

Backup Pro

FAST. EASY. SAFE BACKUP

- ★ Full Mouse Support!
- ★ Up to 90% Data Compression!
- ★ 10 MB in 4 Minutes!



The Finest Backup Program in the World.



Backup ProTM

USER'S GUIDE

Backup utility software

Contents

Introduction.....	v
Before You Begin.....	1
1: Getting Started.....	1-1
Installing Backup Pro	1-2
Understanding the Screen	1-4
Using a Keyboard.....	1-6
Using a Mouse	1-9
Setting Up Backup Pro.....	1-11
Help.....	1-12
Preparing Backup Disks.....	1-13
Directory and File Selection	1-14
2: Full Backup And Restore	2-1
Full Disk Backup.....	2-1
Full Disk Restore	2-6
3: Selective Backup and Restore.....	3-1
Selective Disk Backup	3-1
Full Disk Restore of a Selective Backup	3-3
Selective Disk Restore.....	3-4
4: Other Backup Techniques.....	4-1
Periodic Backups.....	4-2
Interruptible Backup	4-6

5: Menu Selections.....	5-1
Options	5-2
Backup	5-9
Restore	5-25
Utilities	5-35
Configure.....	5-44
Command line options	5-50
 6: Floppy Only Backup Types	 6-1

Appendices

Appendix A: Terms and Concepts	A-3
Appendix B: Common File Extensions.....	A-5
Appendix C: Backup Pro Files.....	A-7
Appendix D: Error Messages.....	A-9
Appendix E: The TIMER Utility.....	A-15

Index

Introduction

Backup Pro is a fast, easy, and extremely reliable utility for backing up your computer files. Regular backup of fixed disk files is one of the most important computer tasks. Although computer equipment is generally reliable, the failure of fixed disks and other components is not uncommon. File backups, done on a regular basis, can prevent the loss of important information and data entry time.

Backup Pro insures against disaster:

- ◆ If a fixed disk fails, you can restore backup data to a new fixed disk.
- ◆ If failure of other components prevents access to your data, you can restore your data to another computer and continue to work.

Backup Pro is working for you in minutes:

- ◆ You can access all of the Backup Pro functions by pointing to choices on menus.
- ◆ No DOS backup commands are required.
- ◆ System directories and files are displayed for quick reference and selection.

And, Backup Pro offers full mouse support.

Before You Begin

DeskMate and Backup Pro

Backup Pro is designed to run as a DeskMate application or as a stand-alone utility. Installation instructions are provided for either use, see *Getting Started, 1-1*.

Maintaining Orderly Backups

Backup Pro copies files from a source (usually fixed disk drive C), to a destination (like floppy drive A). If you are backing up to a floppy drive, you will need a supply of disks, labeled and numbered in sequential order. Backup Pro automatically formats disks during the backup process. Backup Pro tells you how many backup disks are required based on the files you have chosen and the type of backup disks you are using.

During backup, selected files and subdirectories are copied in sequential order. The data is indexed and the index is stored on the last backup disk. Backup Pro uses the index to restore the files and subdirectories in the correct sequence. Sections 2, 3, and 4 of this guide provide examples of basic backup and restore procedures. Section 5 provides step-by-step instructions for every Backup Pro menu selection. The Appendices contain lists of terms, error messages, and other helpful information.

Store your backup disks in a safe place. For extremely important data, make a second set of backup disks and store them in a site away from your computer.

Copy Protected Software

If you have copy protected software on your fixed disk, you might have problems during the restore process. Consult the manuals of the software which is copy-protected.

1: Getting Started

Backup Pro is ready to go to work as soon as you install it on your system. This section provides you with information about:

- ▶ Installing Backup Pro
- ▶ Understanding the screen
- ▶ Using a keyboard and/or a mouse
- ▶ Accessing the HELP feature
- ▶ Setting up Backup Pro
- ▶ Preparing backup disks

Installing Backup Pro

You can run Backup Pro from either your floppy or fixed disk drive. Installing Backup Pro on your fixed disk will make backups much simpler.

Note: Backup Pro is designed to run within DeskMate or as a stand-alone utility. The following instructions explain how to install the Backup Pro files. For instructions on adding Backup Pro as an Application List Box, refer to the DeskMate manual.

To run Backup Pro from floppy disks

1. Format a disk. This disk will hold the working copy of Backup Pro.
2. Insert the Backup Pro distribution disk in Drive A.
3. Enter **A:INSTALL**
4. Follow the directions on your screen to install Backup Pro.
5. Store the original disk in a safe place.

Note: You can only copy Backup Pro to a high density (1.2 or 1.44 Mb) disk.

6. Follow the directions on your screen to run Backup Pro.

To run Backup Pro from a fixed disk

The Backup Pro installation program creates a directory (normally named BP) and copies necessary files from the master disk.

1. Insert the Backup Pro distribution disk in Drive A.
2. Enter **A:INSTALL**
3. Follow the directions on your screen to install and run Backup Pro.

To run Backup Pro from a portable computer

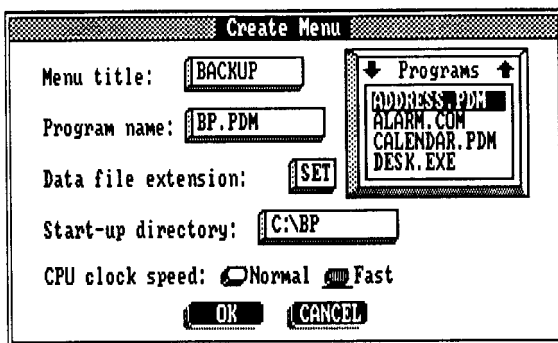
If you are using a portable computer with LCD or plasma display you must use a different *install* command. This applies to both floppy and fixed disk installations.

- ♦ Enter **A:INSTALL BW**

To start Backup Pro from DeskMate

You can install Backup Pro as an Application List Box in DeskMate's desktop.

1. Choose **DESKTOP** from the main menu.
2. Choose **CREATE** from the pull-down menu.
3. Enter a menu title.
4. Enter **BP.PDM** as the program name.
5. Enter the complete directory path for Backup Pro (C:\BP).
6. Enter **SET** as the **Data file extension**.
7. Choose **OK** to continue.



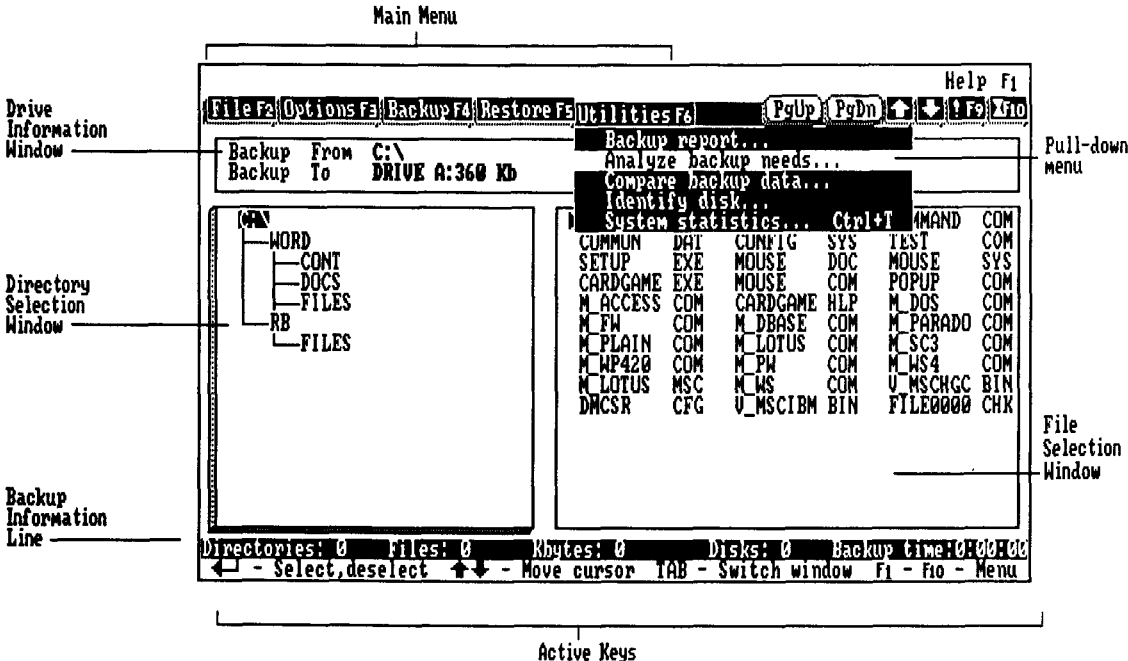
DeskMate prompts you to choose the desktop location for Backup Pro. After the Application List Box is created you can start Backup Pro like your other DeskMate programs. Refer to your *DeskMate User's Reference* for further information.

After starting Backup Pro

Backup Pro will read the current fixed disk drive and display a **directory tree**. This takes only a few seconds. The directory tree is a map of all the subdirectories on your fixed disk and all the files within those subdirectories. Refer to your DOS manual for further explanation of subdirectories.

Understanding the Screen

The Backup Pro screens are easy to understand and even easier to use. This section describes the screen layout and the elements which appear on it. You might want to start Backup Pro while reviewing this information.



- Main menu.....**Each item on the main menu represents one of the major Backup Pro processes. Choosing any main menu item displays another menu (called a pull-down menu).
- Pull-down menus**Each pull-down menu offers several items. These items perform the majority of Backup Pro functions.
- Drive Information Window**Displays the current source and destination for backups or restores.
- Directory Selection Window.....**Displays the directory tree for the source drive during a backup and the backup disks during a restore.
- File Selection Window**Displays the list of files for the current directory. Files and subdirectories can be selected for backup or restore.

Active Keys.....Displays definitions of the currently active keys. This line changes depending on the Backup Pro function being used.

Backup Information LineDisplays the following information on the storage size of a backup:

Directories: The number of subdirectories currently selected for backup.

Files: The number of files contained in the selected subdirectories.

Kbytes: The amount of storage space (in kilobytes) occupied by the selected files.






Disks: The number of floppy disks required to backup the selected files.

Backup time: The estimated time required for Backup Pro to backup the selected files.

Using a Keyboard

Backup Pro uses standard methods for moving around the screen and choosing items. This section provides a brief description of the computer keys and an explanation of how to choose various items.

Key Descriptions

Enter	Completes the selection of an item. On some keyboards this key is marked as:  or <Return>.
Cursor keys	Move the highlighted cursor bar around the screen. These direction keys are marked as:    
PgUp, PgDn	Moves the cursor bar up or down a page, one page at a time.
Home, End	Moves the cursor bar to the beginning or end of a list.
Esc	Cancels the current selection.
Tab	Moves the cursor bar between windows and selection options.
Shift-tab	Moves the cursor bar in the reverse direction of the Tab key.
Ctrl	Use in combination with certain letter keys. These combinations offer a one step short-cut to perform functions like starting backup and restore. See <i>Menu Selections, 5-1</i> for the combinations.
F1	Displays context-sensitive help.
F2-F6	Display the Backup Pro pull-down menus.

To choose a main menu item

Use the function keys (F2-F6) to display main menus.

- ◆ Press one of the function keys (F2-F6).

To choose a pull-down menu item

Use the up/down cursor keys to choose pull-down menu items.

1. Choose a main menu.
2. Highlight one of the pull-down menu items using the Up/Down cursor keys.
3. Press the <ENTER> key.

If you use the left/right cursor keys when a pull-down menu is displayed, the other pull-down menus will be displayed.

