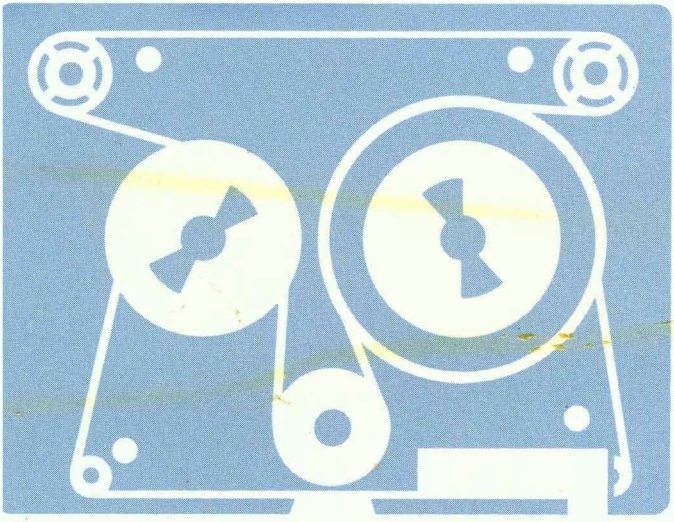
BACKUP™



WITH

EZ™ TAPE

USER'S MANUAL

IRWIN® MAGNETICS

Document No. 2507137-B

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Chapter 1: Getting Started

1.1 This Manual

This manual tells how to use the **EzTape** software with your Irwin **BACKUP** tape system. In it information that you must type or that appears on your personal computer display screen is printed like this:

```
Do you want to do the backup? Yes
```

Keys you press are shown like this:

F1

Commonly used keys and their functions are described below:

↑ Arrow key, used to move the cursor up to highlight the name of a desired option.

↓ Arrow key, used to move the cursor down to highlight the name of a desired option.

B Letter key, also used to specify a desired option. In this example, 'Backup'.

Esc Escape key. Used to return to a previous screen. If you are in file selection, your selections are automatically saved. If you are in the Main Menu, your cursor will move to the 'Quit' option.

CTRL + C
This will abort the procedure you're in.

↵ This key may be labeled 'Return' or 'Enter', depending on your computer's

keyboard. Use this key to enter information that you have typed, or to advance from one screen to the next.

[F1] Function key. **EzTape** uses all ten function keys.

1.2 System Requirements

System Requirements

- You must have a **hard disk** in order to use **EzTape**.

  The hard disk must be formatted and the operating system files installed. Refer to the documentation that came with your hard disk for initialization procedures.

- **EzTape** runs under **MS-DOS** or **PC-DOS** Version 2.00 and later versions of these disk operating systems.

  If your computer is still new and unfamiliar to you, review your DOS manual before installing the **EzTape** software to gain an understanding DOS commands and disk organization.

- Your **BACKUP tape drive** should be installed before you begin to install the **EzTape** software.

  If it has not yet been installed, refer to the installation guide for your drive.

- Your computer must have a minimum of **512K bytes of memory** to run **EzTape**.

  If you have memory resident applications other than DOS, you may not be able to run **EzTape** while they are installed. **EzTape** performance is optimized on a computer with 640K bytes of memory, and no memory resident applications other than DOS.

If the memory you have available is low, **EzTape** will display a message indicating that you may wish to increase available memory before proceeding in order to get better performance. If you do not have enough memory available, **EzTape** will display a message and it will not execute.

1.3 Installing Your EzTape Software

Installing

The program diskette supplied with your Irwin **BACKUP** tape drive contains the **EzTape** control programs you need to back up and restore data to and from your hard disk. This section tells you how to use the automatic software installation program to copy these files onto your hard disk. It takes just a few minutes to run.

The floppy drive in your computer is probably identified as drive A, and the hard disk as drive C. If not, substitute the correct letters in the steps below.

1. You must be logged onto the hard disk drive. To make sure, enter

   `C:` then press [↵].

2. Insert the **EzTape** diskette into your floppy diskette drive A. Then enter

   `A:INSTALL` and press [↵].

3. Answer the questions that appear on the screen. In most cases the default answer provided will be correct.

4. When the procedure is complete, remove the diskette and store it in a safe place. You should not have to use it again unless the programs

you just copied to the hard disk are damaged somehow.

5. Reboot your system by pressing the CTRL, ALT, and DEL keys at the same time.

6. **EzTape** is installed and ready to use. To verify this, enter

   `CD \EZTAPE` and press ↵.

   If you have installed **EzTape** in a directory other than `C:\EZTAPE`, substitute that directory name in the above command, and wherever you see it in this guide.

7. Then enter:

   `EZTAPE` and press ↵.

   The logo will appear on the screen, followed by the **EzTape** main menu.

CONFIG File The CONFIG.SYS File

To get optimal performance when using **EzTape**, you should have a CONFIG.SYS file in the root directory which includes the two lines shown below. This example shows how to create the CONFIG.SYS file. If you already have a CONFIG.SYS file, you should append the lines.

> **Warning: If you already have a CONFIG.SYS file, this procedure will replace it.**

1. From the DOS prompt, enter
   `COPY CON: CONFIG.SYS` and press ↵.

2. Enter:
   `FILES=10`
   `BUFFERS=20`

3. Press [F6], then press [↵].

The AUTOEXEC.BAT File

If you do not already have an AUTOEXEC.BAT file, the **EzTape** installation program will create one in the root directory if you specify that you want to install **EzStart**. If **EzTape** creates the file, it will contain these lines:

```
DATE
TIME
C:
CD \EZTAPE
EZSTART
CD \
```

If you already have an AUTOEXEC.BAT file, the **EzTape** installation adds the lines to it if you specify **EzStart**.

These commands will:

1. Prompt you to enter the correct date when you start your system up.

2. Prompt you to enter the correct time when you start your system up.

3. Load **EzStart** every time you start the system.

You may also want to add a line to the AUTOEXEC.BAT file that specifies the **EzTape** directory in the search path. That way, you will not need to move to the **EzTape** directory every time you want to use it. To learn more about the AUTOEXEC.BAT file, consult your DOS manual.

Help

1.4 Help

Every **EzTape** menu includes the [F1] key. If you are performing an **EzTape** operation and are not quite sure about it, you can always press [F1] for HELP. The first time you press [F1], you'll get a brief message directed specifically at the highlighted option. If you press [F1] a second time (while first level HELP is displayed), you'll get a more detailed explanation about the operation.

Experienced Irwin Users

1.5 A Note for Experienced Irwin Users

If you own Irwin software that has a version number beginning with 3 or 4 (such as 4.2), you are familiar with its programs called IMAGE, FIP, and TFORMAT.

Using **EzTape**, you can restore files individually from tapes made with the IMAGE program – that's something you could never have done with the IMAGE program itself. However, backup tapes that you made with the FIP program cannot be restored with **EzTape**.

The tape cartridges you used with the earlier software are the same type **EzTape** uses. If you have tapes formatted by TFORMAT, you can use them with **EzTape**. (In **EzTape**, the process of servo-writing and formatting is referred to as 'initializing'.) However, tapes formatted by **EzTape** cannot be read by the previous versions of software.

If you have backups made with the earlier software on which you have stored data for archival, you will probably want to restore that data using the earlier software and then make a new backup using **EzTape**.

That way, when you need to access your archived data you can take full advantage of **EzTape**'s flexibility.

You should save your diskette containing the earlier Irwin software. You might come across a FIP backup that you forgot to convert.

Chapter 2: EzTape Basics

This chapter will describe how to make a backup of your entire hard disk, how to back up only files that have changed since the last backup, and how to restore your entire hard disk. It uses three batch files that come with **EzTape**. (Files can also be backed up and restored selectively even from an image backup of your entire hard disk, as described in the next chapter.)

2.1 Backing Up Your Entire Hard Disk

Image Backup

1. Insert an initialized tape cartridge into your Irwin drive.

2. At the DOS prompt, enter:

   `CD \EZTAPE` and press [↵].

3. Enter:

   `BACKALL` and press [↵].

4. When the backup is complete, **EzTape** will return you to the DOS prompt in the **EzTape** directory.

5. Remove the tape. Label it with the date and contents. You may want to move the write-protect tab to the right to ensure that this data cannot be overwritten.

   NOTE: If the capacity of your hard disk is greater than the capacity of an individual tape for your drive, you may need more than one tape to complete a backup of your entire disk. You should have the necessary tapes

initialized ahead of time so that you will not have to interrupt the backup operation. If you have to cancel the backup operation, hold down the CTRL key and press C.

6. When you run the BACKALL batch file again, the new backup of your entire hard disk will **overwrite** the old one if you use the same tape. The name of the backup set on the tape will be IMAGE.001.

Modified Files

2.2 Backing Up Modified Files

This batch file selects all files on your hard disk that have been created or modified since the last backup.

1. Insert an initialized tape cartridge into your Irwin drive.

   At the DOS prompt, enter:

   CD \EZTAPE, and press ↵.

2. Enter:

   CHANGED, and press ↵.

3. When the backup is complete, **EzTape** will return you to the DOS prompt in the **EzTape** directory.

4. Remove the tape. Label it with the date and contents. You may want to move the write-protect tab to the right to ensure that this data cannot be overwritten.

Backup sets made from the CHANGED parameter file can be appended (added on) to other CHANGED backup sets. The backup sets do not overwrite.

2.3 Restoring Your Entire Hard Disk

Image Restore

Insert the tape cartridge which contains the backup of your entire hard disk into your Irwin drive. If the backup of your entire hard disk required more than one tape, you will need to have all of the tapes available in order to perform the restore.

1. At the DOS prompt, enter:

   `CD \EZTAPE` and press [↵].

2. Enter:

   `RESTALL` and press [↵].

3. If you have some newer files on the hard disk, **EzTape** will ask you if it should overwrite a new file on the hard disk with the old file on the tape.

4. When the restore is complete, **EzTape** will return you to the DOS prompt in the **EzTape** directory.

5. Remove the tape and store it in a safe place.

   NOTE: The RESTALL batch file will restore the entire contents of your tape cartridge to the hard disk. If you have more than one backup set on the cartridge, it will restore them all in the order in which they were backed up.

Damaged Hard Disk

If Your Hard Disk Was Damaged or Destroyed

If you are restoring your entire image backup because your disk was destroyed somehow, or if you have reformatted your hard disk, you will need to take some special steps.

- Be sure the hard disk is formatted and the system files have been installed. Consult your DOS manual for step by step procedures. This usually involves booting your system with the DOS diskette in drive A. Then, you will probably format the C drive using the /s parameter. The /s installs the system files.

- Re-install **EzTape** following the instructions in the installation section of this manual (see page 1–3).

- The version of DOS that you installed should be the same as the version you're about to restore from tape. If it is not the same, you should restore using file selection as described in the next section so that incompatible DOS files are not copied to the hard disk.

- If the capacity of your new hard disk, or the size of the new DOS partition, is smaller than the amount of data you plan to restore, you should selectively restore files as described in chapter 3. If you have questions about the size of the DOS partition, consult your DOS manual. The FDISK utility can be used to check the size of the partition.

After preparing your hard disk and system files, you are ready to restore from your tape backup using the procedure described in the preceding section, "Restoring Your Entire Hard Disk".

2.4 Your Backup Plan

Backup Plan

A good way to use these batch files is to run a BACKALL of your entire hard disk first. Then, run the CHANGED backup each day until you perform another BACKALL of your entire hard disk. You can use **EzStart** to automate the process (see page 6–1).

A very comprehensive backup strategy uses three tapes, rotated in use so that you always write on the oldest version, and thus have two other recent versions in case of difficulty. This "grandfather-father-son" backup strategy is common in large data processing operations. The strategy outlined below uses this approach on both a weekly and monthly basis.

1. **Week 1**: Make a complete (BACKALL) backup on Friday. Label the tape with "BACKALL #1" and the date, and store it in a safe place.

   Back up your active data files (using the CHANGED batch file) at the end of each day except Friday. Use a separate tape for each day. Label them: "Monday", "Tuesday", "Wednesday", and "Thursday". Store them in a safe place.

2. **Week 2**: Make a complete (BACKALL) backup on Friday, using a new tape. Label the tape with "BACKALL #2" and the date. Store it with your other weekly tape.

   Back up your active data files each day using the CHANGED batch file. Write over the tapes used in the previous week. Use the tape labeled "Monday" on Monday, "Tuesday" on Tuesday, etc. Store each day's tape.

3. **Week 3**: Make a complete (BACKALL) back up on Friday, using a new tape. Label the tape with "BACKALL #3" and the date. Store it with your other weekly tapes.

Back up your active data files each day using the CHANGED batch file, and writing over the daily tapes.

4. **Week 4**: Make a complete (BACKALL) back up on Friday. Label it with the month and store it.

   Make another complete (BACKALL) back up on Friday, writing over the "BACKALL #1" tape. Store it.

5. **Weeks 5-8**: Repeat the steps above. When you make your Friday backup, write over the oldest of the three weekly tapes. When you make your end-of-the-month backup, use a fresh tape. Label it with the month and store it.

6. **Weeks 9-12**: Use a fresh tape for the third end-of-the-month backup, too. When you reach the fourth month, make your backup by writing over the first month's backup. Each month after that, write over the oldest of the three monthly tapes.

You need a total of ten tapes for this method. This strategy is extremely comprehensive and provides a very effective backup library for very sophisticated applications. Using such a scheme, you can recover infrequently used files, lost months before and just discovered missing.

Chapter 3: Basic File Selection

3.1 Selecting Files for Backup

Backup File Selection

You can make individual backup selections at any of three levels:

- **DRIVE**
- **DIRECTORY/SUBDIRECTORY**
- **FILE**

The keys used in basic file selection are listed below.

[+]	to SELECT a file, directory, or drive
[-]	to UNSELECT a previously selected file, directory, or drive
[↵]	to display the next screen for the item currently highlighted
[Esc]	to return to the previous screen. Any selections you made will be saved.

The steps involved in basic file selection are outlined below.

1. Insert an initialized tape into your Irwin **BACKUP** drive.
2. At the DOS prompt, enter:

   `CD \EZTAPE`, and press [↵].

3. Enter:

   EZTAPE, and press [↵]. The main menu is displayed (see **Figure 3–1**).

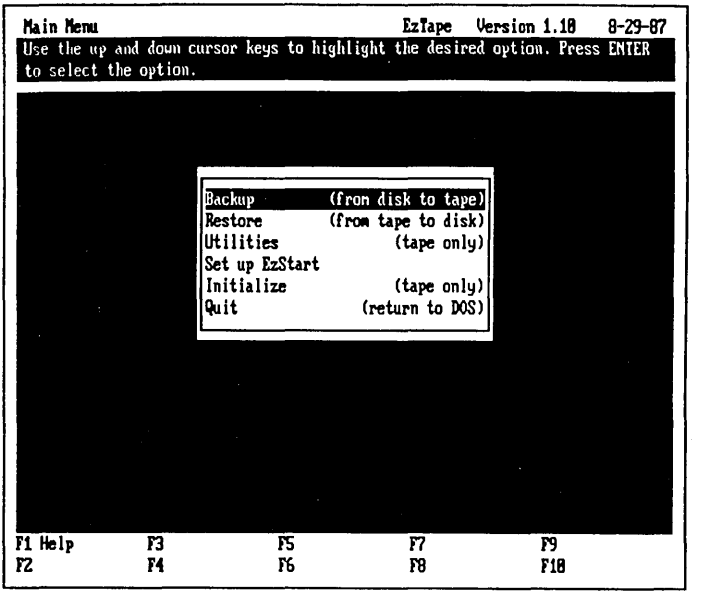

Figure 3–1
The Main Menu

4. From the main menu, press [B] to select **Backup** from the menu. A screen will be displayed as shown in (**Figure 3–2**).

