another method is to use a text editor to change "workstation_name =" in the ISLELAN.CFG file. Workstation names can be up to 12 characters.

3. Press <Enter> to save the workstation name. You will see:

For ISLELAN to work properly, the following statements need to be added to your AUTOEXEC.BAT file:

```
REM load islelan TSR
C:\MAYNARD\ISLELAN.EXE
```

The installation will let you select the location for these statements in the AUTOEXEC.BAT file, or they can be automatically added to the end of the AUTOEXEC.BAT file.

Do you wish to continue? (Y/N)

4. Press <N> to quit without modifying your AUTOEXEC.BAT file. If you press <Y> you will see:

Do you want the statements to be automatically added to the end of your AUTOEXEC.BAT file? (Y/N)

If you press <Y> your AUTOEXEC.BAT file will be updated with the statements added to the end of the file. If you press <N>, your AUTOEXEC.BAT file will be displayed. Your AUTOEXEC.BAT file will look similar to this example:

```
Remote Workstation Installation
ECHO OFF
CLS
DATE
TIME
C:\NOVELL\IPX
↓
↑ C:\NOVELL\NET3
MODE COM1:9600,N/8/1/P
SET PROMPT=$P$G
SET MSII=C:\MAYNARD
```

Using the cursor arrow keys, move the arrows to the location where you want the statements inserted. Press <Ctrl Enter> to insert the statements. You must insert the remote workstation TSR statements after the IPX, ANETx, NETx or NetBIOS statement.

Re-boot the computer to load the remote workstation software.

Editing the Configuration File

The first time you execute ISLEINST the software will automatically execute ISLECFG.EXE when it finishes copying the necessary files. If, at some later time, you wish to reconfigure your published drives type:

```
c: <Enter> cd maynard <Enter>
or
c: <Enter> cd [path] <Enter>
islecfg
```

Removing the IsleLAN TSR from Memory

If you wish to remove the TSR from memory, you can type: `islelan /r`

MaynLAN Local Workstation Installation

In addition to the tape drive, the local workstation requires matching versions of the MaynLAN and IsleLAN software (i.e., version 3.1) and the MaynStream software version 3.1 or later. During the MaynStream software installation you are asked:

```
Should MaynStream default to having the ability to back up
IsleLAN network workstations? (Y/N) Y
```

If you answered Yes, then IsleLAN drives will be displayed in the Drive Selection Status window when you run the MaynStream software and MaynLAN will be loaded for you.

If you said **No** to this question and now you want to back up IsleLAN drives, you must answer **Yes** to the “Back up 'Published' IsleLAN drives?” question in the Configuration/Hardware Options/Network Options menu, or set the `Remote_drive_backup=` statement in your `MSII.CFG` file to 1.

Here are the procedures for installing the MaynLAN software on the local workstation.

1. Make sure the MaynStream program is installed.
2. Place the diskette labeled “MaynStream Installation” in drive A: and type:

```
a: <Enter>
mayninst [path] <Enter>
```

Typing `mayninst` will install the software on drive C: in the `\MAYNARD` subdirectory. The MaynLAN program needs to be installed in the same directory as the MaynStream program.

3. During the installation you will see:

```
Should MaynStream default to having the ability to back up
IsleLAN network workstations? (Y/N) Y
```

Answer **Yes** to this prompt to install MaynLAN.

4. Go to the directory where the MaynStream software is installed by typing:
C: <Enter> cd\ <Enter> cd maynard <Enter>
or C: <Enter> cd [path] <Enter>

Run the MaynLAN program by typing:
`maynlan`

5. Load the MaynStream software.

NOTE: Be sure that you have installed the IsleLAN software and have published drives you want to back up on remote workstations, before loading the MaynStream software.

After you load the MaynStream software, the Drive Selection Status window will appear. The drives published with the IsleLAN software will appear in this screen as:

```
IsleLAN (published drive name)
```

NOTE: If you do not see the published drives in the Drive Selections Status window, check “Network Options” to make sure that the “Backup Published IsleLAN drives” option is set to **Yes**.

To view the published drive, choose **Select** in the **Backup** menu and move the cursor to the IsleLAN drive you want to see.

Press the **<Spacebar>** if you want to select the drive for complete backup or **<Enter>** to view the root directory of the drive. You can mark subdirectories and files to back up while viewing the drive in the menu.

NOTE: If an error occurs at an IsleLAN workstation during a tape operation that causes the IsleLAN workstation to re-boot, then MaynLAN must be unloaded and reloaded so it can “find” the re-booted workstation.

Changing the Published Drive Setup

Once you have set up your remote drives, you can publish new drives, remove published drives, or change existing published drives by running ISLECFG. To delete a published drive, move the cursor over the drive and press the **<F3>** key. To add a published drive, press **<F2>** and enter the information.

Publishing Local Drives				
Publish	Path	Alias	Password	Access Backup Only
Yes	C:\	Drive-C	***	Yes
Yes	D:\	Drive-D		Yes
Yes	E:\	Drive-E		Yes
Yes	F:\	Drive-F		Yes
Yes	C:\accting	Accting	****	No

Press **<Ctrl Enter>** after you have made your changes.

If you change publishing options or publish a new drive, you must re-boot the computer or unload IsleLAN (islelan /r command) and re-load it.

Back up Published IsleLAN Drives Option

In the MaynStream software, under “Network Options” (see below), there is a “Back up Published IsleLAN drives” option that allows you to back up remote workstation drives. If you answer **Yes** to this option, all published drives will be listed in the Drive Selection Status window and will be available for backup. If you answer **No** to this question, only the available local workstation and file server drives will be displayed in the Drive Selection Status window.

Network Options

```

Skip OPEN files? (Y/N) [N]
Create the SKIPPED script? (Y/N) [Y]
Backup/Restore Macintosh resource information? (Y/N) [Y]
Back up "Published" IsleLAN drives? (Y/N) [N]
Display Novell servers instead of mapped drives? (Y/N) [Y]
Preserve Novell files' last accessed date? (Y/N) [Y]
Maintain a Server and IsleLAN Password Database? (Y/N) [N]

```

Maintain a Server and IsleLAN Password Database Option

The password database is a list of user/device names and passwords used to login to networks and attach to published drives. When you answer **Yes** to this option, the MaynStream software will store your assigned drive password(s) in a database and automatically enter them for you whenever you access an IsleLAN published drive. If you answer **No**, this option will prompt you to enter the password for the IsleLAN drive you are accessing.

Publishing the Local Drive

If you choose to publish the local drive for access by remote computers, run ISLEINST or use INSTALL /ISLELAN when you install the software the first time. This will allow other remote computers with tape drives to back up your drive with the MaynStream software.

The format for using the MaynStream Advanced Commands with remote workstation backup looks like this:

```
[d:]tbackup +[remotewksname/published alias:]
[\path\][filename][/param]
```

Example: (remotewksname = HarryJ)

```
d:tbackup +HarryJ/drive-c:\*.* /s
```

The + symbol has a special function in the command line. It instructs the command that specifications following the + are for remote workstations only.

[remotewksname/published alias:] specifies the remote workstation/alias that contains the files you wish to access. The workstation name and published alias are set when you run ISLECFG.EXE at the remote workstation.

[\\path\\][filename] specifies the directory and file(s) you wish to access. If no file name is given, *.* in the current directory will be used.

The Remote Backup Configuration Files

The configuration files (ISLELAN.CFG and MAYNLAN.CFG) are created when you run the ISLECFG or INSTALL /MAYNLAN utilities.

The only user-configurable option is the “workstation_name =” option. Do not change the defaults of any of the other configuration options.

workstation_name =

This is the name of the workstation as entered when you exited and saved ISLECFG.EXE. To change this name, use a line editor (e.g., Personal Editor, Edlin, etc.), to edit the file directly.

Whenever a configuration option changes, you must re-boot the computer for the changes to take effect, or unload ISLELAN.EXE/MAYNLAN.EXE by using the [file]LAN /r command and then re-load it.

NOTE: For each option, a space must precede the equals sign (=). If you save the file using your own editor, be sure there is a space between the option and the equals sign.

Chapter 6

Command Line Structure

THIS CHAPTER IS FOR THE ADVANCED USER. FIRST-TIME USERS SHOULD TURN TO “INTRODUCTION TO THE SOFTWARE” IN CHAPTER 3.

The commands described here allow you to do all of the basic functions of Tmenu as well as some more advanced, specific commands. The commands are used from the DOS prompt. These programs are found in the MaynStream directory on your hard drive. It is recommended you include a “set msii=” statement in your AUTOEXEC.BAT file. The “set msii=” statement is recommended so the MaynStream software knows where to look for the MaynStream configuration file and any scripts you may create and use.

The commands are:

TBACKUP

This command allows you to back up any or all files on a drive(s), and place them on tape. Backups are made in file-by-file mode.

TDIR

This command gives you a listing of files on a backup tape.

TENSION

This command re-tensions the tape for better performance and longer tape life. Tension can optionally erase tapes.

TRESTORE

This command allows you to restore files from the tape to a disk. Files can be restored individually file-by-file.

TVERIFY

This command checks the data on the tape and compares it to the data on the drive.

The Command Line

The command line consists of three basic components: the command, one or more paths, and parameters.

The commands are TBACKUP, TDIR, TENSION, TRESTORE, and TVERIFY.

The path can consist of a drive letter (C:, D:, etc.), a subdirectory (\, \dos\, \apps\, etc.), and a filename (a.b, *.* , *.doc, abc*.* , etc.).

The MaynStream Command Line allows paths to be specified in the same syntax that DOS allows for the DIR command with one exception; to differentiate a directory from a command parameter in a MaynStream command line, you must place a backslash (\) after a directory.

abc is the file abc in the current directory on the current drive.
\abc is the file abc in the root directory of the current drive.
\abc is the subdirectory abc in the root directory of the current drive.

Each of the commands can be followed by one or more parameters. Parameters are completely optional. Each parameter controls a specific option. If a parameter is not included, it defaults to the value specified in the msii.cfg file (See appendix A). If a parameter is specified on the command line, it overrides the default value. Parameters in the commands are always preceded by a forward slash (/).

If you wished to back up drive C: starting at the root directory (\) and including all subdirectories (/s) your command line would look like this: **tbackup c:\s**

TBACKUP is the command that backs up a disk.

C: signifies the root directory of drive C:

/S is a parameter. This particular parameter tells the software to back up all subdirectories under the specified directory. Since the specified directory in this example is the root directory of drive C:, you are backing up everything on drive C. If you omitted /s, only the files in the root directory of drive C: would be backed up.

The file specification “*.*” is implied where it is omitted. So **tbackup c:\s** is the same as **tbackup c:*.*s**

Dependent and Independent Parameters

There are two kinds of parameters: dependent and independent. Independent parameters **MUST BE PLACED AT THE END OF THE COMMAND LINE**, but apply to the entire command. Dependent parameters are placed after a file specification.

Of the 31 acceptable command parameters only seven are dependent parameters. Here is a complete list of the available parameters for the commands:

<u>Parameter</u>	<u>Independent or Dependent</u>	<u>Applicable Commands</u>	<u>Description</u>
/ad:n	D	B	access dates
/ap	I	B	append to the end of a tape
/au:n	I	B,R	automatically verify
/-a	I	B	do not set the modified bit
/ba	D	B	prompt for backup set name
/d	D	B,D,R,V	include files from after date to before date
/em	I	B,R,V	include all empty directories
/en	I	B	back up all default drives
/er	I	T	erase the tape
/f	I	B,R,V	list files
/-f	I	B,R,V	do not list files
/-h	I	B,R	exclude hidden files
/in	I	B	back up files in-use
/la	D	B	prompt for backup set description
/le	I	B,R,V,D	select logfile output level
/li	I	B,D,R,V	logfile output to another file
/lo	I	T	"long" erase
/m	D	B	include modified files
/page	I	D	stop when the screen is full of filenames
/pas	I	B	assign password
/pr	I	R	prompt before restoring "read-only" or "modified" files
/q	I	R	do not restore existing files
/s	D	B,D,R,V	include subdirectories
/-s	I	B	exclude special files
/ta	I	B	prompt for tape name
/tr	I	B	transfer operation
/v:n	I	D,R,V	start command at the specified backup set
/w	I	D	display files in columns (wide)
/x	D	B,D,R,V	exclude files
/y	I	B,D,R,V	automatically answers YES to all Y/N prompts, waits at empty prompts
/yy	I	B,D,R,V,T	answers YES to all Y/N prompts and <Enter> to all field prompts

B - TBACKUP D - TDIR T - TENSION R - TRESTORE V - TVERIFY

Here is an example of an independent parameter:

```
tbackup c:\ /s d:\ /s /pas
```

This command line would back up drives C: and D: . /pas (prompt for a password), is an independent parameter that does not directly relate to the d:\ file specification. Because /pas is an independent parameter you could just as easily change this command to: **tbackup c:\ /s /pas d:\ /s** and you would get the same results.

Here is an example of a dependent parameter:

```
tbackup c:\ d:\ /s e:\
```

This command line would back up all of drive D: and the root directories of drives C: and E: . /S (include subdirectories), is a dependent parameter which only applies to the file specification that directly precedes the parameter.

Multiple File Specifications on the Command Line

An example of a typical command to back up your entire drive C: would look like this: **tbackup c:\ /s**

c:\ is a single file specification with a single dependent parameter (/s).

The command line allows you to enter more than one file specification. Multiple file specifications could include two or more subdirectories, two or more drives, or a single subdirectory and an exclusion of files (/X parameter).

For example, two subdirectories on the same drive:

```
tbackup c:\apps\ /s c:\word\ /s
```

For example, two different drives:

```
tbackup c:\ /s d:\ /s
```

For example, one subdirectory excluding all *.bak files:

```
tbackup c:\dos\*.* c:\dos\*.bak /x
```

The Command Line Limit

When entering a command line, DOS limits you to 127 characters. The name of the command and blank spaces are included in this count. Spaces are required between file specifications and between commands and the file specifications.

Scripts

Scripts that you create for the command line can also be used in Tmenu as long as you give the scripts the .BKS or .TKS extension, and place the scripts in the MaynStream directory (usually \maynard).

To create a script you can use Tmenu as described in chapter 3. To create a script outside of Tmenu use the DOS system editor or a word processing program (e.g., Microsoft Word) and save the script as an ASCII file.

The same rules apply to scripts as apply to the command line. Although the command itself is not included in the script, you must put spaces between file specifications, or place each file specification on a separate line. Scripts have no limit to the number of characters or the number of lines.

When using a transfer .TKS script you must specify the /tr option for transfer.

NOTE: If you create a script that uses mapped drives it will not be readable if the server/volume name option is enabled. Likewise, scripts created with server/volume names will not be readable if the server/volume name option is set to display mapped drives. See “Displaying Server/Volumes vs. Mapped Drives” in Chapter 8 for more information.

The @ Symbol

In the command line the @ symbol <Shift 2> has a special function. This symbol tells the command you have selected to look for file specifications and parameters in a script file. The @ symbol follows the command and precedes the file where you are keeping the script:

```
tbackup @c:\path\filename
```

For example, if you wanted to back up a series of files you might type a command line that looks like this:

```
tbackup @c:\maynard\execute.bks
```

This command line will tell the backup command to expect input from a file in the \maynard subdirectory called EXECUTE.BKS. EXECUTE.BKS might look like this:

```
c:\*.exe  
c:\dos\*.exe  
c:\dos\ver\dossup\*.exe  
c:\apps\*.exe/s  
c:\prog\*.exe
```

This file may have been created by Tmenu or you may have created it yourself with an editor. In either case, the files specified here are backed up by this command. A command line may use more than one script. For example:

```
tbackup @c:\prog\execute.bks @c:\apps\myscript.bks
```

Scripts invoked with the @ symbol can be freely intermixed with file specifications and parameters on the command line.

Nesting Scripts

Scripts may also be nested. In other words you can use the @ symbol within a script to direct the command to yet another script. Using the example above, another script can be nested within the script:

```
c:\*.exe  
c:\dos\*.exe  
c:\dos\ver\dossup\*.exe  
c:\apps\*.exe/s  
c:\prog\*.exe  
@c:\maynard\execute1.bks
```

The last line of the script sends you to another script called EXECUTE1.BKS. This file may include more files to be backed up:

```
d:\word\*.exe d:\word\*.com  
d:\sy\*.exe  
d:\123\*.exe
```

Scripts can be nested up to 4 deep. If you exceed that number you will see a message telling you the maximum number of nested scripts has been reached.

Comments in Scripts

Comments can be added to scripts by using braces “{“ and “}” to enclose the comments. For example:

```
c:\*.exe  
c:\dos\*.exe {these are all of my executable files in DOS}  
c:\dos\ver\dossup\*.exe  
c:\apps\*.exe/s  
c:\prog\*.exe
```

Everything between the braces is ignored by the command. The comments placed in the script are for your own benefit.

NOTE: When using braces to insert comments you must have a space between the

file specification and the bracket.

The braces can also be useful if you decide you want to exclude a particular line (or lines) from the command. Using the example above you can prevent the execution of a single line by placing the braces around the file specification:

```
c:\*.exe
c:\dos\*.exe {these are all of my executable files in DOS}
{c:\dos\ver\dossup\*.exe}
c:\apps\*.exe/s
c:\prog\*.exe
```

The file specification in braces will not be executed by the command, but it remains in the script. If you want to add this file specification later, just remove the braces.

Command Line Parameters

All of the available command line parameters are listed alphabetically and are described on the following pages. Next to each parameter are the commands with which the parameter may be used.

[/AD:x] TBACKUP

This switch specifies the Novell files' last accessed date where *x* is the answer to the question "Only include files NOT accessed in *x* days." This switch only applies to a transfer operation invoked via Tbackup (e.g. TBACKUP C:*.old/s/tr/ad:15).

[/AP] TBACKUP

The append option adds files to the end of a tape without writing over files already stored on the tape.

[/AU:x] TBACKUP TRESTORE

The automatic verify option allows you to do a verify operation immediately after a backup or restore. The value of "n" can be any of the following:

- 0 = do not automatically verify the backup/restore
- 1 = automatically verify the backup/restore
- 2 = prompt whether the backup/restore should be verified

If "n" is not specified, automatic verification will be enabled. For example, **tbackup c:\s/au** will automatically verify the backup as will **tbackup c:\s/au:1**

If this option is set to 2 (prompt for verification) and the /YY switch is also specified, then automatic verification will take place without prompting the user. If an error occurs during the backup or restore, the automatic verify option will be ignored.

NOTE: A script file called VERIFY.BKS contains a list of files that failed to verify. When you do a backup it may be a good idea to turn on auto-verify after backup. If a VERIFY.BKS file is created when you use this parameter, you have a problem. You can view the contents of the VERIFY.BKS file to see what files failed to verify and what kind of problem was encountered.

[/-A]

TBACKUP

If the /-A option is specified the backup command will not clear the modified (backup) bit when backing up files.

The modified bit is used by DOS to keep track of which files have been backed up since they were last modified.

Be sure to specify the minus "-" in the command or this option will be confused with the append (/A) option. For example, **tbackup c:\-a**

This option should also be included in your command line if you are backing up a write-protected device.

CAUTION: If you back up with the /-A option, a subsequent backup with the /M option will back up all files modified after and before the backup which specified /-A. The /-A option prevents the backup from clearing the modified bit on modified files. These files then appear as if they have not been backed up since they were last modified. Therefore, the second backup with the /M option will back up these same modified files again.

[/BA]

TBACKUP

To add a user-defined name to the backup set.

This parameter has two options: [/BA:?] and [/BA:"_____"]. The backup set name parameter followed by a question mark will prompt you to enter a backup set name before the backup begins. For example, **tbackup c:\/b:?**

The backup set description parameter will allow you to enter a backup set description on the command line by putting the description between quotes. For example: **tbackup c:\/s/b:"All doc files"**

[/D[:mm/dd/yy][:mm/dd/yy]]

**TBACKUP
TDIR
TRESTORE
TVERIFY**

To specify backing up/listing/restoring/verifying files after a given date, before a given date, or between two dates. If no date is specified the default date (today's date), will be used. The first date is the AFTER date, the second date is the BEFORE date.

To back up all the files created in July 1990 (ON or AFTER July 1st and ON or BEFORE July 31st) you would type: **tbackup c:\s\d:07/01/90:07/31/90**

To back up files created or last modified before a given date, but not after a given date enter two colons after this parameter. **tbackup c:\s\d::10/01/90** (All files on drive C: created or last modified on or before October 1st, 1990.)

[/EM]

**TBACKUP
TRESTORE
TVERIFY**

To include empty directories in the backup/restore/verify.

[/EN]

TBACKUP

To automatically back up all of the default devices. For information on changing the default devices refer to "Default_backup_drives =" in Appendix A.

[/ER]

TENSION

To erase the information on the tape while the tape is re-tensioned. This parameter erases **all** data stored on the tape. Use it with caution. With the 2200HS\+ or the 5000, the /e/yy parameters will do a "short" erase of the 8mm tape where an end-of-file mark will be placed at the beginning of the tape to make it look blank, but the data will not actually be erased. See /LO for information on the "long" security erase.

WARNING: You will NOT be prompted before overwriting data when this option is used.

[/F]

**TBACKUP
TRESTORE
TVERIFY**

To list the files as they are backed up/restored/verified. Use this parameter to override the tape configuration file

[-F]

**TBACKUP
TRESTORE
TVERIFY**

If you do not want files to be listed, use this parameter to override the tape configuration file.

[/-H]

TBACKUP

If the **/-H** option is specified, files that are marked as hidden will not be backed up. This option will prevent files like **IBMBIO.COM** or **IBMDOS.COM** (among others), from being backed up. For example: **tbackup c:\-h**

[/IN]

TBACKUP

To back up files in use.

Files on networks that are open for write access by other workstations should not normally be backed up. However, MaynStream version 3.1 can be configured to back up files that are in-use by another DOS session or another network station. If a file was opened for “exclusive use” or “deny read”, MaynStream will still be unable to open these files and they will be handled based upon your “skip open files” options.