To turn on a check mark menu item

Certain pull-down menu items are preceded by a **check mark**. Check marks are not chosen like menu items. You can toggle the check mark on or off. If the check mark (✓) is displayed, the option is turned on. Otherwise the option is turned off.

1. Highlight the item.
2. Press <ENTER>

To choose items from a dialog box

When you choose certain menu items, Backup Pro displays a dialog box from which further selections are made. Dialog boxes contain edit fields, check boxes, and radio buttons.

Edit Fields - If an option requires you to enter or change text, like file names and directories, an edit field is displayed.

Radio Buttons (●) - Some dialog boxes have several choices (radio buttons), stacked vertically in a group. Whenever a button is selected (turned on), all other buttons are turned off.

Check Boxes [X] - You choose a check box the same as a radio button. One or more check box choices can be active at the same time.

Check boxes and radio buttons are not chosen like menu items. They are toggled on or off with the spacebar. Each has an indicator to tell you the current status.

1. Highlight the selection.
2. Press <ENTER>

Select buttons - At the bottom of most dialog boxes are two select buttons, OK and Cancel. The items you select, or the text you enter in a dialog box, is not processed until you choose OK.

- ◆ Choose **OK** to process the selections.
- or
- Choose **CANCEL** to remove them.

Using a Mouse

Backup Pro offers full mouse support. You can take full advantage of your mouse while still having complete keyboard capability.

Note: Since you will probably use a combination of mouse *and* keyboard when using Backup Pro, see *Using a Keyboard, 1-5*.

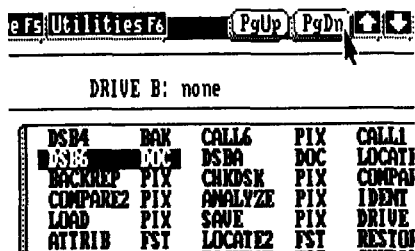
To choose a menu item

After starting Backup Pro, the mouse pointer is located in the center of the screen. Choosing a selection in Backup Pro requires two steps. Whenever the manual instructs you to "Choose" something, do the following.

1. Point to the main menu item.
2. Click and hold either button.
3. Drag the pointer to the pull-down menu item.
4. Release the button.

To scroll thru lists



When working in the Directory and File Selection windows, you might only see a limited portion of your directory tree and file list. Use the PgUp/PgDn boxes to move through the lists.



To move one page at a time,

1. Point to the **PgUp** (up) or **PgDn** (down) boxes at the top right of the screen.
2. Click either button.

To move one line at a time,

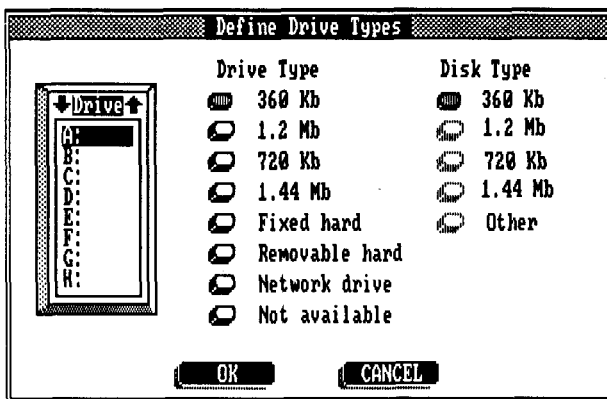
1. Point to  (up) or  (down) at the top right of the screen.
2. Click either button.

Setting Up Backup Pro

Before performing any backups you must define the disk drives in your system. For a detailed explanation, see *Options, Define drive types, 5-9*.

1. Select **OPTIONS** from the main menu.
2. Select **DEFINE DRIVE TYPES**

A dialog box appears for drive and disk types. For each drive letter, you must identify the drive type and the disk type. This example defines the drive type for a standard floppy drive A.



3. Highlight drive letter **A**
4. Move to the **Drive Type** column.
5. Choose **360 Kb** using the cursor keys and spacebar.
6. Move to the **Disk Type** column.
7. Choose **360 Kb**

For a fixed disk drive C, repeat steps 3 thru 7. Choose "Fixed hard" for Drive type. Disk type is not required.

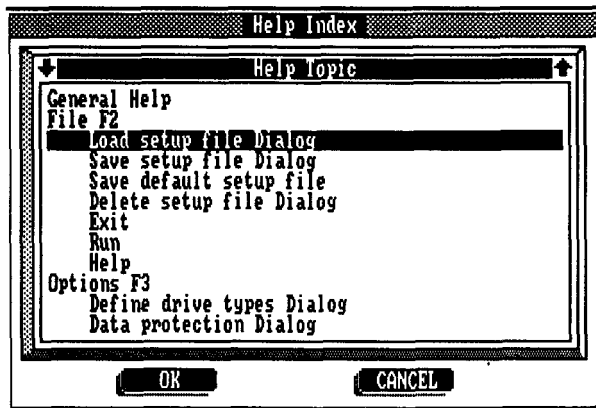
8. Choose **OK** to complete the drive selection.
9. Choose **SAVE DEFAULT SETUP FILE** from the **File** menu to save your selections.

Help

Helpful information is instantly available from any Backup Pro menu.

To get help for a specific menu item:

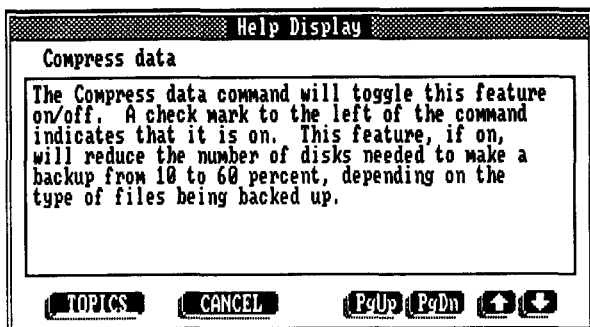
1. Highlight the item.
2. Press F1



The **Help Index** appears. The cursor bar highlights the specific topic you are interested in.

3. Choose **OK**
or
Choose another topic.

A help window displays the specific information. If the help window contains multiple pages, click on PgUp/PgDn to scroll through the help text. Scroll through the Help Index the same way.



To exit the help window:

4. Choose **TOPICS** to return to the Help Index.
- or
- Choose **CANCEL**

Using a mouse

1. Choose **FILE** from the main menu.
2. Choose **HELP** from the pull-down menu.
3. Follow steps 1 thru 4 above.

If the help window contains multiple pages, use PgUp/PgDn to move through the help text.

Preparing Backup Disks

Have the required number of disks available before beginning a backup. Also, label the disks and number them sequentially (1,2,3, etc.). You do not have to format the disks before beginning a backup.

Directory and File Selection

Backup Pro automatically displays the structure of the root directory of your fixed disk drive in the Directory Selection window. The cursor highlights the root directory. The File Selection window always displays the files which are in the selected directory or subdirectory.

- ◆ Press <TAB> to move between windows.

The current (or active) window appears raised. Use the cursor up/down, PgUp/PgDn, and Home/End keys to move through the directory and file selection windows.

You can choose specific subdirectories and files to include or exclude from your backups. Subdirectories and files which you *include* for backup will be displayed in bright intensity. The directories and files you want to *exclude* will be displayed in normal intensity.

Note: All subdirectories and files are included (bright intensity) by default.

To choose a specific directory

1. Highlight the subdirectory in the Directory Selection window, and press <ENTER>. The subdirectory changes intensity.
2. Repeat for each subdirectory.

If a directory is included for backup, all of the files in that directory are automatically included and displayed in bright intensity. If a directory is excluded, all of the files in that directory are automatically excluded and displayed in normal intensity. You can choose any specific file or files to be included/excluded from a backup.

To choose a specific file

1. Highlight the file in the File Selection window, and press <ENTER>. The file changes intensity.
2. Repeat for each file.

Using a mouse

To include/exclude a subdirectory or file

- ◆ Point to the directory or file and **double click** either button.

If the Directory or File Selection windows contain multiple pages, use PgUp/PgDn to move through the list.

2: Full Backup And Restore

This section guides you through a Full Backup and Full Restore of your fixed disk. For advanced functions, see *Menu Selections, 5-1*.

Full Disk Backup

You will backup all of the files on fixed disk drive C to floppy diskettes on drive A.

To start Backup Pro from the DOS prompt:

1. Enter **CD\BP**
2. Enter **BP**

To start Backup Pro from DeskMate:

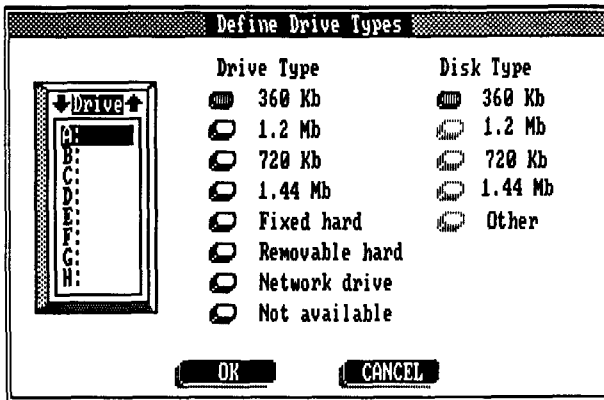
- ◆ Choose the backup menu title on your DeskMate desktop (see *To start Backup Pro from DeskMate, 1-3*).

Backup Pro will read the current fixed disk drive and display a **directory tree**.

Before performing any backups you must define the disk drives in your system. If you have already done this, skip to step 12.

3. Select **OPTIONS** from the main menu.
4. Select **DEFINE DRIVE TYPES**

A dialog box appears for drive and disk types. For each drive letter, you must identify the drive type and the disk type.

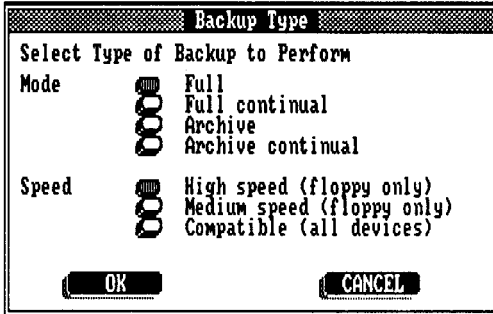


5. Highlight drive letter **A:**
6. Press **<TAB>** to move to the **Drive Type** column.
7. Choose the appropriate drive type using the cursor keys and spacebar.
8. Press **<TAB>** to move to the **Disk Type** column.
9. Choose the appropriate disk type.
10. Repeat steps 5 thru 7 for fixed disk drive C. Choose "Fixed hard" for Drive type. Disk type is not required.
11. Choose **OK** to complete the drive selection.

Next you choose the type of backup you want, in this case a full backup at high speed.

12. Choose **BACKUP** from the main menu.
13. Choose **BACKUP TYPE** from the pull-down menu.

A dialog box appears with options for mode and speed.



14. Choose **FULL** from the **Mode** options.

This selection will backup all files on drive C that are not hidden or system files. For an explanation of hidden and system files, see *Appendix A: Terms and Concepts, A-3*.

15. Choose **HIGH SPEED (FLOPPY ONLY)** from the **Speed** options.

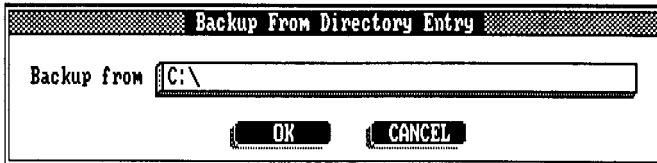
This option greatly increases the speed of the backup operation. For an explanation of the speed choices, see *5: Backup, Backup type, 5-18*.