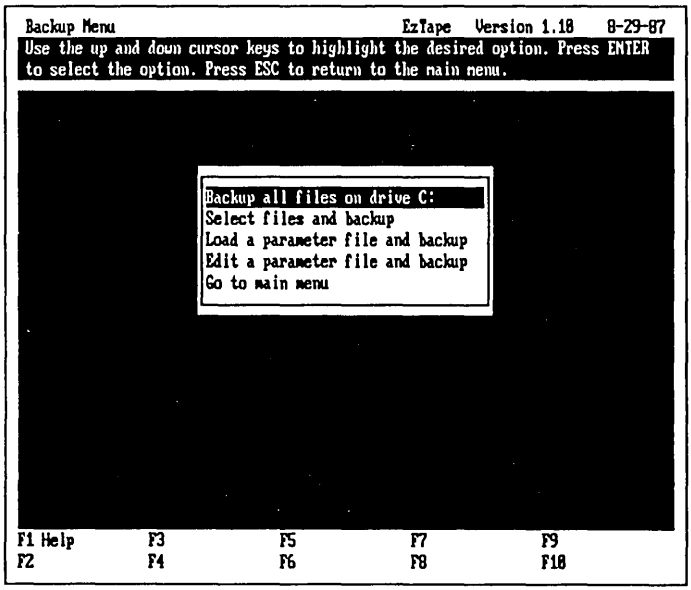

Figure 3–2
The Backup Menu

5. From the Backup Menu, press [S] to choose **Select Files and Backup** from the menu. The screen displays the source drives available for backup (**Figure 3–3**).

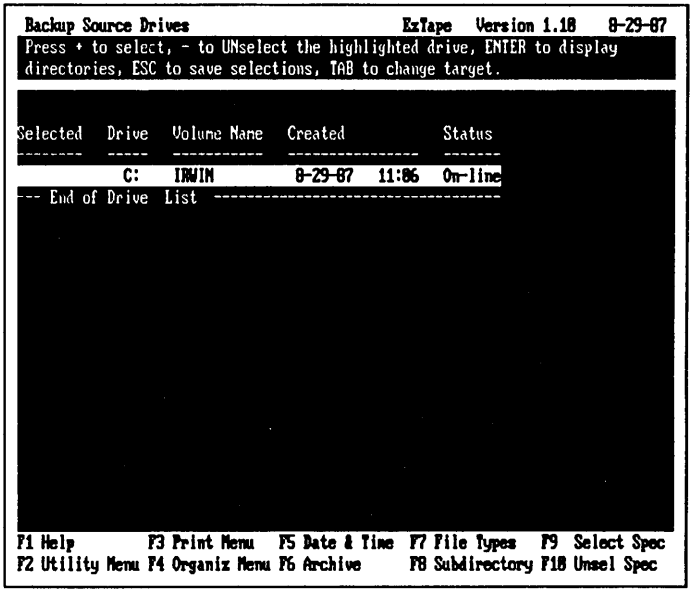

Figure 3–3
Backup Source Drives Screen

6. **Select Source Drives**: You can select the entire contents of an on-line drive by moving the cursor to the desired drive and pressing [+].

7. **Select Source Directories**: Move the cursor to highlight the C drive, using the [↑] and [↓] keys. Press [↵]. The directories and subdirectories on the hard disk will be displayed. See **Figure 3–4**.

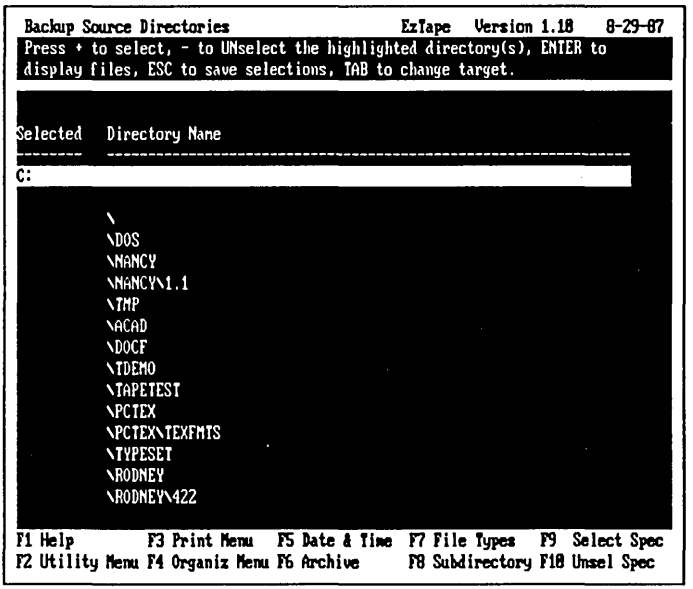

Figure 3–4
Backup Source Directories Screen

The [+] key is used to select the entire contents of a directory. The [-] key is used to UNselect the contents of a directory. You can select as many of the displayed directories as you like or you can go on to the next step and display the files in the directories.

8. **Select Source Files:** Move the cursor to the directory you want to select files from, using the [↑] and [↓] keys. Press [↵]. The files contained in the directory will be displayed.

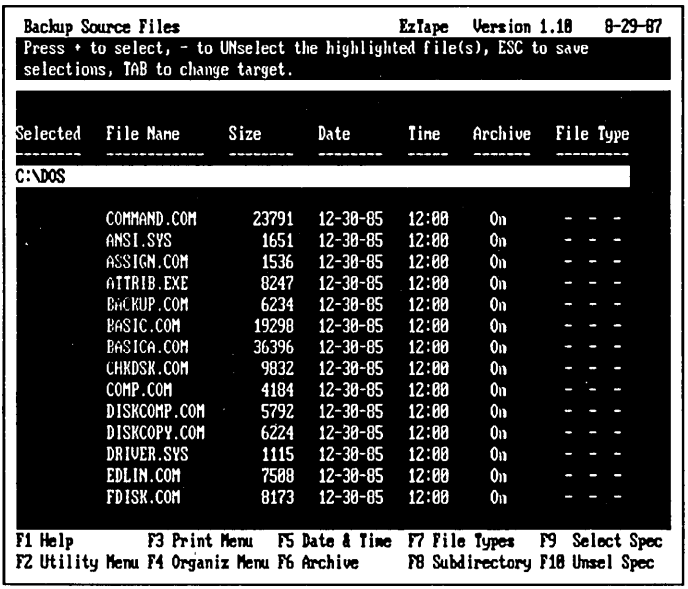

Figure 3–5
Backup Source Files Screen

Use [+] to select a file, or [-] to UNselect a file. When you first bring up the screen, all of the files are UNselected.

You'll see these symbols in the SELECTED columns of your backup source screens:

`**  -->` Files were selected in the specified drive.

`All --->`
All files in the specified drive or directory have been selected.

`Some -->`
Some of the files in the specified directory have been selected.

( ) -->

Selection parameters may apply to this drive or directory, but no files meet them. No files have been selected.

---> The specified file has been selected.

The absence of any symbol in this column signifies no selection.

9. Pressing [Esc] saves your selections and displays the previous screen.

   When you have finished making all of your file selections for backup, use [Esc] to save your selections and return to the previous menus.

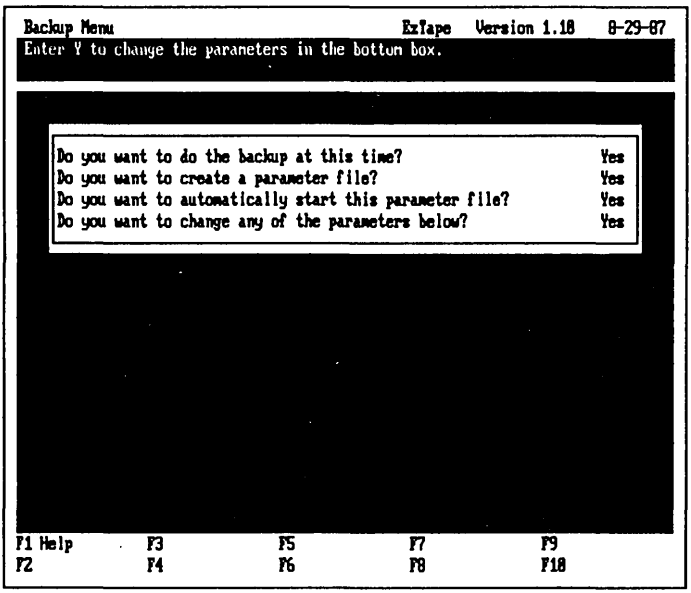

Figure 3-6
Backup Decisions Window

EzTape will display a window prompting for responses to the following:

10. **Do You Want to Do the Backup?**

    If you answer yes and press [↵], the backup will be performed as soon as all of the following questions are answered.

11. **Do You Want to Create a Parameter File?**

    Even if you answer no to the first question, **EzTape** gives you an opportunity to create a file in which the parameters for the selections you just made can be saved. That way, whether you do the backup now or not, you can run the backup later without entering the selections again. If you answer yes and press [↵], a parameter file is created which can be run automatically.

    If you answer no to both of the above questions, the Backup Menu is displayed. No backup will take place; and no parameter file will be created.

12. **Do You Want to Automatically Start this Parameter File?**

    If you answer yes and press [↵], the backup can be performed automatically on a day and time you specify.

13. **Do You Want to Change Any of the Parameters Below?**

    A new window is displayed in the bottom portion of the screen which shows additional parameters and their default values.

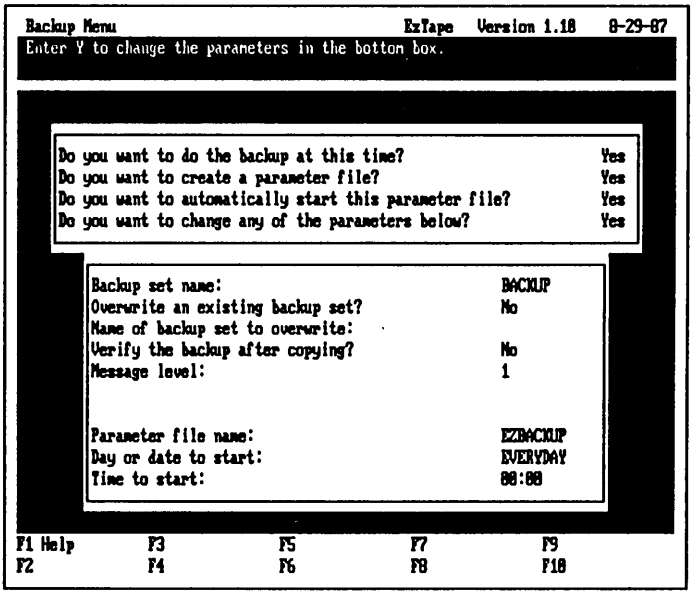

Figure 3–7
Backup Parameters Window

If you answer no and press ↵, the backup and/or the creation of your parameter file will take place. When the backup is complete, you will be prompted to press any key to continue.

If you answer yes (the default) and press ↵, your cursor highlighting moves to the window which displays the other parameters and their default settings. You can change any of them.

14. **Backup Set Name**

The name of the backup set on the tape can be characters or numerals, up to eight long. **EzTape** automatically adds a three-digit, sequential extension to the name.

15. **Overwrite an Existing Backup Set?**

    If there is a backup set already on the tape which you wish to overwrite, answer yes here.

    > **NOTE:** If you overwrite a backup set, the data in the old backup set is lost.

    If you answer yes and press [↵], the cursor moves to the next question.

16. **Name of Backup Set to Overwrite**

    Enter the name of the backup set (and its numeric extension) you wish to overwite. The data from the old backup set will be lost!

17. **Verify the Target after Copying?**

    Verifying backed up data means that a byte-for-byte comparison will be performed between the tape after the data has been written to it and the same data on the hard disk. If you want to specify a verify of your backed up data, enter yes and press [↵]. (If you have a 10mb **BACKUP** unit, a verify will automatically be performed since the unit does not support **EC/Tape**.)

18. **Message Level**

    Enter 0 to see minimal status messages during backup. Enter 1 (the default) to see messages with normal detail. Enter 2 to get more detailed descriptions of what's happening.

19. **Parameter File Name**

    Enter a name using up to eight characters or numerals. **EzTape** automatically gives the parameter file a `.BPF` (Backup Parameter File) extension.

20. **Day or Date to Start**

    If you specified that you wanted to have automatic backup using this parameter file, the day or date parameter will be displayed. Enter the day or date you want **EzTape** to start the backup.

    Use these abbreviations:

`Mon`	Monday
`Tue`	Tuesday
`Wed`	Wednesday
`Thu`	Thursday
`Fri`	Friday
`Sat`	Saturday
`Sun`	Sunday
`Weekdays`	Every day, Monday through Friday
`Everyday`	Every day, Monday through Sunday
A valid date	That date only.

    When entering the date, use this form: `08-16-87` (for August 16, 1987). **EzTape** can accommodate dates through 12-31-99 (December 31, 1999).

21. **Time to Start**

    This parameter will also be displayed if you specified automatic start for this parameter file. Enter the time you want **EzTape** to start the backup. Use this form:

    08:00 (for 8:00 AM)
    15:53 (for 3:53 PM)

    The time can be from 00:00 (midnight) to 23:59 (11:59 PM).

Once you have answered the questions outlined above, press Esc. **EzTape** will perform the backup, if you specified it. It will also create the parameter file at this time.

Restore File Selection

3.2 Selecting Files for Restore

You can make individual restore selections at any of four levels:

DRIVE

BACKUP SET – A backup set is the group of files backed up during the execution of a single **EzTape** backup.

DIRECTORY/SUBDIRECTORY

FILE

From the main menu and with the cursor highlighting `Restore`, press [↵]. The Restore Menu is displayed (see **Figure 3–8**).

The principles used for selecting files during restore are the same as those used during backup. Use the [+] key to make selections, and the [-] key to UNselect files.

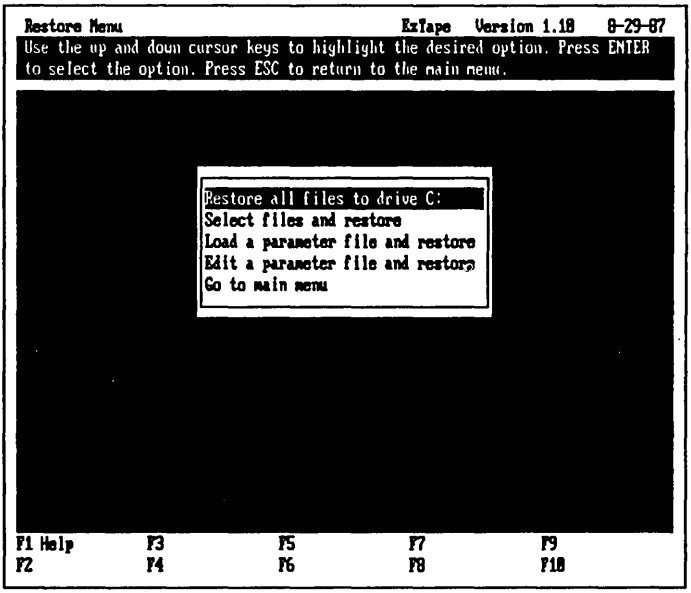

Figure 3–8
Restore Menu

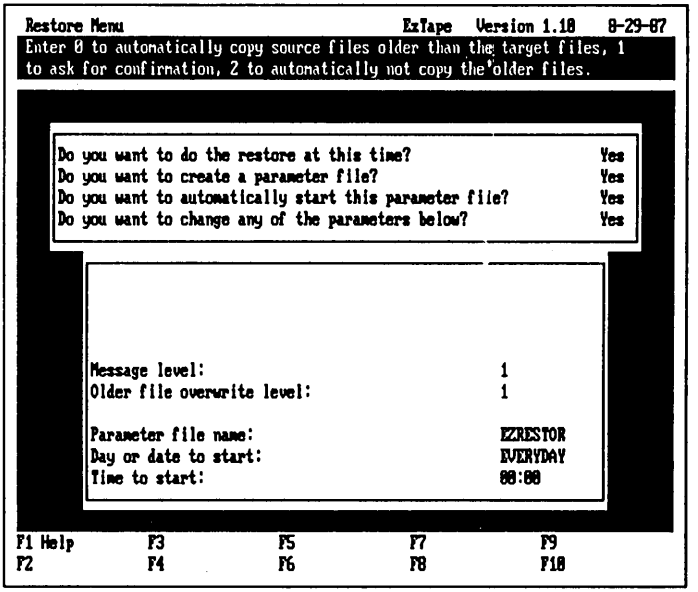

Figure 3–9
Restore Parameters Window

When you have completed the selection process, use the Esc key to save the selections and exit to perform the restore. The Restore Decisions window will be displayed. There are fewer parameters to specify during a restore operation. They are basically the same as during backup, with one exception:

Older File Action

You probably have some files on the tape that have the same names as files on the fixed disk. If you modified those files on the fixed disk sometime after the last backup, you probably do not want to restore the older versions from the tape, since they would overwrite the newer versions on the disk. On the other hand, the disk version of the file might have been damaged and you may deliberately want to overwrite it with the tape version.