Backup_files_inuse is only definable through a configuration file option. The way to enable/disable this option is through editing the **MSII.CFG** file (typically found in the **\MAYNARD** directory) setting the configuration option “**backup_files_inuse = 1**” enables backing up open files, whereas “**backup_files_inuse = 0**” disables the option (default value).

MaynStream “locks” open files to prevent other sessions or network workstations from modifying the file while it is being backed up. The file remains locked by MaynStream during backup, therefore large files will be locked for a longer period of time. If the other application program attempts to write to this locked file, typically a “write error” will be produced; however, the handling of this condition is strictly dependent upon the other application program. Once MaynStream backs up the file, it will be “unlocked” and a **WARNING** message will be displayed indicating that an open file was backed up while it was in use.

If you are backing up files while they are in use, it is highly likely that files will fail to verify because their contents are possibly being changed by other applications. For this reason, you should not transfer files with this option enabled if you wish to delete files from your system. MaynStream’s transfer option will not allow you to delete files if any differences were found during the verify process.

MaynStream will “mark” files that were backed up while in-use. When restoring, verifying or listing files, in-use files will be marked with an “<I>” attribute.

[/LA]

TBACKUP

To add a user-defined description to the backup set.

This parameter has two options: [/LA:?] and [/LA:"_____"]. The label parameter followed by a question mark will prompt you to enter a backup set description before the backup begins. For example, **tbackup c:\la:?**

The backup set description parameter will allow you to enter a backup set description on the command line by putting the description between quotes. e.g. **tbackup c:\s/la:"monday's backup"**

[/LE:n]

**TBACKUP
TRESTORE
TVERIFY**

To select the logfile output level.

If the output is sent to a file or a printer, you can select from four output levels (the default is Level 1). Each successive level includes the previous level's output in addition to more directory or file detail. Level 1 includes the drive letter, the backup set number on the tape, the tape number, the tape label, the starting date and time, any errors encountered, ending date and time and completion statistics. Level 2 includes level 1 plus a list of all processed subdirectories. Level 3 includes levels 1 and 2 plus a "wide" listing of all the files processed. Level 4 includes levels 1, 2 and 3 plus file sizes, file date/time and file attributes.

Level 1 Sample:

```
Backup of C: <<No Name>>
Backup set 1 on tape 1
LABEL: "Log level 1"

Backup started on 12/24/90 at 10:00a

Backup completed on 12/24/90 at 10:00a
Backed up 11 files in 2 directories.
Processed 122,912 bytes in 3 second(s).
```

Level 2 Sample:

```
Backup of C: <<No Name>>
Backup set 1 on tape 1
LABEL: "Log level 2"

Backup started on 12/24/90 at 10:00a

Directory \

Directory \DOS

Backup completed on 12/24/90 at 10:00a
Backed up 11 files in 2 directories.
Processed 122,912 bytes in 3 second(s).
```

Level 3 Sample:

Backup of C: <<No Name>>
Backup set 1 on tape 1
LABEL: "Log level 3"

Backup started on 12/24/90 at 10:00a

Directory \
IBMBIO.COM IBMDOS.COM CONFIG.SYS AUTOEXEC.BAT

Directory \DOS
APPEND.EXE ASSIGN.COM ATTRIB.EXE BACKUP.COM BASIC.COM
BASICA.COM XCOPY.COM

Backup completed on 12/24/90 at 10:00a
Backed up 11 files in 2 directories.
Processed 122,912 bytes in 3 second(s).

Level 4 Sample:

Backup of C: <<No Name>>
Backup set 1 on tape 1
LABEL: "Log level 4"

Backup started on 12/24/90 at 10:00a

Directory \ IBMBIO.COM	23740	05-08-90	12:00p
IBMDOS.COM	30650	05-08-90	12:00p
CONFIG.SYS	154	12-24-90	9:10a
AUTOEXEC.BAT	790	12-24-90	8:12a

Directory \DOS APPEND.EXE	5810	05-08-90	12:00p
ASSIGN.COM	1530	05-08-90	12:00p
ATTRIB.EXE	10656	05-08-90	12:00p
BACKUP.COM	30738	05-08-90	12:00p
BASIC.COM	3534	05-08-90	12:00p
BASICA.COM	3534	05-08-90	12:00p
XCOPY.COM	11776	05-08-90	12:00p

Backup completed on 12/24/90 at 10:00a
Backed up 11 files in 2 directories.
Processed 122,912 bytes in 3 second(s).

[/LI]

**TBACKUP
TDIR
TRESTORE
TVERIFY**

This parameter creates an output log file. The parameter has three options: [/LI:"path"], [/LI:"path":A], and [/LI::A].

To copy the output to a file of your choice /LI is followed by a colon and the path in quotes. For example: **tbackup c:\s/li:"\wp\tbackup.doc"**

To append the output to a file instead of writing over the file, /LI is followed by a colon, the path in quotes, a second colon, and the letter A: For example: **tbackup c:\s/li:"\maynard\output.doc":a**

To append the output to the log file you defined with Configuration, the parameter is followed by two colons and the letter A. For example: **tbackup c:\s/li::a**

If the path is omitted but the file name is given, the output file will be created in the default directory (the current directory on the default device.) If the filename is omitted but the path is given, the file will be created in the specified directory with the name specified in **Configuration/Hardware Options/Output Options**.

[/LO]

TENSION

To do a "long" security erase of the data on a Maynard 2200HS+ 8mm or 5000 data cassette. Like the /er parameter, this parameter erases **all** data stored on the tape. Use it with caution. This erase could take up to two hours to perform.

[/M]

TBACKUP

To specify backing up only files that have been modified since the last back up.

NOTE: /M and /EN are position sensitive. To back up only modified files on all default drives, type: **tbackup /en/m**

If you type: **tbackup /m/en** all files would be backed up instead of only modified files.

[/NA:n]

**TBACKUP
TRESTORE
TVERIFY**

To back up/restore/verify Macintosh Appletalk File Protocol (AFP) information on Novell NetWare 2.15 or greater. "n" can be 0 or 1. If you specify /NA:0 Macintosh AFP information will not be backed up/restored/verified. If you specify /NA:1 (the default of this option), Macintosh AFP information will be backed up/restored/verified, if present.

[/ND:n]**TBACKUP**

This option resets the Novell NetWare file's date and time for each restored file. Normally after a file is backed up Novell sets the accessed date, but if you specify **/ND:1** MaynStream resets the accessed date to its original value. Configured in this fashion, MaynStream will also set Novell's "last archive date" if changing the modified bit is enabled. If you specify **/ND:0** then a backed up file will be treated as an accessed file and the file's Last Accessed Date will not be reset by MaynStream.

[/NO]**TBACKUP
TRESTORE**

To back up/restore any non-DOS partitions.

[/PAGE]**TDIR**

To have TDIR pause and prompt when the screen is full of listed files.

[/PAS]**TBACKUP**

To prompt you to assign a password to the tape before beginning the backup. There can only be one password per tape, regardless of the number of backup sets the tape contains. You cannot specify a new password for a tape if you are appending to the tape.

If the tape already has a password, you will always be prompted to enter that password first. Only after you have correctly entered the old password for the tape, will you be prompted to assign a new password if you are overwriting the data on a tape.

[/PR]**TRESTORE**

To have TRESTORE prompt you before restoring files that have changed. These changes might be new versions of the same file that have occurred since the last backup, or they could be marked "read-only" by DOS.

[/Q]**TRESTORE**

When **/Q** is used, a file that already exists on the disk will not be restored. Only files that are on the tape, and not on the disk, will be restored. This option can be useful when upgrading the operating system on a new disk, and you wish to restore all files, except the old version of the operating system.

[/S]

TBACKUP
TDIR
TRESTORE
TVERIFY

To back up/list/restore/verify all subdirectories under the specified directories.

[/-S]

TBACKUP
TRESTORE

The /-S option excludes “special” files from the backup/restore. Special files are marked with any combination of the “system,” or “read only,” attributes. This option is helpful when used with copy protection and networks. This option will prevent files like IBMBIO.COM and IBMDOS.COM (among others), from being backed up/restored. Be sure to specify the minus“-” in the command or this option could be confused with the subdirectories (/S) option. For example: **tbackup c:\-s**

[/TA]

TBACKUP

To add a user-defined name to the tape.

This parameter has two options: [/TA:?] and [/TA:”_____”]. The tape name parameter followed by a question mark will prompt you to enter a tape name before the backup begins. For example: **tbackup c:\t:?**

The tape name parameter will allow you to enter a tape name on the command line by putting the description between quotes. For example:
tbackup c:\s/t:”Monday's backup”

[/TR]

TBACKUP

This parameter provides for a Transfer operation. The selected files will be backed up, automatically verified, and you will be prompted to delete these files.

NOTE: Only a single backup copy is made. The Transfer function in Tmenu does provide the ability to create multiple backup copies prior to deleting the files.

WARNING: When used with the /YY switch, the files backed up using this option will be deleted because the deletion question will be automatically answered "YES".

[/V:n]

**TDIR
TRESTORE
TVERIFY**

To direct the command to the correct backup set on the tape before beginning the directory/restore/verify. Including this parameter is an alternative to the dialogue you will have with the command. For example, if you use the /V:n parameter with TDIR, and you mark you do not want a directory of the first backup set, you are asked, "Do you want to search for another backup set?". Replace the "n" with the number of the backup set. That is, if the second backup set on the tape contains the files you wish to list you would type: **tdir c:\s\v:2**. The default is to the first backup set on the tape. The /V:n parameter may be useful in batch files.

[/W]

TDIR

To display file names on the entire width of the screen.

[/X]

**TBACKUP
TDIR
TRESTORE
TVERIFY**

This parameter is used to exclude files that match the file specification in the advanced command.

To back up the entire drive C: but exclude all of the files in the root directory you would type: **tbackup c:\s c:\x**

In the advanced commands, included and excluded files are processed in the order they are specified for each device. For example: **tbackup c:*.* c:*.bak/x c:\fred.bak**

This would include all files in the root directory of drive C: (*.*), then exclude all files in the root directory that end with the extension .BAK (*.bak/x), but finally the file called fred.bak would be included.

The order of included and excluded files is very important. If you were to take the above example and rearrange it the outcome would be different. For example:

```
tbackup c:\*.* c:\fred.bak c:\*.bak/x
```

This would include all files in the root directory of drive C: (including fred.bak whether the file is mentioned or not), then all files in the root directory that end with .BAK would be excluded. Fred.bak would not be backed up, because *.bak/x comes after fred.bak in the command line.

[/Y]

TBACKUP
TDIR
TRESTORE
TVERIFY

This option automatically answers Yes to the first yes/no question.

If you wish to skip all Yes/No questions and begin a backup you would type:

```
tbackup c:\s/y
```

NOTE: If labels (tape name, etc.) are set to Yes, you will be prompted for them.

WARNING: Be careful using /Y with TRESTORE. You could inadvertently restore the contents of the wrong tape.

[/YY]

TBACKUP
TDIR
TENSION
TRESTORE
TVERIFY

This option automatically answers YES to all of the tbackup/tdir/tension/trestore/tverify questions and ignores all prompts for labels when used with backup.

To answer YES to all backup questions you would type: **tbackup c:\s/yy**

This option is useful in batch files.

TBACKUP Notes

Purpose

To back up one or more files from disk to tape.

Format

[d:]TBACKUP [d:][\path\[filename.ext]][/parameter]

Parameters

[/AP]	[/AD:x]	[/AU:n]	[-A]	[/BA]	[/D]	[/EM]
[/EN]	[/F]	[-F]	[-H]	[/IN]	[/LA]	[/LE:n]
[/LJ]	[/M]	[/PAS]	[/S]	[-S]	[/TA]	[/TR]
[/X]	[/Y]	[/YY]				

[d:] before TBACKUP

To specify the device that contains the TBACKUP command.

[d:]

To specify the device that contains the files you wish to back up. If no device is given the default device will be used.

[\path\[filename.ext]

To specify the directory and file(s) that you wish to back up. If no file name is given *.* in the current directory will be used.

- Wildcards are allowed in the file names and extensions.
- The TBACKUP command will display the directories and optionally the filenames, as it backs up. You will be prompted to change tapes if the tape becomes full.
- If you have named your non-DOS partitions via Tmenu, the backup set created on the tape for the non-DOS partition will have the name you specified. If, for example, you have a non-DOS partition named XENIX in Tmenu, the backup software will create a backup set called [XENIX].Px where "x" is the partition number of the XENIX partition on the hard drive. You can back up the non-DOS partition in image mode by specifying [XENIX] (in this example), as a file specification for TBACKUP.
- XENIX and UNIX device drivers are available for MaynStream. This will enable you to back up these systems in file-by-file mode. Contact Maynard's Technical Support at 800/227-6296 if you wish to obtain these drivers.
- During backup corrupt files may be encountered. These files are logged in the CORRUPT.LST file in the Maynard directory.

TBACKUP Examples

To back up your entire hard drive C: type: **tbackup c:**/s

To back up all files in the current directory of the default device, type: **tbackup**

Extended partitions are backed up by the partition number, not by a drive letter. For example, to back up a XENIX partition, type: **tbackup 0:[xenix.p0]**

TDIR Notes

Purpose

To list files on the tape.

Format

[d:]TDIR [\path\[filename.ext][parameter]

Parameters

[/D] [/LE:n] [/LI] [/PAGE] [/S] [/V:n] [/W]
[/X] [/Y] [/YY]

[d:] (before TDIR)

To specify the drive containing the TDIR command.

[\path\[filename.ext]

To specify the directory and files on the tape that you wish to display. If no file name is given *.* in the current directory will be used.

- A space is required after the TDIR command.
- Wildcards are allowed by the TDIR command.
- If you do not specify a directory, the default device's current directory will be used when displaying files from the tape. If you do not specify a file name, all file names will be displayed in the current directory. For this reason we recommend you always specify a path when using this command.
- The TDIR command is similar to the DOS Dir command, except it lists files on tapes instead of files on devices.

TENSION Notes

Purpose

To re-tension the tape TENSION should be performed after every 20 backups.

Format

[d:]TENSION [/parameter]

Parameters

[/ER] [/LO] [/YY]

[d:] (before TENSION)

To specify the drive containing the TENSION command.

TRESTORE Notes

Purpose

To restore one or more files from tape to disk.

Format

[d:]TRESTORE [d:][\path\][filename.ext][parameter]

Parameters

[/AU:n] [/D] [/EM] [/F] [/F] [/LE:n]
[/LI] [/PR] [/Q] [/S] [/S] [/V:n]
[/X] [/Y] [/YY]

[d:] (before TRESTORE)

To specify the drive containing the TRESTORE command.

[d:]

To specify the device you wish the files to be restored on. If no letter is given the default device will be used.

[\path\][filename.ext]

To specify the files you wish to be restored. If no file name is given, *.* in the current directory will be used.

- A space is required after the TRESTORE command.
- Wildcards are allowed in the TRESTORE command.
- You will be warned if the tapes are inserted out of order.
- To restore all files to hard disk C type: `trestore c:\s`

Restoring Files to Another Subdirectory

You cannot change the name of a file when it is restored to a disk, but files can be restored to different subdirectories.

For example, if you have a backup that contains files ending with the .DOC extension in a directory called WP, but you want these files restored on your disk in a subdirectory called DOC, you would type: `trestore c:\wp*.doc = c:\doc\`

The source drive and the target drive must be the same. For example: `C:*. * = C:\doc*. *` not `C:*. * = D:\doc*. *`

The equals sign `<=>` is used to redirect the restored files to the new subdirectory. The file specification (source) comes first in this command line and the path name (target directory) follows the equals sign. Dependent parameters should be placed after the source. Target directories cannot have dependent parameters. Don't specify the same files more than once. Files can only be restored to one target at a time.

Restoring Corrupted Files

Corrupted files which are backed up are listed in a file called CORRUPT.LST in your MaynStream directory. You should take a look at this list and check the status of the files before you proceed to restore them. For more information on corrupt files refer to "Handling Corrupt Files" in the Help section.

Along the same lines, the script file called VERIFY.BKS contains a list of files that failed to verify. When you do a restore, it is highly recommended that you turn on auto-verify after a restore. This option is found in **Configuration/ General Options** or you can use the `/au` parameter in your Trestore command line. If a VERIFY.BKS file is created, you have a problem. You can view the contents of the VERIFY.BKS file to see what files failed to verify and what kind of problem was encountered.

TVERIFY Notes

Purpose

To verify that the data written on the tape or disk has been recorded correctly.

Format

```
[d:]TVERIFY [d:][\path\][filename.ext][\parameter]
```

Parameters

[D]	[EM]	[F]	[/-F]	[/LE:n]	[/LI]
[S]	[/V:n]	[X]	[/Y]	[/YY]	

[d:] (before TVERIFY)

To specify the drive containing the TVERIFY command.

[d:]

To specify the device you wish the tape files to be compared to. If no letter is given the default device will be used.

[\path\filename.ext]

To specify the files you wish to be compared. If no file name is given, *.* in the current directory will be used.

- It is highly recommended that you verify after every backup and restore.
- A space is required after the TVERIFY command.
- Wildcard characters are allowed by the TVERIFY command.
- You will be warned if the tapes are inserted out of order.
- To compare all files on tape to hard disk C: type: `tverify c:\s`

Verifying Files in Another Subdirectory

Files can be verified against files in different subdirectories.

If you had a backup on tape that contained all files in a subdirectory called HOME, and you wanted to compare these files to a subdirectory on your disk called WORK, you would type: `tverify c:\home*.* = c:\work*.*`

The source drive and the target drive must be the same. For example:

`C:*.* = C:\doc*.*` not `C:*.* = D:\doc*.*`

The equals sign `<=>` is used to compare the files on the tape to the files in a different directory on the disk. The file specification (source) comes first in this command line and the path name (target directory) follows the equals sign. Dependent parameters should be placed after the source. Target directories cannot have dependent parameters.

Chapter 7

Help

You have just installed and started using your MaynStream system. If something is not working like it's supposed to, what do you do?

This chapter is designed to assist you with problems you may have while using the MaynStream system.

Using CHKDSK

If the Maynard drive or software has never worked properly follow these steps to look for the possible cause of the problem:

Boot your computer with a bootable floppy diskette so your AUTOEXEC.BAT and CONFIG.SYS files are not loaded from the hard drive. The floppy should contain a CONFIG.SYS file with files=20 and buffers=20.

Go to the directory that contains your DOS files.
Type: **CHKDSK C: <Enter>**

This will run a non-destructive test of your first hard drive. You should see a list that tells you:

```
xxxxxxx bytes total disk space
xxxxxxx bytes in x hidden files
xxxxxxx bytes in xx directories
xxxxxxx bytes in xxxx user files
xxxxxxx bytes in bad sectors
xxxxxxx bytes available on disk
xxxxxx bytes total memory
xxxxxx bytes free
```


If any unusual messages appear as a result of this check, refer to your DOS manual or see your local dealer.

Be sure you have at least 512K of memory available (bytes free). The amount available will be listed on the last line of DOS's CHKDSK.

Go to the directory that contains the MaynStream software and type: **tmenu**
<Enter>

If it now functions properly, determine what is in the AUTOEXEC.BAT file or the CONFIG.SYS file on the hard drive that is conflicting with the MaynStream software.

“Unable to Open Resource File” Message

Unable to open resource file

If you get an “Unable to open resource file” error message, the files essential to running the MaynStream software cannot be found. This may occur if you have executed Tmenu or one of the advanced commands with an explicit path and the MaynStream resource file (MSII.RES) file cannot be located. To remedy the situation type a “set” command that explicitly specifies the path to the MaynStream software. If, for example, the MaynStream software was in a directory called “tape” on drive C: type: **set msii=c:\tape**.

Non-DMA Mode

The non-DMA mode gives you the ability to use the MaynStream system on a computer without using DMA channels or interrupts. There are three reasons why you might want to use the non-DMA mode:

- 1) Some PC's do not have available DMA channels or interrupts (not a factor in PS/2 models)
- 2) Some PC's have defects in DMA controllers that prevent simultaneous use of two or more DMA channels (not a factor in PS/2 models)
- 3) Non-DMA can be used as a diagnostic tool. This is non-DMA's most useful function.

On the PS/2 use the PS/2 Reference disk to set the DMA Arbitration Level to the non-DMA mode. For information on changing the PS/2 configuration refer to Chapter 2.

To set the non-DMA mode in a PC or compatible use the **Tmenu/Configuration/Hardware Options/Controller Options**. In this menu you can select non-DMA from the list of available DMA channel settings.

Non-DMA is not a preferred mode. Every attempt should be made to resolve interrupt and DMA conflicts. The MaynStream system will not operate as quickly and tape capacity will decrease when the non-DMA mode is used.

Parity Errors

The following debug program may be used to test a memory expansion card that is suspected of causing parity errors when used with MaynStream.

1. Type: `debug <Enter>`
`o 83,A <Enter>`

If the program returns to the hyphen (-), the memory expansion card is not causing the conflict. If, however, it displays "PARITY CHECK 2," the DEBUG program may be used to create a program named NOPAR.COM which will turn off parity.

2. Type: `debug <Enter>`
`NNOPAR.COM <Enter>`
`A <Enter>`
`MOV DX,A0 <Enter>`
`XOR AX,AX <Enter>`
`OUT DX,AL <Enter>`
`INT 20 <Enter>`
`<Enter>`
`RCX <Enter>`
`20 <Enter>`
`W <Enter>`
`Q <Enter>`

3. Whenever backup is to be performed type: `nopar <Enter>`
4. Back up the drive using the MaynStream software.
5. Re-boot the computer to return to normal operations using parity.

Handling Corrupt Files

If, while performing a backup operation, DOS is unable to read a file successfully (after performing several retries), MaynStream will consider the file as corrupt on the disk. MaynStream will display a warning message informing you that a corrupt file has been found. MaynStream will then attempt to salvage as much of the file's contents as is feasible. Corrupt files found during backup are listed in a special log file called CORRUPT.LST (in the MaynStream directory).

MaynStream denotes corrupt files with an additional "<C>" attribute during file selections from tape or directory listings.

If a CORRUPT.LST file exists in your MaynStream directory at the start of a restore operation, MaynStream will warn you of its presence. You should view the contents of this file, and take corrective steps to "repair" your file(s) and/or hard disk. Once the problems have been corrected, the CORRUPT.LST file should be deleted.

