

Retrospect

Retrospect

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User's Guide



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INTRODUCTION

WELCOME TO RETROSPECT

Welcome to Retrospect—the most complete data management solution for your Macintosh. There is no safer or easier way to ensure data integrity for your Macintosh system.

Retrospect will back up and restore entire hard disks, or archive and retrieve files. Backups and archives can be as simple or as complex as you choose to make them.

With Retrospect, you will be able to:

- Have a complete backup of your hard disk in the event of data loss.
- Automate the backup procedure so you do not have to think about it.
- Automatically restore your hard disk to its most recent state, without having to search for the most recent version of each file.
- Archive inactive files, instead of buying additional hard disks or throwing away potentially valuable files.
- Retrieve files used on a periodic basis only when they're needed, and keep them out of the way when they're not being used.

About This Guide

This guide assumes you are familiar with all the tasks described in your Macintosh Owner's Guide. If you're not yet comfortable with basic Macintosh operations, please refer to your Macintosh guide for specific instructions.

An Overview

This Overview provides a brief description of each chapter. The section "About Retrospect" is a discussion of the devices supported by Retrospect, and Macintosh hardware and software requirements. The section "Retrospect Features" is a description of the main program features.

Chapter 1, "*Getting Started*," describes how to install Retrospect onto your hard disk, contains a summary of the basic backup operation, and discusses backing up vs. archiving with Retrospect.

Chapter 2, "Backing Up," outlines Retrospect's basic backup procedure to copy all of your files into a Retrospect Archive.

Chapter 3, "Restoring an Entire Volume," explains how to automatically rebuild a hard disk to the state it was in when it was last backed up.

Chapter 4, "Archiving," demonstrates how to copy or move files into a Retrospect Archive. Retrospect's Archive function has all the features available in the Backup function, and many more.

Chapter 5, "*Retrieving Files*," explains how to retrieve files from a Retrospect Archive.

Chapter 6, "Selecting Folders and Files," explains how to use Retrospect's Browser and file Selectors to choose files to be copied to an Archive.

Chapter 7, "Options and Execution," lists the various options you encounter depending on which function you are performing, and describes what happens during the execution of the operations.

Chapter 8, "Scripts," shows you how to easily repeat procedures you have done before, and how to automate them with Retrospect's Calendar.

Chapter 9, "Backup and Archiving Strategies," offers some suggestions for Backup and Archiving routines.

Chapter 10, "Standard and Custom Selectors and View Formats," contains a detailed description of how to create your own file Selectors, and develop your own methods to display files in the Browser.

Chapter 11, "Special Features," explains how to use Subvolumes, encryption, preferences, and Archive and device management procedures.

Appendix A covers troubleshooting. Appendix B provides references for menu commands and display details. The Glossary contains terms related to Retrospect and to backing up and archiving in general.

About Retrospect

Retrospect's two main functions are backing up and archiving files. The Retrospect application backs up or archives files from any volume mounted on the Macintosh desktop.

Network Backups

Retrospect can back up or archive files to or from any mounted AppleShare or TOPS volume. You can select an AppleShare or TOPS volume in Retrospect just like you would select a local volume.

If you wish to backup other Macintoshes on the network without using TOPS or AppleShare, purchase one or more copies of Remote 10-Pack. The combination of Retrospect and a Remote 10-Pack provides the full functionality of Retrospect Remote, Dantz Development's network backup software.

Devices and Media

Retrospect stores files on a wide variety of media, including 3.5" disks, removable disk cartridges, tape cartridges, and optical cartridges. Retrospect supports most backup devices available for the Macintosh, and it does not rely on any tape device's software to perform its functions. As your equipment needs change, Retrospect will provide for your backup and archiving needs now and in the future.

Retrospect compatibility depends entirely on the storage device hardware. To determine which mechanism your storage device uses, refer to the compatibility list in the Device Notes. If your device is not listed, chances are it still uses a mechanism supported by Retrospect. You can find out by connecting the device to your Macintosh. If it appears on the Desktop, or if it appears when you select Devices from Retrospect's Config menu, it can be used with Retrospect.

Macintosh Requirements

Retrospect works on a Macintosh Plus, and all models newer than the Plus, with at least 1 megabyte of random-access memory (RAM).

Retrospect works with Macintosh System Release 6.0 or higher. You can get a copy of the most recent System software from an authorized Apple dealer or a Macintosh users group in your area.

Retrospect Features

Retrospect has many versatile features for your backup or archiving requirements:

- Performs all functions for local and server volumes.
- Has a calendar for unattended backup or archive operations.
- Records your choices into scripts so you can quickly repeat procedures you've done before.
- Keeps track of your files with a catalog, so you can quickly locate files without using the backup media.
- Offers three levels of Archive encryption for data security.
- Allows you to format, erase or retension backup media without tying up your Macintosh.