- **Option 0**: tells **EzTape** to go ahead and restore the selected older files from the tape without asking your permission.
- **Option 1**: tells **EzTape** to ask you for confirmation each time it is about to overwrite a newer disk file with an older tape version of the same name. This is the default value.
- **Option 2**: prevents **EzTape** from overwriting any disk files.

If you are making a parameter file that will be run automatically and unattended, you may not want to use the default value.

Once you have specified your parameters, press Esc. **EzTape** will perform the restore. It will also create the parameter file at this time.

When the restore is completed, you are prompted to press any key. Then, the Restore Menu is displayed.

Chapter 4: Advanced File Selection – Using Function Keys

For more powerful file selection capabilities, and for some **EzTape** utilities, use the function keys that are available when you choose the `Select Files` option from the Backup or Restore menus.

4.1 EzTape Utilities

Utilities

The Utilities Menu is accessed by pressing [F2] within any of the backup or restore source menus. It is also accessed from **EzTape**'s main menu, by pressing [U].

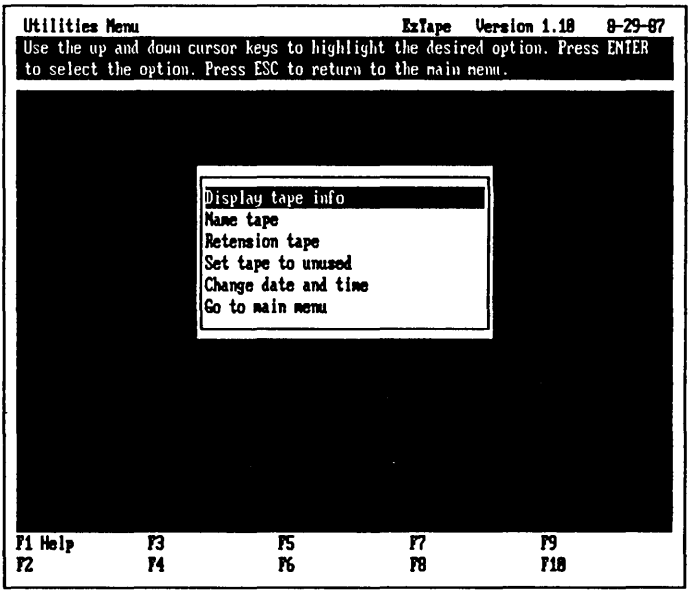

Figure 4–1
The Utilities Menu

Once the Utilities Menu is displayed, move your cursor to the desired option using the ↑ and ↓ keys, then press ↵.

Display Tape Info

Display Tape Info

This option will display tape information as shown in **Figure 4–2**. This is a display only; the information cannot be edited.

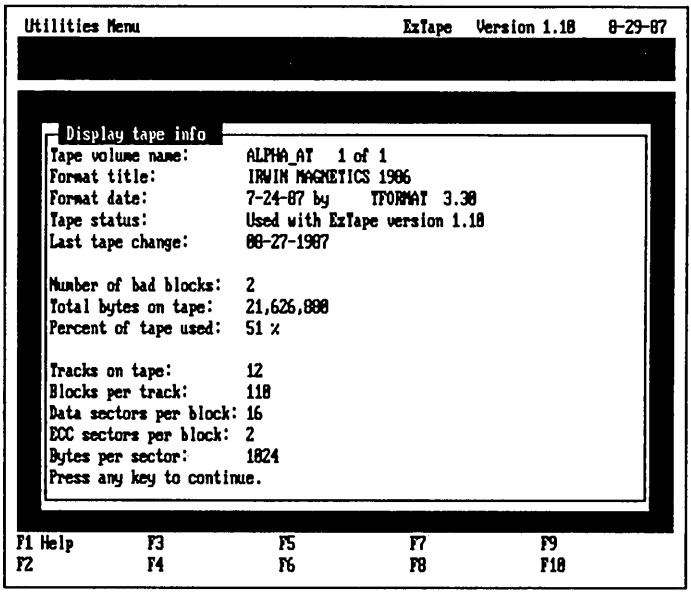

Figure 4–2
Display Tape Info

Press any key to return to the Utilities Menu.

Name Tape

Name Tape

You are prompted to enter a volume name for the tape. If a volume name already exists, it is displayed. **EzTape** asks you if you wish to change the existing name.

If you do not wish to change an existing name, press [↵] to accept the default answer, no. **EzTape** will automatically return you to the Utilities Menu. If you do wish to change the name, enter [Y] and press [↵].

Enter a name for the tape, using any keyboard characters, up to 11 characters long. Then press [↵].

When the operation is finished, press any key to return to the Utilities Menu.

Retension

Retension Tape

The tape spools from end to end, pauses, then spools back. This aligns a tape that has not been used for a long period of time or one that has been exposed to temperature extremes. It takes about one minute. When it is finished, press any key to return to the Utilities Menu.

Set Tape To Unused

Set Tape to Unused

When you select this option, any data that you already have on the tape will be overwritten. **EzTape** marks the tape as being unused. The tape will still be initialized after this operation, so you can immediately perform a backup with it if you wish. Select this option if you no longer have any need for the backup sets on the tape, and you wish to re-use the tape.

When this option is selected, EzTape asks you to confirm the operation, since any data already on the tape will be destroyed if it is performed.

If you're not sure, press [↵] to accept the default response - no. **EzTape** automatically returns to the Utilities Menu. If you are sure, enter [Y].

Setting the tape to unused takes less than a minute. When it's finished, press any key to return to the Utilities Menu.

Change Date and Time

Change Date/Time

The `Change Date and Time` option allows your DOS date and time to be changed, without leaving the **EzTape** program. The new date and time you enter will reset the clock. If your date and time are set properly, your backup sets will accurately reflect on which date and at what time they occurred.

Changing the date and time through **EzTape** will affect the DOS date and time until you reboot, or turn your computer off, or reset the date and time again. If you have a clock/calendar card, the date and time will remain reset.

You should refer to your DOS manual for more information about DOS and setting your computer's date and time.

When you select the date and time option, a window appears which displays your system date and time. Enter the date using two digits for each field. For example, August 4, 1987, would require you to enter `080487`. **EzTape** automatically enters the dashes. Then press [↵].

Enter the time using a 24 hour clock, and using two digits for each field. For example, if you wish to enter 8:00 AM, type `0800`. If the time you wish to enter is 1:30 PM, you would type `1330`. **EzTape** automatically enters the colon. Then press [↵].

Printing Reports

4.2 Printing EzTape Reports

EzTape has a convenient feature which allows you to obtain several different types of printed reports of the directories or files on your hard disk or tape. This feature can be utilized whenever you are using the file selection menus for backup and restore, by pressing [F3]. The print menu is shown in Figure 4–3.

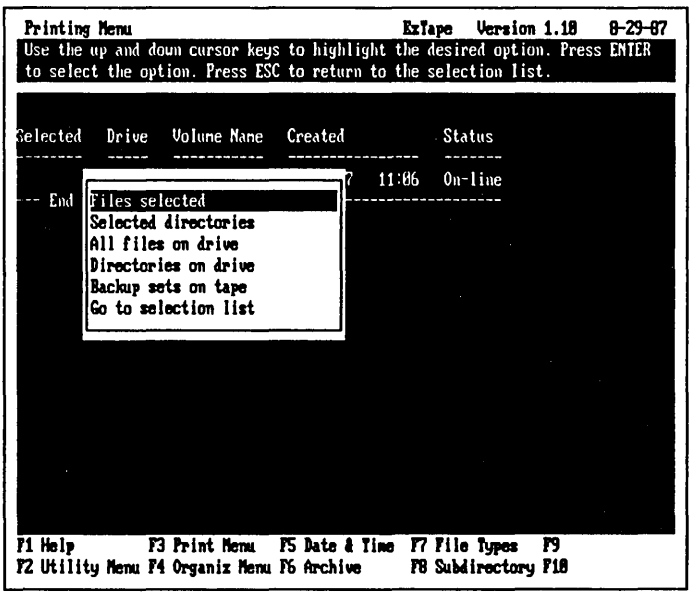

Figure 4–3
The Print Menu

To make a selection, move your cursor to the option you want using the [↑] and [↓] keys. Then press [↵]. Before you make your selection, make sure that your printer is connected and turned on. Move the paper so that the report can start at the top of the page.

When you print files from the backup screens, the source is the hard disk. When you print files using the restore screens, your printed reports will be generated from the tape data. The exception to this is the option

to print backup sets on tape, which is the same from either backup or restore screens.

Files Selected

Files Selected

Prints a list of the files you have marked for selection.

Selected Directories

Selected Directories

Prints a list of the directories you have marked for selection.

All Files on Drive

All Files

This option, when chosen from backup file selection, prints a report of all the files on your hard disk, organized by directory. When chosen from restore file selection, it prints a report of all the files on the tape.

Directories on Drive

Directories

Prints a report showing every directory and subdirectory on your hard disk if you are in file selection for backup. If you select the option from restore file selection, it prints a list of every directory and subdirectory represented on the tape.

Backup Sets

Backup Sets on Tape

Prints a report of the backup sets on your tape cartridge. You can select this option from either the backup or restore selection screens.

Organizing Your Hard Disk

4.3 Organizing your Hard Disk with EzTape

Within any of the backup source menus, press [F4] to display the Organize Menu (see **Figure 4–4**). Move your cursor to the desired option using the [↑] and [↓] keys, then press [↵]. When the operation has been completed, press any key to return to the Organize Menu. Press [Esc] to return to the backup source screens.

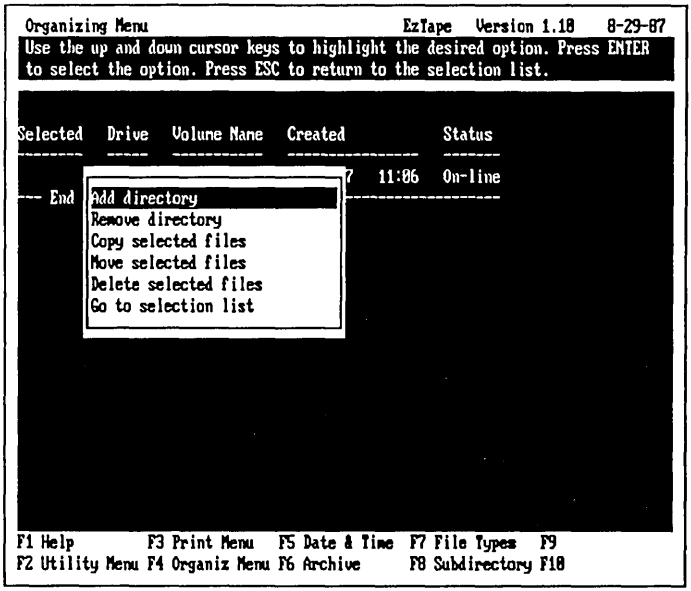

Figure 4–4
The Organize Menu

With the exception of the `Delete Selected Files` option, when an option is selected you will be prompted to enter the name of a directory (see **Figure 4–5**). Use the same format you would in DOS. Press [↵] after entering the name. (If an option has been selected, but you wish to exit without executing the option, press [CTRL] and [C] to return to the Organize Menu.)

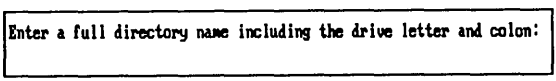

Figure 4–5
Organize Window

Add Directory

Enter the name of the directory you want to make on the hard disk.

Remove Directory

Remove Directory

Enter the name of the directory you want to remove from the hard disk. Your cursor must not be positioned on the directory you intend to remove.

EzTape will not remove a directory unless all of the files in the directory have been removed first.

Copy Files

Copy Selected Files

Files can be copied as a group into a different directory on the hard disk. Files can be copied from different directories at the same time as long as they will all be copied to the same destination.

Before you select this option, make your file selections using the [+] and [-] keys and the selection parameters. The date and time feature, archive switch, file types, subdirectories, and select and UNselect specifications can be used to designate files to be copied.

The files will have the same names as the files they were copied from. The new files will be marked for selection if they meet your selection qualifications.

Move Selected Files

Move Files

Files can be moved into a different directory on the hard disk. Files from different directories can be moved at the same time as long as they will all be moved to the same directory.

Before you select this option, make your file selections. The date and time feature, archive switch, file types, subdirectories, and select and UNselect specifications can be used to designate files to be moved.

The files will be copied into the specified directory. Then, they will be deleted from the original directories.

The files will be marked for selection if they meet your selection qualifications.

Delete Selected Files

Delete Files

Before you select this option, make your file selections. The date and time feature, archive switch, file types, subdirectories, and selection specifications can be used to designate files to be deleted.

A confirmation message will be displayed (see **Figure 4–6**). If you answer no, the Organize Menu will be displayed. If you answer yes, the confirmation message is displayed again, in capital letters. (That's just in case you were typing faster than you were thinking.) If you answer yes, the selected files will be deleted from the hard disk.

If you delete the entire contents of a directory, you will still need to use the `Remove Directory` option to delete the directory entry on your hard disk.

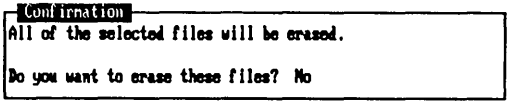

Figure 4–6
Delete Selected Files Confirmation

Date and Time

4.4 Date and Time Parameters

The files on your hard disk are stamped with the date and time they were created or modified. You can back up files using the date and time stamp. For example, you might want to back up files created or modified since the first of the month.

The F5 key works only in conjunction with the F9 or F10 keys.

1. Press F5 to make your date and time specifications.
2. Then, press F9 to specify the files that should be included in the selection.

The Date and Time Window

Date/Time Window

When you press F5 from the Backup or Restore Source screens, a window is displayed on your screen. See **Figure 4–7**.

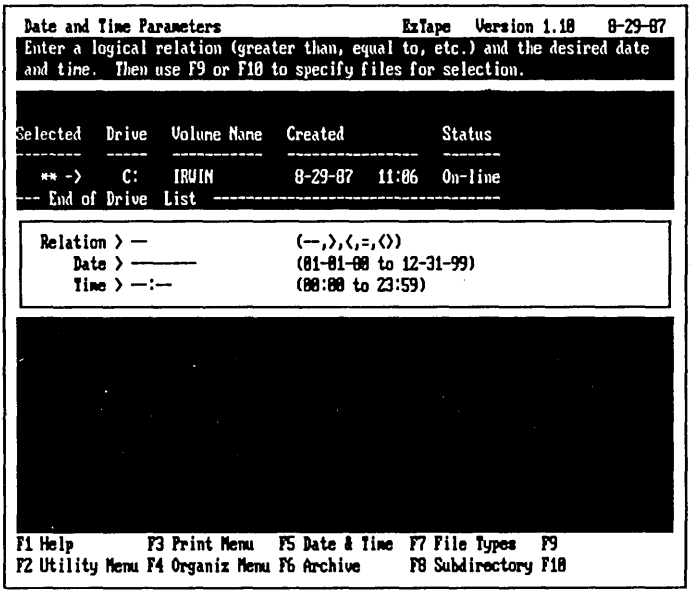

Figure 4–7
Date and Time Window

Relation

Relation

Enter one of the following:

–	No relation.
>	Select only files created or modified since the date and time you specify.
<	Select only files created or modified before the date and time you specify.
=	Select only files with a specific date and time.
<>	Select only files that have date and time stamps different from the ones you specify.

Date

Date

Enter a date to be used in making this comparison. The date can be from 01-01-80 to 12-31-99 (December 31, 1999). Use this form:

01-01-80 for January 1, 1980

Time

Time

Enter the time to be used in making the comparison. The time can be from 00:00 (midnight) to 23:59 (11:59 PM). Use this form:

08:00 for 8:00 AM
15:53 for 3:53 PM

Press [↵] after you have entered your date and time specifications.

Date and Time during Restore

The date and time parameter works the same way during restore as it does during backup. This means you can select files from the tape based on the date and time they were stamped with on the hard disk, at the time they were backed up. From the Restore Source screen, you can specify a relation, date, and time using F5. Then use F9 to specify which files to include in the restore.

An Example

Here is an example which shows how to back up every file on the hard disk which has been created or modified since July 1, 1987.