During backup you may receive the message "Corrupt file found - retry?". If you answer N to this question there is a chance that the corrupt file may be backed up. Answering No causes the MaynStream software to read a smaller portion of the file in an attempt to bypass the corrupt area and preserve more data.

MicroChannel Help

If your Maynard drive has never worked in the MicroChannel Computer, or it worked for a while but now has stopped working, it may be that the computer has not been properly informed of the Maynard adapter. During the MaynStream MicroChannel computer installation an .ADF file is added to the Reference Disk to tell the system that MaynStream has been installed.

1. Place your backup copy of the Reference Diskette in drive A:. Be sure this copy includes the MaynStream .ADF file.
2. Turn on the computer. You will see:

1. Learn about the computer
2. Backup the Reference Diskette
3. Set configuration
4. Set features
5. Copy an option diskette
6. Move the computer
7. Test the computer

Select option 3 "Set configuration."

3. You will see:

1. View configuration
2. Change configuration
3. Backup configuration
4. Restore configuration
5. Run Automatic configuration

4. Select option 1 "View configuration."

You will see a listing of each installed option. Find the MaynStream description that looks like this:

Slot x - MaynStream Tape Adapter
Adapter Address.....[FF70 to FF77]
DMA Arbitration Levels.....[Level 1]
Interrupt Level.....[Level 5]

If the MaynStream adapter is not being recognized re-install the MaynStream adapter and software.

Hardware Help

If your MaynStream system has been working properly but now has stopped working, works in an unexpected manner, does not provide access to the MaynStream configuration file or the script files; the following steps may identify the possible cause of the problem:

1. Be sure the Maynard card, drive and cables are secure and properly attached.
2. Try erasing a tape and then try again.
3. Try a different tape.
4. Check for any changes you may have made to the computer including:
 - Added card (especially a second Maynard card)
 - Changed versions of DOS
 - Added a new software package

Here are some other possible **hardware related** problems:

- The Maynard drive is making unusual noises.
- The fan on the back of the Maynard drive does not seem to be working.
- You attempt to back up your computer and when you give the command the Tape Backup light on the front of the Maynard drive does not come on, and nothing happens.

Check to make sure the cables are properly attached to the Maynard controller and the Maynard drive. Clean the heads of the tape drive.

Troubleshooting and Error Messages Chart

The following chart lists problems and error messages you may encounter, and their solutions. Error categories included are: Catalog, Fatal, File, Hardware, Memory, Network, Password Database, Resource File (MSII), Tape, and Tmenu/Tbackup.

If you don't find your problem on this chart, or the solution suggested here does not solve the problem, please contact Maynard Technical Support.

Symptom	Problem	Solution
---------	---------	----------

Catalog

Error Message: "Fatal Cataloging Error..."	When backing up a NetWare fileserver, you can verify the backup but can't use the catalog when trying to catalog large directory trees.	If you have a subdirectory path that requires 135 characters to display, or if your subdirectory tree extends more than 63 levels from the "root" (SYS:), you may prevent the Cataloging error by disabling Cataloging for the backup session that includes this path. If you have a MaynStream DAT, you may not be able to backup a subdirectory tree larger than 64 levels. You should split the tree, if possible, into more manageable "branches". These limitations are being addressed in a future release of MaynStream.
Error Message: "Unrecoverable catalog error: n". Following are the values for "N".	MaynStream encountered a problem when using the disk based catalog.	
0x40b	There are not enough file handles available.	Modify the FILES= line inside your workstation's CONFIG.SYS file to at least 20. Re-boot and try the operation again.
0x40e	The software is loaded on the Novell server without write rights.	Give the user write rights to the MAYNARD subdirectory.
0x410	The disk based catalogs could be corrupt.	Re-start the application and compact the catalogs.
0x412	A DOS disk file seek error has occurred during a read operation from the catalog.	Re-start the application and compact the catalogs.
0x415	Memory corruption has been detected.	Re-boot the system and try the operation again.

Symptom	Problem	Solution
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0x416	At least one of the five files that comprise the catalog are missing.	Restore the last backup that was made of the catalog files.
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Fatal

Error Message: "Fatal Error on MaynStream 1".	An error was detected in the MaynStream system.	Exit the Tmenu application at once. Re-enter the application by typing TMENU/ZL. You will notice a debug window in the middle of your screen when the program comes up. Try the operation that caused the error again and locate the last occurrence of "Device error =" in the debug window and find the code in the symptom column. If you are not able to determine the error code from the window, view the debug.log file in your Maynard directory.
---	---	---

NOTE: If the "Ret Val =" field equals -520, match the "Device Error" code listed below in the Symptom column. If the "Ret Val =" field does not equal -520, contact Maynard Technical Support for assistance.

Device error = 0	The operation was completed without an error.	This is not an error code.
------------------	---	----------------------------

Device error = 1	A device timeout occurred.	Check the cabling and termination (if SCSI) on the drive.
------------------	----------------------------	---

Device error = 2	This error is typically encountered when the tape is spanned during the backup. This is typically not a problem.	Exit Tmenu, re-start the application and try the operation with a new tape.
------------------	--	---

Device error = 3	Bad data was read from the tape.	Tension the tape and retry the operation. If the problem occurs during backup, replace the tape.
------------------	----------------------------------	--

Device error = 4	No tape was found in the drive.	This is not an error code. Insert a tape to continue with the operation.
------------------	---------------------------------	--

Device error = 5	A Filemark was found.	This message is returned when the end of the bakup set is encountered. This is not a fatal error.
------------------	-----------------------	---

Symptom	Problem	Solution
Device error = 6	MaynStream attempted to read data from the tape but the drive reported that no data was found. The data on the tape could be corrupt.	Tension the tape and retry the operation.
Device error = 7	Invalid command sent to drive.	Check the cable and termination.
Device error = 8	Drive reset detached.	Check the cable and termination.
Device error = 9	1) The tape is write-protected. 2) There is a problem with the drive.	1) This is not a fatal error. Un-protect the tape if an overwrite is desired and try the operation again. 2) If the tape is not write protected, your drive may be faulty. Contact Maynard Technical Support for further instructions.
Device error = 10	The tape drive reported a hardware failure.	Check the cables and termination. Replace the tape and retry the operation.
Device error = 11	A hardware or software error occurred.	Contact Maynard Technical support.
Device error = 12	Physical end of media was detected.	Replace the tape and retry the operation.

Symptom**Problem****Solution****File**

Error Message:
"File xxxxxxxxx
is different".

File attributes have
changed between the
time the file was
backed up and
verified.

The file that shows as different might have
been changed by someone at another
workstation since the backup. If you know
this is true, then your backup is good. If this is
not true, your backup is suspect. Back up the
data again and verify it to be sure it is good. A
"Contents verified okay" message will indicate
a valid backup. If you are unsure of the file,
restore it to a directory and use the DOS
compare program "comp" to verify that the
file is actually different. To check for a hard
drive problem, copy the file to NUL or run
DOS's chkdsk /f if the drive is not a server.
Clean the heads on the Maynard drive.

Error Message:
"File x in use -
skipped".

The MaynStream
configuration file has
been set to skip files
that are open.

Go into Configuration/H/W Options/Network
Options and change "Skip OPEN files?" to
No.

Error Message:
"File x in use -
waiting".

The MaynStream
configuration file has
been set to wait for
open files to close
before it can back up
the file.

Go into Configuration/H/W Options/Network
Options and change "Skip OPEN files?" to
Yes.

Error Message:
"File not found on
disk".

The file on the tape
does not exist on the
drive.

The wrong path or file name may have been
entered into the command line, or if you are
using a backup script, the file in the script may
not be on the drive.

The number of
files backed up do
not match the
number of files
verified.

Not a problem if the
condition is one of the
situations listed in the
solution column.

1) There are five MaynStream catalog files
located in the MaynStream directory that are
not verified, so whenever this directory is
included in the backup, the number of files
will not match.

2) If you are backing up NetWare 386
binderies, there will be 3 files that will not
match (NET\$PROP.SYS, NET\$VAL.SYS and
NET\$SORJ.SYS).

Symptom	Problem	Solution
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Hardware

<p>Error Message: “Inconsistent Hardware Parameters Defined”.</p>	<p>MaynStream 3.1 is installed over a previous version of MaynStream.</p>	<p>MaynStream 3.1 is trying to read the previous hardware settings from the configuration file MSII.CFG. To correct the problem, select the proper MaynStream controller under Hardware Options and save the configuration. This will re-create the MSII.CFG file with the proper hardware settings.</p>
<p>Computer locks up with an Adaptec 1542 controller.</p>	<p>Wrong parameters are set for the controller card.</p>	<p>Try placing one of the following parameters after the ASPI4DOS.SYS statement in your CONFIG.SYS file (/F) (/F64) (/NO2). For further help refer to your Adaptec documentation.</p>
<p>Error Message: “Unable to determine DMA or IRQ channel”.</p>	<p>1) There is a conflict with another card in the system.</p> <p>2) Bad DMA chip.</p>	<p>1) Make sure no other cards in your system are using the same settings as your Maynard controller and try different DMA and IRQ settings on the Maynard controller card.</p> <p>2) Check the DMA controller chip in your computer. If it is an AMD8237 or 9517 with a masking date falling between 1979 and 1981, replace it with a known good DMA controller chip.</p>
<p>MaynStream will not allow me to append backup set to a tape.</p>	<p>Power to the tape drive was interrupted during the last backup.</p>	<p>The MaynStream software was not able to write a file mark on the tape because of the power loss. You will not be able to append to this tape, however, you can overwrite the data on the tape.</p>
<p>Error Message: “Parity errors detected”.</p>	<p>1) The backup is probably good. Most likely MaynStream tried to free the buffer pool.</p> <p>2) Video Flicker may be causing the error.</p> <p>3) Intermittant bus slot.</p>	<p>1) Verify the backup. If it verifies okay then the backup is okay. If it does not verify check the memory in the computer. Other things that may generate this message are screen flicker and an intermittent bus slot.</p> <p>2) Change your answer to the flicker question in the Tmenu configuration.</p> <p>3) Move the Maynard controller to a different slot closer to the power supply. Otherwise, the computer should be checked out by a service center.</p>

Symptom	Problem	Solution
Error Message: "Unable to create file x".	1) Your hard disk is full.	1) Free up some space on your hard disk and try the operation again.
	2) You don't have rights on your network to create a file.	2) Get the appropriate rights for the drive/directory where the MaynStream software is located.
	3) The file is read-only and exists on the disk.	3) Flag the file as Read-write to overwrite the file.
	4) There is a mapping problem on the network.	4) Make sure your drives are mapped correctly.
Error Message: "Unable to open file x - skipped".	The MaynStream software is unable to open a file on the disk.	The MaynStream software will either wait for the file to be closed or skip the file. Make sure you have sufficient rights to the file or directory.
Error Message: "Unable to read extended file information for file".	A network disk error is encountered.	The backup will continue, but upon completion, you should run Novell's VREPAIR to correct this disk error.

Symptom	Problem	Solution
---------	---------	----------

Memory

<p>Error Message: "Insufficient Memory".</p>	<p>Not enough memory available for the operation.</p>	<p>Tmenu requires 512K of available memory. If you cannot free more memory, use the MaynStream command line programs. If you have an expanded memory manager loaded, make sure the MaynStream software is configured to use expanded memory in MSII.CFG. This load approximately 30K of resource information into expanded memory.</p>
--	---	--

You may also get the "Insufficient memory" message if available disk space on your hard drive is getting low. MaynStream defaults to using Virtual Memory, which treats disk space as if it were RAM. If you receive the Insufficient Memory message and you suspect that you have limited available space on your hard drive, you can turn off Virtual Memory by editing the MSII.CFG file. Change the setting from "Virtual_memory = 1" to 0, which will disable Virtual_memory.

<p>Error Message: "Fatal virtual memory error - x"</p>	<p>1) There is not enough space on the disk.</p>	<p>1) Exit the application and check your available disk space. You should have at least 1 MB free on the disk, if not, free up some disk space and try again.</p>
	<p>2) Bad clusters were located on the disk.</p>	<p>2) Run a disk diagnostics program (i.e., CHKDSK /f) to search for bad clusters. Have the program clean up the bad clusters and try the operation again.</p>
	<p>3) Virtual memory is interfering with the operation.</p>	<p>3) Turn off virtual memory temporarily. Change the MSII.CFG file setting in the "Virtual_memory = 1" field to 0.</p>

Symptom	Problem	Solution
Network		
Error Message: “Unable to attach to server (name)”.	MaynStream was unable to log into the specified server because:	
	1) the server crashed.	1) Try to run the operation again when the server is up again.
	2) the Supervisor has disabled login.	2) Try to run the operation again when the Supervisor has enabled login again.
	3) the maximum number of connections for the server has been reached.	3) Try to run the operation later when the server has connections free.
	4) an invalid name/password combination has been supplied.	4) Check to make sure that the name/password combination you have is correct for the server you are logging into.
	5) the workstation network card has failed.	5) Make sure network cables are connected properly and that the network card is not faulty.
Error Message: “Unable to obtain server (name)’s address on network”.	MaynStream was unable to determine the internet network address of a server for remote login.	Check the NetWare bindery to see if it is corrupt. For more information on checking the bindery, refer to your NetWare documentation.
Error Message: “Unable to login to server (name)”.	The server name/password information in the password database file was incorrect.	Provide the correct information at this time to update the password database file.
Error Message: “Unable to logout from server (name)”.	The bindery files may be closed.	Contact your network administrator.

Symptom	Problem	Solution
Error Message: "Error in novell.nks network script".	1) The wrong network was selected in the MSII.CFG file. 2) The Novell.NKS script is corrupted.	Re-install the MaynStream software and try the operation again. Make sure the "set msii" statement in your AUTOEXEC.BAT file is pointing to the drive\directory that contains the MaynStream software.
Error Message: "Unable to restore security information for directory x".	The security information was not backed up because you were not logged in as Supervisor.	For these files to be backed up, you must be logged in as Supervisor or equivalent.
Error Message: "Unknown Attachment Error: x".	1) The remote workstation is not on and/or does not have IsleLAN running. 2) The remote workstation is hung. 3) The host workstation is hung.	1) Make sure the remote workstation the operation is being performed on is up and has IsleLAN running. 2) Reboot the remote workstation. Remove other TSRs running in the computer. 3) Reboot the host workstation. Remove other TSRs running in the computer.
Computer hangs when IsleLAN or MaynLAN is run.	NRL_dos_vector settings need changing.	Change the NRL_dos_vector setting from 60 to 61 in the IsleLAN.CFG file. If the problem occurs on the workstation directly connected to the tape drive, change the setting in both the MaynLAN.CFG and the MSII.CFG files.
Error Message: "Unable to restore trustee information".	1) The trustee information was not backed up. 2) No trustee information exists for the directory you selected. 3) You did not login as the supervisor.	1) For these files to be backed up, you must be logged in as Supervisor or equivalent, and the SYS volume must be included in the backup. 2) Do not choose to restore to a directory different from the original backup. 3) Login as Supervisor.
Read and write audit bits are not set following backups of a NetWare 3.1 server.	This is not an error message. MaynStream does not support the Read or Write Audit bit on a Netware 3.1 server.	

Symptom	Problem	Solution
Message: "Invalid Source Path".	MaynStream is set up to display server/volume names and you have a script or batch file attempting to process a NetWare mapped drive.	Disable the "Display Novell servers instead of mapped drives" option under Configuration/HW Options/Network Options, or update your script file to look for server/volume names instead of mapped drives.

Password Database

Error Message: "The Password Database is Full. Increase the value of "Max_PDbase_Entries" in MSII.CFG".	The value of the "Max_PDbase_Entries" is not large enough to accommodate all of the entries you are trying to make.	Delete your existing MSII.PWD file and modify your MSII.CFG file with an ASCII text editor. Increase the value of the "Max_PDbase_Entries" option. The values for this field are in hex. The default is 32 (50 entries). Try 40 which will give you 64 entries. Re-create your password database.
Error Message: "Error accessing Password Database".	MaynStream could not access the Password Database.	Quit and restart Tmenu and try the operation again. If the problem continues, you will need to delete the password database file (MSII.PWD) through DOS and re-create it.
Error Message: "Error reading Password Database".	MaynStream was unable to find the MSII.PWD file or an error occurred that would not allow the file to be read.	Quit and restart Tmenu and try the operation again. If the problem continues, you will need to delete the password database file (MSII.PWD) through DOS and re-create it.
Error Message: "Error writing to Password Database".	MaynStream was unable to find the MSII.PWD file or an error occurred that would not allow the file to be written to.	Quit and restart Tmenu and try the operation again. If the problem continues, you will need to delete the password database file (MSII.PWD) through DOS and re-create it.
Error Message: "Unknown Password Database Error".	An error occurred with MSII.PWD file.	Quit and restart Tmenu and try the operation again. If the problem continues, you will need to delete the password database file (MSII.PWD) through DOS and re-create it.

Symptom**Problem****Solution****Resource File**

Error Message:
"Error x loading
resource file:
"C:\MAYNARD\
MSII.RES".

MaynStream was
unable to initialize the
system with the
MSII.RES file that
was found. The file is
probably corrupt.

Check the hard disk for any possible problems
and re-install the MaynStream software.

Error Message:
"Error opening
resource file:
C:\MAYNARD\
MSII.RES".

1) The MSII
environment variable
is not set to the
current MaynStream
directory.

1) Make sure the "set" statement in your
AUTOEXEC.BAT file contains the MSII.RES
environment variable, for example:
set MSII=C:\MAYNARD.

2) The MSII.RES file
is missing from the
MaynStream
directory.

2) Re-install the MaynStream 3.1 software in
your system.

3) The resource file
that MaynStream was
trying to use is from
another version of the
software.

3) Re-install the MaynStream 3.1 software in
your system.

Unattended
backups do not
work properly.

The MSII.SCD
resource file must be
updated from previous
versions of the
MaynStream software.

Re-schedule your jobs with the 3.1 Autoback
program for the time and days you wish them
to run. This will update the MSII.SCD file.

The MaynStream
software doesn't
recognize my
default drives.

The Default_backup_
drives option in the
MSII.CFG resource
file has changed.

Make sure additional lines with the drive
letters are not preceded by a space. The +sign
needs to be the first character. For example:
default_backup_drives = C
+D
+E

Symptom	Problem	Solution
Tape		
Error Message: "Tape positioning error on MaynStream x".	An error occurred while positioning to a set on tape.	First try exiting the application, re-boot your system and try the operation again. If that does not work, Tension the tape.
Error Message: "Unexpected end of backup set encountered on MaynStream x".	MaynStream encountered an error at the end of a set where <Ctrl + Break> was pressed to terminate a tape function.	First try exiting the application, re-boot your system and try the operation again. If that does not work Tension the tape.
Error Message: "The tape in MaynStream x is foreign and cannot be read".	The tape is recognized by the tape drive, but the application cannot determine the format of the tape's data. The tape was probably used by a different software package and/or operating system.	First try exiting the application, re-boot your system and try the operation again. If that does not work, the data on the tape cannot be accessed; you can use the tape again by erasing it with the TENSION /E /YY command. <i>CAUTION:</i> Using the TENSION /E /YY command will delete all data from the tape.
Error Message: "Fatal tape format inconsistency on MaynStream x".	The current data block that was read was not a MaynStream control block. The information that was recorded to tape may have been corrupted, or the data on tape could be damaged.	First try exiting the application, re-boot your system and try the operation again. If that does not work Tension the tape and retry the operation. <i>NOTE:</i> You should ALWAYS verify your data after a backup to make sure it is not corrupt.
Error Message: "Unable to read tape".	1) You have an IRQ or DMA conflict. 2) The tape is bad. 3) The tape drive's heads are dirty or out of alignment.	1) Check your DMA and IRQ settings to be sure there is not a conflict in the system. 2) Tension the tape and try the operation again. 3) Clean the heads with a Maynard cleaning kit. If that does not solve the problem, contact Maynard Technical support.

Symptom	Problem	Solution
Error Message: "Fatal translation error on tape in MaynStream x".	If encountered during a backup operation, the path size for a file being written to tape exceeds the maximum block size of the tape drive (1024 bytes for 8mm and 512 bytes for other drives). If encountered during a read operation there is corrupt data on the tape.	Re-organize the directory structure on the disk.

Tmenu/ Tbackup

Tmenu locks up.	<p>1) Jumper settings have been changed.</p> <p>2) Non-DOS partition names have been changed in the MSII.CFG file.</p>	<p>1) Specify the Maynard card configuration in the MaynStream software. Do this by typing "Tmenu/C" from the command line. This will take you to the Select Controller option in the software. Once you have selected the type of controller you have, choose Controller Options and specify the MaynStream controller configuration to match your hardware settings. (This procedure only pertains to ISA controllers.)</p> <p>2) Non-DOS partitions must have more than one character in the field in the MSII.CFG file (i.e., XENIX not X).</p>
Pressing CTRL-BREAK may cause ^C characters to scroll off the screen.	Pressing CTRL-BREAK when it is not an available option will cause this condition.	Only press CTRL-BREAK to stop a tape function when it is shown as a valid option on your Tmenu screen.

Symptom	Problem	Solution
Error Message: "Directory x not found".	<p>1) The specified directory does not exist.</p> <p>2) You are using an old script file which does not contain the directory.</p> <p>3) There is a mapping problem on the network.</p>	<p>1) Check to see if the directory still exists.</p> <p>2) Make a new script file for the operation.</p> <p>3) Check to make sure you are mapped to the directory.</p>
Directory paths with long names are not restored.	MaynStream can only restore paths up to 64 characters in length.	<p>There are 3 ways to restore this information:</p> <p>1) Using Tmenu, go to Restore and move the cursor to Select. Go to the directory you want to restore and highlight it with the spacebar.</p> <p>2) Using Tmenu, go to Restore and move the cursor to Select. Go several levels deep to where the path will fit in the pop up include (<+>) window. The path should be limited to 64 characters.</p> <p>3) From the command line you can use the Trestore command.</p>
Tbackup is not backing up all of the files in my script.	Drive letters that have been selected may not be available at the time of the backup.	<p>Type out the actual script file [scriptfile].BKS and match it with your NetWare mapped drives. Make sure the drive mapping matches your script file.</p> <p>If they match, Try placing the /yy parameter in front of the script file you are using. For example: Tbackup/yy @Friday.BKS.</p> <p>If they do not match, update your script file.</p>

Customer Support

There is a support network that consists of you, your authorized dealer, and Maynard Electronics, Inc.