16. Choose **OK** to continue.

Now you will identify the source and destination drives for your backup. The source is where the files are right now. The destination is where you are backing up those files to.

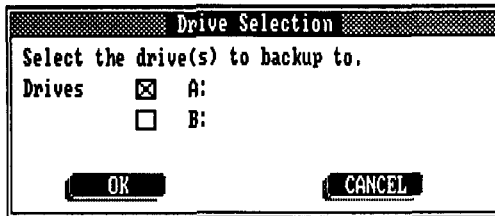
17. Choose **BACKUP FROM ENTRY**

A dialog box appears where you can enter the letter name of the source drive. In this example the source drive is C.



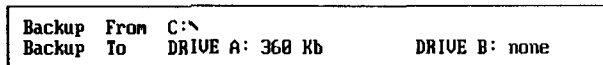
18. Enter **C:**
19. Choose **OK**
20. Choose **BACKUP TO ENTRY** from the **BACKUP** pull-down menu.

Another dialog box appears for the destination drive.



21. Choose **A:**

The Drive Selection window displays the source and destination drives you selected. Review the Disk Type (1.2 Mb or 360 Kb for a typical drive A). If it is not correct, define your disk type before continuing, see *Options, Define drive types, 5-12*.



Once the backup type, source, and destination are set, you can begin the actual backup. The **statistics line** displays the number of diskettes and amount of time required for the backup. Have the required number of disks ready (see *Preparing backup disks, 1-13*).

22. Choose **START BACKUP** from the pull-down menu.

A dialog box requests the first backup disk.

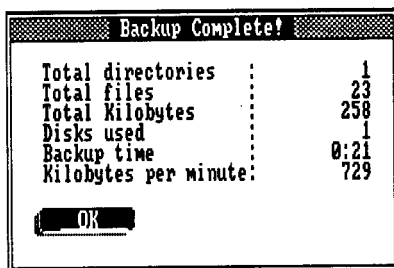


23. Insert the first disk.

The cursor highlights each file in the File Selection window as the file is backed up. After the first disk is filled, the dialog box prompts for the next disk. Continue to insert additional disks as requested.

24. Insert additional disks.

When the backup is complete, a dialog box displays backup statistics. The statistics help you plan for future backups.



25. Choose **OK** to continue.

You have completed a full backup. Be sure to store the backup disks in a safe place.

Note: When using the "floppy only" speed option, Backup Pro formats each disk during the first backup. Subsequent backups will proceed much faster since the disks will already be formatted.

Full Disk Restore

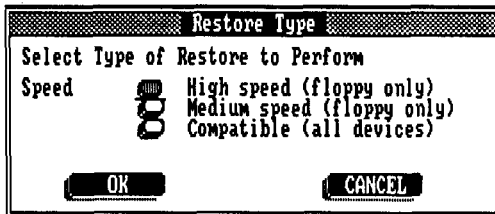
You will restore all of the files from the *Full Disk Backup, 2-1*. Files will be restored from floppy drive A to fixed drive C. The restoration will not include hidden or system files, since they were not backed up. This lesson assumes you have already started Backup Pro.

Note: If you do not feel comfortable restoring over your original files (or if you have copy-protected files), choose another drive or a different directory on the same drive as directed in this lesson.

Begin by choosing the type of restore you want.

1. Choose **RESTORE** from the main menu.
2. Choose **RESTORE TYPE** from the pull-down menu.

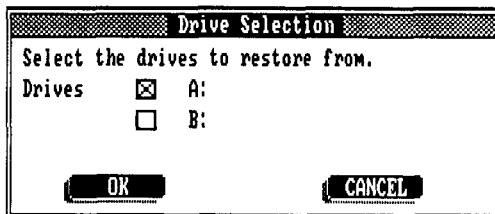
A dialog box appears with options for speed. Use the same selection that was used for backup.



3. Choose **HIGH SPEED (FLOPPY ONLY)** from the speed options
4. Choose **OK**

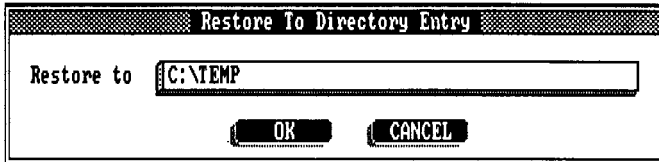
Now you will identify the source and destination drives. This works the same as with a backup. However, now the source and destinations are switched.

5. Choose **RESTORE FROM ENTRY**.



6. Enter **A:**
7. Choose **OK**

8. Choose **RESTORE TO ENTRY**



Since the backed up files exist on your fixed disk drive, Backup Pro displays an overwrite warning upon restore. To prevent this, enter a temporary path name, like C:\TEMP, as a destination to restore your data to.

9. Enter **C:\TEMP**

Once the restore type, source, and destination are set, you can begin the actual restore. Have the backup disks ready.

10. Choose **START RESTORE**

A dialog box requests the last backup disk. Important information about a backup is always stored on the last disk.



11. Insert the last disk.

Once Backup Pro has read the last disk, a dialog box appears prompting for the first disk of the backup.



12. Insert the first disk.

The cursor cycles through the files in the File Selection window. After the first disk is restored, the dialog box prompts for the next disk. Continue to insert additional disks as requested.

13. Insert additional disks.

If the overwrite warning option is active, a warning dialog box appears. This tells you that a file is being restored to a directory where the same file name already exists. You can skip this file, overwrite it, and/or overwrite the remaining files automatically (see *Options, Overwrite warning*, 5-16).

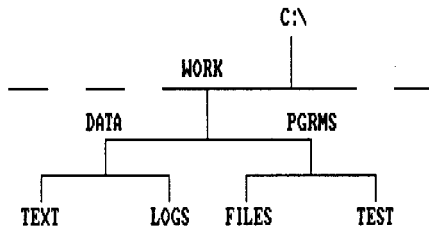
14. Choose **OK** to continue.

3: Selective Backup and Restore

The previous section explained how to complete a full backup and restore of the fixed disk C. Now you will learn how to perform selective backup and restore of a single fixed disk directory.

Selective Disk Backup

You will backup a subdirectory named WORK and its subdirectories. The following diagram illustrates this branch of the directory tree:



Each of the directories, including WORK, contains a number of files. Backup Pro allows you to choose certain directories for a selected backup or restore.

The backup type and destination settings are identical to the Full Disk Backup in the previous section.

1. Complete steps 1 thru 16 of *Full Disk Backup, 2-1*.

The statistics option is a quick way to verify the drive types, backup type, and other options are correctly set. See *Utilities, System statistics, 5-47*.

2. Choose **UTILITIES** from the main menu.
3. Choose **STATISTICS** from the pull-down menu.

A dialog box appears with the statistics.

System Statistics			
Drive C	: Fixed disk	Drive A	: 360 k drive, 360 k disk
Total bytes	: 32,602,112	Total bytes	: 362,496
Available	: 20,338,688	Available	: 362,496
Total memory	: 655,360	Backup mode	: Full
Available	: 135,920	Backup speed	: High speed (floppy only)
Data compression	: Off	Include/exclude files	: 1
Data verification	: On	Exclude attributes	: Hidden System
Time display	: Off	Data range selection	: Off
Setup file	: BACKPRO.CFG		
DOS version	: 3.31		
Backup version	: 1.00		

OK

4. Choose **OK** to continue.
5. Move the cursor to the Directory Selection window.

The root directory C:\ is highlighted.

6. Choose **C:** in the Directory Selection window.
(Highlight it with the cursor and press <Enter>)

This excludes (deselects) the root directory (C:\) and its subdirectories from inclusion in a backup. The entire directory tree changes from bright to normal intensity.

7. Choose the **WORK** subdirectory.
(Highlight it with the cursor and press <Enter>)

The intensity of the WORK subdirectory changes to bright. Now only the selected subdirectory (the bright WORK subdirectory) will be included in the backup.

The rest of the backup procedure is the same as for a Full Disk Backup.

8. Press <F4> to display the Backup menu.
9. Complete steps 20 thru 25 in *Full Disk Backup, 2-1*.

Full Disk Restore of a Selective Backup

You will restore the single subdirectory WORK which you backed up in the previous section. Files will be restored from drive A to C. Only the WORK subdirectory files and subdirectories will be restored.

If you do not feel comfortable restoring over your original files, you can choose an alternate drive or directory on the same drive. You may also wish to restore only one file, just to get a feel for the procedure.

The backup type and source settings are identical to the previous Full Disk Restore lesson.

- ♦ Complete steps 1 thru 14 in *Full Disk Restore*, 2-5.

Selective Disk Restore

Backup Pro allows you to restore *selected* directories or files from a full disk backup. You might use a partial restore if you had a disk problem and one of the directories was damaged.

This lesson explains how to restore the single directory **WORK**. Only the **WORK** directory files and subdirectories will be restored. Files will be restored from drive A to C.

The backup type and source settings are identical to the Full Disk Restore.

1. Complete steps 1 thru 8 in *Full Disk Restore*, 2-6.
2. Choose **READ DRIVE** from the Restore pull-down menu.

A dialog box requests the last backup disk. Important information about a backup is always stored on the last disk.

3. Insert the last disk.
4. Choose **OK**

Backup Pro reads the last disk and updates the Directory and File Selection windows.

5. Choose **A:** in the Directory Selection window.

The intensity of all subdirectories changes from bright to normal. The intensity of a subdirectory identifies whether it will be included in a backup or restore. Included subdirectories are bright; excluded ones are the normal intensity.

6. Choose the **WORK** directory.

The intensity of the **WORK** subdirectory changes to bright. Now only the selected subdirectory (the bright **WORK** subdirectory) will be included in the restore. The rest of the restore procedure is the same as for a Full Disk Restore.

7. Complete steps 10 thru 14 in *Full Disk Restore*, 2-6.

You can use this same procedure to restore a single file or a group of files from a full backup.

4: Other Backup Techniques

This chapter suggests and demonstrates advanced backup techniques: performing periodic backups, using alternate date range backup modes and criteria.

There are many ways to perform and maintain backups for your fixed disk. The ones you choose depend on the type of work that you normally perform on your computer. Some users work primarily in one application and use only one or a small number of data files. Other users utilize a variety of applications and create or update many files.

Most fixed disks contain large numbers of program files (*.EXE, *.COM) and configuration files (*.CNF, *.SET, etc.). In addition, many programs use a large number of overlays (*.OVL) and graphics oriented programs may use a large number of image files (*.IMG or *.PIC). These types of files change only if you install an upgrade for the program. The configuration files change only if you reconfigure a program. The files that do not change can be backed up less frequently than others.

The files that are routinely created and updated are your user data files. These files may have a variety of file extensions depending on the application program. Consult your software manuals to identify these files.

The concept of maintaining rotating backups is to backup your entire fixed disk (all files and file extensions) periodically. The frequency with which you perform a full backup depends greatly on the number of changes you make to program configurations and whether or not you are installing upgrades. Normally a fixed disk should be fully backed up at least once every 30 days.

More frequent backups should be performed daily, to backup the files that have been created or altered since the last full backup. This method allows you to only spend time backing up those files that have been changed.

Periodic Backups

Frequent Archive Backups

Periodic backups allow you to backup just the files which have been created or updated since the last full backup. Whenever a new file is created, or a file is updated, DOS sets the file backup indicator. This tags the file as needing to be archived (backed up).

- ◆ Complete the *Full Disk Backup, 2-1*.

Save the Full Disk Backup configuration settings using a setup name, like FULL.

1. Choose **FILE** from the main menu.
2. Choose **SAVE SETUP FILE** from the pull-down menu.
3. Enter a setup file name.