1. From the Backup Source Drives menu, press F5.
2. Enter > for relation, press ↵.
   Enter 07-01-87 for date, press ↵.
   Enter 00:00 for time, press ↵.
3. Press F9. The default value for file specification is *.* which means "include everything."
4. Press ↵ to accept the default value.
5. Press Esc to return to the Backup Menu. After you make your backup decisions, the backup begins.

Archive

4.5 Archive Parameter

The Archive Parameter is used for making backups of files that have been created or modified since the last backup.

The archive switch, or archive bit, is set by your computer's Disk Operating System. When a file is created, the archive bit is turned on. Similarly, when you modify a file, the archive bit is turned on.

You can instruct **EzTape** to turn the archive switch for each file to off after it has completed backing up. That way, the next time **EzTape** looks for the files that have changed, it ignores the ones that have their archive switches turned off.

Another way that **EzTape** utilizes the archive switch is during restore. You can tell **EzTape** to restore only those files that had their archive switches turned on at the time of the backup to restore the files most recently backed up.

The [F6] key works only in conjunction with the [F9] or [F10] keys.

1. Press [F6] to make your archive specification.

2. Then, press [F9] to specify the files to include in the selection.

The Archive Window

When you press F6 from the backup or restore source screens, a window is displayed. See **Figure 4–8**.

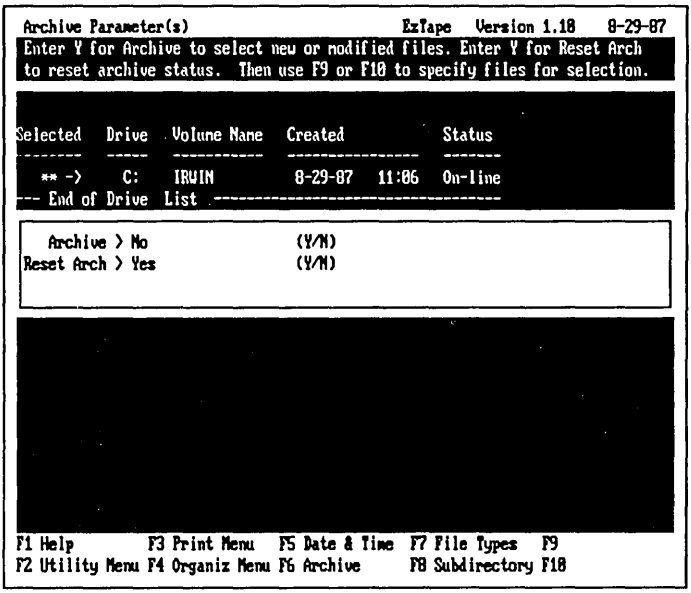

Figure 4–8
The Archive Parameter Window

For each entry, the available choices are displayed on the right. The answers can be only yes or no.

Archive

Archive

This indicates whether you wish to capture files regardless of how their archive bits are set; or whether to back up only files that have changed – that is, their archive bits are on.

If you answer no, the default value, **EzTape** will back up files regardless of whether they have changed since the last backup.

If you answer yes, **EzTape** backs up only files that have been modified or created since the last backup.

Reset Archive Switch

Reset Archive Switch

This lets you reset the archive switch after a backup.

If you answer yes, the default, then after **EzTape** saves a file on tape, it will reset the archive switch on the disk file to off. If you back up again soon and tell **EzTape** to back up only those files that have changed (archive = yes), **EzTape** won't back up the file.

If you answer no, **EzTape** will not reset the archive switch. You might want several backups of the same group of modified files. If so, you would not want the archive switch to be reset after the first backup. Then, after you have made multiple backups, you should reset the archive switch if you want effective backup of modified files.

Archive Parameters during Restore

You can use the archive switch during restore procedures, too. If you press F6 from one of the Restore Source screens, the archive window is displayed. It isn't possible to reset the archive switch on the files contained on the tape, so that choice doesn't appear. However, if you answer yes to the archive switch, only files with their archive bits on at the time the backup was made will be selected for restore.

The archive switch defaults to no during restore. This means that **EzTape** will restore files regardless of whether they were new or modified at the time of the backup.

Example

An Example

Here is an example which shows how to back up every file on the hard disk which has been created or changed since the last backup. (You already have a batch file, called CHANGED, that does this. See page 2–2.)

1. From the Backup Source Drives screen, press [F6].

2. Enter [Y] for archive. This tells **EzTape** to back up only files created or modified since the last backup.

   Enter [Y] (the default) for reset archive switch. This tells **EzTape** to reset the archive switch of the hard disk files to off, to signify that they've been backed up. The next time the file is changed, DOS will turn the switch back on.

3. Press [F9]. The default value for file specification is *.* which means "include everything".

4. Press [↵] to accept the default value.

5. Press [Esc] to return to the Backup Menu. After you make your backup decisions, the backup will take place. Only the new or changed files will be included in the backup.

4.6 File Types

File Types

Some of the files on your hard disk are designated as system files. You may have other files that are of the read-only or hidden types. The F7 function allows for special handling of these file types.

> **The F7 key works only in conjunction with the F9 or F10 keys.**

1. Press F7 to make your file type specification.
2. Then, press F9 to specify the files to include in the selection.

The File Types Window

File Types Window

When you press F7 from the backup or restore source screens, a window is displayed. See **Figure 4–9**.

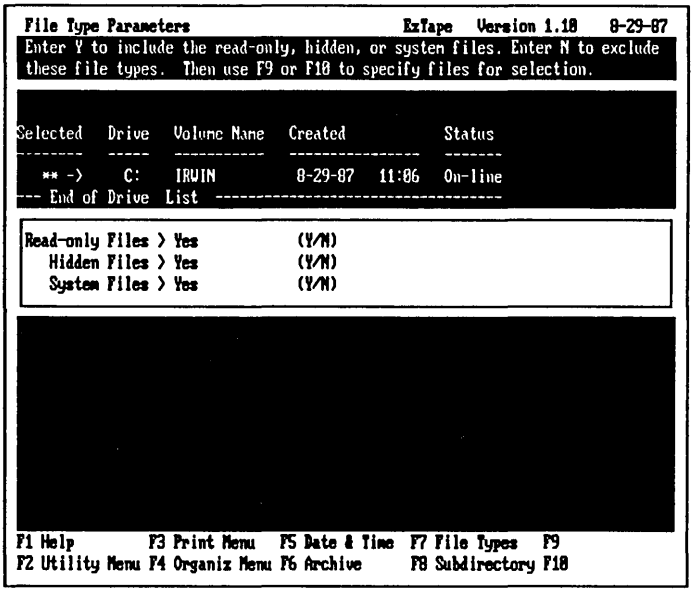

Figure 4–9
File Types Window

For each entry, the available choices are displayed on the right. The answers can only be yes or no. During backup or restore, the default values for all three file types is Yes.

Read-Only

Read-Only Files

Read-only files on your hard disk are protected so that ordinarily they cannot be changed. When **EzTape** displays files for selection, read-only files are marked with an R in the last column.

Enter yes (the default) if you want read-only files included in your file selections. Enter no to ignore read-only files during this backup or restore.

Hidden Files

Hidden

Hidden files are special files which do not appear in any directory. The DOS system files are also hidden files. When **EzTape** displays files for selection, hidden files are marked with an H in the last column.

Enter yes (the default) to include hidden files in file selections. Enter no to ignore hidden files during this backup or restore.

System Files

System Files

DOS system files contain the information that your computer needs to operate with. Consult your DOS manual to learn more about system files. These files must always occupy a special place on the hard disk. System files are files that you want to be sure to have a backup of. When **EzTape** displays files for selection, system files are marked with an S in the last column.

Enter yes (the default) to include system files in your file selections. Enter no to ignore system files during this backup or restore.

Hidden and System Files during Restore

Restoring Hidden and System Files

Files that are marked hidden and system, like your DOS system files and some application program files, are restored to the same area on the hard disk from which they were backed up. EzTape may have to find different places for other files that you are restoring at the same time. Run CHKDSK before performing a restore that includes system files to be sure that any errors in the hard disk directory or file allocation table are corrected. Consult your DOS manual for more information about the CHKDSK command.

Example **An Example**

Here is an example which shows how to include your system files in a backup. The read-only and hidden files will not be included.

1. Run CHKDSK.

2. Load the **EzTape** program.

3. From the Backup Source Drives screen, press [F7].

4. Enter [N] for read-only files.
   Read-only files will not be backed up.

   Enter [N] for hidden files.
   Hidden files will not be backed up.

   Enter [Y] for system files.
   System files will be backed up.

   Press [↵].

5. Press [F9]. The default value for file specification is *.*, which means to include everything.

6. Press [↵] to return to the backup screen. After making your backup decisions, the backup begins.

4.7 Subdirectories

EzTape automatically includes your subdirectories in the selection process.

If you do not want to include subdirectories automatically, you can change it. Press F8. You will see a window like the one in **Figure 4–10.**

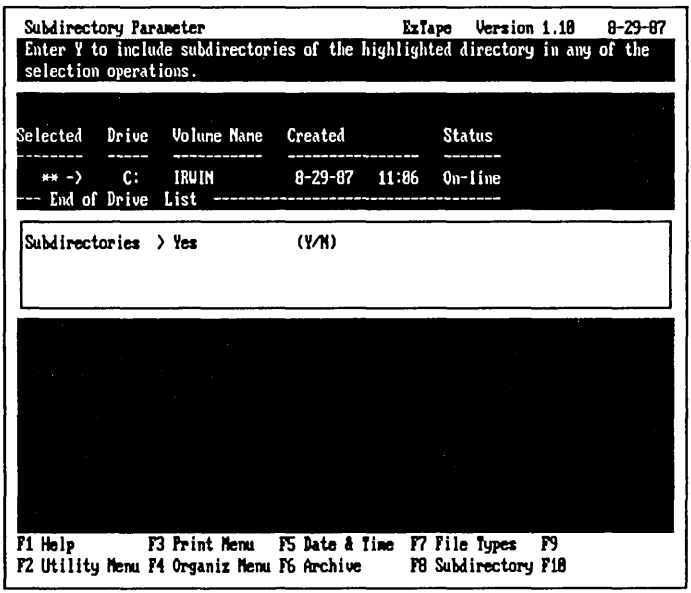

Figure 4–10
The Subdirectories Window

If you answer no, subdirectories will not be automatically included in your selections. If you answer yes, subdirectories will be included.

If you have a monochrome monitor, when subdirectories are included, the first directory is highlighted and the subdirectories are underlined. If you have a color monitor, the first directory is highlighted and the subdirectories are grouped by another color.

If your subdirectory switch is set to include all subdirectories and you UNselect a directory containing subdirectories, all of its subdirectories will be UNselected too.

The subdirectories switch works the same way during restore, but it looks at the directories and subdirectories on the tape instead of the hard disk.

Select Spec

4.8 Select Specifications

F9 provides the ability to make file selections using the wildcard characters, * or ?, or using individual file specifications. F9 is also the function key that ties the parameter selections together.

File Specification

Using Select Spec for File Specification Only

When you press F9, a window is displayed on your screen, as shown in **Figure 4–11.**

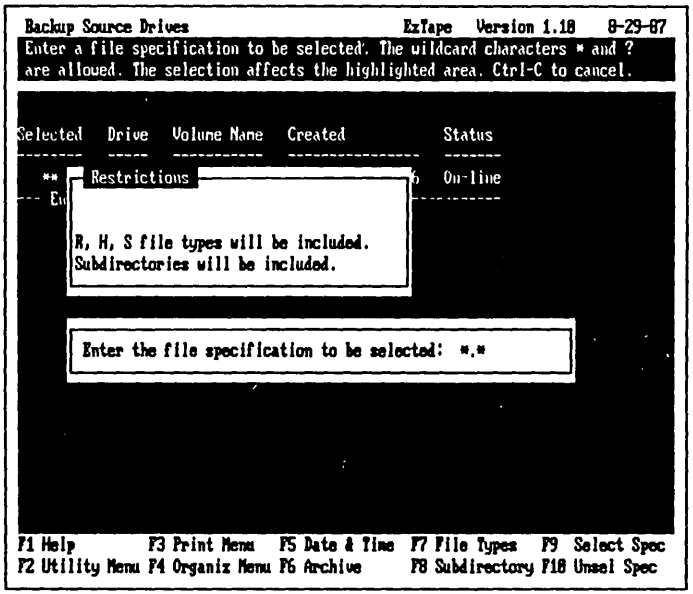

Figure 4–11
Selection Specification

There is also a window which displays what restrictions may have been placed on this selection. The restrictions window always displays whether the subdirectories switch is on or off.

When using the file specification feature, you must enter the complete DOS file specification for the files you want to select. You can use the * and ? wildcard characters.

A complete DOS file specification consists of a filename of up to eight characters, plus an extension of up to three characters. There is a "." between the filename and the extension. A file does not have to have an extension.

You can use "?" to take the place of one character in the filename. The "?" means that any character could be accepted in that position. For example,

TEST? would accept TEST1, TEST2, or TESTA in a file specification.

You can use "*" to take the place of all the rest of the characters in a filename or extension. For example, TEST* would accept TEST1, TEST10, TESTXY, or just TEST. The file specification, *.*, includes all files that fit the qualifications displayed in the restrictions window.

If you press [F9], and then decide you do not want to specify any files, hold down [CTRL] and press [C] to return to the previous menu.

File Specification With Parameters

Using File Specification with other Parameters

When using other parameter specifications, the [F9] file specification must be used in order to define the group of files on which to place those parameters.

The other parameters which require the use of the [F9] key after their selection include:

[F5] DATE AND TIME
[F6] ARCHIVE
[F7] FILE TYPES

Each of these parameters is described in earlier sections. If you specify one, a few, or all of these parameters, you must follow their specification by using the [F9] key.

An Example

Example

This example shows how to back up the files with an .MMO extension in the word processing directory \TEXT and its subdirectories that have been created or modified since June 1st, excluding hidden and system files (but including read-only files).

1. From the Backup Menu, move the cursor to `Select Files and Backup`. Press [↵]. The Backup Source Drives screen is displayed.

2. Press [↵] to display the Backup Source Directories screen.

3. Move the cursor to \TEXT. \TEXT and its subdirectories are highlighted since the subdirectory switch defaults to on – that is, subdirectories are automatically included.

4. Press [F5] `Date and Time`.

5. For relation, enter >, and press [↵].
   For date, enter `06-01-87`, and press [↵].
   For time, enter `00:00`,and press [↵].

6. Press [F6] `Archive`.

7. Press [Y] for Archive.
   Press [Y] for Reset Archive.

8. Press [F7] `File Types`.

9. Press [Y] for Read-only.
   Press [N] for Hidden.
   Press [N] for System.

10. Now press F9 `Select Specifications`. All of the qualifications that you just selected are displayed in the restrictions window.

11. In the area to enter `File Specification`, enter:

    `*.MMO`, and press ↵.

12. From the Backup Source Drives screen, if you now press ↵, the Backup Source Files screen is displayed and the files that meet all of the parameter criteria are marked for selection.

During Restore

Selection Specifications during Restore

Selection specifications during restore work in exactly the same way but the selections apply to the files on the tape.

Experiment

A Note about Selection Specifications

When you combine all the basic file selection techniques with the parameter and selection specifications, there's an incredible number of ways to specify a backup or restore. You'll want to experiment with the selection process and parameters to get a feel for exactly how they work.

4.9 UNselect Specifications

UNselect Spec

The F10 UNselect Specifications key is the counterpart to the F9 Select Specifications key. UNselect works the same way.

This feature lets you undo file selections using the wildcard characters, or using individual file specifications.

The F10 key, like selection specifications, also works in conjunction with the selection parameters.