At Maynard, the service doesn't stop once you've purchased one of our products. We understand how important it is for your system to remain at peak performance. So when you need more help or more information where do you turn?

First consult the documentation and literature that accompanies the product. Most questions can be answered by referring to this information. Be sure the product you have purchased is compatible with the operating system, interface cards, and other peripherals in your computer.

Contact the dealer from which you purchased the system. These dealers have been carefully selected by Maynard Electronics, Inc. because of their commitment to their customers. They can help you not only with this system but they are also more familiar with your particular computer.

If your dealer is unable to help you, we suggest you contact the Technical Support department at Maynard Electronics. This is a skilled and experienced group of people whose major responsibility is to answer questions about all Maynard products. If your dealer cannot resolve your questions call Maynard Technical Support Department to discuss the problem. The number is 407/263-3500 or call 800/227-6296 if you have a quick question. If you must return a product for service you will be given a Return Authorization Number.

Obtaining a Return Authorization Number

In a continuing effort to provide our customers with the best service and shortest turn-around time possible, Maynard has initiated the following Return Authorization (RA) Policy.

It is the policy of Maynard that all material and repair returns, whether in warranty or not, will only be accepted at the Maynard Return Center if an RA number covering the products being returned has been issued. Any unauthorized returns will be re-shipped, unrepaired, to the customer at the customer's expense.

The conditions of the Maynard warranty are as follows:

Maynard reserves the right to determine if a repair is subject to the warranty agreement. Damage caused by products being dropped or mishandled is not covered by the warranty. Opening a Maynard cabinet may void the warranty. Any unauthorized modification of any controller card or drive is not covered by the warranty, and repairs will be charged for under the standard repair cost structure. Transit damage caused by inadequate packaging also invalidates the warranty agreement. **Suitable packaging may be purchased from Maynard at a nominal cost.**

An RA number is required to return product to Maynard. The RA number must be clearly printed on the outside of the box. All products are to be returned to Maynard shipping pre-paid. For insurance reasons, Maynard cannot accept any product that is returned via the U.S. Postal Service. Returns will be accepted from UPS, Federal Express, or a comparable freight carrier.

Maynard will return product via a pre-paid two day delivery service within the continental United States only if products are under warranty and subsequently found to be faulty. Out of warranty, repaired products will be shipped at the customer's expense. Turn-around time for warranty repairs will not exceed 48 hours (not including shipping time), unless extraordinary fault conditions exist. A report form with the failure analysis will be returned with each product.

RA numbers may be obtained from the Technical Support Department by telephoning 800/227-6296 or 407/263-3500, during the hours of 8:30 a.m. to 8:00 p.m. EST, Monday through Friday.

The following information will be required prior to the issuance of an RA number:

- Company name (if applicable)
- Shipping address (do not give a P.O. box)
- Telephone number
- Detailed explanation for return
- Serial number of each product being returned
- Payment method, if out of warranty

Only the products listed on the RA form will be accepted at the Maynard Return Center. Any other product will be returned to the customer, unrepaid, at the customer's expense. A copy of the original invoice showing serial numbers may be required as proof of purchase.

Send all returns to:

Maynard Electronics Inc., Return Center
37 Skyline Drive
Lake Mary, FL 32746
Attn: RA: XXXXX

Limited Warranty

Maynard Electronics, Inc. warrants each of its products to be free from defects in materials and workmanship as follows: five (5) years from the date of purchase on any Plug-in Card, Board, or Module; one (1) year from the date of purchase on any Tape Backup System, Cabling, or other Maynard product not covered above. During these warranty periods, Maynard, at its option, will repair or replace product or product components which in its opinion prove defective.

This warranty service will be provided at no charge to the registered owner other than shipping and handling, provided the product is returned prepaid to an Authorized Maynard Electronics Service Center, or to Maynard Electronics, Inc., 37 Skyline Drive, Lake Mary, Florida 32746. Maynard will return the repaired product via a like carrier, within the continental United States within 48 hours, shipping time excluded.

Maynard reserves the right to determine whether a needed repair is subject to the Warranty as per its provisions stated herein. Transit damage caused by inadequate packing invalidates this Warranty.

All products returned for repair or replacement must be accompanied by a Return Authorization (RA) number which must be written clearly on the shipping package. See the previous section "Obtaining a Return Authorization".

This Warranty will not be effective if, in the opinion of Maynard the product in question has been damaged through accident, misuse, misapplication, or as a result of service or modification other than by an Authorized Maynard Service Center.

Chapter 8

Network Considerations

MaynStream is compatible with these networks:

- IBM PC Network
- Novell NetWare 2.0 or later
- Novell NetWare 386 Version 3.0 or later
- Novell NetWare Lite
- 3COM

Remote drive backup supports Novell networks 2.0 and greater and all networks using NetBIOS protocol.

Displaying Server/Volumes vs. Mapped Drives

One of the newest features of the MaynStream software is the ability to display either server/volume names or mapped drives on Novell networks. This option can be found in Tmenu in the **Configuration/ Hardware Options/Network Options** as “Display Novell servers instead of mapped drives?” or in the MSII.CFG file as `Display_novell_servers =`.

When set to display server/volume names, you have the ability to select all known servers and volumes on the internet. Prior to starting MaynStream, you do not need to be logged into a server to access that server. MaynStream automatically prompts you for the network user name and password for any server to which you are not logged in. At the end of the MaynStream session (or if you abort an operation) you are logged out of the server. This automatic login/logout feature provides maximum security for unattended backup of NetWare networks, eliminating any potential security breach.

User-supplied user names and passwords can be kept in an encrypted database. This makes automatic login/logout and unattended backup using the command line, even easier. This database is enabled by answering **Yes** to the “Maintain a Server and IsleLAN Password Database?” question found in **Configuration/ Hardware Options/Network Options**.

One of the advantages of displaying server/volume names instead of mapped drives are that you no longer need to be concerned with mapping. The limitation of 26 available mapped drive letters and Novell's limit of 8 server connects are no longer concerns. The issue of network security is also a highly desirable feature of server/volume name display.

This version of MaynStream allows users who have created extensive MaynStream batch files and script files with earlier versions of MaynStream to still use those files by displaying mapped drives instead of server/volume names.

Novell Network Installation

The following instructions outline installing the MaynStream software on a network workstation. It is recommended that only Supervisors install the MaynStream software on the server.

1. Place the diskette labeled “MaynStream Installation” in drive A:.
2. From the C: prompt type:

```
A: INSTALL [drive:\path] <Enter>
```

Typing **INSTALL** will install the MaynStream software on drive C: in the \maynard subdirectory.

Typing **INSTALL [drive:\path]** is an optional way to install the MaynStream software in the drive and subdirectory of your choice.

3. A screen welcoming you to the MaynStream installation will appear. Type 1 to install the software or 2 to exit the installation program.
4. You will see this prompt:

```
Should MaynStream default to having the ability to back up  
IsleLAN network workstations? (Y/N) Y
```

The option defaults to “Yes”, so press <Enter>.

NOTE: If you do not have a network interface (IPX or NETBIOS) running, MaynStream will ask which you want to install. Choose 1 for IPX, or 2 for NETBIOS. If you are unsure which interface to choose, contact your network administrator. If you are using the NETBIOS interface, enter the name of your backup workstation and press <Enter> when prompted.

5. The software will tell you which drive\directory the software will be installed on. If the path is correct, press <Enter> or N to exit the installation program.
6. You will be asked if you want to create a TMENU.BAT file in your root directory. This file will allow you to start TMENU from your root directory. Press 1 to create the file, 2 to skip the step or 3 to quit the installation.

7. You will then be asked if you wish to update your CONFIG.SYS file to allow optimum performance for MaynStream. Press 1 to update the file, 2 to skip the step or 3 to quit the installation. If you do not have a CONFIG.SYS file, MaynStream will create one for you.

When the INSTALL procedure is complete you will be able to run the MaynStream software from your hard drive.

MAPPED DRIVES NOTE: If you have mapped drives active instead of server/volume names, the network supervisor should map a drive to the root (sys:) of the server to back up the entire network. (Multi-volumes will require a drive mapped to the root of each network volume.) If no local hard drive is present, or if you do want the software installed on the server, then follow these steps:

1. Install the MaynStream software on the desired drive and directory. For example, to install the software on drive M: in the \TAPE subdirectory insert the MaynStream installation disk and type: **A:install m:\tape <Enter>**

M:\ should be mapped to sys: on the network. If this drive is not mapped to sys: you will only be able to back up the directories that are descendants of the M:\TAPE directory.

NOTE: You can install the software to any drive and directory to which you have rights. If you type **m:**, the software will be installed in the \MAYNARD directory on drive M:.

2. Answer **No** when prompted to create the TMENU.BAT file unless you are installing to a non-dedicated server. In the case of a non-dedicated server TMENU.BAT would allow you to back up remote workstations.
3. Answer **No** when prompted to update/create the CONFIG.SYS file. NetWare does not use a CONFIG.SYS file.
4. Map the next available “search drive” to the MaynStream directory by adding the following line to the Supervisor login script:

```
map insert s9:=sys:tape
```

“s9” is the last search drive specified plus 1. If there is no existing login script make sure you have a search drive mapped to **sys:\public**.

5. Add this line to the Supervisor login script:
DOS SET MSII = “m:\\tape”

Note the space after MSII and after “=”. For a complete path both the double backslashes and the double quotes are needed.

NOTE: To add the above lines to the Supervisor login script use Novell's SYSCON utility.

Novell Network Mapping

When you start MaynStream on a network, a check is made of your rights. MaynStream abides by the rights assigned to each user. If you do not have sufficient rights to a directory you will not be able to back up or restore files in that directory. Below are each of MaynStream's main functions with the network rights needed to perform each function:

NetWare 286

BACKUP

Open existing files
Read from open files
Search the directory
Modify file attributes (if you are changing the archive bit)
Parental rights (if you wish to back up trustees)

NetWare 386

Read from open files
File scan
Modify file attributes (if you are changing the archive bit)
Access control rights (if you wish to back up trustees)

TRANSFER

Open existing files
Read from open files
Search the directory
Delete existing files
Parental rights (if you wish to back up trustees)

Read from open files
File scan
Erase existing files
Access control rights (if you wish to back up trustees)

RESTORE

Open existing files
Write to open files
Create (and open) new files
Search the directory
Parental rights (if you are restoring a new subdirectory)

Read from open files
Create (and open) new files
File scan
Access control rights (if you're restoring a new subdirectory)

VERIFY

Open existing files	Read from open files
Read from open files	File scan
Search the directory	Access control rights (to
Parental rights (to verify	verify trustee information)
trustee information)	

DIRECTORY OF TAPE

No rights required.

Using MaynStream on the Novell Network

Using the MaynStream software you can back up any directories for which you have sufficient rights. MaynStream will back up the following:

- programs and data
- DOS file attributes (hidden, read-only, system, modified, etc.)
- extended file attributes
- directory security information including maximum rights mask (Inherited rights mask for NetWare 386) and trustee information. (You must log in as a supervisor, supervisor equivalent or workgroup manager.)
- Macintosh AFP files (if AFP configuration is enabled)
- hidden files (if enabled)
- bindery information (You must log in as a supervisor or supervisor equivalent)

NOTE: If you are a supervisor or a supervisor equivalent and you are backing up the sys: directory (or a drive that is mapped to the sys: directory), you will be asked if you want to back up the bindery.

The Command Line and Networks

The command line structure can also be used to back up network files.

If you chose to display NetWare servers instead of mapped drives, the MaynStream command line uses a double plus (++). The server/volume command line looks like this:

```
++[servername/volume:][\path\][filename][/parameter]
```

For example, to back up all of the directories and files in the “Acc” server with the “credit” volume you would type: **tbackup ++acc/credit:\ /s**

You do not have to be logged into the server to back up. If you are not logged in you will be prompted to enter your user name and network password (unless it is already in the password database). When the tape function is terminated (either normally or by a <Ctrl Break>), you are logged out of the server.

If you have MaynStream set to display mapped drives, what is backed up depends on the mapping. If you back up a drive that is mapped to the root directory you will back up the entire network volume. If you back up a drive that is mapped to a single directory you will only back up that directory, and any subdirectories, if selected.

Password Protecting the Automatic Login Feature

MaynStream provides the capability of “locking” the Automatic Login Feature to prevent unauthorized MaynStream access to NetWare servers and remote drives on local workstations. When this feature is enabled, a password is required to allow automatic access to NetWare servers and remote drives for Tmenu, Autoback, and command line operations. If the correct password is not entered, MaynStream operations can be performed on secured servers and remote drives, but the appropriate user names and/or passwords will have to be given.

To install the lock, perform the following steps:

1. At your DOS prompt, type **TMENU /LOCK** then **<Enter>** to start the software.
2. At the following prompt, enter a unique password and press **<Enter>**.

```
Enter Password
Enter a password to prevent unauthorized
automatic login to NetWare servers and remote
drives:
```

NOTE: This password does not have to be the same as the one you use to login to the network.

3. When prompted, re-enter the password to confirm that it is correct and press **<Enter>**.

Your password is now in place and the automatic login protection feature has been enabled. Whenever you start MaynStream, either through Tmenu, Autoback, or using the command line interface, you will be prompted to supply the password to unlock the Automatic Login Feature.

NOTE: If you do not confirm your password correctly, the feature will not be installed and you will need to exit and re-enter Tmenu to try installing your password again as illustrated in steps 1-3.

Using the MaynStream Automatic Login Feature

Upon entering MaynStream you will be prompted to enter the password to unlock the Automatic Login Feature.

Enter the password you supplied in step 2 (above) and press **<Enter>**. MaynStream will now allow you to automatically login to NetWare servers and remote drives. Refer to the beginning of this chapter for more information on automatic login.

If you do not enter the correct password, MaynStream will inform you that the password is incorrect, and will continue running with the Automatic Login Feature disabled.

Changing Your Automatic Login Password

To change the password that locks the Automatic Login Feature, simply follow these instructions:

1. From your DOS prompt type **TMENU /LOCK** then **<Enter>**.
2. Enter the current password for the Automatic Login Feature and press **<Enter>**.
3. You will be prompted to enter a password to prevent unauthorized automatic login, enter your new password and press **<Enter>**.
4. Re-enter the password when prompted to confirm that it is correct. Press **<Enter>**.

Backing up Server/Volumes on a Network

If the MaynStream software is installed on a local drive follow these steps:

1. Go to the directory where the MaynStream software is installed.
2. Start the MaynStream software by typing: **Tmenu <Enter>**
3. Select the server(s) you wish to back up. To back up more than one server volume, move the cursor over each selection and press **<Spacebar>**.

NOTE: If you are already logged into the server, an asterisk (*) will appear next to the server name. If you are not logged into the server you have selected to back up, you will be prompted for your network user name and password (unless it is already in the password database).

To view the volumes contained on a server, move the cursor over the server name and press **<Enter>**.

Selected volumes are highlighted. If you wish to select several volumes in a row, keep **<Spacebar>** depressed. To de-select a volume move the cursor over the selected volume and press **<Spacebar>** again.

If the MaynStream software is installed on a server follow these steps:

1. Login as a supervisor.

2. Map a drive to the location of the MaynStream software. For example, type:
map m:=sys:\tape where sys:\tape includes the MaynStream software.
3. Go to the drive that is mapped to the MaynStream software, and from that prompt start the MaynStream software. Type: **M: <Enter>**
4. Start the MaynStream software by typing: **Tmenu <Enter>**
5. Select the server(s) you wish to back up. To back up more than one server volume, move the cursor over your selections and press **<Spacebar>**.

NOTE: If you are already logged into the server, an asterisk (*) will appear next to the server name. If you are not logged into the server you have selected to back up, you will be prompted for your network user name and password.

To view the volumes contained on a server, move the cursor over the server name and press **<Enter>**.

Selected volumes are highlighted. If you wish to select several volumes in a row, keep **<Spacebar>** depressed. To de-select a volume move the cursor over the selected volume and press **<Spacebar>** again.

What is not Backed up

NOVELL.NKS is a MaynStream file that contains a list of NetWare files that are not backed up unless you log in as a supervisor. These Novell NetWare utility files are not backed up because they are always open. These files include:

<code>\system\net\$msg.sys</code>	<code>\system\q_*.s??</code>
<code>\system\net\$spl.que</code>	<code>\system\Q\$*.s??</code>
<code>\system\desktop*.*</code>	<code>\system\deleted.sav*.*</code>
<code>\system\dirstamp.sys</code>	<code>\system\backout.tts</code>

All but the bindery files are utility files. Utility files will be re-created if needed and bindery files will only be backed up if you are a network supervisor or if you are a supervisor equivalent and you answer **Yes** to the bindery question.

If you have the minimum rights to back up (Read, Open, Search, and Modify for NetWare 286 or Read, File Scan, and Modify for NetWare 386), but you lack Parental rights (Access Control rights in NetWare 386) to a directory, you will back up the directory but you will not back up the trustees for that directory.

NOTE: While the network is running, MaynStream will back up all closed files on any network volume from any user workstation, providing the user has rights to these files. Files will not be accessed or backed up by MaynStream while they are open. "Open" files are files which are being written to or updated by another network user. If you want to wait for open files to close before continuing with the backup, answer **No** to the "Do you want to skip OPEN files?" question under **Configuration/Hardware Options/Network Options**.

Verifying on a Network

MaynStream will verify all of the following:

- programs and data
- directory security information (maximum rights mask for NetWare 286 or Inherited rights mask for NetWare 386, trustee information)
- extended file attributes

If bindery files are on a tape and you verify the tape against a network drive, the MaynStream software will close the bindery and verify the files. While this doesn't take long, all access to the network will stop until the files are verified and the bindery is opened again. While network access is suspended, no harm will come to user files. You may verify bindery files only if you are a supervisor or if you are a supervisor equivalent. Otherwise, no attempt is made to verify the bindery.

NOTE: NetWare 386 bindery files will not verify because data is always being written to these files.

Restoring on a Network

MaynStream will restore all of the following:

- programs and data
- DOS attributes
- extended file attributes
- directory security information, (if you have supervisor privileges)
- bindery information (You must log in as a supervisor or supervisor equivalent).

IMPORTANT: If you are a supervisor and you are restoring a tape you will be asked, "Do you wish to restore the bindery files if they exist on this tape?" Be careful restoring old bindery files over more recent bindery files. Changes made to user and group information may be lost.

Before the restore begins you will see: "Do you wish to restore directory security information for each directory?" This question gives you the option to restore files without restoring directory security information that may be outdated. Changes made to security information may be lost.

If the network hard drive crashes, the supervisor should restore his most current backup. This will re-establish the bindery and place the most current directory security information on the drive.

Novell extended file attributes will be restored regardless of supervisor privileges. (With the exception of owner ID.)

Restoring to a Non-network Drive

If you are restoring to a non-network drive, where it is not possible to have directories with names longer than 11 characters (8 characters plus 3 extension characters), it is possible to restore a “long name” directory. Use Tmenu to highlight the appropriate directory. Tmenu will restore the files, but it will truncate the directory name to 11 characters.

Replacing a Novell Network Server Disk

What you will need:

- A valid backup of all volumes on all existing server disks. This should include the network bindery files.
- A bootable DOS diskette.
- Your working copy of the Novell network installation diskettes.
- Access to a network workstation with at least a floppy disk drive and a MaynStream system.

1. Remove the old server hard disk from the file server, if it has failed.
2. Install the new server hard disk, if required.
3. Compsurf the new server disk, if required.
4. Initialize the disk with the original installation parameters. i.e., server name, volumes, number of directories, etc.
5. Boot the server.
6. For mapped drives go to the network workstation that contains the MaynStream software. Login as supervisor (no password is required). Continue with steps 7 and 8.

For server volumes, run Tmenu from the workstation’s hard drive and restore the backup to the above drive letter (the drive letter mapped to sys:). Step 7 is not required when server volume names are active.

7. Map a drive to the root directory. (e.g., map g:=sys:)
8. Run Tmenu from the workstation’s hard drive and restore the backup to the above drive letter (the drive letter mapped to sys:).

NOTE: Answer Yes when prompted to restore the bindery and the directory security information.

NOTE: If you have multi-volumes you have to map to the root of each volume and perform multiple restores for each root/backup set combination.

Backing up Mapped Drives on a Network

Follow these steps to back up the entire network. In this case you must have the “Display Novell servers instead of mapped drives” option set to **No** in Tmenu.

1. Login as a supervisor.
2. Map a drive to the root of each partition on the server. For example, type: **map t:=sys:** where sys: is the only root directory of the server.
3. Then map a drive to the location of the MaynStream software. For example, type: **map m:=sys:\tape** where sys:\tape includes the MaynStream software.
4. Go to the drive that is mapped to the MaynStream software, and from that prompt start the MaynStream software. Type: **M: <Enter>**
5. Start the MaynStream software by typing: **Tmenu <Enter>**
6. Select drive T: which is mapped to sys: to perform any MaynStream function.

CAUTION: Although MaynStream does correctly display a Novell IMAGE partition while running on a non-dedicated server, **DO NOT** select this during backup operations if the network operating system is currently running.

NOTE: Because the catalog files and resource files are not shareable, only one person can execute the MaynStream software at a time.

NOTE: To back up bindery files you must be a supervisor mapped to the root of the sys: volume.

Mapped Drive Backup Examples

To back up an entire file server sys: volume: **tbackup r:\s**

Be sure r: is mapped to sys: (the root)

To back up a single directory: **tbackup m:\s**

Be sure m: is mapped to the correct directory

To automatically back up bindery information and the sys: volume and replace all information currently on the tape: **tbackup r:\s/yy**

Login as Supervisor. Be sure r: is mapped to sys: (the root)

/yy automatically answers YES to the “Back up bindery files?” question.