The next time you perform a full backup, you can load the setup for the full backup. This saves you the time of setting the options for your backup each time.

When the full backup is performed in the Full mode, Backup Pro will reset the backup indicator, indicating the file has been backed up.

To backup only changed files (archive bit on),

In the **archive continual mode**, Backup Pro only backs up files that have changed (backup indicator on) since the last full backup and does NOT change the backup indicator. This is very important because you want to maintain a rotating backup of the files that have **changed** since the last full backup. Some files may change daily and they should be included in each rotating backup.

1. Choose **BACKUP** from the main menu.
2. Choose **BACKUP TYPE**
3. Choose the **ARCHIVE CONTINUAL** mode.

Use a different set of disks than the one used for the Full Disk Backup. The full backup set of diskettes will contain all the files selected for backup from your fixed disk. The second set of disks will contain only those files changed in the time period between the backups.

Perform the rotating backup daily. You can reuse the rotating set of disks. The rotating backups will always contain just the files that were changed since the last full backup.

Save the rotating backup configuration settings the same way as for the full backup. You can then load the setup for this type of backup and proceed directly to starting backup.

The daily rotating backup might become too lengthy because of the number of file changes. This is an indication that it is time for a new full backup. When you perform a new full backup, you can reuse the set of disks used for the last full backup. Be sure to label the full and rotating sets of backup disks and keep them separate.

To restore a full fixed disk from rotating backups

Use this procedure to restore the most current versions of your fixed disk files. The full backup disks restore all files as they existed at the time of the full backup. The rotating backups, the files which were added or changed since the last full backup, are then restored over the full backup versions.

1. Restore the files contained on the full backup disks.
2. Restore the files contained on the rotating backup disks.

Frequent Date Range Backups

Backup Pro allows you to set a date range to be used when backing up files.

To use this feature, backup the entire fixed disk as described in *Full Disk Backup, 2-1* using the Full backup mode, and record the date of that backup. Let's assume that date is March 1, 1989. Save the settings for the full backup under a name like FULL.

1. Choose the Full backup mode.
2. Choose **DATE RANGE SELECTION** from the Backup pull-down menu,

A dialog box appears.

3. Toggle date selection to **ON**.
4. Enter **3/1/1989** in the **Range From** entry.
5. Choose **OK**

The backup menu appears. A check mark (✓) displays by the menu selection "**Date range selection**" indicating that this feature is selected.

Save this setup under a name like DATE for future use.

Use a different set of disks than was used for the full backup for this date range backup.

6. Choose **START BACKUP**

The rotating backup will be performed in the mode saved in the DATE set-up file. Only files created on or after 3/1/1989 will be backed up.

Perform the rotating backup by date range on a daily basis. This backs up any file that has changed since the last full backup. When the rotating backup becomes too long, perform a new full backup and repeat the cycle.

When you perform a new full backup, you can reuse the set of disks used for the last full backup. Be sure to turn the Date range selection **off** before performing a new full backup. When Date range selection is turned off, the check mark (✓) no longer appears beside that option on the pull-down menu. You can use a setup file to help you change this setting.

Important: Make sure the system date is correct before performing a data range backup. Also, be sure to label your disks and keep the sets of rotating and full backup disks separate.

To restore a full fixed disk from rotating backups

Use this procedure to restore the most current versions of your fixed disk files. The full backup disks restore all files as they existed at the time of the full backup. The rotating backups, the files which were added or changed since the last full backup, are then restored over the full backup versions.

1. Restore the files contained on the full backup disks.
2. Restore the files contained on the rotating backup disks.

Interruptible Backup

When using the Compatible (all devices) Backup type, you can abort a backup in progress and later resume the backup where you left off. This feature cannot be used in conjunction with the "floppy only" backup types.

To interrupt the backup:

- ◆ Press **<ESC>** during the backup.

or

Choose **CANCEL** when a dialog box appears for the next disk.

You will be prompted to verify that you want to cancel the backup.

To resume the cancelled backup:

- ◆ Choose **RESUME PRIOR BACKUP** from the Backup pull-down menu.

A dialog box warns you that the current setup will be replaced by the setup which was in effect at the time the backup was interrupted. To save the current setup, choose Cancel and then save the current setup before resuming the backup.

5: Menu Selections

This section describes the functions of the various menu options:

- ▶ File
- ▶ Options
- ▶ Backup
- ▶ Restore
- ▶ Utilities

Main menu selections are listed in the order they appear on the screen. Pull-down menu selections are listed with each main menu selection.

FILE



Open setup file...	Ctrl+O
Save setup file...	Ctrl+S
Save default setup file	
Delete setup file	

Exit...	Esc
Run...	
Help...	

The File menu items help you to:

- ▶ Create setup files
- ▶ Exit from Backup Pro
- ▶ Run other programs
- ▶ Access the HELP feature

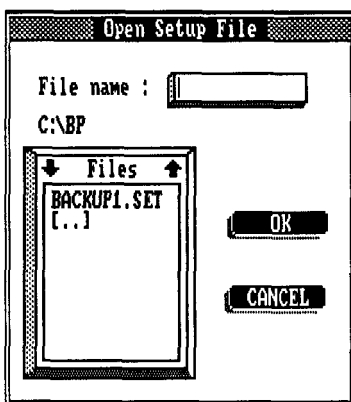
Open setup file

You can save and load your various backup routines. This allows you to perform one of your backup routines without defining the options each time. Setup file information includes source and destination, inclusions/exclusions, and other options.

1. Choose **OPEN SETUP FILE**

or

Press **<CTRL>** and **<O>**



The setup file directory is displayed. A list box appears inside the dialog box that contains a list of the currently saved setup files.

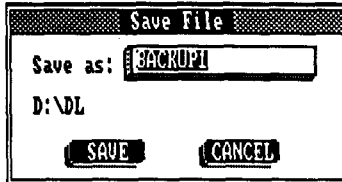
2. Choose a setup file.
3. Choose **OK**

You can load the setup files from any directory you specify. To use an alternate directory:

1. Choose **[..]** from the list box.
2. Choose a directory.

Save setup file

You can save all of your current settings at any time. Saving settings in files allows you to quickly configure Backup Pro for different types of backups and restores.



1. Choose **SAVE SETUP**
or
Press **<CTRL>** and **<S>**
2. Enter a name for your setup file.
3. Choose **OK**

Use a file name that reflects what the settings will do. Any legal DOS file name is acceptable. Backup pro automatically assigns the file extension for setup files.

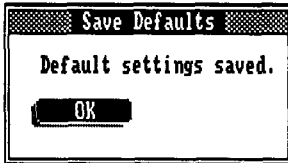
You can specify an alternate directory for a setup file by entering the complete pathname.

Save default setup file

Use this option to save all of the current backup settings as the **default** settings (drive type definitions, backup type, etc.).

◆ Choose **SAVE DEFAULT SETUP FILE**

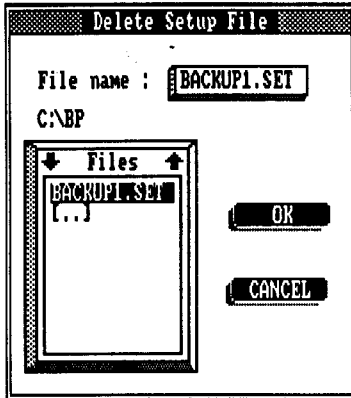
The settings are saved to the default directory. They will automatically be used the next time you run Backup Pro.



To recover the original default settings, erase the file BACKPRO.CFG from the Backup Pro directory.

Delete setup file

You can delete any of the setup files you create. If you no longer use certain setups, remove them from the setup list with this function.



1. Choose **DELETE SETUP FILE**
2. Choose a file setup name.
3. Choose **DELETE**

You can delete setup files from any directory you specify. To use an alternate directory:

1. Choose **[..]** from the list box.
2. Choose a directory.

Exit

To exit Backup Pro and return to the DOS prompt or the DeskMate desktop environment:

1. Choose **EXIT**
or
Press **<ESC>**

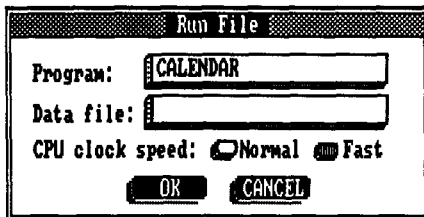
A dialog box appears to verify that you really do want to exit.

2. Choose **OK** to exit.
or
Choose **CANCEL** to continue.

Run

DeskMate allows you to activate another program while in Backup Pro. See your *DeskMate User's Reference* for further information.

◆ Choose RUN



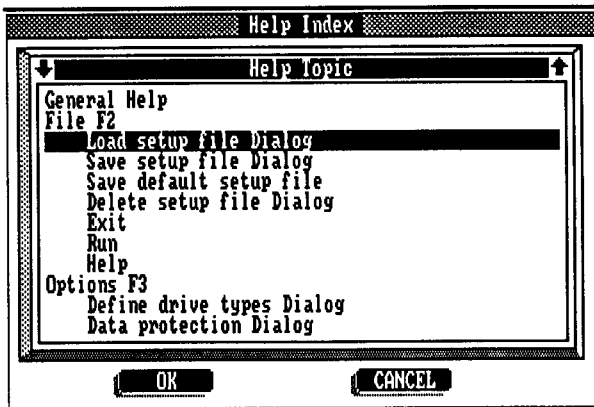
Help

A series of HELP screens are available to explain the various Backup Pro functions.

1. Choose **HELP**

or

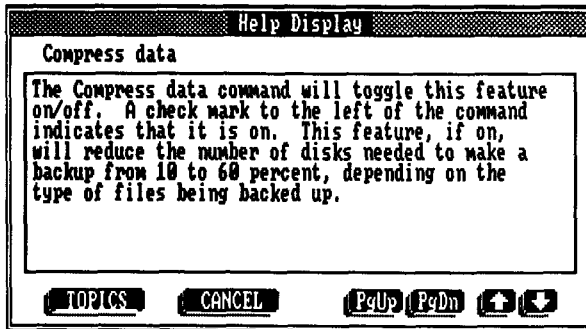
Press **F1**



The Help Index appears.

3. Choose a topic. Use PgUp/PgDn to scroll through the Help Index.
4. Choose **OK**

A help window displays the specific information. If the help window contains multiple pages, use PgUp/PgDn to scroll through the help text.



To exit the help window:

4. Choose **TOPICS** to return to the Help Index.

or

Choose **CANCEL**

Help is also sensitive to the function you are currently working with. To get help for a specific menu item, press F1 at any time. The cursor in the Help Index will be highlighting the appropriate topic.

OPTIONS

F3

Define drive types... Ctrl+C

Data protection

Compress data

✓ Overwrite warning

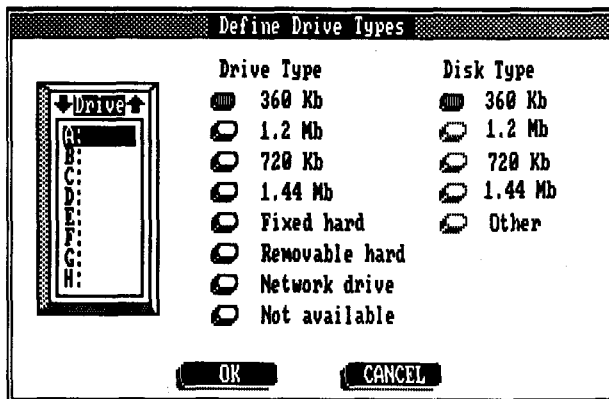
The Options menu items provide the following services:

- ▶ Defining the types of drives on your system
- ▶ Data protection
- ▶ Compression of data for economic storage
- ▶ Warning against overwriting files

Define drive types

This option is to define drive types for all the floppy and fixed devices in your system.