Using UNselect Spec during File Specification

File Specification

When you press F10, a window is displayed on your screen, as shown in **Figure 4–12.**

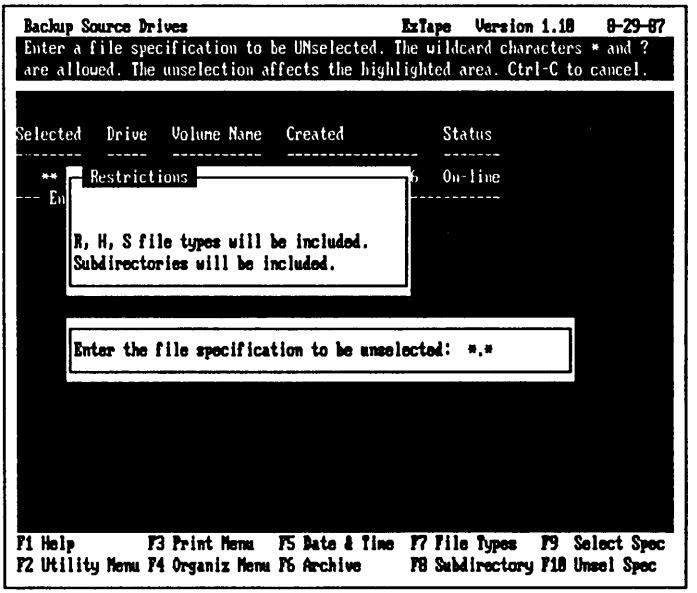

Figure 4–12
UNselection Specification

If you selected files using basic file selection or the F9 key, F10 can be used to unselect all or part of that selection.

If you press F10, and then decide you do not have any files that you want to UNselect, hold down CTRL and press C to return to the previous menu.

Using UNselect with Parameters

UNselect and Parameters

If you used parameter specifications in conjunction with the F9 file specification, you can use the F10 key to UNselect files that meet that specification or that fit a different one.

The other parameters which can be included in an UNselect operation are the same as the ones for selection:

F5 DATE AND TIME
F6 ARCHIVE
F7 FILE TYPES

Each of these parameters is described in earlier sections. If you specify one, a few, or all of these parameters, you must follow their specification by using F9 or F10.

Example

An Example

This example will show how to exclude from the backup in the previous example all of the .MMO files that begin with TASK and that were dated June 15th. This example will show the entire process of selecting and UNselecting.

1. From the Backup Menu, move the cursor to `Select Files and Backup`.
   Press [↵]. The Backup Source Drives screen is displayed.

2. Press [↵] to display the Backup Source Directories screen.

3. Move the cursor to \TEXT.
   \TEXT and its subdirectories are highlighted since the subdirectory switch defaults to on; that is, subdirectories are automatically included.

4. Press [F5] `Date and Time`.

5. For relation, enter >, and press [↵].
   For date, enter 06-01-87, and press [↵].
   For time, enter 00:00, and press [↵].

6. Press [F6] `Archive`.

7. Press [Y] for Archive.
   Press [Y] for Reset Archive.

8. Press [F7] `File Types`.

9. Press [Y] for Read-only.
   Press [N] for Hidden.
   Press [N] for System.

10. Now press [F9] SELECT SPECIFICATIONS. All of the qualifications that you selected are displayed in the restrictions window (see **Figure 4–13**).

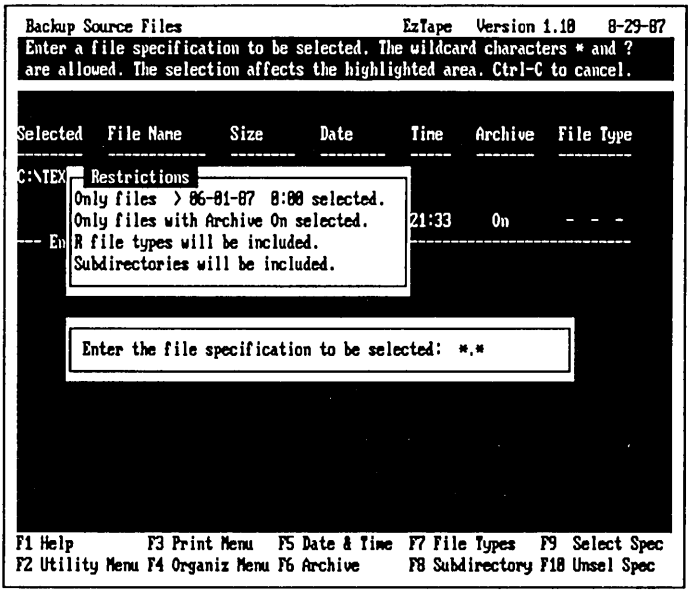

Figure 4–13
Example – Restrictions Window

11. In the area to enter `File Specification`, enter:

    `*.MMO` and press [↵].

12. From the Backup Source Drives screen, press [↵]. The Backup Source Files screen is displayed and the files that meet all of the parameter criteria are marked for selection.

13. To UNselect the files described earlier, press [F5] `Date and Time`.

14. For relation, enter =, and press [↵].
    For date, enter `06-15-87`, and press [↵].

15. Press [F10]. The restrictions window will show that files with a date of `06-15-87`, with archive on, and including read-only files that fit the specification can be unselected.

16. In the area to enter file specification to UNselect, enter:

    `TASK*.*` and press [↵].

17. The Backup Source Files screen displays the files that meet the parameter criteria for `Select Specifications`, but the files that meet the parameter criteria for `UNselect Specifications` are excluded.

18. Pressing [Esc] three times backs out of the selection process to the Backup Menu, where your final backup decisions are made.

During Restore

UNselection Specifications during Restore

UNSelection specifications during restore work in exactly the same way but the UNselections apply to the files on the tape.

4.10 Target

If you press the tab key, [→|], from the backup or restore source screens before you make your file selections, you will be able to specify target information. The target is the place to which you want to direct the data.

Target during Backup

When you are performing backup operations with **EzTape**, the target is always a tape drive. If you enter any of the backup source screens and press [→|], a window is displayed, as shown in **Figure 4–14.**

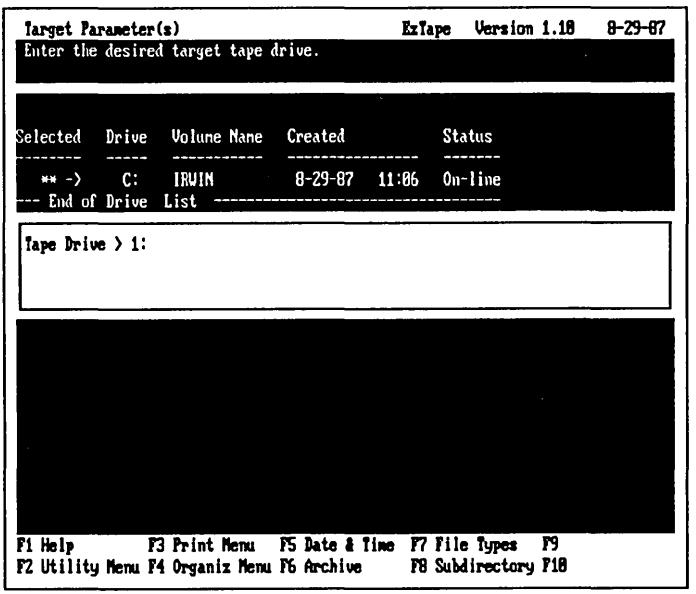

Figure 4–14
The Target Window During Backup

The tape drive defaults to the number 1. If your system has only one Irwin **BACKUP** tape drive, the target is "1".

If you have more than one Irwin drive, you may need to specify a different target. For example, if you have an internal Irwin drive and an external Irwin drive, the internal drive will be target "1". The external drive will be target "2". You could have up to four Irwin drives that could be specified as the target. The number that you enter refers to the location of the drive in the search path.

If your target is different than the default value, specify it before you make file selections.

During Restore

Target during Restore

When you are performing restore operations with **EzTape**, the target is always a hard disk. If you enter any of the Restore Source screens and press [→|], a window is displayed, as shown in **Figure 4–15.**

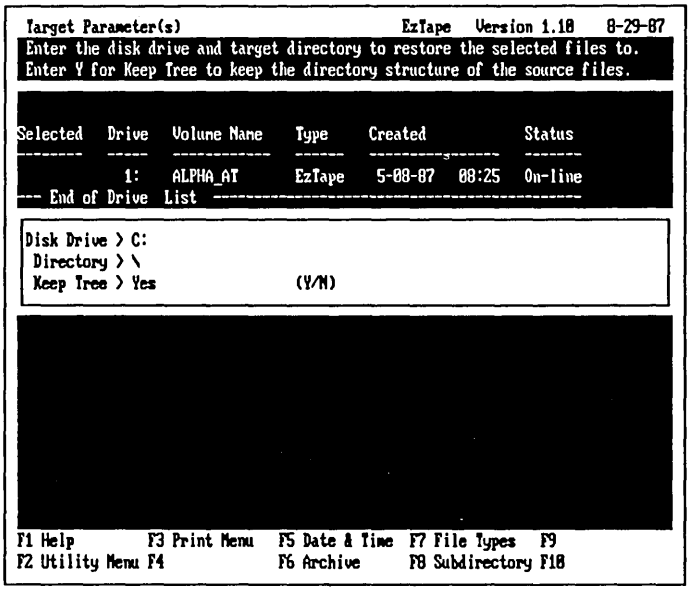

Figure 4–15
The Target Window During Restore

There are several target parameters in this window. If you change any of them, do it before making your file selections.

Disk Drive

Specify here the hard disk to which you want to restore files. If you have only one hard disk, it is probably called C:. This is the default value. If you have more than one hard disk, specify the letter identifying the disk to which you want to restore files.

Directory

The default value displayed is the root directory of the hard disk (\ ). Change this if you intend to restore files to a different directory than the one from which they were backed up. Enter the full path name. Directories and subdirectories are separated by a \.

For example, if you made a backup of a file from the \PROJECT directory and you now wanted to restore it to a subdirectory called \ONE in a directory called \TASK, you would enter \TASK\ONE for this entry in the Target Window.

Keep Tree

When **EzTape** makes a backup of data on your hard disk, it makes a record of the tree structure of directories, subdirectories, and files. That way, it can restore the data in its proper place within the tree structure.

It is possible that you do not want to preserve the tree structure of certain files that you are restoring. For example, you have a directory called \WORDS, from which you run a word processing application. This directory has several subdirectories. One of the subdirectories is called \WORDS\LETTERS. It contains letters. Another of the subdirectories is called \WORDS\MEMOS, containing memos. You make a backup of \WORDS and its subdirectories. **EzTape** will keep track of the organization.

Then you decide that it would make things a lot easier if memos and letters were all in the same directory. In this case, you could use the Target Parameter to specify a subdirectory, \WORDS\CRRSPNDC. You would answer no to the Keep Tree entry. The result of the restore of this particular backup, \WORDS, would be that \WORDS\MEMOS and \WORDS\LETTERS would now be merged into one subdirectory, \WORDS\CRRSPNDC. Whatever directory you name in the target will hold the merged files.

NOTE: **It's important to remember that if you decide not to keep the tree structure, any files that you will be merging into one directory must have unique names. If some of your files in the different directories have identical names, some files will be overwritten.**

Therefore, if you have identically named files in different selected directories, you should always say yes (the default) to Keep Tree.

Chapter 5: Parameter Files

A parameter file stores your backup or restore choices (or parameters) so that you do not have to enter them again.

5.1 Making a Parameter File

Making Parameter Files

When you back up or restore using the file selection process, **EzTape** asks a few questions before actually saving or restoring data. At that time you are prompted to specify whether you want to create a parameter file.

If you answer no when **EzTape** asks "Do you want to create a parameter file?", no parameter file will be created.

If you answer yes, **EzTape** will create a parameter file which you can use all the time to perform your backups or restores. The parameter file will automatically make the file selections that you manually specified. It will do this whenever you load the file from **EzTape**'s Backup Menu, or whenever you run the parameter file from a batch file in DOS.

EzTape will want to know if the parameter file is to be run automatically at a certain time and on which days. You have this ability with the **EzStart** feature that works with **EzTape**.

The other parameters will also be specified, such as the backup set name, whether an existing backup set is to be overwritten, the name of the backup set to

overwrite, older file handling (on restore), and the name of the parameter file.

The name of the parameter file will be eight characters or numerals. **EzTape** automatically supplies an extension. If the parameter file runs a backup, the extension is .BPF (Backup Parameter File). If it runs a restore, the extension is .RPF (Restore Parameter File) . Each parameter file must have a unique name.

Loading Parameter Files

5.2 Loading a Parameter File

If you select Backup from the Main Menu, you will see the Backup Menu. The first two options on the Backup Menu were covered in previous sections. The third option is to Load a parameter file and backup. Press [L] to select this option.

A list of the available parameter files will be displayed. You'll notice they all have the .BPF or .RPF extensions.

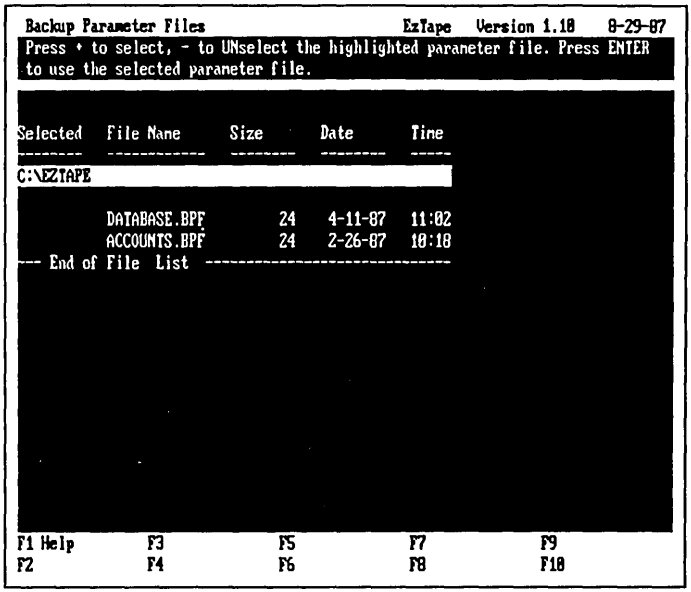

Figure 5–1
Parameter Files

To run a parameter file, all you have to do is move the cursor bar using the [↑] and [↓] cursor keys to the parameter you wish to load. Then, press [+] to select the file. The selection symbol is displayed in the left hand column. Press [↵].

When the backup is complete, you'll be prompted to press any key to continue.

Loading a parameter file works the same way in the Restore Menu as it does in the Backup Menu.

Loading from DOS

Loading a Parameter File from DOS

Whenever you create a parameter file, **EzTape** also creates a file with the same name but with a .BAT extension. This means that you can run your parameter file from the DOS prompt using just one word - the name of your parameter file.

1. Insert an initialized tape into your Irwin **BACKUP** drive.

2. At the DOS prompt, enter:

   `CD \EZTAPE` and press [↵].

3. Enter the name of the parameter file; then press [↵].

Editing Parameter Files

5.3 Editing a Parameter File

If you select `Backup` from the Main Menu, the Backup Menu will be displayed. You'll see an option in the menu called `Edit a parameter file and backup`. Press [E] to select the edit option.

The display is the same as during loading parameter files. You'll see a list of parameter files. Move your cursor bar to the parameter file you want to edit, and press [+] to select it. Then, press [↵].

Each time you press [↵] you will see one of the backup source screens. You will see which files are marked for selection. You can change them, or you can leave them as they are.

It's important to note that EzTape only displays the file selections that meet your parameter criteria. It will not display the parameters that you have actually placed on the selection. That's because

you could have "layered" your parameter selections. For example, you could have set the archive switch to yes in the database directory, but it could be set to no in the word processing directory - all in the same parameter file. Therefore, EzTape does not display your archive parameter setting. If you create a very complex parameter file which you might want to edit, you should make a note of your parameter specifications. You can also print out a listing of your parameter file and interpret it using the command line options.

Chapter 6: EzStart

EzStart keeps track of **EzTape** functions and automatically tells your computer to perform them at the time you specify.

EzStart can run one of the standard batch files (`BACKALL`, `RESTALL`, `CHANGED`) that come with the system, or you can use parameter files you have created.

6.1 How to Use EzStart

Using EzStart

This example will show you how to back up only the files that have changed since your last backup. It will be run by **EzStart** each weekday while you're at lunch, using a standard batch file supplied with the system, called `CHANGED`.

1. At the DOS prompt, enter:

   `CD \EZTAPE`, and press [↵].

2. Enter:

   `EZTAPE` and press [↵].