Backing up Multiple Mapped Drives

To back up a server that has three volumes, sys:, sys1:, and sys2: follow these steps:

1. Login as supervisor. For example: **f:login myserver\supervisor**
2. Map drives to the root of each volume:
map r:=myserver\sys:
map s:=myserver\sys1:
map t:=myserver\sys2:
3. Go to the directory where the MaynStream software was installed.
4. Either type Tmenu and select drives R:, S:, and T:, or use the Tbackup advanced command. For example:
tbackup r:\s s:\s t:\s /yy/la:"fileserver backup"

tbackup is the backup command

r:\ selects the root of r: which is mapped to the sys: volume

/s specifies all subdirectories are to be backed up for the drive

s:\ selects the root of r: which is mapped to the sys1: volume

/s specifies all subdirectories are to be backed up for the drive etc.

NOTE: "Myserver" is the name given to the user's server. Sys: is a required name by Novell, but you may name any other volume any way you wish.

NOTE: You could also skip step 3 if you used the set msii= statement and mapped a search drive as described in the Novell Network installation earlier in this chapter.

Restoring Mapped Drives on a Network

To restore files:

- Select the drive which is mapped to where the files should be restored
- Type: **map t:=sys:** (sys: is the desired directory)
- Type: **map m:=sys:\tape** (sys:\tape includes the MaynStream software)
- Type: **M:** <Enter>
- Type: **Tmenu** <Enter>
- Select drive T to perform the MaynStream function

Network Type

When you select this option you will see:

```
Network Type

Which Network Software are you using? [0]
0. None                               3. IBM PC Network
1. Novell NetWare                     4. Other
2. 3Com 3+
```

Enter the number that corresponds to the network you are using. If your network is not listed, select **Other**. The default for this option is 0, no network.

NOTE: If the network is running, MaynStream will automatically recognize it and the default will be changed to reflect the network.

Network Options

When you select this option you will see:

```
Network Options

Skip OPEN files? (Y/N) [N]
Create the SKIPPED script? (Y/N) [Y]
Backup/Restore Macintosh resource information? (Y/N) [Y]
Back up "Published" IsleLAN drives? (Y/N) [N]
Display Novell servers instead of mapped drives? (Y/N) [Y]
Preserve Novell files' last accessed date? (Y/N) [Y]
Maintain a Server and IsleLAN Password Database? (Y/N) [N]
```

Skip OPEN files?

This gives you the option to skip open files during the backup, or to wait for open files to close before the backup continues. The default for this question is No, open files will not be skipped. Enter **Y** to back up only closed files. Enter **N** for the backup to wait for open files to close before continuing.

Create the SKIPPED script?

This gives you the option to create a script that will contain a list of all the files that are skipped during the network backup. The default for this question is Yes, to create the script. If you answer **Y**, open files encountered during the backup will be written to the skipped file script. This file will appear as an option under Backup in Tmenu.

Before you select SKIPPED from Backup in Tmenu you must deselect the default drives. If the default drives are not deselected, all files will be backed up.

After the backup is completed the script will be deleted. This will be done to create a new SKIPPED script in the event that other open files are encountered during the backup of the skipped files. If no files are skipped, this file is not necessary.

Back up and restore Macintosh resource information?

This option allows you to back up and restore Macintosh resource information on Novell NetWare 2.15 or greater. If you answer Yes (the default of this option), Macintosh resource information will be backed up or restored if present. If you answer No the Macintosh resource information will not be backed up or restored. Answer No if you are restoring to a DOS computer.

MaynStream will "mark" Macintosh resource information that were backed up. When restoring, verifying or listing files, Macintosh resource information will be marked with an "<A>" attribute.

Back up "Published" IsleLAN drives?

This option allows you to back up IsleLAN drives. If you answer Yes to this option all of the published remote drives will be listed in the Drive Selection Status window and they will be available for any of the Tmenu operations. If you answer No to this option only the available local drives and the server drives will be displayed in the Drive Selection Status window. If you answer Yes to this option and you fail to load the MaynLAN TSR you will see an error message.

Display Novell servers instead of mapped drives?

If you wish to view all servers on the network (whether you are logged into and mapped to them or not), answer Yes to this question. If this question is set to No, the only Novell drives that will be listed in your Drive Selection Status window are those drives to which you are attached and to which you are mapped (prior to starting MaynStream).

Preserve Novell files' last accessed date?

When a file is accessed on a Novell network, the "last accessed date" field is modified to indicate the last time someone accessed that file. Normally MaynStream would change this date when it backs up the file. If you wish for Novell's "last accessed date" field to remain unchanged, answer Yes (the default) to this question.

Maintain a Server and IsleLAN Password Database?

The password database is a list of user/device names and passwords used to login to networks and attach to remote drives. If you answer **Yes** to this question the passwords you enter to gain access to remote drives will be kept in the database so the next time you access the remote drive the password will be entered for you. If you answer **No** to this question you will be prompted to enter the password each time you access a remote drive. The contents of the password database are encrypted for security purposes.

After making changes to these selections you can save the changes in the MaynStream configuration file (MSII.CFG). This is accomplished by selecting **Save Changes** from the Configuration menu.

The Configuration File Options for Network Use

The options described on the following pages are network specific. All other configuration options are described in Appendix A.

The configuration file is created/updated when you select **Save Changes** in Tmenu. It is easiest to change the configuration file by using the options that appear under **Configuration** in Tmenu. However, if you have experience using an editor (e.g., Edlin, Brief, etc.), you can change the configuration file by editing the file directly.

NOTE: For each option a space must precede and follow the equals sign `<=>`. When you use **Save Changes** this is done automatically. If you save the file using your own editor, be sure there is a space between the option and the equals sign.

Backup_files_inuse =

Accessible through the configuration file only.

Files on networks that are open for write access by other workstations should not normally be backed up. However, MaynStream 3.X can be configured to back up files that are in-use by another station. If a file was opened for “exclusive use” or “deny read” by another workstation, MaynStream will still be unable to open these files and they will be handled based upon your “skip open files” options.

Since we at Maynard Electronics, Inc. DO NOT recommend a regular use of this capability, it is only definable through a configuration file option. The only way to enable/disable this option is through editing the MSII.CFG file (typically found in the \MAYNARD directory); setting the configuration option “backup_files_inuse = 1” enables backing up open files, whereas “backup_files_inuse = 0” disables the option (default value).

MaynStream “locks” open files to prevent other workstations from modifying the file while it is being backed up. The file remains locked by MaynStream during backup, therefore large files will be locked for a longer period of time. If a workstation’s application program attempts to write to this locked file, typically a “write error” will be produced; however, the handling of this condition is strictly dependent upon the workstation’s application program. Once MaynStream backs up the file, it will be “unlocked” and a WARNING message will be displayed indicating that an open file was backed up.

If you are backing up files while they are in use, it is highly likely that these files will fail to verify because their contents are being changed by other workstations. For this reason, you should not transfer files with this option enabled if you wish to delete files from your system. MaynStream’s transfer option will not allow you to delete files if any differences were found during the verify process.

0 = Do not back up files in use.

1 = Back up files in use.

MaynStream will “mark” files that were backed up while in-use. When restoring, verifying or listing files, in-use files will be marked with an “<I>” attribute.

Display_novell_servers =

Accessible through **Configuration/Hardware Options/Network Options.**

This option determines whether server volume names or mapped drives will be displayed in the Drive Selection Status window of Tmenu. To use the command line with server names or mapped drives this option must be properly set or an error message will be displayed saying that MaynStream cannot recognize the drive.

0 = display mapped drives

1 = display Novell server/volume names

Enable_password_database =

Accessible through **Configuration/Hardware Options/Network Options.**

This option specifies whether a password database will be maintained. The password database is a list of device names and passwords used to attach to remote drives and server volumes.

0 = do not enable the password database

1 = enable the password database

Network =

Accessible through **Configuration/Hardware options/Network Options**.

The number following this option is set according to the network selected in Tmenu. The supported networks are:

0 = None

1 = Novell Advanced NetWare

2 = 3COM 3+

3 = IBM PC Network

4 = Other

Process_macintosh_files =

Accessible through **Configuration/Hardware options/Network Options**.

When using MaynStream with Novell NetWare 2.15 or greater, you can back up and restore Macintosh Appletalk File Protocol (AFP) information.

0 = Do not backup or restore Macintosh resource information.

1 = Backup and restore Macintosh resource information.

Extended_date_support =

Accessible through **Configuration/Hardware options/Network Options**.

This can be used to prevent MaynStream from setting a file's last accessed and last archived date and time. Before a file is backed up, MaynStream saves the original accessed date and time value. Normally after a file is backed up, Novell sets the accessed date. If you set this option to **1**, MaynStream resets the accessed date to its original value.

When set to **1**, MaynStream will also set Novell's "last archive date" if changing the archive bit is enabled. If you set this option to **0**, then a backed up file will be treated as an accessed file and the file's Last Accessed Date will be changed.

0 = Do not reset the file's date and time

1 = Reset the file's last accessed date to its original date and time and set the archived date and time

Skip_open_files =

Accessible through **Configuration/Hardware options/Network Options.**

When using MaynStream with a network, you are given the option to wait for open files to close before backing them up, or skipping the open file completely.

0 = Wait for open files to close.

1 = Skip the open files.

Skip_script =

Accessible through **Configuration/Hardware options/Network Options.**

When using MaynStream with a network, you are given the option to create a script that contains a list of open files that you skipped during the backup.

0 = Do not create the SKIPPED.BKS file.

1 = Create the SKIPPED.BKS file.

Chapter 9

Reference

The reference chapter will assist you by providing information that may be necessary to use your MaynStream system.

Technical Specifications

External Cassette and Cartridge

Capacity:	60, 150, 250 MB
Tracks:	9, 18
Data Transfer Rate:	86 to 116 Kbytes/sec 5.4 to 6.4 MB/min
Recording Density:	150/250 = 12.5K bpi 60 = 10K bpi
Operating Environment:	50° - 90° F
Relative Humidity:	8-80%
Power Consumption:	VAC 110 or 220
Service Life:	5 years/30,000 hrs.
PC Model Dimensions (HxWxD):	3.5" x 5.9" x 14.5"
PS/2 Model Dimensions (HxWxD):	3.5" x 5.9" x 14.5"
Weight:	8 lbs.
Interface:	QIC
Fast File Retrieval:	Cassette - NO Cartridge Type A - YES Cartridge Type B - NO

A

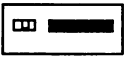


B



Internal Cassette and Cartridge

Capacity: 60, 150, 250 MB
Tracks: 9, 18
Data Transfer Rate: 86 to 116 Kbytes/sec
5.4 to 6.4 MB/min
Recording Density: 150/250 = 12.5K bpi
20/60 = 10K bpi
Operating Environment: 50° - 90° F
Relative Humidity: 8-80%
Power Consumption: <15w operating
Service Life: 5 years/30,000 hrs.
PC Model Dimensions (HxWxD): 1.6" x 5.8" x 8.1"
PS/2 Model Dimensions (HxWxD): 4.3" x 6.5" x 8.8"
(Includes space for user installed 1/2 height drive)
Weight: 2.5 lbs.
Interface: QIC
Fast File Retrieval: Cassette - NO
Cartridge Type A - YES
Cartridge Type B - NO



A



B

Internal 150 Cassette

Capacity: 150 MB
Tracks: 17
Data Transfer Rate: 116Kbytes/sec;
6.4MB/min
Recording Density: 12.8 Kbpi
Operating Environment: 41° - 113° F
Relative Humidity: 20-80%
Power Consumption: <15w operating
Service Life: 5 years/30,000 hrs.
PC Model Dimensions (HxWxD): 1.6" x 5.8" x 8.1"
PS/2 Model Dimensions (HxWxD): 1.7" x 4.0" x 5.8"
Weight: 1.5 lbs.
Interface: QIC
Fast File Retrieval: NO

525Q Internal and External

Capacity: 525 MB
Tracks: 26
Data Transfer Rate: Up to 180Kbytes/sec
Recording Density: 16 Kbpi
Operating Environment: 41° -113° F
Relative Humidity: 20-80%
Power Consumption: VAC 110 or 220
Service Life: 5 years/30,000 hrs.
Portable Dimensions (HxWxD): 3.5" x 5.9" x 14.5"
Int. PC Dimensions (HxWxD): 1.625" x 5.75" x 8.125"
Int. PS/2 Dimensions (HxWxD): 3.375" x 5.75" x 7.875"

Weight:	8 lbs. (Port.); 2.5 (Int.)
Interface:	SCSI
Fast File Retrieval:	YES

600 Internal/External

Capacity:	600 MB
Tracks:	21
Data transfer rate:	242 Kbytes/sec
Recording Density:	38.4 Kbpi
Operating Environment:	41°-113° F
Relative Humidity:	20-80%
Power Consumption:	VAC 110 or 220
Service Life:	5 years/30,000 hrs.
PC Model Dimensions (HxWxD):	1.6" x 5.8" x 8.1"
PS/2 Model Dimensions HxWxD):	1.7" x 4.0" x 5.8"
Weight:	4.35 lbs (Port.) 1.5 lbs (Int.)
Interface:	SCSI
Fast File Retrieval::	YES

DAT Internal and External

Capacity:	1300, 2000 MB
Track Density:	1,869 tracks/in. (736 tracks/cm)
Data Transfer Rate:	183 Kbytes/sec
Recording Density:	114 Kbpi
Operating Environment:	41° - 113° F
Relative Humidity:	20-80%
Power Consumption:	VAC 110 or 220
Service Life:	5 years/20,000 hrs.
Portable Dimensions (HxWxD):	3.4" x 5.3" x 9.3"
Internal Dimensions (HxWxD):	1.6" x 5.7" x 7.9"
Weight:	4.7 and 2.5 lbs. respectively
Interface:	SCSI
Tape length	1300 (60m.), 2000 (90m.)
Fast File Retrieval:	YES

2200HS+

Capacity:	2200 MB
Track Density:	819.35 tracks/in. (32.26 tracks/mm)
Data Transfer Rate:	Up to 256 Kbytes/sec
Recording Density:	43.2 Kbpi
Operating Environment:	41° -113° F
Relative Humidity:	20-80%
Power Consumption:	VAC 110 or 220
Service Life:	5 years/20,000 hrs.
PC Model Dimensions (HxWxD):	3.5" x 5.9" x 14.5"
PS/2 Model Dimensions (HxWxD):	3.5" x 5.9" x 14.5"
Weight:	8 lbs.

Interface: SCSI
Fast File Retrieval: YES (2200+ only)
Power supply input filtered for low EMI.
Connecting cable completely shielded for low EMI/RFI.
Forced air cooling for extra reliability.
Portable, small, durable packaging.

5000

Capacity: 5.0 GB
Tracks: 1638/in
Data transfer rate: 500 Kbytes/sec
Recording Density: 45.4 KBpi
Operating Environment: 41° -104° F
Relative Humidity: 20-80%
Power Consumption: VAC 110
Service Life: 40,000 hours
PC Model Dimensions (HxWxD): 3.5" x 5.9" x 14.5"
PS/2 Model Dimensions HxWxD): 3.5" x 5.9" x 14.5"
Weight: 7 lbs.
Interface: SCSI
Fast File Retrieval:: YES

8-bit QIC and SCSI Controllers

PC I/O Address: 370-377H, 360-367H
PS/2 I/O Address: FF70-FF77H, FF60-FF67H
PC QIC-02 DMA: Supports 1-3 or none, Default 1
PC SCSI DMA: Supports 1-3, Default 1
PS/2 QIC-02 Arbitration Level: Supports 1,3-7 or none, Default 1
PS/2 SCSI Arbitration Level: Supports 1, 3-7, Default 1
PC Interrupt: Supports 3-7 or none, Default 3
PS/2 Interrupt: Supports 2,3,5,7 Default 5,
Level Sensitive
PS/2 IBM-approved ID: 568D (SCSI), 568B (QIC)

16-bit SCSI Controller

PC I/O Address: 370-377H, 360-367H
PC DMA: Supports 5, 6, 7, Default 5
PC Interrupt: Supports 3, 4, 5, 10, 11, 12, Default 10

Available Hardware Options

The MaynStream System has several components that can enhance its operation. Media and drive cleaning kits are available from your local dealer, but in the event your dealer is unable to assist you, contact Maynard directly (800-821-8782). Below you will find a listing of options for your system.

Controller Cards

QIC-02 Controller Card (Part number 10001)

A half-sized card designed to allow the Maynard drive to attach to IBM, and most IBM compatible computers.

QIC-02 PS/2 Adapter (Part number 10003)

A card designed to allow the Maynard drive to attach to a Personal System/2 Model 50, 50Z, 55, 60, 70 or 80.

SCSI Controller Card (Part number 40001)

A half-sized card designed to allow the Maynard 8mm, DAT, and other Maynard SCSI systems to attach to IBM, and most IBM compatible computers.

SCSI PS/2 Adapter (Part number 40003)

A card designed to allow the Maynard 8mm, DAT, and other Maynard SCSI systems to attach to a Personal System/2 Model 50, 50Z, 55, 60, 70 or 80.

16-Bit SCSI Controller Card (Part number 40002)

A high performance card designed to allow the Maynard 525Q, DAT, 8mm, and other Maynard SCSI systems to attach to IBM AT class computers, and most AT compatible computers.

Data Cables

External QIC-02 Data Cable (Part number 10005)

A shielded cable with 37-pin male and female connectors. Used to quickly connect the Maynard drive to the computer.

External SCSI Data Cable (Part number 40005)

A shielded SCSI cable used to quickly connect Maynard external SCSI tape drives to the computer.

Media

Digital Cassette 60 (Part number 90502)

A reliable magnetic cassette tape. The type of drive you are using will determine how much data you will be able to store on the tape:

	<u>20 MB Maynard</u>	<u>60 MB Maynard</u>
600 ft tape	27 MB of storage	60 MB of storage

Digital Cassette 150 (Part number 90506)

A reliable magnetic cassette tape like the 60, but for 150 megabyte cassette systems only.

Data Cartridge 6150 (Part number 90504)

A heavy duty cartridge available for cartridge drives, capable of storing from 60 to 150 megabytes, depending on the drive.

Data Cartridge 6250 (Part number 90507)

A heavy duty cartridge like the 6150, available for cartridge drives, capable of storing up to 250 megabytes.

Data Cartridge 6525 (Part number 90509)

A heavy duty cartridge available for the Maynard cartridge drives, capable of storing 525 megabytes.

Data Cassette 600 (Part Number 90510)

A reliable magnetic cassette tape for 600 megabyte systems only.

1300 MB DAT Cassette (Part number 31300)

4mm DAT metal particle tape (qualified, computer grade media recommended), capable of storing 1.3 gigabytes.

2000 MB DAT Cassette (Part number 32000)

4mm DAT metal particle tape (qualified, computer grade media recommended), capable of storing 2.0 gigabytes.

8mm Data Cassette (Part number 90522)

A durable 8mm data cartridge available for the Maynard 8mm drives, capable of storing up to 2.2 gigabytes for the 2200HS+ and 5 gigabytes for the 5000.

Cleaning Kits

Cassette Cleaning Kit (Part number 90101)

This includes a cleaning cassette, brushes, and cleaning fluid to remove built up particles on the heads of Maynard cassette units.

Cartridge Cleaning Kit (Part number 91501)

This includes a cleaning cartridge, brushes, and cleaning fluid to remove built up particles on the heads of Maynard cartridge units.

8mm Cassette Cleaning Kit (Part number 92201)

This includes a cleaning cassette to remove built up particles on the heads of Maynard 8mm, helical scan units.

4mm DAT Cassette Cleaning Kit (Part number 91301)

This includes a cleaning cassette to remove built up particles on the heads of Maynard 4mm DAT units.

NOTE: For information on using cleaning kits for tape maintenance, refer to Appendix F.



Appendix A

The Configuration File (MSII.CFG)

The configuration file is created when you select “Save Changes” in Tmenu.

It is easier to change the configuration file by using the options that appear under **Configuration** in Tmenu. However, if you have experience using a text editor, you can change the configuration file by editing the file directly.

Each of the configuration options is described below. The values for these options can be changed using either Tmenu, the advanced command parameters, the MSII.CFG file, or in some cases, several methods can be used. The default values for each option are highlighted in bold print.

The options are listed below in alphabetical order so they will be easier to find. They are not listed alphabetically in the configuration file.

NOTE: For each option a space must precede the equals sign <=>. When you use “Save Changes” this is done automatically. If you save the file using your own editor, be sure there is a space between the option and the equals sign.

All values are in hex (base 16).

Active_driver =

Accessible through Tmenu/Configuration/Hardware Options/Controller Options.

This option allows the MaynStream software to support different types of controllers. The drivers available for this option include:

MS_QIC = Maynard QIC-02
MS_SCSI = Maynard SCSI (8-bit/16-bit)
IBM_SCSI = IBM MicroChannel SCSI
AD_ASPI = Adaptec ASPI SCSI

Append_to_log =

Accessible through Tmenu/Configuration/HW Options/Output Options or the /LI:a parameter.

As you create a logfile you have the option to append the information or to replace the existing information with new information. If you are not appending, the output file will be rewritten when you use Tmenu or every time an advanced command is used.

0 = do not append information to the logfile
1 = append information to the logfile

Be careful when appending to a logfile. This file can grow rapidly depending on the amount of information you are logging. Every now and then you may want to edit the logfile using a word processor or editor and delete old information.

Backup_files_inuse =

Accessible through the configuration file only.

Files on networks that are open for write access by other workstations should not normally be backed up. However, MaynStream 3.X can be configured to back up files that are in-use by another station. If a file was opened for "exclusive use" or "deny read" by another workstation, MaynStream will still be unable to open these files and they will be handled based upon your "skip open files" options.

Since we at Maynard Electronics, Inc. DO NOT recommend a regular use of this capability, it is only definable through a configuration file option. The only way to enable or disable this option is by editing the MSII.CFG file (typically found in the \MAYNARD directory).

0 = Do not back up files in use.
1 = Back up files in use.