You also specify the disk type (storage capacity) of each drive.



1. Choose **OPTIONS** from the main menu.
2. Choose **DEFINE DRIVE TYPES**
or
Press **<CTRL>** and **<C>**

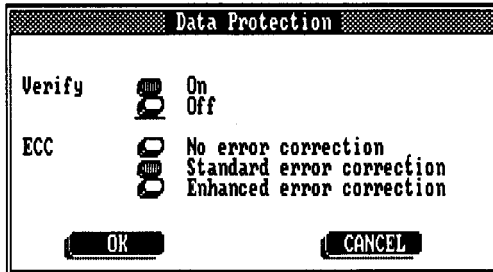
A dialog box appears for drive and disk types. For each drive letter, you must identify the drive type. You must also specify a disk type for all floppy drives.

3. Choose a **Drive Type**.
4. Choose a **Disk Type**.
5. Repeat steps 3 thru 4 for each drive.
6. Choose **OK**

You can define hard disks as fixed or removable. Drive letters can also be defined as local area network (LAN) drives.

Data protection

The verification and error correction options provide you with added data protection.



Data verification

Data verification consists of reading and comparing the original files with the backup copies to make sure they match. This verification takes place during backup and restore.

VERIFY TOGGLE
On (<input checked="" type="checkbox"/>) Verifies files as they are backed up.

1. Choose **DATA PROTECTION** from the Options menu.
2. Toggle the verify option.
3. Choose **OK**

Error Correction

Error correction allows the recovery of data from the backup disk in case part of the disk is defective. Normally, DOS identifies bad sectors on disks as the disks are formatted. However, marginally bad sectors are occasionally missed. DOS also does not identify sectors damaged after formatting.

To prevent these problems, Backup Pro provides optional error correction. When turned on, error correction information is written to the backup disk during backup. Several error correction levels are available.

ERROR CORRECTION (ECC) OPTIONS	
Choose...	To...
NO ERROR CORRECTION	backup files without error correction.
STANDARD ERROR CORRECTION	write error correction information to the backup disks. Additional backup disks may be required.
ENHANCED ERROR CORRECTION	write twice as much error correction information to the backup disks as standard error correction.

1. Choose **DATA PROTECTION** from the Options menu.
2. Choose an error correction (ECC) option.
3. Choose **OK**

Note: You can only use error correction if the Backup Type selection is "High or Medium Speed."

Compress data

Data compression reduces the amount of storage space needed to perform a backup. When this option is turned on, Backup Pro compresses files during backup and decompresses files during restore.

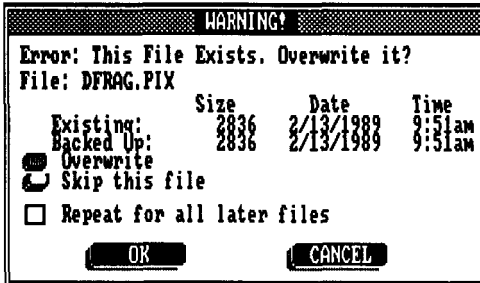
Compressed files require fewer backup disks and backup time is usually increased.

COMPRESSION TOGGLE
On (<input checked="" type="checkbox"/>) Compresses files.

Overwrite warning

If you are restoring selected files from a full backup, you might not want to overwrite previously backed up files. If you are backing up files you might not want to overwrite backup information already stored on the backup disks. You can set a warning to prevent either of these overwrites.

The overwrite warning dialog box displays a comparison of the existing and backed up files. The overwrite options allow you to overwrite or skip any or all of the files.



OVERWRITE OPTIONS	
Choose...	To...
OVERWRITE	overwrite the current file.
SKIP THIS FILE	leave the current file intact and move on to the next one.
REPEAT FOR ALL LATER FILES	either overwrite or skip the remaining files. Choose this in conjunction with one of the other two options.

1. Choose **OVERWRITE WARNING**
2. Choose an overwrite option.
3. Choose **OK** to continue.

BACKUP

F3

Backup type...
Backup From entry...
Backup To entry...
Read drive ...

Start backup... Ctrl+B
Resume prior backup...

✓ Include/exclude file...
✓ Attribute exclusions...
Date range selection...

Locate file(s)...

The **Backup** options allow you to:

- ▶ Set the type of backup
- ▶ Set the backup drives and directories
- ▶ Start a backup
- ▶ Read the fixed disk files
- ▶ Resume an interrupted backup
- ▶ Choose specific backup files and directories
- ▶ Locate certain files

Backup type

There are two parts to setting the backup type: mode and speed. The two parts can be set separately.

Backup mode

The **backup mode** allows you to choose the frequency with which certain files are backed up. You will want a full backup of all of your files at regular intervals.

Between full backups you can limit your backups to new files and files which have been updated. Whenever a file is created or updated, DOS tags that file. Backup Pro uses the tag to identify which files need to be backed up during an Archived Backup. During a full backup, the tags are removed and *all* files are backed up.

For example procedures, see sections 2, 3, and 4.

MODE OPTIONS	
Choose mode...	To backup...
FULL	all files not excluded by other settings. Archive tags are cleared.
FULL CONTINUAL	all files not excluded by other settings. Archive tags are not cleared .
ARCHIVE	only files created or altered since the last full backup. Archive tags are cleared.
ARCHIVE CONTINUAL	only files created or altered since the last full backup. Archive tags are not cleared .

1. Choose **BACKUP TYPE**
2. Choose a mode option.
3. Choose **OK**

Backup speed

Backup time can be reduced considerably by choosing a high or medium speed. The high and medium speed options use a special backup format which is much faster than the standard DOS format. Backups using this format can only be read using Backup Pro. The DOS compatible format is mainly for backing up to a device other than a floppy drive (like a network or another hard disk).

For further explanation of backup speed, see "*Floppy only*" *Backup Types*, 6-1.

SPEED OPTIONS	
Choose...	To backup...
HIGH SPEED	in the least amount of time.
MEDIUM SPEED	if you have a non-IBM computer and the high speed backup does not work. This speed uses the Backup pro format, but is slower than High Speed.
COMPATIBLE	using the standard DOS format. It is much slower than the high or medium speed formats. When using the compatible speed option, a backup may be aborted and restarted at a more convenient time.

1. Choose **BACKUP TYPE** from the Backup menu.
2. Choose a speed option.
3. Choose **OK**

Backup From entry

You must use this option to define the drive and directories of the files you want to backup.

To select a specific subdirectory

You can select a branch of your directory tree or select particular files for backup without having to deal with the entire tree diagram of your fixed disk. This is helpful if your fixed disk has many directories and subdirectories and you wish to perform a selective backup.

The Directory and File Selection windows display the directory you chose and the files in that directory. Only the files in the subdirectory you choose will be backed up.

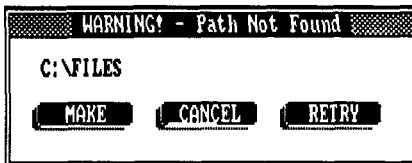
1. Choose **BACKUP FROM ENTRY**
2. Enter the drive and subdirectory path, *[d]:\[pathname]*.

Example: D:\FILES would be the path for a FILES subdirectory on a drive D.

3. Choose **OK**

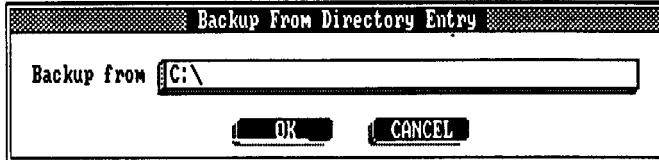
If the directory you choose does not exist, a warning dialog box appears. You can add the directory to your fixed disk without leaving Backup Pro.

- ♦ Choose **MAKE** to add the subdirectory to your fixed disk.



To select all subdirectories (a full backup)

1. Choose **BACKUP FROM ENTRY**
2. Enter the drive and root directory path. The default is C:\ (a typical single fixed disk).
3. Choose **OK**



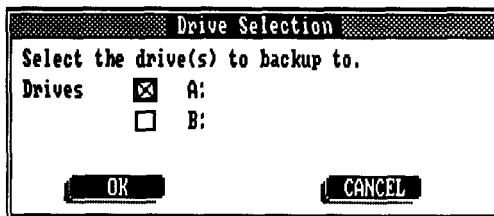
Backup To entry

In addition to setting the source for your backup, you must define the destination. You can backup your files to any drive or directory on your system, including another hard drive. However, the destination options you choose limits the backup speed (see *Backup speed, 5-19*).

DESTINATION OPTIONS	
If you backup to...	Backup speed...
Floppy drive, A or B	can be any speed
a non-floppy drive	must be DOS compatible

To backup to floppy disks

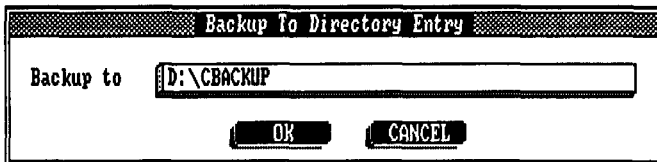
If you are using the high or medium speed backup option, you can only backup to drives A or B. You can backup to both A and B if the drive and disk types are the same.



1. Choose **BACKUP TO ENTRY**
2. Toggle **A** and/or **B**
3. Choose **OK**

To backup to other than floppy disks

If you backup to another fixed disk or to a removable cartridge, you must use the DOS compatible speed option.



1. Choose **BACKUP TO ENTRY**
2. Enter the drive and subdirectory path, *[d:]\[pathname]*.

Example: **D:\CBACKUP** would be the path for a CBACKUP subdirectory on a drive D.

3. Choose **OK**

Start backup

This menu selection begins the backup process.

Important: Be sure you have set and checked all other backup options before starting the backup process.

On the information line Backup Pro displays an estimate of the number of disks and the time required to perform the backup. The number of disks required is based on using no file compression. If the compression option has been selected, the number of disks required will be less than the number displayed.

1. Choose **START BACKUP**

or

Press **<CTRL>** and ****

A dialog box prompts you for the first and subsequent diskettes. If you are backing up to a network or a hard disk you will receive a different prompt.

2. Insert first disk.
3. Choose **OK**
4. Continue to insert additional disks when prompted.

When backing up using the "floppy only" speed option, you do not have to make any key presses after inserting each new disk. Backup Pro senses when the new disk is inserted and continues automatically. While you are changing disks, Backup Pro is reading files from the fixed disk. The cursor bar will continue to move over files as you change disks and the floppy disk drive light will stay on.

The first time a "floppy only" backup is performed, Backup Pro must format all disks in its proprietary format. This first backup will take longer than normal due to the formatting process. Subsequent backups will go much faster.

To cancel a backup

You can cancel a backup at any time.

1. Press **<ESC>**
2. Choose **OK** to cancel.

Read drive

Use this option to read the files on your fixed disk. Once the drive is read, you can start your backup or choose to include/exclude specific files or subdirectories.

◆ Choose **READ DRIVE**



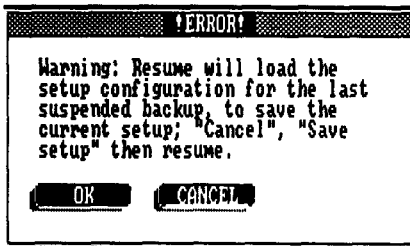
The directory tree appears in the Directory Selection window. The root directory files appear in the File Selection window.