3. Press [S] to select the `Set Up EzStart` option. The **EzStart** setup screen is displayed. See Figure 6–1.

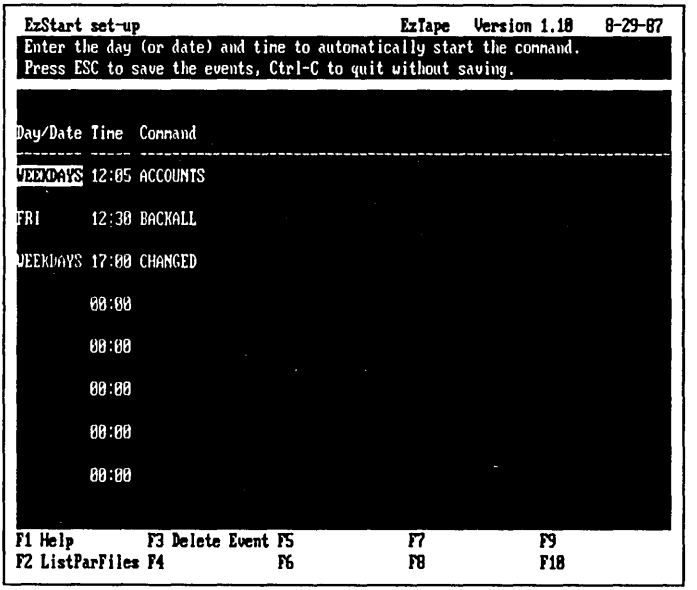

Figure 6–1
Set Up EzStart

4. If you have not used **EzStart** before, the cursor will be positioned on the first entry at the top of the left hand column on this screen. There is room on the screen to enter up to eight different **EzStart** commands, and eight is the limit of the number of commands **EzStart** can remember. A "command" is the name of an **EzTape** parameter file.

   During backup or restore, you might have specified parameter files to be run automatically. If so, you will see them on the **EzStart** screen.

   Enter the day you want the backup to occur. In this case, enter

   WEEKDAYS, and press [↵].

   The cursor will move to the column labeled Time.

5. Enter the time you want the backup to occur, using 24 hour notation:

   12:00 and press [↵].

   The cursor will move over to the third column, Command.

6. Enter the name of the standard batch file that will perform the operation you want:

   CHANGED

   CHANGED is the name of a batch file that comes with the **EzTape** software. It backs up only files that have been created or modified since the last backup.

7. Press [Esc] to save your entries.

8. You can now leave **EzTape** and use your system for other things.

Before 12:00 PM each weekday (Monday through Friday), you should make sure that there is an initialized tape in your tape drive. Leave your computer turned on. At 12:00 pm, the batch file called CHANGED will be executed.

If EzStart finds your computer system busy when it is time to do a backup, it will play a little tune and wait until the computer is available. It will play the tune every 5 minutes to remind you that it's waiting. When the computer is free, and the DOS prompt is displayed, EzStart will play a few different notes 30 seconds before it starts the backup. Then it will carry out the backup as specified.

You can use any parameter file with **EzStart**, not just the ones that came with **EzTape**. Be sure to enter the name correctly, since **EzStart** won't check for things like an invalid parameter file name until it tries to execute your command at the time you specified.

Here are some guidelines for the three fields in the **EzStart** menu.

Day/Date

Day/Date

Enter the day or date you want **EzStart** to run the parameter file. Choose one:

Mon	Sat	
Tue	Sun	
Wed	Weekdays	(Mon through Fri)
Thu	Everyday	(Mon through Sun)
Fri	A valid date	(in the form 01-01-80)

Time

Time

Enter the time you want **EzStart** to run the parameter file. Use a 24 hour clock, like this:

08:00 for 8:00 AM
15:53 for 3:53 PM

Command

Command

Enter the name of a valid parameter file.

6.2 Function Keys in EzStart Set Up

Function Keys

F1 `Help`: Displays a HELP message. Pressing F1 a second time displays a more detailed HELP message.

F2 `ListParFiles`: Displays a list of existing parameter files, along with the date they were created or last modified.

F3 `Delete Event`: Deletes the current highlighted event.

6.3 Installing EzStart

Installing EzStart

The easiest way to install **EzStart** is to simply answer yes to the question

```
Install EzStart into your AUTOEXEC.BAT file?
```

during the **EzTape** installation.

If you do not specify **EzStart** during installation, it is possible to install it later.

If you do not already have an AUTOEXEC.BAT file, you must create one to install **EzStart**. The AUTOEXEC.BAT file resides in the root directory. It is used to specify certain procedures or conditions that you want to occur automatically whenever you start up your system. You can read more about the AUTOEXEC.BAT in your DOS manual.

To run **EzStart**, it should contain these lines:

```
DATE
TIME
C:\EZTAPE\EZSTART
```

If you already have an AUTOEXEC.BAT file, add the lines to it.

These commands will:

1. Prompt you to enter the correct date when you start your system up.

2. Prompt you to enter the correct time when you start your system up.

3. Load **EzStart** every time you start the system.

You must enter the correct date and time on startup. **EzTape** uses these parameters to identify files and to know when to execute stored **EzStart** commands.

If your computer has a clock, you may not want to include the DATE and TIME commands.

You can edit the AUTOEXEC.BAT file using the DOS text editor EDLIN, or you can use the DOS COPY CON command.

Chapter 7: Networks

The concepts involved in file selection work just the same on a network. You will see a number of different drives represented in the Source Drives screens. One of the drives will be your local hard disk, probably "C". The other drives may, in actuality, be areas of the network server that you are "mapped" to. For example, **Figure 7–1** shows a Backup Source Drives screen which includes a number of different drive letters. However, notice that several of the letters have the same volume name. The letters represent different logical partitions on the same network drive.

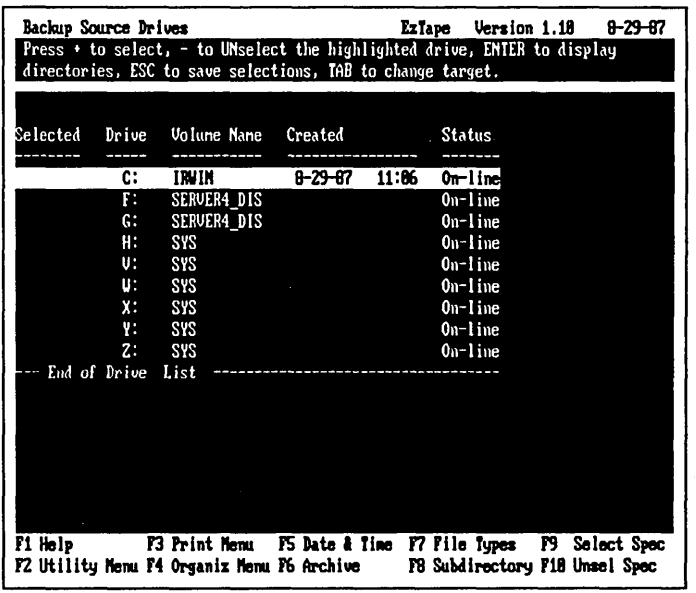

Figure 7–1
Backup Source Drives Screen on a Network

User Files

Backing up network user files is no different than normal file selection and backup. Make selections using the [+] and [-] keys, and the function keys. The user files marked for selection will be backed up, except in two cases:

- The user performing the backup does not have access to the files in the directory as determined by the network rights assigned to it.
- The file is unavailable for backup because it is in use on the network.

In either case, a message will be displayed on the screen, and the backup will continue without operator intervention.

NETBIOS

7.1 NETBIOS Compatible Networks

EzTape provides complete support for NETBIOS based network drives. If you run **EzTape** with NETBIOS compatible software, such as the IBM PC Local Area Network Program, you can back up and restore your entire system from a workstation.

To back up your entire NETBIOS compatible system, select a drive for backup using the [+] key in the Backup Source Drives screen. When the backup is complete, select the next drive. Repeat the process for each network drive to be backed up.

You may wish to alter the `BACKALL` batch file to perform backups of the network drives, as in **Figure 7–2**. You can run this batch file automatically under **EzStart**. The batch file in the example will back up drives C, D, E, and F. It will overwrite existing IMAGE backup sets with extensions 001 through 004.

```
C:
CD \EZTAPE
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE.001 /r /q /s C:\*.*
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE.002 /r /q /s D:\*.*
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE.003 /r /q /s E:\*.*
EZTAPE BACKUP /t 1: /n IMAGE /x IMAGE.004 /r /q /s F:\*.*
```

Figure 7–2
BACKALL Batch File with Lines Appended for Network Drives

7.2 Novell Networks

Novell Networks

EzTape provides complete support for networks running under the Novell Advanced Netware software. In addition to the ability to back up and restore user files on the network, **EzTape** handles the special network system files and security information.

Bindery Files

The Bindery files are special Novell files which contain various user information, such as user names, ID numbers, and passwords. These files are not normally available to users. **EzTape** automatically detects the existence of the Novell network, and checks to see if the user is logged in as the `SUPERVISOR`. If the user is logged in as the `SUPERVISOR`, **EzTape** enables access to the Bindery files. The Bindery information is contained in two files. They are called `NET$BIND.SYS` and `NET$BVAL.SYS`. If either one of these files is selected for backup by the `SUPERVISOR`, both files will be included in the backup. This ensures that the user

does not accidentally back up or restore just one of the files and possibly destroy the validity of the Bindery files. When the backup is performed, the two files will appear as one, called BINDERY.NOV, on the tape. If you restore this file from the tape, both of the original files will be restored.

Trustee Rights

Whenever **EzTape** backs up files from a Novell network drive, it also saves the trustee rights. The trustee rights are assigned at the directory level. They specify which users have access to the files.

When you perform a restore in the Novell network environment, you have several options with regard to the trustee rights. You will be prompted to select an option during the restore procedure as part of the restore parameters display (see **Figure 7–3**).

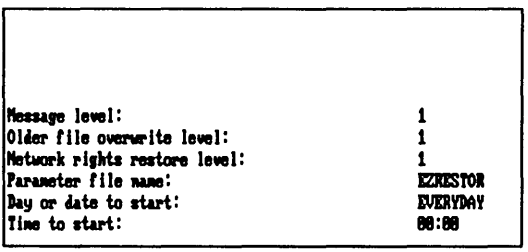

Figure 7–3
Restore Parameters with Network Files

- **Option 0**: Choose option 0 if you do not wish to restore any of the trustee information. If you are restoring files to an existing directory for which the correct trustee rights have already been established, you would choose this option. Similarly, if you are restoring files to a directory for which no trustee rights are desired, you would

choose option 0. For example, if you were transferring one of your work files from one Novell network to another Novell network, you might choose option 0 when you performed the restore. The trustee rights already established on each of the networks would remain the same.

- **Option 1**: The default response for the trustee rights is option 1. This specifies that trustee information for the directory containing the files to be restored should also be restored.

- **Option 2**: Option 2 specifies that all available trustee information should be restored. This type of restore includes the trustee rights as in option 1, but it also includes trustee rights associated with directories that are parents to the directory receiving the restored files, up to the root directory. You must have parental rights to the directories being restored in order to perform this type of restore.

Trustee Rights When Restoring to a Different Target

If you are restoring your network files to a different target, you should understand how the trustee rights will be affected. There are two different possible types of restores when you specify a new target, one in which you keep the original tree structure, and one in which you elect to ignore the tree structure.

- **Option 0**: If you select option 0 when restoring to a different target, the trustee rights will be not be affected since you will not be restoring any trustee information.

- **Option 1**: If you select option 1 when restoring to a different target, and you elect to keep the tree structure, the tree will be recreated under the target directory and the trustee rights for the directory containing the files being restored

will be restored. Thus, in the example shown below, when **FILEB** is restored to the new target directory **DIRA**, the tree structure for **FILEB** is recreated under **DIRA** and the trustee rights for **DIRB** are assigned within that structure. See **Figure 7–4.**

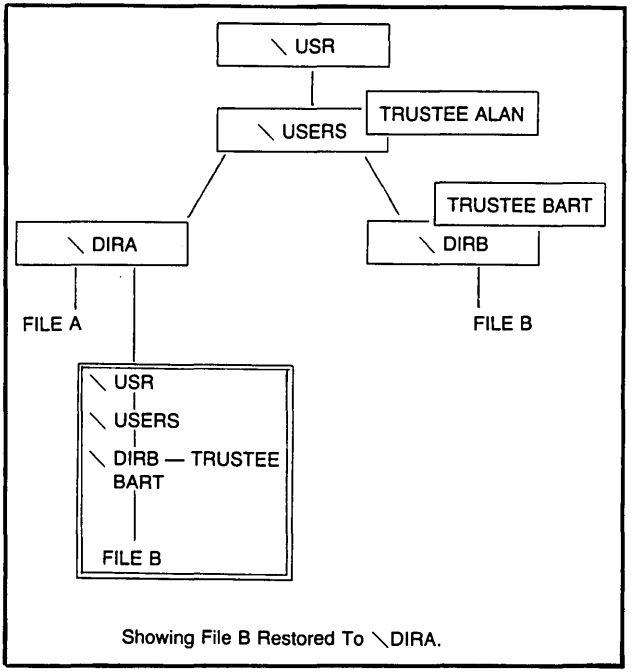

Figure 7–4
Trustee Rights - Option 1, New Target, Keeping Tree Structure

If you select the same option (1) when restoring to a different target, and you elect not to keep the tree structure, the trustee rights for the directory containing the files being restored will be restored to the new target directory. Notice how this type of restore, as shown in **Figure 7–5**, differs from the previous one.

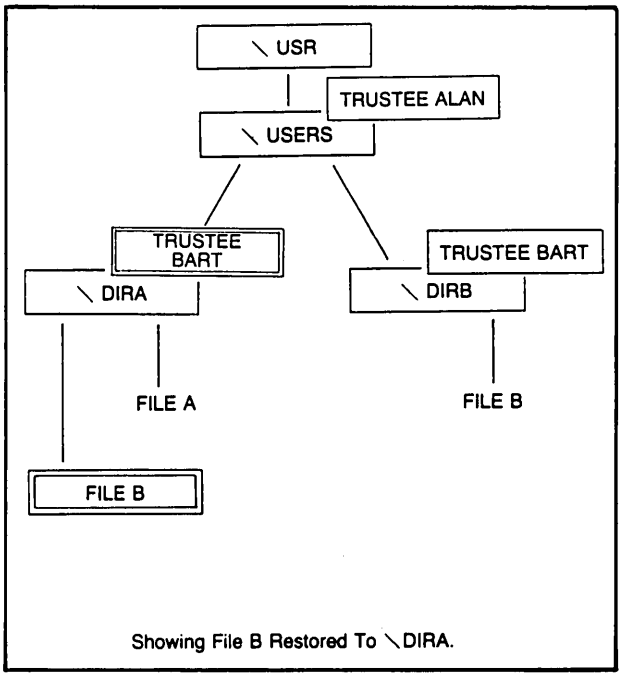

Figure 7–5
Trustee Rights - Option 1, New Target, Without Tree

- **Option 2**: Similarly, if you select option 2 when restoring to a different target, and elect to keep the tree structure, the tree will be recreated under the new target directory, and at each level on the tree, the trustee rights will be restored. See **Figure 7–6.**

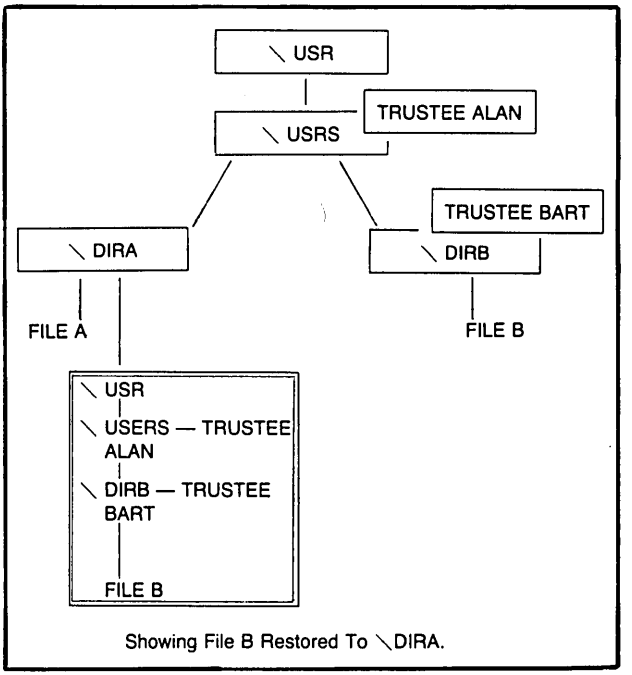

Figure 7–6
Trustee Rights - Option 2, New Target, Keeping the Tree

If you select option 2 when restoring to a different target, and elect not to keep the tree structure, the trustee rights for the files being restored will be assigned to the target directory. All of the rights up the original path will be assigned to the target directory. See **Figure 7–7.**

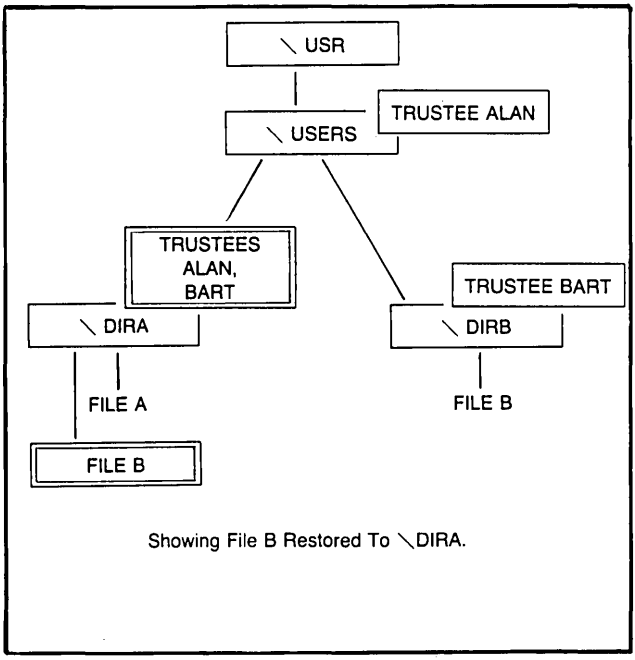

Figure 7–7
Trustee Rights - Option 2, New Target, Without Tree

Maximum Rights

Another feature of the Novell network is maximum rights. Maximum rights allow an owner of a directory to set the maximum rights anyone on the network can have to a particular directory. **EzTape** will save the maximum rights value for a directory when it is backed up. This value will be restored when trustee rights are included in the restore, and they follow the same rules under the options for trustee rights.