MaynStream "locks" open files to prevent other workstations from modifying the file while it is being backed up. The file remains locked by MaynStream during backup, therefore large files will be locked for a longer period of time. If a workstation's application program attempts to write to this locked file, typically a "write error" will be produced; however, the handling of this condition is strictly dependent upon the workstation's application program. Once MaynStream backs up the file, it will be "unlocked" and a WARNING message will be displayed indicating that an open file was backed up.

If you are backing up files while they are in use, it is highly likely that these files will fail to verify because their contents are being changed by other workstations. For this reason, you should not transfer files with this option enabled if you wish to delete files from your system. MaynStream's transfer option will not allow you to delete files if any differences were found during the verify process.

MaynStream will "mark" files that were backed up while in-use. When restoring, verifying or listing files, in-use files will be marked with an "<I>" attribute.

Backup_name =

Accessible through **Tmenu/Configuration/General** or the **/BA** parameter.

This option will instruct the software to prompt you for a backup set name each time you begin a backup. A backup set name will help you better identify the contents of a tape.

0 = Do not give the backup a name

1 = Prompt for a backup name

Backup_non_dos_flg =

Accessible through **Tmenu/Configuration/HW Options/Partition Names** or the **/NO** parameter.

If you have non-DOS partitions you have the option to automatically include them in a backup, or exclude them from a backup.

In Tmenu, the non-DOS partitions will be highlighted for backup if this option is set to 1, but you will still have the option to include or exclude the partitions.

0 = do not automatically back up non-DOS partitions

1 = automatically back up non-DOS partitions

Backup_set_label =

Accessible through **Tmenu/Configuration/General** or the **/LA** parameter.

This option will instruct the software to prompt you for a backup set label each time you begin a backup. A backup set label will help you better identify the contents of a tape.

0 = Do not give the backup set a label

1 = Prompt for a backup set label

Catalog_auto_cleanup =

Accessible through **Tmenu/Configuration/Catalog Options**.

This option allows you to automatically remove catalog information that has been replaced by a more current backup, or erased.

0 = disable automatic catalog cleanup

1 = enable automatic catalog cleanup

Catalog_level =

Accessible through **Tmenu/Configuration/Catalog Options**.

This option allows you to set the level of detail that a catalog will maintain. Full catalogs contain tape, backup set and file information. Partial catalogs contain only tape and backup set information.

0 = disable cataloging

1 = partial cataloging enabled

2 = full cataloging enabled

Colors =

Accessible through the configuration file only.

This sets the colors for the MaynStream menus. Values are in hex.

value 1 = background character + attribute

value 2 = highlight for menu items

value 3 = normal menu attribute

value 4 = instruction menu attribute

value 5 = help menu attribute

value 6 = editing menu attribute

value 7 = error menu attribute

value 8 = "fill in" menu attribute

value 9 = for Maynard Technical Support use only.

Colors =30b0 4f 1f 70 20 6f 4f 30 1f

Controller =

Accessible through the **Configuration/Hardware Options/Controller Options**.

This option specifies all of the controller options including: driver type supported, current status, controller type, number of tape drives attached, I/O address, interrupt number, DMA channel, and card slot. The values following this option will represent offsets, but there is not a one-to-one correspondence. Therefore, it is recommended that these values be changed by modifying the settings found in Tmenu.

Debug =0

For Maynard Electronics Technical Support only.

Debug_window_size =

For Maynard Electronics Technical Support only. The default is 8.

Default_backup_drives =

Accessible through the configuration file only. The default is drive C:.

This option allows you to define which drives (if any) are to be set by default as the devices to be backed up. For example, if you wanted to back up drives C, D, and E by default, you would set the following lines (each device on a separate line):

```
default_backup_drives = C
+D
+E
```

Display_Novell_servers =

Accessible through **Configuration/Hardware Options/Network Options**.

This option determines whether server volume names or mapped drives will be displayed in the Drive Selection Status window of Tmenu. To use the command line with server names or mapped drives this option must be properly set or an error message will be displayed saying that MaynStream cannot recognize the drive.

0 = display mapped drives
1 = display Novell server/volume names

DOS_drive_definition =

Accessible through the configuration file only.

This option defines all DOS devices. Any DOS device not included in this line will be excluded in the list of drives available for backup or restore. If none are specified the software will automatically determine the drives. If you want to define the DOS drives as being C, and D, you would set these lines (each device on a separate line):

```
DOS_drive_definition = +C
+D
```

EMS_memory =

Accessible through the configuration file only.

When running the IsleLAN/MaynLAN software, you may get an “insufficient memory” message. If this is the case, be sure this option is set to 1 to use expanded memory. Also be sure that you are using an expanded memory package like 386Max or QEMM.

0 = do not use EMS memory
1 = use EMS memory

Enable_Password_Database =

Accessible through **Configuration/Hardware Options/Network Options**.

This option is used to maintain a server volume and remote drive password database. If you have "Display_Novell_servers =" set to 1, then this option must be enabled (set to 1) to maintain an encrypted database of your NetWare user name and password. If you are using Automatic Backup with remote workstation backup (IsleLAN) this option must be enabled and you must access the remote workstation at least once to place the password in the database.

0 = do not maintain a password database

1 = maintain a password database

Extended_date_support =

Accessible through **Configuration/Hardware options/Network Options**.

This can be used to prevent MaynStream from setting a file's last accessed and last archived date and time. Before a file is backed up, MaynStream saves the original accessed date and time value. Normally after a file is backed up, NetWare sets the accessed date. If you set this option to 1, MaynStream resets the accessed date to its original value.

When set to 1, MaynStream will also set NetWare's "last archive date" if changing the archive bit is enabled. If you set this option to 0 then a backed up file will be treated as an accessed file and the file's Last Accessed Date will be changed.

0 = Do not reset the file's date and time

1 = Reset the file's last accessed date to its original date and time and set the archived date and time

Hidden_files =

Accessible through **Tmenu/Configuration/File Options** or the **/-H** parameter.

0 = do not backup or restore hidden files

1 = backup and restore hidden files

List_files =

Accessible through **Tmenu/Configuration/General** or the **/F** parameter.

If you do a file-by-file backup you have the option to list the files as they are being backed up, or to only list the directories that contain the files. Use this option to list files:

0 = do not display individual files

1 = display individual files

Log_file =

Accessible through Tmenu/Configuration/HW Options/Output Options

When you duplicate the output to a file, the log information is written to the file specified by this option. The default file is MSII.PRT. However, you can enter any filename (maximum 8 characters and a 3 character extension). Do not enter a complete path name. The file is automatically put in the subdirectory that contains all of your MaynStream files.

Log_level =

Accessible through Tmenu/Configuration/HW Options/Output Options or the /LE:n parameter

If you selected to duplicate the output to a file or to the printer you have four levels of logging information to choose from.

- 1 = includes the volume specification, the backup set number on the tape, the tape number, the tape label, the starting date and time, any errors encountered, ending date and time and completion statistics.
- 2 = includes level 1 plus a list of all processed subdirectories.
- 3 = includes levels 1 and 2 plus a "wide" listing of all the files processed.
- 4 = includes levels 1, 2 and 3 plus file sizes, file date/time and file attributes, plus the drive or server name, the starting date and time, the backup set number on the tape, the tape number, any errors encountered, completion statistics, and the ending date and time.

Max_buffer_size =

Accessible through the configuration file only.

This option specifies the maximum amount of memory (512 byte buffers) reserved to support MaynStream operations. The maximum value that can be entered is 8. The default is 0.

Max_PDbase_entries =

Accessible through the configuration file only.

This is the maximum number of entries maintainable within the password database. Enter any number you may require. The default of this option is 32 Hex (50 decimal).

Max_screen_height =

Accessible through the configuration file only.

The MaynStream Tmenu screens can be adjusted for different heights if you have one of the following special cases:

If you have an EGA with 43 lines enter 2B.
If you have an EGA with 35 lines enter 23.

NOTE: Before starting the program the monitor must be in the correct mode. (i.e., in 43 or 35 line mode.)

The default is 19. Setting this option to 0 will auto-determine screen height however, additional memory is required for the screens.

Max_screen_width =

Accessible through the configuration file only.

NOTE: The MaynStream software cannot be run in the 40 column mode.

The default is 50.

Memory_limit =

Accessible through the configuration file only.

Memory can be tailored to your needs. The default of this option is fff0. If you want to set a limit to the amount of memory available to MaynStream use this option.

Monitor =

Accessible through **Tmenu/Configuration/HW Options/Monitor Options**

The monitor option can either be color or black and white. If no configuration file is present the default for this option is to auto-determine the monitor type. Enter the number for the monitor type:

0 = Auto-determine screen type

1 = color

2 = monochrome

Network =

Accessible through **Configuration/Hardware Options/Network Options**.

The number following this option is set according to the network selected in Tmenu. The supported networks are:

0 = None

1 = Novell Advanced NetWare

2 = 3COM 3+

3 = IBM PC Network

4 = Other

NonDos_drive_definition =

Accessible through the configuration file only.

The non-DOS drive definition allows you to define and label all non-DOS partitions. This would only be necessary if you want to rename the partition or the MaynStream software is unable to auto-determine the partition type.

You must know which drive (0-7) the non-DOS partition is on, and also the partition number (0-3). For example, suppose you have a XENIX partition on drive 0, partition 0. The partition would be defined as:

```
0:[XENIX].P0 { 0: = drive number  
               [ ] = user defined drive label  
               .P0 = partition number
```

Only defined non-DOS partitions are available for backup or restore. If none are specified, the program will try to determine the partitions.

NRL_dos_vector =

This is the interrupt vector used for communication between Tmenu and any remote drives. The value for this option must match the value set for `NRL_dos_vector =` in the remote drive configuration file.

Password =

Accessible through `Tmenu/Configuration/General` or the `/PAS` parameter.

This option instructs the software to prompt you for a password. Passwords can be used to protect the data on a tape. Whenever you back up or transfer a tape you will be asked to enter a password.

Once a tape has a password, you must be able to re-enter the password exactly to access the data on the tape.

The purpose of the password is to stop unauthorized access to the information on the tape. A password will not stop anyone from destroying the information on the tape. For this reason protected information can be erased without entering the password.

0 = Do not prompt for a password

1 = Prompt for a password

Process_empty_dirs =

Accessible through `Tmenu/Configuration/File Options` or the `/EM` parameter.

This option allows you to back up or restore empty directories (directories that contain no files or other directories).

0 = do not backup or restore empty directories
1 = backup and restore empty directories

Process_Macintosh_files =

Accessible through Configuration/Hardware Options/Network Options.

When using MaynStream with Novell NetWare 2.15 or greater you can back up and restore Macintosh resource information for Appletalk File Protocol (AFP).

0 = Do not backup or restore Macintosh resource information.
1 = Backup and restore Macintosh resource information.

Prompt_mode =

Accessible through Tmenu/Configuration/File Options or the /PR parameter.

If you have files on the tape that are marked "read-only," or files that are "modified," and you do not want these files restored, you can be prompted by the software before they are restored. Otherwise all files will be restored.

0 = restore all files
1 = Prompt the user before restoring read-only or modified files

Remote_Drive_Backup =

Accessible through Tmenu/Configuration/HW Options/Network Options.

This option will list remote drives to make them available for backup, restore, etc.

0 = do not list remote "published" drives
1 = list remote "published" drives

Restore_existing_files =

Accessible through Tmenu/Configuration/File Options and the /Q parameter.

When you are going to restore files from a tape to a disk, there are some files that you might not want restored. Updated files on the drive might be more recent than the same files on the tape. When you upgrade your operating system or a software package, you do not want to restore old versions of the software.

0 = restore only the files that are on the tape and not on the drive
1 = restore all files

Save_file_listings =

Accessible through Tmenu/Configuration/HW Options/Output Options and the /LI parameter.

- 0 = display output to the screen only
- 1 = display output to the screen and to the printer
- 2 = display output to the screen and also to the specified file

Set_archive =

Accessible through **Tmenu/Configuration/File Options** and the **/-A** parameter.

To indicate a file has been backed up, the modified bit is cleared (i.e. turned off). When you create a new file or change an existing file, the modified bit is turned on.

- 0 = do not clear the modified bit on backup
- 1 = clear the modified bit on backup

Shades =

Accessible through the configuration file only.

This option sets the shades (black and white) for the MaynStream menus. All values are in hex.

- value 1 = background character + attribute
- value 2 = highlight for menu items
- value 3 = normal menu attribute
- value 4 = instruction menu attribute
- value 5 = help menu attribute
- value 6 = editing menu attribute
- value 7 = error menu attribute
- value 8 = "fill in" menu attribute
- value 9 = for Maynard Technical Support use only

Shades =70b0 70 f 70 7 70 70 7 f

Skip_open_files =

Accessible through **Configuration/Hardware options/Network Options**.

When using MaynStream with a network, you are given the option to wait for open files to close before backing them up, or skipping the open file completely.

- 0 = Wait for open files to close.
- 1 = Skip the open files.

Skip_script =

Accessible through **Tmenu/Configuration/Hardware Options/Network Options**.

When using MaynStream with a network, you are given the option to create a script that contains a list of open files that you skipped during the backup.

Before you select SKIPPED from Backup in Tmenu you must deselect the default drives. If the default drives are not deselected, all files will be backed up.

0 = Do not create the SKIPPED.BKS file.

1 = Create the SKIPPED.BKS file.

Special_files =

Accessible through Tmenu/Configuration/File Options and the /-S parameter.

Special files include files that are marked "system," "read-only," or "hidden." The default for this question is YES, so special files will be backed up and restored.

1 = Backup and restore all hidden, system, and read-only files

0 = do not backup and restore special files

Special_word =

For Maynard Electronics Technical Support only.

Tape_Buffer_size =

For Maynard Electronics Technical Support only.

Tape_Name =

Accessible through Tmenu/Configuration/General and the /TA parameter.

This option will instruct the software to prompt you for a tape name each time you begin a backup, but only when you are writing to a blank tape or overwriting a tape that already contains data. A tape name will help you better identify the contents of a tape.

0 = Do not give the tape a name

1 = Prompt for a tape name

Use_fast_file_restore =

Accessible through the configuration file only.

0 = disable FFR globally for all devices

1 = enable FFR

If this option is set to 1 and the tape drive supports FFR, it will be enabled.

Verify_Backup =

Accessible through **Tmenu/Configuration/General** and the **/AU** parameter.
This option is used to automatically verify after a backup operation.

0 = do not automatically verify a backup

1 = automatically verify a backup

2 = prompt whether the backup should be verified

Verify_Restore =

Accessible through **Tmenu/Configuration/General** and the **/AU** parameter.

This option is used to automatically verify after a restore operation.

0 = do not automatically verify a restore

1 = automatically verify a restore

2 = prompt whether the restore should be verified.

Video_address =0

This option must be set to zero.

This option is reserved for future use.

Video_snow =

Accessible through **Tmenu/Configuration/HW Options/Monitor Options**.

If the screen flickers whenever the screen is accessed, this is called "snow."
Determine if you have snow when running Tmenu, then enter the correct digit in this option:

0 = if no snow

1 = if snow

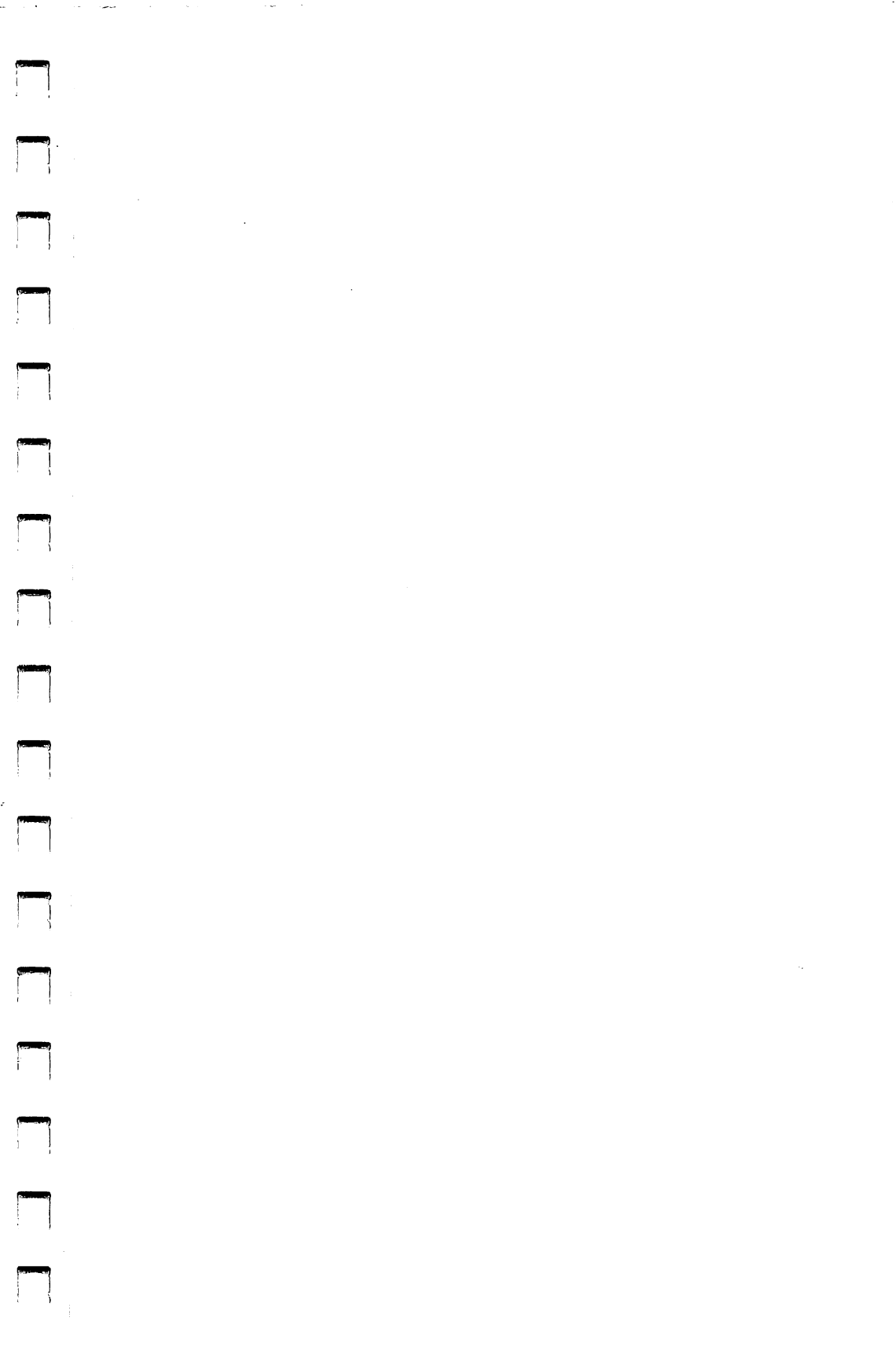
Virtual_Memory =

Accessible through the configuration file only.

MaynStream will optionally use virtual memory during many memory intensive disk operations.

0 = virtual memory support disabled

1 = virtual memory support enable



Appendix B

Copy Protection

The method for backing up and restoring copy-protected files is different from the normal file-by-file backup. Copy-protected files are special files on your disk that prevent a program from being copied. However, if the area of your disk that holds the copy-protected files becomes corrupted, restore those files just like any other files.

An image backup of a DOS partition is useful when you have programs with copy-protection schemes. You will have difficulty restoring copy-protected programs to a disk after the disk has failed, if you only have a file-by-file backup of the disk.

To back up your copy-protected files follow these steps:

1. Create an EXCLUDE.RSS file that contains your copy-protected files
2. Back up the hard drive in image mode
3. Regularly back up the hard drive in file-by-file mode

NOTE: As you add copy-protected files to your disk, repeat steps 1 and 2 to update your image backup.

If your drive crashes and you lose your copy-protected files:

1. Boot your computer from a DOS diskette
2. Partition and reformat your drive
3. Re-install DOS and the MaynStream software
4. Restore the image backup
5. Restore your latest file-by-file backup

Complete step-by-step instructions are given on the following pages.

Creating the EXCLUDE.RSS File

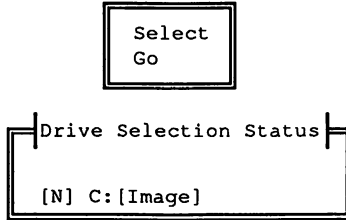
The best way to avoid restoring copy-protected files when restoring to a new drive, is to use the EXCLUDE.RSS file. The EXCLUDE.RSS file is a special script file that may contain any files you want automatically excluded from a restore operation. Copy-protected files may be added to EXCLUDE.RSS using a line editor, and by following the same syntax as the files already contained in the script.

WARNING: So you do not copy older versions of your operating system software from a tape onto your drive, EXCLUDE.RSS must contain the files **IBMBIO.COM, IBMDOS.COM, COMMAND.COM, or IO.SYS and MSDOS.SYS.**

Using DOS Image

After creating the EXCLUDE.RSS do an image backup of the disk.

1. Type: **tmenu** <Enter>
2. In Tmenu there is an option under **Utilities** called **Image (DOS)**. Select this option to do an image backup of an entire DOS partition. You will see:



3. Press **Select** and choose the drive with the DOS partition that contains your copy-protected files.
4. Move the cursor over the drive you wish to back up in image mode and press <Spacebar> to highlight the drive.
5. Once the drive is selected press <Ctrl Enter> to save your choice. The cursor will return to Go and the drive status will be updated to **[Image selected]**.
6. Press <Enter> to begin the image backup.
7. Store the Image backup until it is necessary to restore the copy-protected files. After completing the image backup, do file-by-file backups on a regular basis. Remember, an image backup cannot be restored to a drive of a different size.

NOTE: You must reboot after restoring a DOS image partition.

Restoring Copy Protected Files

To restore copy-protected files to a new hard drive be sure you have an image backup and a recent file-by-file backup. Then:

1. Boot your computer with a DOS diskette.
2. Partition and reformat your drive.
3. Re-install DOS and the MaynStream software.
4. Place the tape with the original image backup in the Maynard drive.
5. Type **Tmenu** from the DOS prompt.
6. Choose **Restore/Go** from the menu, and answer each of the questions to begin the restore.
7. When the restore is finished, remove the tape and insert the tape with your latest file-by-file backup.
8. Choose **Restore/Select** from the menu. Find the EXCLUDE.RSS file and restore this file.
9. Start Tmenu again from the hard drive and choose **Restore/Go** from the menu.
10. Answer each of the questions to begin the file-by-file restore.