GETTING STARTED

CHAPTER 1

Installing and Starting Retrospect

Follow these steps to install Retrospect:

- Start up from your hard disk.
- Insert the 800K Retrospect floppy disk into your Macintosh.
- Copy the Retrospect and Retro.Help files onto your disk.
- If you are using a tape drive, copy the Retro.SCSI file into your System Folder and restart your Macintosh.
- Store the *Retrospect* floppy disk in a safe place, away from heat, humidity and anything magnetic.
- If you are upgrading from a previous version of Retrospect, use the Updater application on the Retrospect floppy disk to update your scripts and settings so they will be compatible with the new version of Retrospect.

Now you are ready to start using Retrospect! Turn to Chapter 2 for Backup instructions, or to Chapter 4 for Archiving instructions.

If You Do Not Like Manuals

If you do not want to read this manual, read this section for basic instructions on using Retrospect for incremental backups.

To back up:

- Launch Retrospect and click Backup.
- Choose the volume you wish to back up and click Next.
- Create the appropriate Archive type for the device you are using, save the catalog file onto your hard disk, and click Next.
- Leave all files marked for backup. Marked files have check marks to the left of their names. Click Next.

• Select the Options you wish to use, and click Execute Now.

You have just created a Retrospect script called "Backup." Anytime Backup is run, it will perform an incremental backup of the same volume using the most recent selections you made in the four steps. You can rename this script in the Scripts menu or schedule it using the calendar.

• For all future incremental backups, launch Retrospect and select Backup from the Action menu. Only new or changed files will be backed up.

Backing Up vs. Archiving

Retrospect's Backup and Archive functions are similar. Using the Backup function is a simple way to maintain a copy of your data. If you find that you need to use options that are unavailable in the Backup function, you can use the Archive function for more comprehensive data management. Both backing up and archiving can be automated and customized for your local and network needs.

Backing up is a simplified procedure to copy files into an Archive for safekeeping. You should back up hard disks frequently in case of a disaster — a hardware failure, software corruption, or accidental file deletion. Retrospect backs up any disk incrementally, meaning that the first backup includes all files you wish to back up, and subsequent backups only include files that are new or have been changed since the previous backup. If a hard disk crashes, Retrospect can restore it to its most recent state quickly and easily. If an individual file is lost, Retrospect can retrieve just that file.

Archiving has more extensive options than Backing up. For example, you can use the Move Files option to copy files to other media and then delete them from your hard disk. You can use this and many other options not available in the Backup procedure. Retrospect can quickly retrieve files from any Archive.

Whether you use the Backup or the Archive function to put files in an Archive, you can use the **Retrieve** function to copy any number of files from an Archive back to a volume. If you used the Backup function to copy your hard disk into an Archive, you can use the **Restore** function to erase any disk and automatically rebuild it to the exact state it was in when it was last backed up.

BACKING UP

CHAPTER 2

This chapter explains how to set up a basic backup operation. You should back up files often, whenever you cannot afford the time or expense involved in starting over. It's a good idea to follow a backup routine. Basic backup rules and suggestions for routines are in Chapter 9, "Backup and Archiving Strategies."

Backup Quick Start

Read this section for basic instructions on using Retrospect for a backup. More detailed instructions are in this chapter.

- Launch Retrospect and click Backup.
- Choose the volume you wish to back up and click Next.
- Create the appropriate Archive type for the device you are using, save the catalog file onto your hard disk, and click Next.
- Leave all files marked for backup. Marked files have check marks to the left of their names. Click Next.
- Select the Options you wish to use, and click Execute Now.

You have just created a Retrospect script called "Backup." Anytime Backup is run, it will perform an incremental backup of the same volume using the most recent selections you made in the four steps. You can rename this script in the Scripts menu or schedule it using the calendar.

• For all future incremental backups, launch Retrospect and select Backup from the Action menu. Only new or changed files will be backed up.

About Backups

When you back up any volume, Retrospect takes a "Snapshot" of it. This Snapshot depicts the exact state of the volume at the time of the backup. If you later need to completely restore the volume, the Snapshot automatically finds the most recent versions of the volume's files. With Retrospect's Snapshots, restoring is as automatic and easy as backing up.

There are four basic steps to the first backup of any volume:

1) Choosing the Source volume (the volume you wish to back up);

2) Creating the Archive (determining which type of Archive is appropriate for the backup device, and creating and naming the catalog file);

3) Selecting files for backup (all files are automatically selected unless you specify otherwise); and

4) Selecting Options and Executing (beginning) the backup.