Chapter 8: Tape Initialization

Like new diskettes for your computer, new or bulk-erased tapes must be prepared for use in the tape system by recording special codes and signals on them. The process of preparing the tape in this way is called "initialization." The tape supplied with your Irwin **BACKUP** system already has these codes and signals recorded on it, so it is ready to use.

There are three steps in the tape initialization process.

1. **ERASE**: A previously used tape must be erased before servo-writing to prevent possible conflict of servo signals.

   Erasing is different than setting the tape to an unused status, in which the tape remains servo-written and formatted (see page 4–1).

   Your tape cartridge can be erased using a bulk eraser. A bulk eraser generates a strong magnetic field that erases all data and other signals from a tape or disk. You can purchase an Irwin bulk eraser from your Irwin dealer. To erase a tape with a bulk eraser, follow the directions that come with it. Improper bulk erasure methods could result in initialization failures.

2. **SERVO-WRITE**: Servo-writing records a pattern of signals on the tape to guide the read-write head precisely along the data tracks.

3. **FORMAT**: After a tape has been servo-written, it must be formatted. Formatting maps the entire tape for read and write operations, identifying "blocks" of data. This includes a check to identify and catalog defective blocks so they will not be used for storing data.

Since the tape's format information is written once and then read repeatedly, it will begin to degrade over time (but usually only after the tape has been used hundreds of times.) If you start to notice an increase in the number of errors or read "retries" on a particular tape, reformat the tape.

8.1 Using the Tape Initialization Menu

Initialization Menu

1. Insert a new or bulk-erased tape into your Irwin drive, or a tape to be erased or formatted.

2. At the DOS prompt, enter:

   `EZTAPE`, and press [↵].

3. Press [I] to display the Tape Initialization Menu. See Figure 8–1.

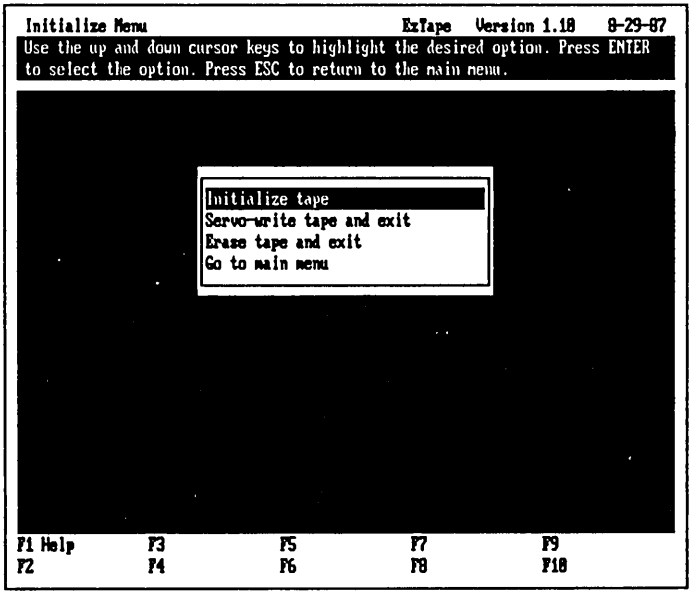

Figure 8–1
Tape Initialization Menu

There are three options in the Initialize Menu.

Initialize Tape

Initialize

`Initialize Tape` involves both servo-writing and formatting. If the tape has been erased, **EzTape** will perform both steps. If the tape has not been erased, **EzTape** will just perform the formatting step.

1. Press [I] to select the `Initialize Tape` option. **EzTape** will check the tape status. If there is data on the tape, a message is displayed (see **Figure 8–2**).

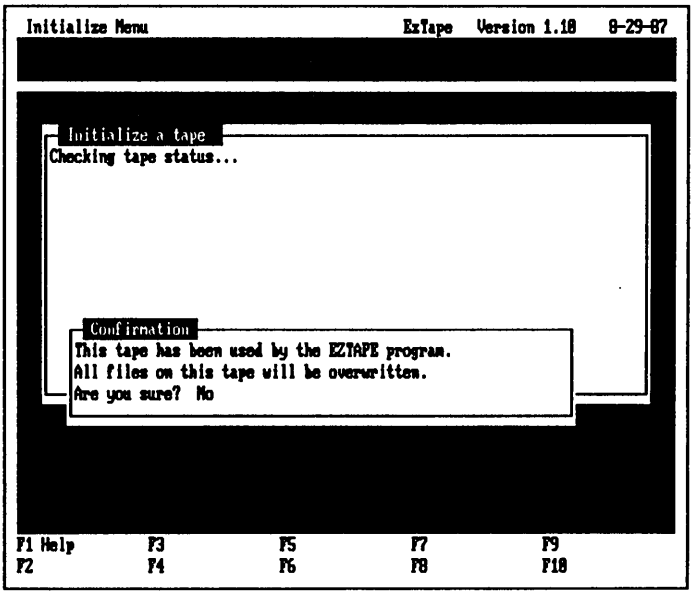

Figure 8–2
A tape containing data

2. If you answer no, the Initialize Menu will be displayed again. If you answer yes, **EzTape** will display a message showing how long the formatting will take, then ask if you want to continue. You will not be able to use your computer for other things during formatting. If you continue, **YOU WILL LOSE ALL OF THE DATA ON THE TAPE.** Press [↵].

3. If the tape is new or bulk-erased, **EzTape** will tell you how long the initialization is going to take and confirm the operation. If you respond no, the Initialize Menu will be displayed. If you respond yes, the entire operation of servo and format will proceed. You will not be able to use your computer for other things during this time. When initialization is complete, press any key to continue.

Servo-Write Tape and Exit

Servo-Write

The `Servo-Write Tape` option allows you to perform the servo-writing without your computer's attention. The tape must be erased for this operation to execute.

If the tape has not been properly erased, it is possible that the procedure could fail. If that happens, the red light on the drive will blink. You should bulk erase the tape again using the correct procedure before attempting to servo.

1. Within the Initialize Menu, press [S] to select the `Servo-Write and Exit` option.

2. **EzTape** will display a message asking you to confirm the operation. If you answer no, the Initialize Menu will be displayed. If you answer yes, the servo-writing will proceed. Press any key. The Initialize Menu will be displayed. You can leave **EzTape** and do other things with your computer while the tape drive servo-writes. If you exit **EzTape** now, do not re-enter the program until the drive finishes operation and the red light on the drive goes out.

3. If the tape has not been bulk erased, **EzTape** will display a message. Press any key to return to the Initialize Menu.

Erase

Erase Tape and Exit

If your drive supports it, the `Erase` option performs a hardware erase. The head acts like a magnet and removes the servo signals on the tape. The erasure can run while you are doing other things with your computer. You should use an Irwin bulk eraser if your drive does not support the erase feature.

1. Press [E] to select the `Erase Tape and Exit` option.

2. If your drive supports the erase feature, you will see a message asking you to confirm the operation. If you answer no, the Initialize Menu will be displayed. If you answer yes, the erase will proceed and **YOU WILL LOSE ALL OF THE DATA ON THE TAPE**. Press any key and the Initialize Menu will be displayed. You can leave **EzTape** and do other things with your computer while the erase operation runs. If you exit **EzTape** now, do not re-enter the program until the drive finishes operation and the red light on the drive goes out.

Chapter 9: The EzTape DOS Command Line

You can append one of four command words to EZTAPE and execute a function directly from the DOS prompt:

```
EZTAPE BACKUP

EZTAPE RESTORE

EZTAPE INIT

EZTAPE UTILITY
```

These command lines provide a way for the experienced user to perform most **EzTape** functions directly from the DOS prompt without going through the **EzTape** menus. If you thoroughly understand the **EzTape** functions, you can use the **EzTape** DOS commands to save the time it would have taken to specify the same operation via the menus.

9.1 The Form of the EzTape Command

Form

All **EzTape** DOS commands take the following form:

EZTAPE [*commandword optionlist*]

where:

commandword
: is (if present) one of: BACKUP, RESTORE, INIT, or UTILITY.

optionlist
is a list of **options** separated by blanks. Each option begins with a slash (/) and a single letter, possibly followed by a blank and an argument string.

The options available for each command word are described in the following sections under the heading of each command word.

Common

9.2 Options Common to All EzTape Commands

`/l` [*filename.ext*]
Lists messages to disk file.

`/w` Waits for user to press a key after various requests for confirmation during execution. This is especially useful in conjunction with commands that display information, in order to retain them on the screen.

`/yes` Suppresses requests for user confirmation. Assumes "Yes."

Backup

9.3 Backup

You can use the following command line options with the `EZTAPE BACKUP` command:

`/a` Selects files with the archive bit ON.

`/b [r] [h] [s]`
Selects files with attributes as follows:
`r` - includes files with the read-only bit

ON.
`h` - includes files with the hidden bit ON.
`s` - includes files with the system bit ON.
If `/b` is specified with no argument, all three file types are excluded. The default for backup is to include all three file types.

`/d` [*relation*] [*mm-dd-yy*] [*hh:mm*]
Selects files according to their date and time stamp as follows: *relation* is `gt` for **greater than** (after), `lt` for **less than** (before), `eq` or = for **equals**, or `ne` or <> for **not equals**. *mm-dd-yy* is the date; the default is `1-01-80`. *hh:mm* is the time; the default is `00:00`.

`/f` [*parfile*] `.BPF`
Specifies a backup parameter file containing file selections and options.

`/n` [*setname*]
Specifies name of backup set. Numeric extension is added automatically.

`/q` Searches all subdirectories from starting path.

`/r` Resets archive bit.

`/s` [-] [*drive:*] [[\]*path*\] [*filename.ext*]
Specifies source. The current disk drive is the default drive. The current directory is the default directory. ***.*** is the default filespec. '-' before the specification designates an unselect, or negative specification.

`/t` [*drive*]
Specifies the target tape drive for a backup. The default is 1.

`/v` Verifies target tape after backup.

`/x` [*setname.ext*]
Overwrites the backup set, does not append. Append is the default.

For example, the command

```
EZTAPE BACKUP /d gt 8-1-87 /s C:\BIN\*.EXE
```

backs up all .EXE files in the BIN directory of your C: disk modified since August 1, 1987.

9.4 Restore

You can use the following command line options with the EZTAPE RESTORE command:

`/a` Selects files with the archive bit ON.

`/b [r] [h] [s]`
Selects files with attributes as follows:

`r` - includes files with the read-only bit ON.
`h` - includes files with the hidden bit ON.
`s` - includes files with the system bit ON.

If `/b` is specified with no argument, all three file types are excluded. The default for restore is to include read-only files but not hidden or system files.

`/d` [*relation*] [*mm-dd-yy*] [*hh:mm*]
Selects files according to their date and time stamp as follows: *relation* is `gt` for **greater than** (after), `lt` for **less than** (before), `eq` or `=` for **equals**, or `ne` or `<>` for **not equals**. *mm-dd-yy* is the date; the default is `1-01-80`. *hh:mm* is the time; the default is `00:00`.

`/f` [*parfile*]`.BPF`
Specifies a restore parameter file containing file selections and options.

`/k` Keeps the original tree structure of the source files. Creates any necessary directories on the target drive.

`/o` [*x*] Specifies the overwrite action as follows:

`0` - don't restore older files
`1` - ask if older files should be restored (default)
`2` - restore older files without asking.

`/q` Searches all subdirectories from starting path.

`/s` [-] [*drive:*] [[\]*backup.set**path*] [*filename.ext*]
Specifies source. The current tape drive, backup set, and directory are the defaults. `*.*` is the default filespec. '-' before the specification designates an UNselect or negative specification.

`/t` [*drive:* [*path*]]
Specifies the target disk drive and (optionally) directory for a restore. `C:\` is the default target disk directory.

`/v` Verifies target disk after restore.

For example, the command

```
EZTAPE RESTORE /s \FRIDAY.003\RALPH\*.*
```

restores all the files in a directory `RALPH` from a tape backup set named `FRIDAY.003`.

Init

9.5 Initialization

You can use the following command line options with the `EZTAPE INIT` command:

`/i` Initializes the tape.

`/s` Servo-writes the tape in the background.

`/e` Erases the tape in the background.

For example, the command

```
EZTAPE INIT /i
```

initializes the tape.

Utility

9.6 Utility

You can use the following command line options with the `EZTAPE UTILITY` command:

`/i` Displays information about the tape. (Use `/w` option with this in order to hold the display on the screen.)

`/n` [*volname*]
Names the tape.

`/r` Retensions the tape.

`/u` Sets the tape to unused.

For example, the command

```
EZTAPE UTILITY /i /w
```

displays information about the current tape in the tape drive, waits for you to press a key when you're done reading, and then returns to the DOS prompt.

Chapter 10: Troubleshooting

10.1 Tape Initialization

Initialization

Check the following:

1. Remove the cartridge, reinsert it, and try again. If you are in the process of servo-writing, the cartridge has to be bulk-erased before retrying the operation. If this doesn't work, see step 2.

2. Use a different cartridge. If the operation now works, the initial cartridge is defective. If this doesn't work, see step 3.

3. Your tape system is probably defective. Return it to your dealer for repair.

10.2 Reading or Writing a Tape File

Tape

Things to try:

1. Try the restore again. The problem may be temporary. A speck of dust or other contaminant may have interfered with reading the tape and another attempt might prove successful, even though built-in routines make the system try several times after an unsuccessful read.

2. Clean the tape drive's read/write head, then try the restore again. For cleaning instructions, refer to your installation manual.

Disk

10.3 Reading or Writing a Disk File

There are other error messages that arise from a failed attempt by **EzTape** to read or write a file on your hard disk.

If **EzTape** was unable to read or write a disk file, check the following:

1. Does the file name, as you typed it, exist in the current (or specified) directory, on the current (or specified) disk drive?

In addition, if **EzTape** was unable to write a disk file, check the following:

1. Is the disk full? If so, remove or delete some files and try again.

2. Are you using the root directory? It may be full. The number of files in the root directory is limited. (Refer to your DOS manual for more information on this limitation.) Remove a few files from the root directory and try again.

3. Were you trying to write to an existing file that is flagged read-only?

Memory

10.4 Memory

A number of error messages arise from a common cause: **EzTape** has run out of memory and cannot complete its current operation. Here are some things to check:

1. Find out how much memory is really available by running `CHKDSK`. (See your DOS manual for information on the `CHKDSK` command.)

2. Do you have any memory-resident application programs running in your computer at this time? (Check your `CONFIG.SYS` and `AUTOEXEC.BAT` files.) If so, try re-booting your system without installing these other programs. This may free up enough memory to run the **EzTape** operation you are trying to perform.