The files for copy-protection are not included in this restore but you will have a working version of your copy-protected program from the restored image backup.

NOTE: So you do not restore old versions of your operating system software onto your drive, the EXCLUDE.RSS file must contain COMMAND.COM, the IBMBIO.COM and IBMDOS.COM files or the IO.SYS and MSDOS.SYS files.



Appendix C

Multiple Drive Installation

Installing two or more tape backup systems gives you the opportunity to greatly increase your backup capacity. This setup is especially useful when a large, unattended backup is required (e.g., when backing up a network drive).

Each Maynard controller (depending on type) can control one or more tape backup drives. A maximum of two Maynard controllers can be installed into one computer. The Maynard QIC controllers can control one tape drive each so the maximum number of QIC drives that can be attached to a single computer is 2. The Maynard SCSI controllers can control up to 7 tape drives each, so the maximum number of SCSI drives that can be attached to a single computer is 14.

IMPORTANT: When installing two Maynard controllers, they must be either both QIC or both SCSI. You cannot mix the two controller types in the same computer.

Standard Bus Installation (PC, AT)

If you have an IBM compatible computer, refer to the manual for that computer concerning cover removal and replacement.

The order of the drives is determined by the I/O address as described below.

1. Turn off the computer, disconnect the power cord, and remove the cover.
2. Check the jumpers on the controller cards to be sure they match the drawings below. The difference between the two cards is the I/O address. The first drive will have I/O address 370H - 377H. The second drive will have I/O address 360H - 367H. The DMA and IRQ settings can be the same on QIC-02 controller cards but **must** be different on SCSI controllers.

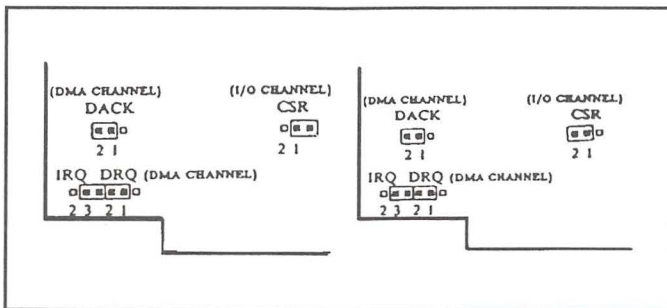


Figure C-1. Jumper settings for drive 1 and drive 2 QIC controller (Issue 3)

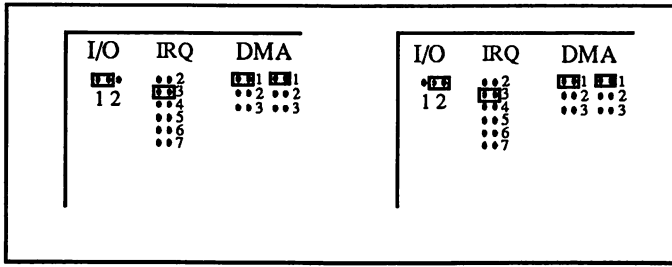


Figure C-2. Jumper settings for drive 1 and drive 2 QIC controller (Issue 5-10)

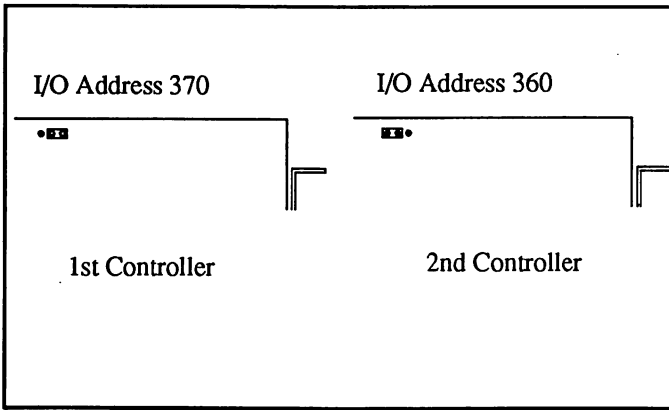


Figure C-3. Jumper settings for 8-bit SCSI controller 1 and SCSI controller 2

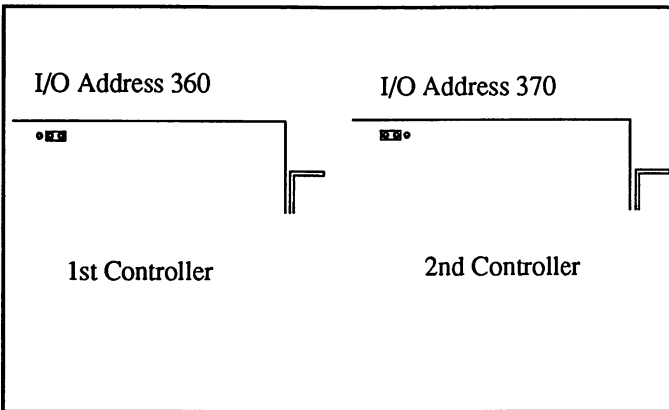


Figure C-4. Jumper settings for 16-bit SCSI controller 1 and SCSI controller 2

NOTE: A set of labels is included with each Maynard drive that allows you to number the cards, cables, and drives so you will know which card controls which drive. Attach these labels to the cards, cables, and drives for easier identification.

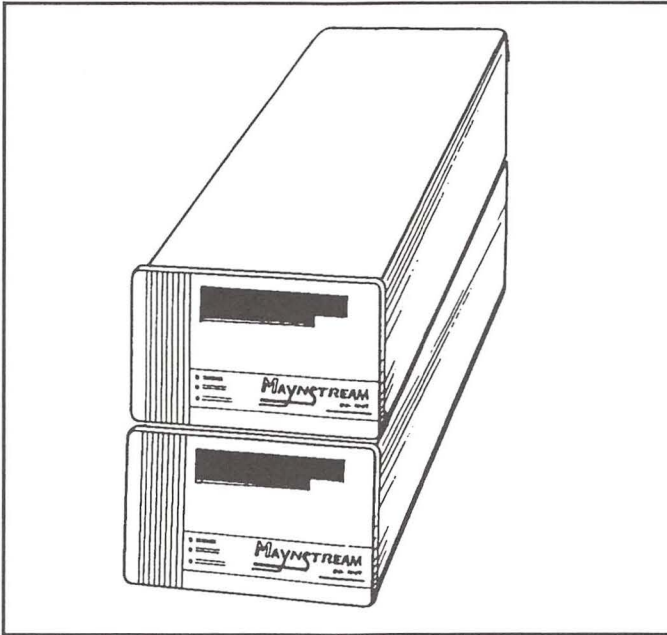


Figure C-5. Configuration of two drives

3. Locate two empty expansion slots in the computer. Remove the screw holding the filler plate that is in line with the empty slots, and take the plates out of the computer.
4. Carefully seat the Maynard controller cards in the open slots.
5. Secure the card bracket with the screw that held the filler plate in place.
6. Replace the cover of the computer.
7. Pressing the clips on the quick-release cable, push the cables into the connectors on the back of the Maynard drives, until the clips fasten securely.

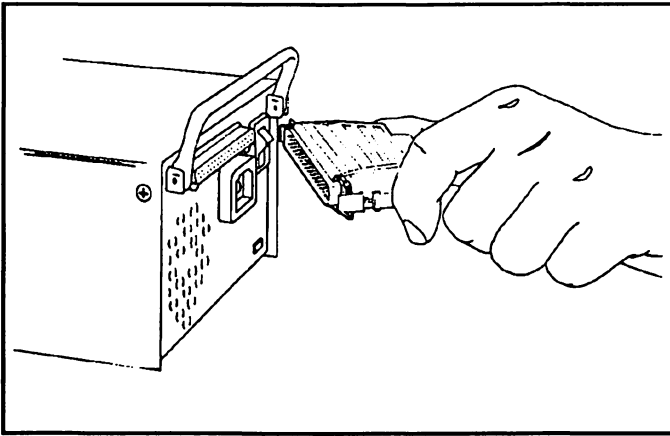


Figure C-6. Connecting the cable to the drive

8. Push the other end of the cables onto the connectors on the Maynard controller cards, until the clips fasten securely.

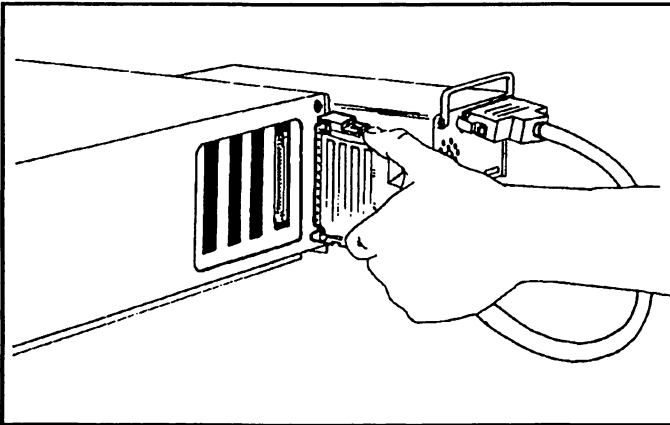


Figure C-7. Connecting the cable to the controller card

9. Plug the power cords into the back of the Maynard drives.
- 10 Plug the other ends of the power cords into an electrical outlet.

MicroChannel Installation (PS/2)

1. Turn off the computer, disconnect the power cord, and remove the cover.
2. Locate two empty expansion slots in the computer.
3. Remove the filler plates that are in line with the empty slots, and take the plates out of the computer.
4. Carefully seat the Maynard adapters in the open slots. Secure the card bracket with the screw that held the filler plate in place.
5. Replace the cover of the computer.
6. Pressing the clips on the quick-release cable, push the cables into the connectors on the back of the Maynard drives, until the clips fasten securely.

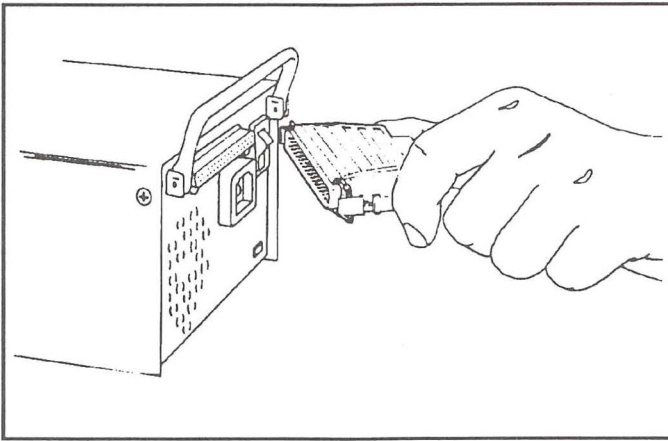


Figure C-8. Connecting the cable to the drive

7. Push the other ends of the cables onto the connectors on the Maynard controller Cards, until the clips fasten securely.

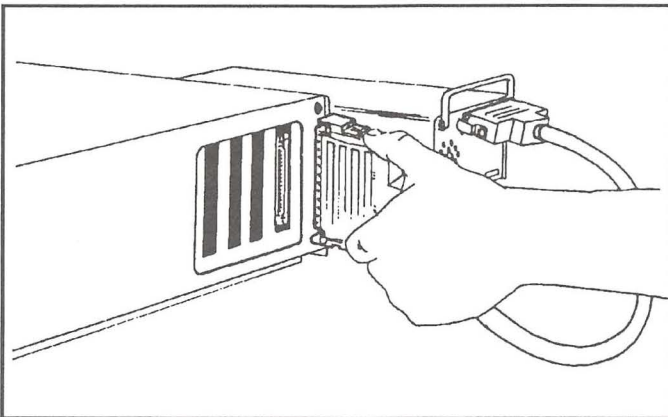


Figure C-9. Connecting the cable to the controller

8. Plug the power cords into the back of the Maynard drives.
9. Plug the other ends of the Maynard power cords into an electrical outlet.
10. Using the MicroChannel Reference disk select “Set Configuration” and then run “Change configuration” to set each card to a different Arbitration level, Interrupt and I/O address.
11. Run a backup and verify the backup to be sure the two drives are working properly.

Multiple Drive Software Notes

After you have set the jumpers and installed the controller cards into your system, you must configure the software to recognize the fact that two cards are present. By default your system will have controller current status set to the following:

<u>CONTROLLER #</u>	<u>CURRENT STATUS</u>
1	AUTO
2	DISABLED

A controller status of AUTO means that if MaynStream finds a controller at the specified I/O address, the controller will be used. DISABLED means to not use the controller, even if one is found. This information is displayed within Tmenu when you choose **Hardware Options/Controllers Options**.

In any situation where you connect multiple drives to a SCSI controller, it is highly recommended that you specify the number of drives attached to the controller within the controller options menu. At initialization time, MaynStream quality checks the number of drives found connected to each controller against the value configured. By default, the Attached Drives value is set to AUTO, and in this configuration if some of the drives were powered down, but one was found, no error message will be displayed warning you of the limited drive problem.

If you have a DAT drive as the second drive in a multiple drive configuration, you may get an “assertion failed” message. Contact the Maynard Technical Support department at 800/227-6296 to get a firmware upgrade.

During Backup or Transfer, the software will automatically continue from the first drive to the second drive except in the following cases:

- No tape is in the second drive
- The second tape contains transferred files
- The second tape is password protected

During Restore or Verify, the software will automatically continue from the first drive to the second drive except in the following cases:

- No tape is in the second drive
- The second tape is out of sequence
- The second tape is not part of the backup set

To tension or erase tapes the software will prompt you for a tape in each drive. Both drives will work to tension or erase tapes.

QIC-02 Controller Card Configuration

Set both controllers to ENABLED. The I/O addresses (which must be different), interrupt numbers, and DMA channels should be explicitly set as illustrated below. (See *Controller Options* in Chapter 3 for a description of the options.)

Maynard QIC-02 Controller Card Options		
	Controller 1	Controller 2
Current Status	ENABLED	ENABLED
Controller Type	Maynard PC QIC-02	Maynard PC QIC-02
Attached Drives	1	1
I/O Address	370	360
Interrupt Number	3	3
DMA Channel	1	1
Card Slot	N/A	N/A

* indicates there is a conflict.

SCSI Controller Card Configuration

Set both controllers to ENABLED. The I/O addresses, interrupt numbers, and DMA channels should be explicitly set (all are to be different values for each option). The actual number of drives to be supported should be entered. An example of a typical configuration is shown below.

Maynard SCSI Controller Card Options		
	Controller 1	Controller 2
Current Status	ENABLED	ENABLED
Controller Type	Maynard SCSI 8-bit	Maynard SCSI 8-bit
Attached Drives	7	2
I/O Address	370	360
Interrupt Number	3	5
DMA Channel	1	3
Card Slot	N/A	N/A

* indicates there is a conflict.

NOTE: Be aware that the asterisk "*" is used to indicate an option value conflict.

NOTE: The Adaptec 1542B SCSI controller and the Maynard 16-bit SCSI controller both default to DMA 5. When installing these two cards in the same computer one of the defaults must be changed.

NOTE: If you install two Maynard 16-bit SCSI controllers into a PS/2 and you wish to auto-determine the cards, the card in the lowest numbered PS/2 slot must be set to the primary address of FF70_H.



Appendix D

Hardware Compatibility Notes

If you are having difficulty getting your MaynStream system to work with your computer, this appendix may help you. This appendix includes information and notes on the jumpers on the Maynard cards. These jumpers allow you to change three things: the I/O address, the Interrupt Request (IRQ), and the DMA channel.

Controller Card Jumpers

To determine what revision you have, look for “REV” followed by a number in the upper right (or left) corner of the Maynard card. Earlier versions of the Maynard card are identified on the back of the card.

Below are diagrams of cards with the jumpers labeled. The jumper settings in these diagrams are the factory settings for the Maynard controllers.

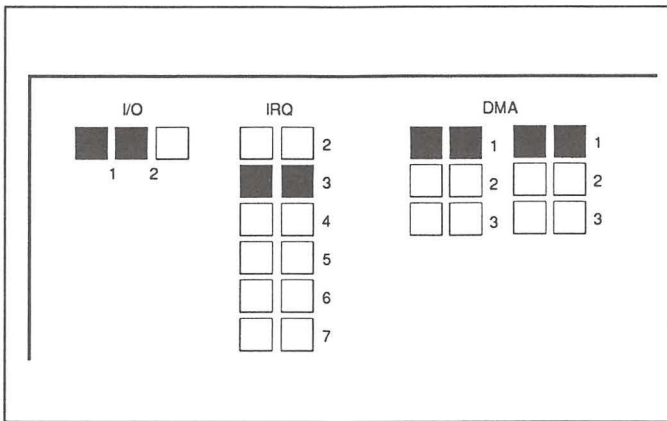


Figure D-1. Maynard QIC Card Rev 5 or later

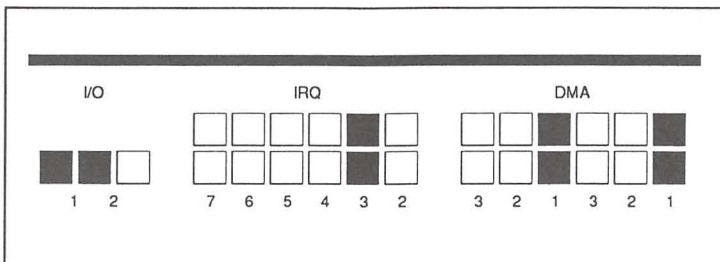


Figure D-2. Maynard 8-bit SCSI Card Rev 2 or later

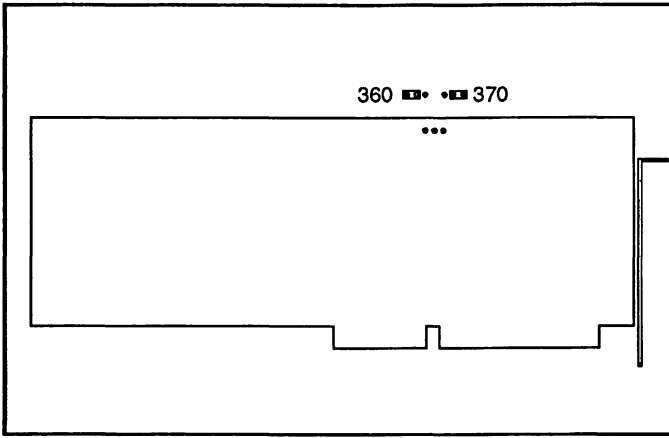


Figure D-3. Maynard 16-bit SCSI Card Rev 1 or 2

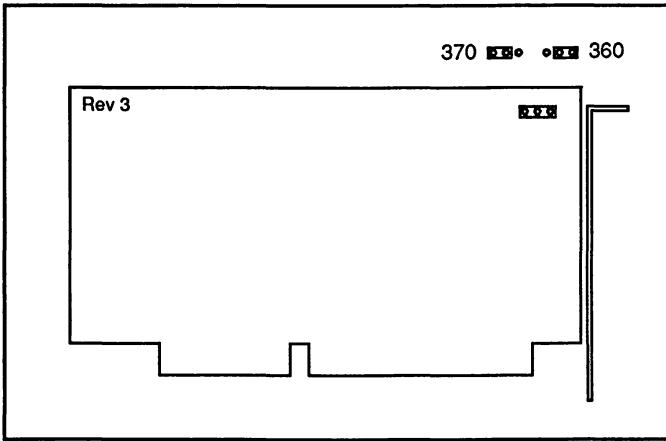


Figure D-4. Maynard 16-bit SCSI Card Rev 3

Some computers, need special jumper settings. If you are having compatibility problems, refer to the chart below for the optimum settings.

<u>Computer</u>	<u>Jumper Settings</u>
Compaq Deskpro 286	Maynard I/O 2
Compaq Portable 286	Maynard I/O 2
Dell 310	Maynard I/O 2
All Dell Computers.....	Do not set DMA 2
8088 Computers.....	Do not set IRQ to 5

Information on each of these jumpers is given on the following pages.

Ability to Change I/O Address

The Maynard ISA cards have a jumper that allows you to use I/O addresses 370_H or 360_H. Here are the I/O address jumper settings for the Maynard cards:

- 1 = primary address 370_H to 377_H
- 2 = secondary address 360_H to 367_H

The drawings at the beginning of this section show the jumper set for the primary address (370-377_H).

The MaynStream software automatically checks both addresses. If you have another device at the unused address, the MaynStream software may cause problems with the other device. To restrict where MaynStream looks for the Maynard controller, run Tmenu /CONFIG and set the software configuration to match the Maynard controller.

Ability to Change Interrupts

The Maynard 8-bit controller cards have jumpers to use either interrupts 2, 3, 4, 5, 6, or 7. The jumper for the interrupts is marked "IRQ" on the drawing of the Maynard card. The Maynard 16-bit SCSI controller can use interrupts 3, 4, 5, 10, 11, or 12.

On the Maynard card, REV 5 or later, the interrupt option in the MaynStream configuration file must match the interrupt selected on the card when using interrupts 2 through 5 or 7.

For more information on the interrupt option in the MaynStream configuration file, refer to Appendix A.

NOTE: IRQ 5 is used by the hard disk in most 8088 computers (e.g., IBM PC, Compaq Portable, Epson Equity, etc.). Do not set the Maynard controller to IRQ 5 when used with these computers.

Ability to Change DMA Channels

Both jumpers (DRQ and DACK) on the 8-bit cards must be set the same to select the channel. The jumper settings for the DMA channel are marked DRQ and DACK on the drawing of the Maynard card.

The 16-bit card is capable of using DMA arbitration levels 5, 6, or 7 or a non-DMA mode. The default DMA arbitration level is 1. As the last option, the non-DMA mode will not conflict with any other option, but slower MaynStream performance will result.

Using MaynStream with an Adaptec Controller

The MaynStream software is compatible with Adaptec 152x/154x and IBM MCA SCSI adapters when a SCSI tape drive is used. When using the Adaptec controller, you will need to load the appropriate ASPI device driver that came with your controller card.