Resume prior backup

This option allows you to interrupt a backup in progress and later resume the backup at a convenient time. This option will work only for "compatible" backup types. For a detailed explanation of this option see *Interruptible Backup*, 4-6.

1. Choose **RESUME BACKUP**

A dialog box appears to warn that the last suspended backup configuration will be loaded.



2. Choose **OK** to resume a suspended backup.

Note: This warning also appears if any backed up files have been changed since the backup.

Include/ exclude files

This is a method for including/excluding certain types of files from a backup. You can enter up to 8 file name strings which specify the files you would like to include or exclude. The DOS wildcard characters (? and *) are accepted. Refer to your DOS manual concerning the use of wildcard characters.

1. Choose **INCLUDE/EXCLUDE FILES**
2. Enter a file specification.

Example: To include files with the .BAT extension:

- ◆ Enter *.BAT

Include/Exclude Entry	Include Subs
.	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>

OK CANCEL CLEAR LIST

A minus sign (-) identifies *excluded* files. Type the minus sign before any excluding file strings.

Example: To exclude all files with the .EXE extension:

- ◆ Enter -*.EXE

The "Include Subs" check box is used to extend the include/exclude file specification to file specifications below the specified directory. If no subdirectory is specified, and "Include Subs" is checked, all directories are included.

If a subdirectory is specified and the "Include Subs" is turned on, the current subdirectory and lower level subdirectories are affected.

Example: If **-\\DOS*.EXE** is specified and "Include Subs" is checked, all files with the .EXE extension in the DOS subdirectory or below are excluded from the backup. Remember, a minus (-) excludes files.

SUBDIRECTORY TOGGLE	
On <input checked="" type="checkbox"/>	includes lower level subdirectories.
Off <input type="checkbox"/>	limits action to the specified directory.

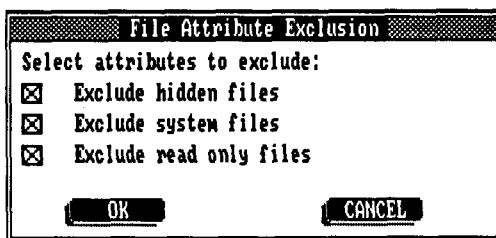
3. Choose **OK**
- ◆ Choose **CLEAR LIST** to remove all file specifications.

Attribute exclusions

You can select files to be excluded from the backup on the basis of the following file attributes:

- ▶ Hidden Files
- ▶ System Files
- ▶ Read only Files

You can choose to exclude one or more of these file types. Refer to your DOS manual for further an explanation of these file types. Choosing an attribute option excludes all matching files in all subdirectories. These options override any manually tagged files or directories.



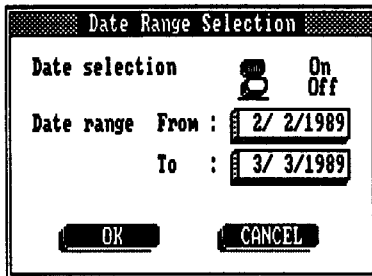
1. Toggle **EXCLUDE...** for the file attributes you do not want in the backup.
2. Choose **OK**

Note: Before backup of copy-protected software, consult the copy-protected software manuals.

Date range selection

If you are rotating backups (see *Periodic Backups, 4-2*), you can limit your backup to files that were created or updated after a certain date. You can also exclude files changed after a certain date by entering a second date.

Example: You performed a full backup of drive C on February 2. Today is March 3 and you want to backup only the files changed since the last full backup.



1. Choose **ON** from the date selection option.
2. Enter the earliest date (FROM).
3. Enter the latest date (TO).
4. Choose **OK**

The information line displays the total number of directories and files which are within the specified date range.

If you do not wish to specify a TO date, leave the default of 12/31/1991.

Note: If you use this option, DO NOT use the same set of disks that were used for the full backup. The backup must be done on a separate set of disks. To restore your files to the fixed disk, first restore the Full backup, and then restore the backup of files from a certain date.

Note: If you do not wish to use the date range in your backup, reset the date selection before starting the backup. Date range selection overrides any manually tagged directories or files.

Tip: You can use this feature to see which files have changed (or been added) on your fixed disk during a certain time period. Follow the steps for setting a date range. Then, browse the directory tree, beginning at the root directory (C:\). As you move through the directories and subdirectories, the files which have changed within the date range will be displayed in bright intensity in the File Selection window.

Locate file(s)

Backup Pro provides an option to help you locate a particular file or group of files. DOS wildcards (? and *) are allowed.

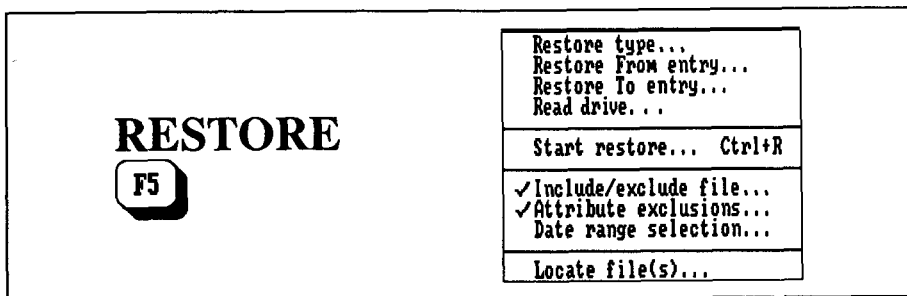
1. Choose **LOCATE FILE(S)**
2. Enter a file specification.

Example: Enter *.DAT to locate all files with the .DAT extension.



The search will begin in the root directory and proceed through the entire directory tree. If a file matches your file specification, an indicator (►) appears next to the file name. The indicator is also displayed beside the directory in which the file was found.

3. Choose **OK** to continue the search.



The **Restore** options allow you to:

- ▶ Set the type of restore
- ▶ Set the restore drives and directories
- ▶ Start a restore
- ▶ Choose specific restore files and directories
- ▶ Locate certain files

Restore type

This selection allows you to select the speed for restoring backed up files. The restore type must be the same as was used to create the back up in the first place. If the backup was done using the DOS compatible speed option, then the restore must be done using that speed option. If the high or medium speed backup types were used for the backup, then that same speed option must be used for the restore.

1. Choose **RESTORE TYPE** from the Restore menu.
2. Choose a speed option.
3. Choose **OK**

Restore From entry

You must use this option to define the drive you want to restore. This option is similar to *backup To entry*.

1. Choose **RESTORE FROM ENTRY**
2. Toggle **A** and/or **B**
or
Enter the drive and subdirectory path, *[d:]\[pathname]*.
3. Choose **OK**

Restore To entry

In addition to setting the source for your restore, you must define the destination. This option is similar to *backup From entry*.

1. Choose **RESTORE TO ENTRY**
2. Enter the drive and subdirectory path, *[d]:\[pathname]*.
3. Choose **OK**

Start restore

This menu selection begins the restore process.

Important: Be sure you have set and checked all other restore options before starting the restore process.

1. Choose **START RESTORE**

or

Press **<CTRL>** and **<R>**

A dialog box prompts you for the last disk of the backup.

2. Insert last disk.

A dialog box prompts you for the first and subsequent disk.

3. Insert first disk.
4. Continue to insert additional disks when prompted.

To cancel a restore

You can cancel a restore at any time.

1. Press **<ESC>**
2. Choose **OK** to cancel.

Read drive

Use this option to read the files on backup disks. Once the drive is read, you can start your restore backup or choose to include/exclude specific files or subdirectories.

1. Choose **READ DRIVE**
2. Insert the first and subsequent disks.



Reading Directory Information.

The directory tree appears in the Directory Selection window. The root directory files appear in the File Selection window.

Include/ exclude files

This is a method for including/excluding certain types of files from a restore. The procedure is similar to that in *Backup, Include/exclude files*. The include/exclude strings for restore do not have to be the same as those used for backup. Use this selection if you do not wish to restore all of the files that were backed up.

Attribute exclusions

You can select files to be excluded from the restore on the basis of the following file attributes:

- ▶ Hidden Files
- ▶ System Files
- ▶ Read only Files

This option is similar to *Backup, Attribute exclusions, 5-29*.

Date range selection

This option is similar to *Backup, Date range selection, 5-30*.

Locate file(s)

This option allows you to locate files on your backup disks. The default search is for all files (*.*). If you need to find a specific file(s), you can enter the file specification.

1. Choose **LOCATE FILE(S)**

A dialog box prompts for the last disk of the backup.

2. Insert the last disk.



3. Enter a file specification.

An indicator (▶) is placed next to the located files in the File Selection window.

4. Choose **OK** to continue the search.

UTILITIES

F5

Backup report...
Analyze backup needs...
Compare backup data...
Identify disk...
System statistics... Ctrl+F

Backup Pro offers several utilities to help you:

- ▶ Review information about specific backups
- ▶ Compare backups to current fixed disk files
- ▶ Identify unmarked or incorrectly marked disks
- ▶ Review Backup Pro settings and system information

Backup report

Backup Pro offers a backup report which displays a complete listing of all directories and files included in a backup. The report includes: file names, file sizes, dates, and other information. The report is available for any current backups.

You can browse the report on the screen, print the report, or send the report to an ASCII text file for later review or printing.

1. Choose **BACKUP REPORT**
2. Insert the last disk of the backup you are interested in.

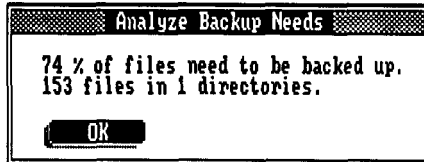
Backup Report						
Report: 04/16/89	DMA Backup of 04/16/89,	1 Disk				
Path/File	Length	Date	Disk	Offset	Compression	
Path: FILES						
AMERICAN.DOC	3584	09/03/87	1	44	OFF	
GPHONE.DOC	1024	02/22/89	1	3656	OFF	
PHONE2.DOC	2560	03/07/89	1	4708	OFF	
README.DOC	6638	02/03/89	1	7296	OFF	
PROSUE.DOC	3072	02/03/89	1	13962	OFF	
TYPOS.DOC	2560	09/03/87	1	17062	OFF	
WORD.DCA.DOC	2793	09/03/87	1	19650	OFF	
ENVELOPE.BAK	512	02/22/89	1	22471	OFF	
ENVELOPE.STY	512	03/07/89	1	23011	OFF	
MARTEK.STY	1024	02/03/89	1	23551	OFF	
<div>PRINT FILE CANCEL PgUp PgDn ↑ ↓</div>						

- ◆ Choose **PRINT** to send the report to your printer.
- ◆ Choose **FILE** to save the report to an ASCII text file. You will be prompted for the file name.

Analyze backup needs

This option displays the number of files and directories (specified in *backup From entry*) which have been updated or created since the last full backup.

1. Choose **ANALYZE BACKUP NEEDS**



2. Choose **OK** to continue.

Note: The "% of files..." is based on the **number** of files to be backed up. It does not refer to the size of the files.

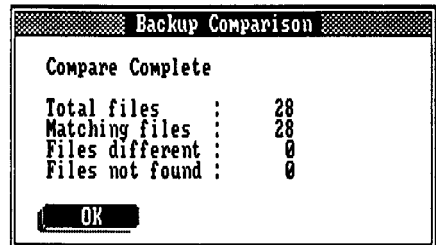
Compare backup

Backup Pro allows you to compare current fixed disk files to the backup files. You can compare the file date and size or file information.

1. Choose **COMPARE BACKUP**

A dialog box appears with two selection options.