3. Add more memory to your system.

4. Review your **EzTape** file selections. It requires less memory to select groups of files using wildcard characters ("*" and "?") than it does to select each file individually using the "+" selector. Similarly, it takes less memory to specify all files in a given directory, than it does to specify each of the files in that directory individually. Streamline your file specifications and try again.

5. Try dividing your job into smaller pieces. For example, if you are specifying a large and complex backup operation, and it won't run in the available memory, divide it into 2 or 3 less complex operations and try again.

6. Try reorganizing your tree structure. It takes significantly more memory to back up a directory several levels away from the root directory, than it does to back up a directory that is contained in the root directory.

7. Is all the memory in your computer system functioning correctly? If you're not sure, re-boot your system or run its diagnostic programs. Refer to the manuals that came with your system for information on testing the memory.

Power Failure

10.5 Power Failure

If electrical power is interrupted during a backup or restore operation, simply start over when the power returns. The incomplete files will be replaced by the new copy.

Drive Failure

10.6 Drive Failure

If the tape drive itself fails during a backup or restore operation, or if you get an unexpected increase in restore failures, try the following steps before you return it to your dealer.

1. Clean the read/write head, then try the operation again. For cleaning instructions, refer to your installation manual.

2. Try a different tape – preferably one that has never been used, else one that has been properly erased with either the Irwin Bulk Eraser or the `Erase Tape and Exit` option under the `Initialize` menu. Servo-write and format the tape, and try both backup and restore operations. If the drive operates normally with a different tape, then the problem is likely to be with the tape you were using.

3. If the drive runs but does not transfer data, the cable connection to the computer may be at fault. Sometimes a very small amount of corrosion forms on electrical contacts, interfering with the passage of the data signals. Disconnect the cable and work the plug in and out several times. Secure the connector and try the operation again.

4. If the tape drive itself has ever been opened, the cable connection inside the drive may be loose, or making incomplete contact. Open the drive (see instructions in your installation manual) and work the cable connection in and out several times. Reassemble the drive and try the operation again.

5. If the drive won't run and its red light doesn't come on, even when the tape is removed and replaced, try the following:

   - Turn off all power to the computer and the drive for 5 seconds, then start over.
   - Check all power connections.
   - If you're using an interface board, check its fuses.

Chapter 11: Error Messages

In the course of using **EzTape**, you will see a number of messages on the display. Most of these simply tell you what the system is doing, ask questions for you to answer at the keyboard, or give instructions for you to follow. However, if **EzTape** has trouble executing an operation, it may display one or more messages that tell you about the problem. Whether you can correct the problem or not, make a note of these messages in case you need to discuss the problem with your dealer.

The rest of this section lists error messages in alphabetical order.

A 110 tape on a 125 or 145 drive is a "read-only" configuration.

To write on an x10 tape, use an x10 drive.

Attempt to write on write-protected media.

Flip the write-protect tab on your tape to its "off" position.

Cannot read the EzStart parameter file.

Make sure that file `EZSFILE` is in the installed **EzTape** directory.

Cannot write the EzStart parameter file.

Make sure that file `EZSFILE` is in the installed **EzTape** directory.

COPY: Cannot allocate memory for transfer buffer.

See page 10–2.

Can't allocate enough memory for copy operation.

See page 10–2.

Can't allocate memory for directory construction.

See page 10–2.

Disk file open error.

See page 10–2.

Disk file read error.

See page 10–2.

Drive not ready.

Check if the tape is properly set in the drive.

Either no servo or DC100 tape - the tape cannot be formatted.

See page 10–1.

Error creating *filename*: *n*

See page 10–2.

Error making *filename*: *n*

See page 10–2.

Error opening *filename*: *n*

See page 10–2.

Error writing to *filename*: *n*

See page 10–2.

Error - Could not delete the previous file.

See page 10–2.

Error - Could not create *filename*.

See page 10–2.

Error - Could not read *filename*.

See page 10–2.

Error - Could not copy the previous file. Copy operation aborted.

See page 10–2.

Error - User changed tapes. Operation aborted.

The operation must be performed again.

Error - Could not create target directory.

See page 10–2.

filename **could not be opened for backup.**

See page 7–2.

filename **will not be restored.**

EzTape will not restore itself. It can be re-installed.

Files in this directory and its subdirectories will not be backed up.

Pathname length exceeds the limit. Move to the desired directory to specify backup.

Format buffer error.

See page 10–1.

Format error, one retry.

See page 10–1.

Format failure.

See page 10–1.

General failure.

See page 10–4.

Header block byte *n* **failed comparison.**

See page 10–1.

Header block data error.

See page 10–1.

Invalid menu option. Press any key.

Press correct menu option.

No files selected for organization. Press any key.

Make file selections prior to organizing.

Not all files successfully backed up. You should re-run this backup on a different tape.

Tape cartridge is defective. Use a different tape to perform backup.

Not enough memory for data tree structure.

See page 10–2.

Not enough memory for file processing.

See page 10–2.

Not enough memory for files.

See page 10–2.

Not enough memory for path processing.

See page 10–2.

Not enough memory for paths.

See page 10–2.

Not enough memory for the generation of a directory tree. Press any key.

See page 10–2.

Not enough memory for the selection tree. Press any key.

See page 10–2.

Not enough memory to continue listing. Press any key.

See page 10–2.

Not enough memory to determine selected status. Press any key.

See page 10–2.

Not enough memory to perform the selection procedures. Press any key.

See page 10–2.

Organization error. The selected operation was unsuccessful. Press any key.

See page 10–2.

Out of memory at dtn malloc.

See page 10–2.

PAN_BR: You need about *n* more bytes of memory.

See page 10–2.

Parameter *n* is not valid for EzTape Init.

See page 9–1.

Parameter *n* is not valid for EzTape Util.

See page 9–1.

Read fault.

See page 10–1.

Read header block error.

See page 10–1.

Sector not found.

The tape has failed.

Seek error.

The tape has failed.

Tape error: Cannot read header block

See page 10–1.

Tape error: Cannot write tape : Write protected or format/drive mismatch

See page 10–1.

Tape error: Floppy controller not responding

See page 10–1.

Tape error: Tape does not appear to be formatted

See page 10–1.

Tape error: Tape parameters appear invalid : Re-format tape

See page 10–1.

Tape error

Processing halts.

Tape mount error.

See page 10–1.

Tape warning: Error writing physical allocation table copy *n*

See page 10–1.

Tape warning

Processing continues.

The batch file cannot be created.

See page 10–2.

The batch file has been corrupted. EzTape is not found. Press any key.

See page 10–2.

The corresponding batch file could not be read. Press any key.

See page 10–2.

The corresponding batch file does not exist. Press any key.

See page 10–2.

The currently listed directory cannot be removed. Press any key.

See page 4–8.

The file for message redirection cannot be appended.

See page 10–2.

The file for message redirection cannot be closed.

See page 10–2.

The file for message redirection cannot be created.

See page 10–2.

The file for message redirection cannot be written to.

See page 10–2.

The help files are corrupted. Press any key.

Re-install the **EzTape** software. Refer to Chapter 1.

The length of this path exceeds the limit.

Pathnames cannot exceed 66 characters.

The parameter file cannot be created.

See page 10–2.

The parameter file cannot be opened.

See page 10–2.

The parameter file creation did not work. Press any key.

See page 10–2.

The servo-write operation terminated abnormally.

See page 10–1.

The tape is not servo-written.

See page 10–1.

The tape is write protected.

To write on this tape, flip the write-protect tab on your tape to its "off" position.

There is an abnormal condition - a loadpoint will be attempted.

See page 10–1.

There is an abnormal tape condition.

Wrong tape type, or physically mangled.

There is an illegal parameter in the command line.

See page 9–1.

There is no tape drive connected to the system. Press any key.

See page 10–4.

There is not enough memory for the format operations.

See page 10–2.

There is not enough memory to display the full-screen help. Press any key.

See page 10–2.

There is not enough memory to display the large message box. Press any key.

See page 10–2.

There is not enough memory to distinguish selection. Press any key.

See page 10–2.

There is not enough memory to save the parameters. Press any key.

See page 10–2.

There is not enough memory to save the selections. Press any key.

See page 10–2.

There is not enough memory to set up EzStart.

See page 10–2.

There was an error loading the batch file. Press any key.

See page 10–2.

There was an error loading the full-screen help display. Press any key.

The full-screen help message could not be loaded or does not exist. Here are some things to check:

1. **EzTape** help messages are contained in a pair of files called `HELPFILE.HPD` and `HELPFILE.HPX`. Look for these files on your hard disk in the same directory where you installed **EzTape**. If you can't find these files, or believe they may have been damaged, re-copy them from your

EzTape software distribution diskette, or re-install the **EzTape** software.

2. It is possible that a full-screen help message does not exist for this situation. You should be able to find any information you need in the **EzTape** User Guide, this **EzTape** Reference Manual, or in related help screens.

This tape is not formatted.

See page 10–1.

This tape was formatted by software that is not compatible with EzTape.

See page 10–1.

Unable to find or open the file HELPFILE.HPX. Press any key.

Re-install the **EzTape** software. Refer to Chapter 1.

Unable to find or open the file HELPFILE.HPD. Press any key.

Re-install the **EzTape** software. Refer to Chapter 1.

Unknown media type.

The tape is not servo-written, not formatted, or contains invalid data in its first block.

Verify failure, bad header block.

See page 10–1.

Write fault.

See page 10–1.

Write header block error.

See page 10–1.

Write protected.

To write on this tape, flip the write-protect tab on your tape to its "off" position.

You do not have enough memory available. You must increase the amount of free memory. Press any key to continue.

See page 10–2.

You have a low amount of memory available. Increasing the amount of free memory may increase performance. Do you wish to continue?

See page 10–2.

Chapter 12: Customer Support

For general questions about Irwin hardware or software, please call Irwin Customer Support at:

1-800-348-6242

Or write to Irwin at the address below.

Irwin Magnetics
2101 Commonwealth Blvd.
Ann Arbor, Michigan 48105
U.S.A.

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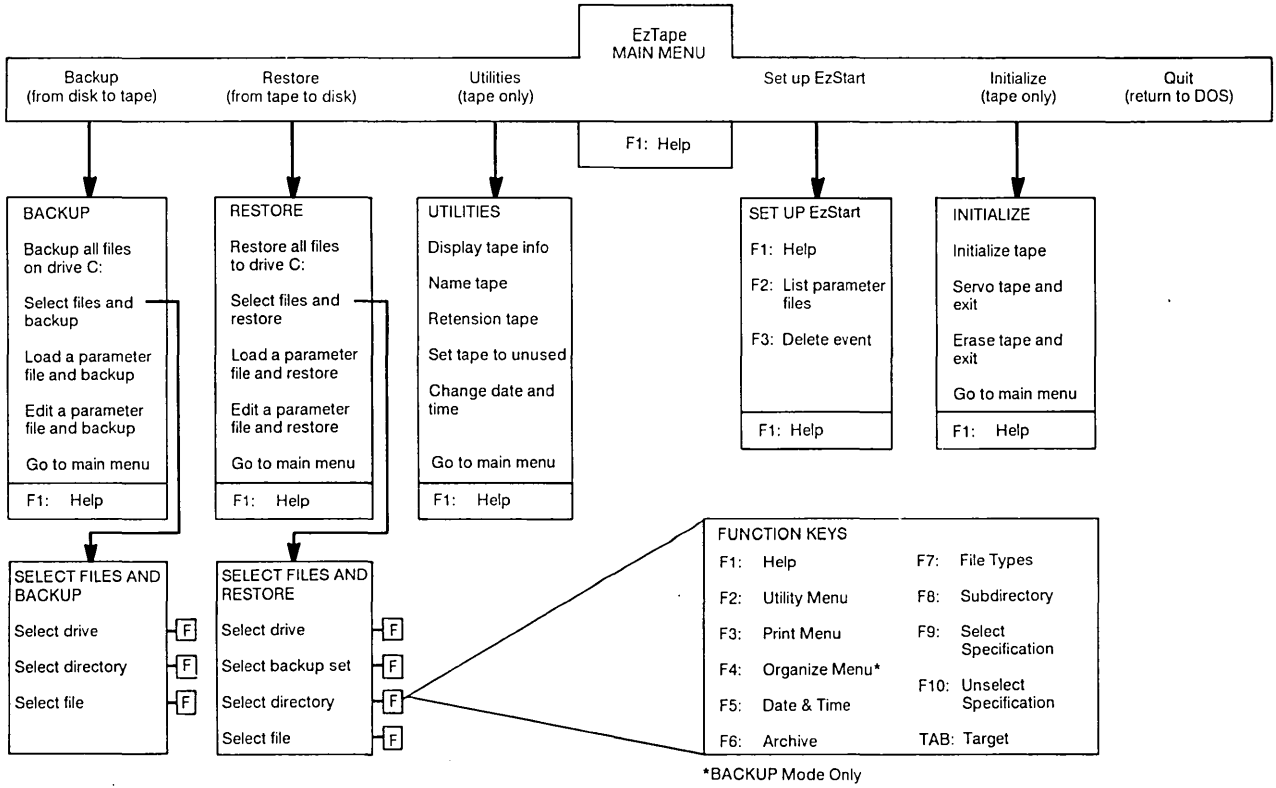
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TAB: Target
*BACKUP Mode Only

EzTape Quick Reference

Special Keys

[↵] To advance to the next screen.

[Esc] To return to the previous screen.

[↑] To position your cursor.

[↓] To position your cursor.

[PgUp] To scroll directory or file displays.

[PgDn] To scroll directory or file displays.

[+] Add: Adds the currently highlighted file or directory to the current file selection.

[−] Delete: Deletes the currently highlighted file or directory from the current file selection.

[CTRL] [C] Abort: Goes up one level in the menu hierarchy, and aborts any selections made at the current level or below.

Special Keys Used in File Selection

[F1] Help: Displays a HELP message. Pressing [F1] a second time displays a more detailed HELP message.

[F2] Utility Menu: Accesses the Utilities menu, from which you can display information about a tape, give it a name, retension it, or set it to unused. Also lets you change the DOS current date and time.

[F3] Print Menu: Lets you print backup sets, directories, files, trees.

[F4] Organiz Menu: Lets you copy, move, and delete disk files and directories.
Not active during a restore operation.

[F5] Date & Time: Lets you restrict subsequent file selection based on date and time.

[F6] Archive: Lets you restrict subsequent file selection based on whether a file has been changed since its last backup.

[F7] File Types: Lets your subsequent file selection include or exclude read-only, hidden, and system files.

[F8] Subdirectory: Lets your subsequent file selection include or exclude subdirectories of a selected directory.

[F9] Select Spec: Lets you select files and directories using DOS filenames with wildcards and the restrictions and inclusions set by [F5], [F6], [F7].

[F10] Unsel Spec: Lets you UNselect files and directories using DOS filenames with wildcards and the restrictions and inclusion set by [F5], [F6], [F7].

[→] Target: Lets you specify the target tape drive.
Lets you specify the target disk drive and directory; lets you choose whether to keep original tree structure of the restored files.

Special Keys Used in EzStart

[F1] Help: Displays a HELP message. Pressing [F1] a second time displays a more detailed HELP message.

[F2] ListParFiles: Displays a list of existing parameter files, along with the date they were created or last modified.

[F3] Delete Event: Deletes the current highlighted event.

Batch Files

Batch Files can be run from the DOS prompt.

Backall — Backup the entire hard disk.

Changed — Backs up new or modified files.

Restall — Restores entire contents of tape.

Irwin BACKUP with EzTape User's Manual
User's Comment Form

Irwin is committed to your complete satisfaction with our product. We have attempted to provide product documentation that is comprehensive and useful. Your comments assist us in improving the documentation and are an important part of the input used for revisions. Please take a few minutes to respond to this survey, and drop the pre-paid form in the mail.

Thank You!

	Excellent	Good	Fair	Poor
Organization of manual	_____	_____	_____	_____
Usefulness of examples	_____	_____	_____	_____
Clarity of information	_____	_____	_____	_____
Ease of use of manual	_____	_____	_____	_____
Suited to your experience level	_____	_____	_____	_____

How much experience have you had with personal computers and peripherals?

none _____ 0-6 months _____ 6 months-1 year _____ 1 year + _____

Please provide any additional comments or suggestions below:

_____

_____

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_____

(Optional)

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Street _____

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