When using the Adaptec 152x or 154x SCSI controller with a Dell 210 you must add the following statements to your CONFIG.SYS file. Statement 1 should be used with 152x controllers, statement 2 should be used with 154x controllers.

- 1) `device=c:\aspi2dos.sys /d /i /tp /c /y- /f15`
- 2) `device=c:\aspi4dos.sys /d /i /tp /c /y- /f15`

Do not attempt to use an Adaptec 1542 adapter and a Maynard SCSI tape drive on earlier models of the AST Premium 286 computer. This configuration will cause the system to “hang”.

General Compatibility Notes

Computers with special compatibility issues are shown here:

- The Compaq Deskpro 286 and Compaq Portable 286 cannot accommodate two Maynard controllers.
- IBM PS/2 Models 50, 50Z and 70 are compatible with the Maynard portable drives and the Maynard 150 internal cassette only.
- Toshiba T1200, T3100 and T5100 laptop computers require an expansion chassis.
- Some computers may receive a “Fatal error on MaynStream” when shadow RAM (sometimes known as shadow BIOS) is enabled. Disable shadow RAM before performing a backup.

Installation for the Compaq Portable 286

There are special considerations for installing the Maynard internal tape drive in the Compaq Portable 286. You will need a star screwdriver, and a small crescent wrench to complete the installation. Below you will find a step-by-step installation for this particular computer.

1. Turn off the computer and remove any power cords or external cables.
2. Remove the top and bottom panels.
3. Stand the computer on end. (Be careful the computer does not tip over when you have it in this position.)

4. Remove the metal plate that holds the cards in place, and the metal plate covering the drive area.
5. Remove all cards from the slots. Remember where each card was located. If you have to remove cables from the cards, remember where these cables were attached.
6. Remove the screws that hold the drive mounting bracket from both sides of the computer. Carefully hold the mounting bracket as you remove the last screw and pull the mounting bracket out of the computer. The mounting bracket will contain the floppy drive and a blank plate.
7. Remove the four screws that hold the blank faceplate to the mounting bracket. Pull the faceplate out. **SAVE** the screws.
8. The Maynard internal drive slides into the mounting bracket with the tape slot closest to the floppy drive. Line up the screw holes and the front faceplates of the floppy drive and the Maynard drive to be sure the drive is in the proper place.
9. Use the four screws removed from the blank plate to hold the Maynard drive in place.
10. With the tape drive secured, slide the mounting bracket into the computer and secure it with the screws that were removed earlier.
11. With the three long screws holding the bracket on the bottom, put the bottom panel back on the computer. The rest of the installation can be done with the computer resting firmly on a flat surface.
12. Plug the power cables into the Maynard drive and into the floppy drive.
13. Plug the 50 pin data cable into the edge connector on the tape drive, and into one of the available power connectors on the Compaq system board.
14. Plug the “Y” power cable into the white connector on the back of the Maynard drive, and into one of the available power connectors on the Compaq system board.
15. Re-install the cards starting with the short Compaq card in slot #1.
16. Connect the controller for the floppy drive controller.
17. Re-install the rest of the cards.
18. Replace the metal plate and the top cover of the computer.



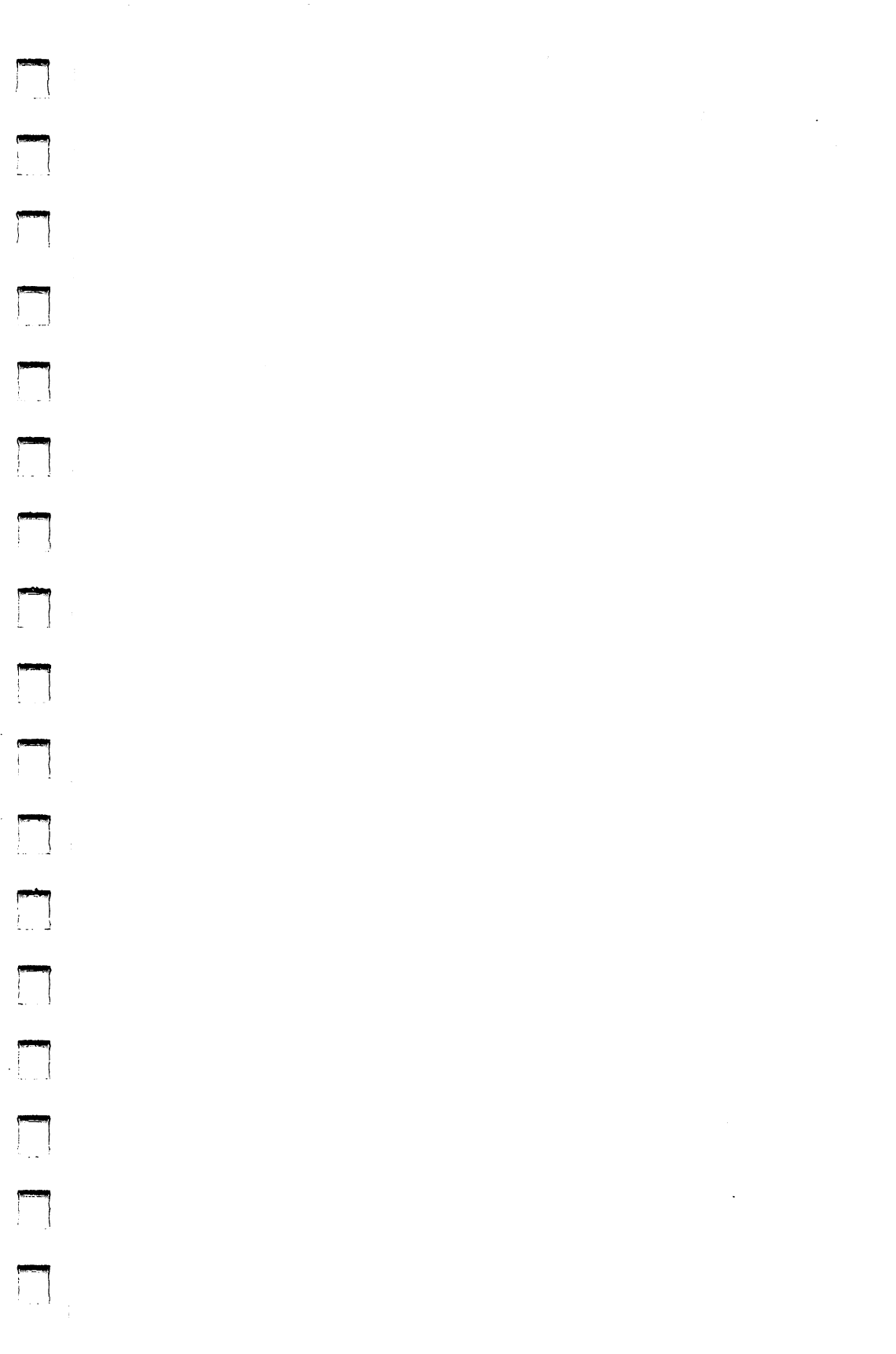
Appendix E

Moving the Maynard Drive

The external Maynard drive is designed to be a portable tape backup system. To use this feature you must have a Maynard controller in each computer that you intend to back up.

Care should be taken when moving the tape drive from system to system. Below are step-by-step instructions on how to move the tape drive.

1. Eject the tape.
2. Turn off the Maynard drive and unplug it from the electrical outlet. It is not necessary to turn off the computer.
3. Disconnect the cable that runs between the computer and the Maynard drive.
4. Carefully move the Maynard drive to the new location.
5. Re-attach the cable between the drive and the new computer. Plug in the power cord, and insert a tape.
6. Use the Tmenu system or the Advanced Command Structure to begin using MaynStream.



Appendix F

Mayntenance

Great care has been taken at Maynard Electronics to insure that the component parts of the MaynStream system are in good condition. The following pages give a comprehensive overview of the care and maintenance that should be taken by the user to assure worry-free operation for as long as you own your MaynStream system.

Tape Drive Care

Below you will find suggestions for the care of your Maynard tape drive:

- Always operate the drive on a flat, sturdy surface.
- Keep the Maynard drive dry and at room temperature when in operation.
- If exposed to cold temperatures, allow the Maynard drive to warm up before using.
- Do not drop the drive.
- For most drives, clean the recording heads after every eight hours of use. The DAT and 8mm drives should be cleaned after every 50 hours of use or at least once a month. The DAT drive should also be cleaned if the green “Cassette in Place” light flashes slowly during normal operation. Cleaning kits can be ordered by calling Maynard Electronics Technical Support at 1-800-227-6296.

Tape Care

The following are some points you should note about maintaining your Maynard tape:

- Do not touch exposed areas of the magnetic tape.
- Keep the tape away from magnetic fields, including monitors, televisions, printers, motors, etc.
- Insert the tape carefully.
- Always return the tape to the plastic case when not in use, even for short periods. Do not leave the tape in the drive when not in use.

- Do not use the tape when the temperature is below 50° or above 120° F. Sudden changes in temperature should be avoided.
- Do not attempt to cut or splice the tape. The reliability of a spliced tape cannot be assured.
- Re-tension the tape after every twenty backups, after environmental changes, or after a long period of disuse.
- Always store the tape in a safe place when not in use.
- If you are using a Digital Data Cassette, be sure the clear leader tape is exposed, not the brown magnetic tape, after the tape has rewound. If magnetic tape is exposed, insert the tape and run Tension from Tmenu or from the DOS prompt.

Appendix G

Faceplate Replacement

The internal PC versions of the Maynard drives come with a black and a beige faceplate that can be changed to best match the computer in which you are installing the drive.

Maynard 150 Cassette

To change the faceplate of an internal 150 MB cassette drive follow these instructions:

Use a phillips screwdriver to remove the right screw that holds the faceplate to the drive. Put the screwdriver through the hole in the metal plate to remove the left screw.

Before you can remove the faceplate pull the tape-locking knob straight out, away from the faceplate.

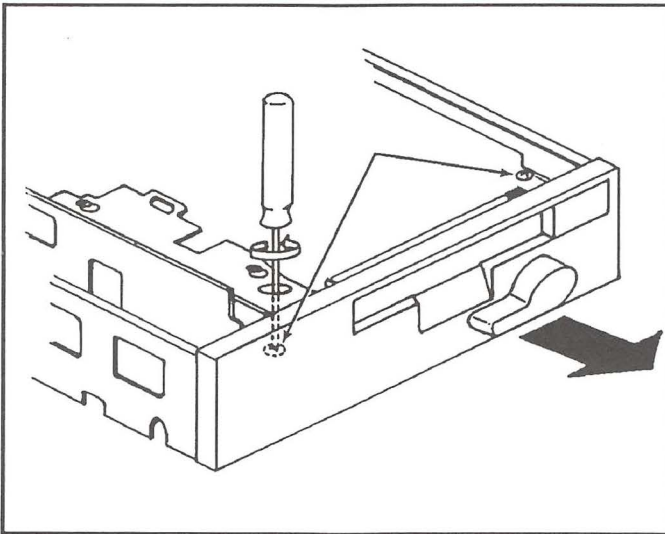


Figure G-1. 150 Cassette faceplate

Use the same screws from the first step to secure the new faceplate. The drive is now ready to be installed in your computer.

HINT: When you put the new faceplate on the drive, put the screws through the faceplate tabs, then slide the faceplate on the drive. It is difficult and awkward to try to drop the screws into place.

Maynard 20 and 60 Cassettes

To change this faceplate simply remove the four screws that hold the faceplate and use these same screws to secure the other faceplate. To change the tape eject button grab it firmly and pull straight out. Then place the new tape eject button on the metal prongs so it lines up with the hole and push the button in until it is almost flush with the surface of the faceplate.

Maynard Cartridge Drives

Tools Required:

Small Flat bladed screwdriver

#2 Phillips screwdriver

Paper Clip

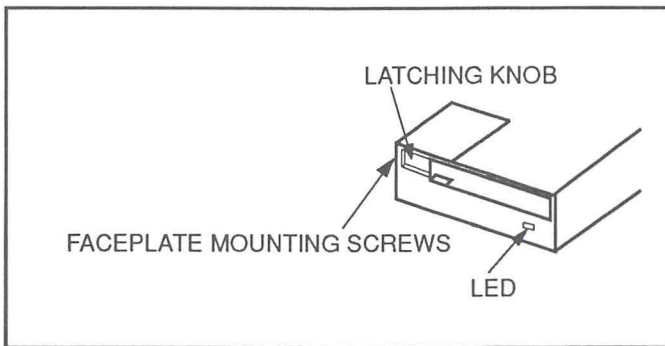


Figure G-2. Cartridge faceplate

Using the flat bladed screwdriver, pry the latching knob from the faceplate using gentle, even pressure.

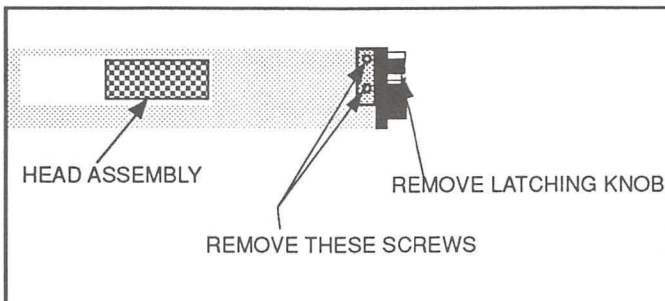


Figure G-3. Removing the faceplate mounting screws

Remove the two faceplate mounting screws from the front left side of the drive unit with the Phillips screwdriver (See figure G-3).

Tilt the faceplate away from the left side of the drive and then slide it towards the bottom of the drive approximately 1/8", allowing the tabs on the right side of the faceplate to disengage.

Place the paper clip on the LED wires.

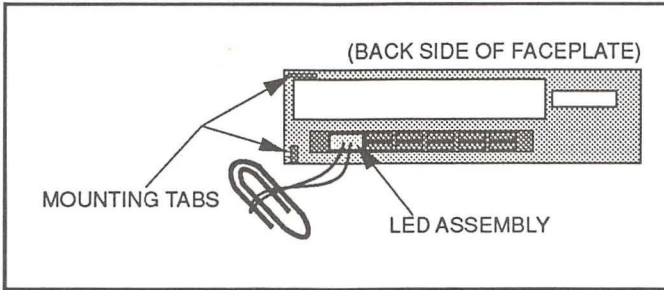


Figure G-4. Clipping the faceplate LED wires

Using the flat bladed screwdriver, pry the mounting band from around the back of the LED and allow it to slide down the wires to the paper clip.

Carefully remove the LED from the holder in the faceplate and then push the holder through the front of the beige faceplate.

Push the LED holder through the front of the black faceplate.

Position the faceplate so that the LED can be re-inserted into the holder and replace the LED.

Slide the mounting band back onto the LED assembly and remove the paper clip.

Attach the new faceplate to the drive unit and replace the faceplate mounting screws.

Replace the latching knob and then proceed with installation as described in this manual.



Appendix H

Glossary of MaynStream Files

This is a list of all of the Maynard specific files and their functions. The files are listed alphabetically by their extensions.

@568B.ADF—	a file required for any Maynard QIC drive to be installed on a PS/2
@568D.ADF—	a file required for any Maynard SCSI drive to be installed on a PS/2
MODIFIED.BKS—	a pre-defined backup script that backs up modified files
VERIFY.BKS—	a backup script created when files fail to verify
ISLELAN.CFG—	the data file that contains the local workstation configuration settings for remote drive backup
MAYNLAN.CFG—	the data file that contains the remote workstation configuration settings
MSII.CFG—	the data file that contains the MaynStream configuration settings (created the first time you save the configuration)
AUTORES.COM—	the program that allows the automatic backup to run at the date and time you have set
*.DAT—	files required if you are using MaynStream's catalog feature
AD_ASPI.DVR—	the dynamically loaded driver for Adaptec ASPI controller
DETDIVR.DVR—	this file determines which type of controller is installed
IBM_SCSI.DVR—	the dynamically loaded driver for IBM SCSI controller
MS_QIC.DVR—	the dynamically loaded driver for Maynard QIC drives
MS_SCSI.DVR—	the dynamically loaded driver for Maynard SCSI drives
AUTOBACK.EXE—	the executable file that starts the Automatic Backup program

INSTALL.EXE—	the executable file that installs the MaynStream software
ISLECFG.EXE—	the setup program for publishing remote workstation drives
ISLEINST.EXE—	the remote workstation installation program
ISLELAN.EXE—	the Terminate and Stay Resident (TSR) that allows the remote workstation to see and be seen by the Maynard tape drive
MAYNINST.EXE—	Used to install MaynLAN executables
MAYNLAN.EXE—	the Terminate and Stay Resident (TSR) that allows the computer attached to the Maynard tape drive to see the remote workstations
PKUNZIP.EXE—	the executable file that extracts (unzips) the compressed MaynStream files from the installation disks and places them on your drive
TBACKUP.EXE—	the tape command that allows you to back up files and place them on tape
TDIR.EXE—	the tape command that gives you a listing of the files contained on a tape
TENSION.EXE—	the tape command that re-tensions the tape and can optionally erase a tape
TMENU.EXE—	the menu-driven program that gives you access to most of the MaynStream software options
TRESTORE.EXE—	the tape command that restores files from tape to disk
TVERIFY.EXE—	the tape command that checks the data on the tape can compares it to the data on the drive
*.IDX—	files required if you are using MaynStream's catalog feature
_MSII_V.MEM—	a working file for virtual memory
ISLELAN.MSG—	the message file used by the IsleLAN program
MAYNLAN.MSG—	the message file used by the MaynLAN program
NOVELL.NKS—	the file containing all NetWare bindery file names to exclude during backup
ISLELAN.PUB—	this encrypted file contains a list of published drives

AD_ASPI.RES—	the resource file for the Adaptec driver
AUTOBACK.RES—	the resource file for the AUTOBACK.EXE file
IBM_SCSI.RES—	the resource file for the IBM SCSI driver
INSTALL.RES—	a resource file that contains the English version of all of the text required for installation
ISLECFG.RES—	the resource file for the ISLECFG.EXE file
MS_QIC.RES—	the resource file for the Maynard QIC driver
MS_SCSI.RES—	the resource file for the Maynard SCSI driver
MSII.RES—	the resource file for the TMENU.EXE file
EXCLUDE.RSS—	the special script that contains files you wish to exclude from a restore
MS_AR525.TDH—	Drive Specific Information
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MS_PYTHN.TDH	
MS_8500.TDH	
MS_EPLUS.TDH	
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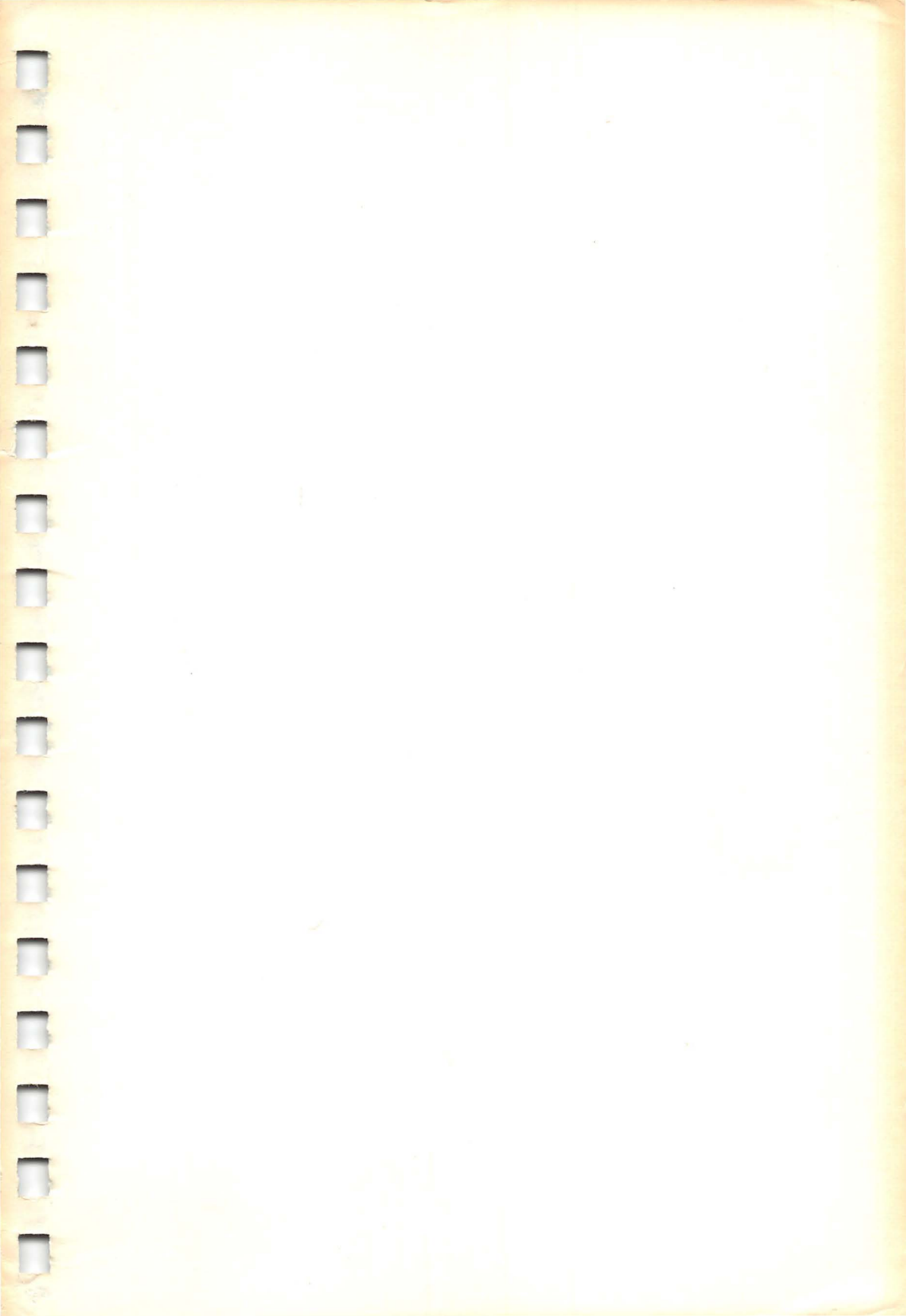


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