COMPARE OPTIONS	
Choose...	To...
COMPARE FILE DATE AND LENGTH ONLY	compare files by date and size. This requires only the insertion of the last disk and is very fast.
BYTE FOR BYTE FILE COMPARE	verify that every byte in the corresponding files match. This requires the insertion of each backup disk and takes much longer.



2. Insert the backup disk.
3. Choose a compare option.

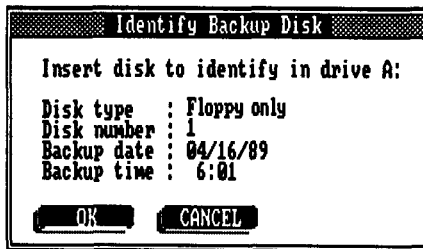
Identify disk

If your disks are unlabeled and get placed out of sequence, you can use this option to identify the disk. The report tells you the disk number, backup date, and backup time.

You can also use this option to determine if the disk is in DOS or "floppy only" formats. Disks formatted for the high speed floppy only option cannot be read by DOS.

1. Choose **IDENTIFY DISK**
2. Insert the disk.

A dialog box appears with the identification.



3. Choose **OK**

Statistics

This option allows you to quickly review the current settings before beginning a backup or restore operation.

1. Choose **STATISTICS**

or

Press <CTRL> and <T>

System Statistics			
Drive C	: Fixed disk	Drive A	: 360 k drive, 360 k disk
Total bytes	: 32,602,112	Total bytes	: 362,496
Available	: 20,338,688	Available	: 362,496
Total memory : 655,360		Backup mode : Full	
Available : 135,920		Backup speed : High speed (floppy only)	
Data compression	: Off	Include/exclude files	: 1
Data verification	: On	Exclude attributes	: Hidden System
Time display	: Off	Data range selection	: Off
Setup file	: BACKPRO.CFG		
DOS version	: 3.31		
Backup version	: 1.00		
<input type="button" value="OK"/>			

2. Choose **OK** to continue.

6: Floppy Only Backup Types

Backup Pro offers two different format options for backup of your files: a DOS compatible format and a proprietary format. The proprietary Backup Pro "floppy only" format provides faster backup and restore operations than the standard DOS format. The proprietary format offers two speeds, high or medium.

The increase in speed is very significant. For example, backing up a 10 Megabyte hard disk on a 1.2 Mb floppy drive takes less than 6 minutes. This is 5 to 6 times faster than the standard DOS compatible backup type.

The medium speed backup is not quite as fast as the high speed, but will usually work on computers that are not 100% compatible. The DOS compatible speed option will work on any DOS compatible machine.

Use the high and medium speed backup types only if the following conditions apply:

- ◆ You are backing up to floppy disks; not to another hard disk.
- ◆ You are not concerned with retaining DOS formatting on your backup disks.

Note: Disks used for backup in the "floppy only" format can be reformatted in the DOS format and reused.

See *Backup, Backup Type, 5-18*, for step-by-step instructions on using the high and medium speed backup types.

The first time a "floppy only" backup is performed, Backup Pro must format all disks in the proprietary format. This first backup will take longer than normal due to the formatting process. Subsequent backups will go much faster.

Appendixes

Appendix A: Terms and Concepts

Appendix B: Common File Extensions

Appendix C: Backup Pro files

Appendix D: Error messages

Appendix A: Terms and Concepts

References to DOS in parenthesis indicates that you will find more information about that item in your DOS documentation.

- Archive.....An alternative method of backing up files so that only those files that have been edited since the last backup are backed up. Full backups can be done at periodic intervals with archive backups done more frequently.
- Backup (DOS).....To make a copy of a file for series of files for safekeeping. Also a DOS command that initiates that operating system's backup program.
- Destination directory.....The directory to which Backup Pro writes the files copied from the Source directory during a backup, or the directory from which Backup Pro restores files to the Source directory. The Backup Pro default destination directory is A:\.
- Directory (DOS)An index that DOS maintains on a disk. If you envision the disk drive as a file cabinet drawer, the directory is the file folder in which groups of files are stored. Subdirectories of directories are file folders inside of file folders into which files are further grouped. A directory may contain both files and subdirectories, i.e, a file folder may contain both loose files and files contained in other folders.
- Format (DOS)The DOS program used to prepare disks so that the computer can write to and read data from them. Disks may be formatted from within Backup Pro.
- File name (DOS).....The name assigned to a file that DOS uses to identify that file. The file name can be up to 8 characters in length.
- File extension (DOS)Up to 3 characters after a "." may be appended to the file name for further identification of a DOS file. The file extension usually identifies the type of file, i.e. .BAT for batch file, .TXT for text file, .BIN for binary, etc.

- Filespec (DOS)**.....The complete identification of a file, including drive letter, path, file name, and extension, i.e. C:\BIN\MYFILE.DAT
- Path (DOS)** - The hierarchical list of directory and subdirectory names which identify the location of the file on a disk. If no path is specified when entering a DOS command, DOS will execute the command in the current directory (if the appropriate executable file exists there). The PATH command (usually in the AUTOEXEC.BAT) file allows you to preset a search path for DOS. For example PATH = C:\BIN;C:\DOS;C:\ would cause DOS to first look in drive C:\BIN for the command file, next in C:\DOS, then in C:\(root directory), and finally in the current directory.
- Restore (DOS)**.....To write files from a backup and replace them to their original locations, usually on a hard disk. Also a DOS command.
- Source directory**.....The directory from which Backup Pro copies files written to the destination directory during a backup, or the directory to which Backup Pro restores files from the destination directory.
- Verify (DOS)**.....A routine that checks that all data copied from one file to another is valid. When selected as a Backup Pro option, Backup Pro verifies each file as it is written and also checks each sector.

Appendix B: Common File Extensions

.ASC	American Standard Code for Interchange of Information (ASCII) file
.BAK	Backup copy
.BAS	Basic source code
.BAT	Batch file
.C	C source code
.CNF	Configuration file
.COB	Cobol source code
.OBJ	Object code file from a compiler
.COM	Executable programs, in memory-image format
.DAT	Data file
.DOC	Document file, usually ASCII
.DIF	Data interchange file, as from VisiCalc
.DBF	Data base file as from dBase
.EXE	Executable programs in relocatable format
.FON	Font file for graphics or printing
.IMG	Memory image or graphics image file
.NDX	Index file, such as dBase
.OVL	Program overlay
.PAS	Pascal source code
.PIC	Graphics image file
.PDM	Executable programs in DeskMate format
.SET	Settings file
.TMP	Temporary work file
.WK1	Lotus user file

Appendix C: Backup Pro Files

Be sure to review the information in this section before attempting to backup or restore your data. The information in this section is essential to preserving the integrity and safety of your files.

PROGRAM FILES	
BP.PDM	Program Overlay file
BP1.EXE	Program Overlay file
BP2.EXE	Program Overlay file
BP3.EXE	Program Overlay file
BP4.EXE	Program Overlay file
BP5.EXE	Program Overlay file
BP6.EXE	Program Overlay file
BP.EXE	Executes Backup Pro
BACKPRO.HLP	The program help text file
BPUTILS.EXE	Executes Backup Pro utility functions
INSTALL.EXE	Executes Installation program

Appendix D: Error Messages

Backup Directory Not Found. "Rebuild" will generate a new directory by scanning all the disks in the backup set.

The backup directory could not be found. Either put in the correct disk or rebuild the directory based from the disks in the backup set.

Backup from and backup to contain the same directory. Cannot continue with backup.

The backup destination cannot be a part of the directory tree being backed up.

Bad Disk In Drive, unable to continue with current disk in drive.

Either a non-DOS disk has been inserted during a compatible backup, or a bad disk has been inserted during a DMA backup.

Cannot send directly to printer. The printer is not ready.

The printer is off-line or does not exist. Send the backup report to a file, and then take the file to a machine connected to a printer in order to print it off, or put the printer on-line.

Directory Missing, a previously existing directory has disappeared or is unaccessable, check for DOS path limit or network protection.

A directory on the source drive has been removed. This will usually happen on a network drive if another user has deleted a directory that was there when the backup tree was read in. It can also appear during a compare backup when a directory that was backed up has since been deleted.

Disk From Current Backup In Drive

Remove the disk and insert a fresh disk to continue the backup.

Disk From Previous Backup In Drive

This warning will only appear once, on the first disk from a previous backup set, to prevent it from getting overwritten accidentally.

Disk from wrong backup set in drive

The disk in the source drive is from a different backup set than the set currently being restored.

Error at Engine Call, program file not found.

Backup Pro was unable to find and execute one of the files BP1.EXE, BP2.EXE, BP3.EXE, BP4.EXE, BP5.EXE, or BP6.EXE.

**Error Cannot Rebuild From This Disk,
Due to a Bad Info Block**

The directory information on this disk cannot be rebuilt because some of the information required by the rebuild process is bad.

Error Cannot Write File Attribute.

This will happen because the user does not have access to the file in order to set its attribute, but the file data has been restored.

Error Creating Backup File.

The Compatible mode backup engine was unable to create the backup data file on the destination drive. This could be because the drive is full or the user does not have permission to write to that directory if it is on a network.

Error Creating Directory File

The compatible engine was unable to create the directory file on the destination drive.

Error Drive Not Ready

The floppy drive controller is no longer responding to the DMA engines.

Error File Not Found

The file being backed up has been deleted. This is possible on a network drive if someone else is modifying files during the backup.

Error Invalid Backup Directory

The backup directory being read has been corrupted.

Error Invalid Command Line. Valid command line arguments: [BACKUP] [RESTORE] [ERROR] [BW] [setup file name][.SET].

An unrecognized command was entered on the command line. Check your spelling, and that the setup file, if one was entered, does exist.

Error Invalid Path, directory or drive does not exist.

The path entered does not exist, re-enter it.

Error loading the setup file. Unable to Complete load.

The requested setup file is either corrupt, or has a bad sector in it.

Error Not A Backup Disk

The user has placed a non-backup disk into the drive during a restore. Remove it and replace with a backup disk from this set.

Error Opening Backup Directory File

The backup directory exists, but cannot be opened. This will probably happen only on networks, when either someone else has the directory file open, or the user does not have permission to access the directory file.

Error Reading Backup Directory. "Rebuild" will generate a new directory by scanning all the disks in the backup set.

The backup directory has been corrupted, it is still possible to recover the files of the backup set by rebuilding the directory from the information stored in the backup set.

Error Reading from Backup Stream

An error has occurred while reading from a backup set. This will usually mean that a bad sector has been encountered.

Error Reading Source File.

The backup engine, DMA or Compatible, was unable to read part of the current source file. This would happen in the case of a bad sector, attempting to read a locked region of a file, or a permission violation on a network.

Error reading XXXXXXXX.XXX OK will delete and continue, Cancel will delete and abort, Re-try will continue with corrupt file (non compressed only)

An error has occurred while reading a DMA backup disk which could not be corrected by the ECC. The possibly bad data can be written out to the file only if the file was not compressed.

Error Seek failure to resume location

While attempting to resume a compatible backup, Backup Pro was unable to position itself to the correct location in the backup set. This implies that the backup set may be corrupt, and the backup should be restarted from the beginning.

Error This File Already Exists.

Do you want to overwrite it?

Prompt the user to overwrite or skip files during a restore.

Error Track 0 Bad, Disk Unusable

The DMA backup has determined that track 0 on this disk is bad. If this occurs, then the disk cannot be used as a backup disk.

Error Unable to Create Directory

Unable to recreate a directory during a restore. This can be because the destination drive is full, or the user does not have permission to create the directory.

Error Unable to Restore File: XXXXXXXX.XXX File has been deleted.

An error has occurred that has prevented this file from being restored.

Error Uncompressing File: XXXXXXXX.XXX File may be damaged.

The file in question could not be restored. The most likely cause of this is that the backup set data has been corrupted.

Error Writing Backup Directory to destination drive.

The compatible backup engine probably encountered a bad sector while writing the directory file to the destination.

Error Writing to Backup Stream.

The Compatible backup engine was unable to write to the backup file. This will probably be caused by a bad sector on the destination.

Error Writing to Data File

An error occurred while writing data from the backup set to the destination file, probably because of a bad sector on the destination drive.

Error Writing Track 0, Unable to Recover

The DMA backup has determined that track 0 on this disk is bad. If this occurs, then the disk cannot be used as a backup disk.

Error Wrong disk for resume

The disk in the drive is not the disk needed in order to resume this backup. The correct disk will need to be inserted or the backup restarted.

Invalid Date

The date entered in the date range selection dialog is invalid.

Nonremovable Drive Full

The destination drive has filled up during a compatible backup.

Not Enough Memory to Run Program

There is not enough free memory in the system to run Backup Pro. Either remove some resident programs or turn off data compression, if it is on.

Program running from same path as destination. Cannot continue backup. If you are attempting to run from a floppy, copy Backup to a hard disk.

The backup will destroy all of the files in the destination, so it cannot backup to the same directory as Backup Pro was installed in.

Program running from same path as source. Cannot continue restore. If you are attempting to run from a floppy, copy Backup to a hard drive.

The restore may overwrite the Backup Pro files with older files. Either change the location of Backup Pro or change the restore location.

Tandon Personal Data Pacs cannot be formatted from within Backup

Attempted to format a Data Pac during a compatible backup.

Unable to open virtual file.

An error has occurred that will not allow Backup Pro to create the virtual file it needs to hold all of the information for the tree.

Unable to resume suspended DOS backup. Resume file load error.

The file containing the information about the last suspended backup has been corrupted or has a bad sector. That backup cannot be resumed.

Unable to write to virtual file. Drive full.

The drive containing the virtual file has run out of space. More space will need to be freed up in order to use the tree being loaded.

Warning drive contents have changed since the last suspended backup. Choose the resume location.

The files on the drive have been modified since the last backup was paused. Select where in the backup to resume.

Warning: Resume will load the setup configuration for the last suspended backup, to save the current setup; "Cancel", "Save setup" then resume.

Resuming a backup will overwrite the current settings of Backup Pro. In order to save these settings, cancel the resume, save the current settings, and return to resume.

Write Protected Disk in Drive, unable to write to disk.

The destination disk has been write protected, in the case of a floppy, remove the write protect tab and try again.

Wrong Disk in Drive. "Continue" will restore from the present disk but probably lose some data.

Either put the right disk in, or continue with the restore, compare, or rebuild with this disk.

Appendix E: The TIMER Utility

Included with Backup Pro is the TIMER utility program. TIMER allows you to automate DOS tasks at a variety of times - after hours, weekly, etc.

TIMER is designed to automatically perform unattended program executions. Each timed entry can be de-activated if necessary. TIMER can also serve as a reminder to perform certain tasks.

On networks, TIMER can be used to automatically execute a number of control functions, such as logging off one workstation and on to another. However, TIMER will not log off if a user is working in an application.

Installing TIMER

TIMER is started through your AUTOEXEC.BAT file. Use a text editor to add the following steps:

1. Enter **SET BPT=C:\BP**
2. Enter **BPT NOEDIT**

The DOS SET command specifies a single file location within the DOS path for your edited program entries. TIMER creates a file from your entries named BPT.DAT and stores it in the current directory, unless otherwise instructed. The SET command insures access to the BPT.DAT file. The example assumed booting from the Backup Pro directory.

The NOEDIT parameter prevents the display of the TIMER edit screen when the system is booted.

Using TIMER

1. Install TIMER
2. Re-boot your system.

If your system does not have a clock/calendar, enter the date and time at the DOS prompts.

3. Enter BPT

TIMER displays an edit screen with the current day of the week and time at the top. Key assignments are displayed at the bottom of the screen.

Tuesday		11:44:27
Active	Time	Command
Y	07:00	
N	00:00	
N	00:00	
N	00:00	
N	00:00	
N	00:00	
N	00:00	
N	00:00	

PgUp/PgDn to Change Days, Alt-X to Exit/Save, Alt-Q to Quit/No Save

Use...	To...
PgUp/PgDn	change days.
Cursor left/right	move between columns.
Cursor up/down	move from line to line.

The ACTIVE column default is "Not Active".

- ◆ Choose **Y** to activate the command line.
- ◆ Choose **N** to inactivate.

Use the TIME column to enter the desired hours, minutes in military time. The entries do not have to be in chronological order.

Multiple commands can be entered for a time slot using the command line separator character (|).

Example: To start DeskMate each Tuesday at 7:00 AM:

1. Change ACTIVE to **Y**
2. Enter **7:00** for TIME
3. Enter **CD\BP | DESK**

Index

Analyze backup needs 5-40

Attribute exclusions 5-22, 32

Backup

Attribute exclusions 5-22

backup From entry 5-12

backup To entry 5-14

Backup type 5-10

Choose directories 5-18

Date range selection 5-23

Explanation of floppy types 6-1

Full Disk example 2-1

Include/exclude files 5-20

Locate file(s) 5-24

Resume backup 5-17

Selective Disk example 3-1

Start backup 5-16

Backup disks

preparing 1-12

Backup From entry 5-12

Backup report 5-36

Backup To entry 5-14

Backup type 5-10

Backups

frequent archive example 4-2

frequent date range example 4-4

interruptible 4-9

periodic examples 4-2

Choose directories 5-18, 30

Color selection 5-48

Compare backup 5-41

Compress data 5-3

Configure

Color selection 5-48

Define drive types 5-47

save deFault values 5-49

Data protection 5-6

Date range selection 5-23, 33

Define drive types 5-47

Error messages A-9

Execute chkdsk 5-38

Exit 5-8

File extensions A-5

Files

Backup Pro files A-7

Format DOS disk 5-37

HELP instruction 1-11

Identify disk 5-42

Include/exclude files 5-20, 31

Installation 1-2

Keyboard use 1-5

Locate file(s) 5-24, 34

Mouse use 1-8

Options

Compress data 5-3

Data protection 5-6

Exit 5-8

Overwrite warning 5-4

Time display 5-5

Overwrite warning 5-4

Restore

Attribute exclusions 5-32

Choose directories 5-30

Date range selection 5-33

Full Disk example 2-5

Include/exclude files 5-31

Locate file(s) 5-34

restore From entry 5-27

restore To entry 5-28

Restore type 5-26

Selective Disk example 3-4

Start restore 5-29

Restore From entry 5-27

- restore To entry 5-35
- Restore type 5-33
- selective Disk example 3-4
- Start restore 5-36
- Restore From entry 5-34
- Restore To entry 5-35
- Restore type 5-33
- Resume prior backup 5-26
- Run 5-8
- Save default setup file 5-5
- Save setup file 5-4
- Setting up Backup Pro 1-11
- Start backup 5-24
- Start restore 5-36
- Statistics 5-47
- Terms and Concepts A-3
- Utilities
 - Analyze backup needs 5-44
 - Backup report 5-43
 - Compare backup 5-45
 - Identify disk 5-46
 - System statistics 5-47

PROGRAM LICENSE AGREEMENT

The Software Toolworks, Inc., Chatsworth, CA 91311

THE SOFTWARE TOOLWORKS, INC. MANUALS AND COMPUTER PROGRAMS ARE PROVIDED ONLY ON THE CONDITION THAT THE PURCHASERS ("CUSTOMER") AGREES TO THE FOLLOWING LICENSE.

READ THIS LICENSE CAREFULLY, IF CUSTOMER DOES NOT ACCEPT AND AGREE TO THE TERMS OF THE ACCOMPANYING LICENSE, CUSTOMER MAY, WITHIN A REASONABLE TIME (i.e., within 30 days), RETURN THE UNUSED COPY OF THE COMPUTER PROGRAM CONTAINED IN THIS PACKAGE TO THE SOFTWARE TOOLWORKS.

SOFTWARE LICENSE AGREEMENT

The Software Toolworks agrees to grant, and the Customer agrees to accept on the following terms and conditions, a personal, non-transferable and non-exclusive limited license to use the Manual and Licensed Program in machine readable form delivered with this Agreement. All proprietary rights and title in and the Manual and the Licensed Program delivered with this Agreement shall remain the property of The Software Toolworks.

TERM

This Agreement is effective from the date the program package is opened and shall remain in force until terminated by the Customer upon one (1) month's prior written notice. The Software Toolworks may discontinue any license or terminate this Agreement upon written notice to the Customer if the Customer fails to comply with any of the terms and conditions of this Agreement. Upon termination, Customer will promptly return or certify destruction of materials furnished under this license.

LICENSE

Each program license granted under this Agreement authorizes the Customer to use a single copy of a Licensed Program, as furnished, on a single computer system of the model and configuration specified. A separate license is required for each additional copy for use of a Licensed Program.

Customer agrees not to modify or adapt any copy of any Licensed Program in any way, including, but not limited to, translating, decompiling, disassembling, or creating derivative works based on the Licensed Program.

Licensed Programs are furnished for the sole use of Customer and its employees and agents. Customer agrees not to loan or otherwise make available any Licensed Program to any person other than the Customer's employees or agents without prior written consent of The Software Toolworks.

This Agreement and any of the Licenses, programs, or materials, to which it applies, may not be assigned, sub-licensed, or otherwise transferred by the Customer without prior written consent from The Software Toolworks.

No right to print or copy, in whole or in part, the Licensed Programs is granted except as expressly provided as follows.

PERMISSION TO COPY LICENSED MATERIALS

Customer may make copies of The Software Toolworks furnished worksheets, identified as such, solely for customer's use. Customer shall NOT otherwise copy, in whole or in part, any manuals or other documentation provided by The Software Toolworks in printed form under this Agreement. Additional copies of printed materials may be acquired from The Software Toolworks.

Licensed Programs provided by The Software Toolworks in machine readable form may not be copied for any purpose whatsoever. A backup replacement diskette may be purchased from The Software Toolworks at \$25 per diskette.

LIMITED WARRANTY

The Software Toolworks warrants the physical diskette(s) furnished by The Software Toolworks to be free from defects in materials and workmanship under normal use for a period of thirty (30) days from date of delivery to Customer as evidenced by a copy of the purchase receipt. The Software Toolworks will replace any such defective diskette which is promptly returned to The Software Toolworks free of charge.

The Software Toolworks does not warrant that the functions contained in any Licensed Programs will meet customer requirements of that operation of any program will be uninterrupted or error-free.

LIMITATION OF LIABILITY

THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN NO EVENT WILL THE SOFTWARE TOOLWORKS BE LIABLE FOR SPECIAL OF CONSEQUENTIAL DAMAGES EVEN IF THE SOFTWARE TOOLWORKS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

GENERAL

This Agreement shall be governed by the laws of the State of California.

Reasonable attorney's fees and court costs shall be awarded to the prevailing party in any action or proceeding brought in connection with an alleged breach of any of the provisions of the Agreement.

If any of the provisions, or portions thereof, of the Agreement are invalid under any applicable statute or rule of the Law, they are to that extent to be deemed omitted.



IBM PC is a registered trademark of International Business Machines Corporation.

MS-DOS is a trademark of MicroSoft Corporation.



19808 Nordhoff Place • Chatsworth, CA 91311