After you follow the steps to back up a volume, you will be able to incrementally back up the same volume with a single command. As you make choices in the four backup steps, Retrospect automatically records these choices in a script called "Backup." You can later perform incremental backups by simply choosing Backup from Retrospect's Action menu. Retrospect will execute an incremental backup of the same Source volume to the same Archive, with all of the same configurations as the first backup.

You can also automate this incremental backup by using Retrospect's calendar to schedule the "Backup" script to run unattended. For instructions on editing, automating, and creating multiple scripts, please refer to Chapter 8, "Scripts."

Choosing the Source

• Double-click on the Retrospect icon to run the program. The main window appears:



The Source Window

The four buttons at the top of the window illustrate the four main steps in backing up. The highlighted button corresponds to the step currently displayed. When you click Next, Retrospect automatically takes you to the next step in the backup process. You can also click a button to go to the corresponding step. Below the four main Retrospect buttons is the Source list. The Source list contains all volumes available for backup.

• Choose the Source.

Highlight the volume that contains the files you want to back up.

• Click Next to continue. The Archive window appears:

Source	Backu	р <u></u>	Next
Choose	e the Archive(s), then click "Next"	1	
0	120 MB Backup Last session: Tue, Feb 25, 1991-9:51 PM	DC 2000 🗘 44.2 M free	Create New
	Cartridge (Tu/Th)	Macintosh Disk	Open Other
	Last session : Thu, Feb 21, 1991 9:51 PM	24.6 M free	Release
			Archive Info
		ক	r

The Archive Window

Below the four main Retrospect buttons is the Archive list. When you back up for the first time, the Archive list is empty. After the first time, the list will appear with any Archives you have created.

If the Archive you wish to use has already been created and appears in the Archive list, highlight it by clicking it. If it has been created but doesn't appear in the list, you can add it to the list by clicking Open Other, and opening the Archive catalog file.

Creating a new Archive

Creating an Archive involves two steps: choosing the media type and creating the catalog file.

• Click Create New. A list of the available Archive types will appear. The available types include Combined File, Macintosh Disk, and Peripheral Devices (for any peripheral devices connected to your Macintosh).

NOTE: To see all the media types Retrospect supports, hold down the Option key while clicking New.

F	Combined file archive data stored in catalog file	🗌 Encrypted
0 _	DC 2000 DC 2000 mini-cartridge drives (QIC-100/140)	OK
	Macintosh Disk series of ejectable Macintosh disks	Cancel



- Highlight the media type you wish to use.
- NOTE: By checking the Encrypted check box in the Archive window when you are creating an Archive, you can password protect an Archive and encrypt it. Whenever you use this Archive, you will have to enter the password. If you plan to use this Archive in unattended operations, you must select the Remember Password option as described in Chapter 11, "Special Features."
- Click OK. A standard file save dialog box appears:



Creating the catalog with the standard File Save dialog box

- Name the Archive. An Archive cannot be renamed once you have created it.
- NOTE: Do not change catalog file or media names using the Finder. The catalog filename is what connects the catalog to its media and vice versa. Retrospect cannot use catalogs and media members whose names have been changed in the Finder.
- Select a destination for the catalog file. It's a good idea to keep all of your catalog files in one place on your hard disk. However, if you are creating a Combined File Archive, you must save the file to the destination volume, **not** to your source hard disk.
- NOTE: For backups, it is a good idea to keep a copy of the catalog file on another disk. Although any catalog file can be rebuilt from the media, a restore will be much faster if you have a convenient copy of the catalog file. If you copy the catalog, remember to copy it again whenever you back up. If you save the original catalog to a floppy disk, you will be required to insert the disk each time you back up.
- Click Create. The Archive window reappears with the new Archive highlighted in the list.

			Backup 📕		
Source	Archive Select	Options			Next
Choose	e the Archive	e(s), then clicl	< "Next"		
	Weekly			DC 2000 🗘	Create New
	Last session :			OK free	
					Open Other
					Release
					Archive Info
		••••••••••••••••••••••••••••••••••••••			F

The New Archive

- Make sure the appropriate Archive is selected.
- Click Next to continue. A status window appears, counting the files and folders as they are scanned. The Browser window appears when scanning is complete:



The Browser Window

Retrospect's Browser is the tool to select the files you want to back up. When you back up for the first time, all files on the Source volume are automatically selected. If you do not wish to select all files for backup, please see Chapter 6, "Selecting Folders and Files."

Click Next	. The Options window appears:	
	Backup	
Source Archive	Select Options	Execute Now
Options:	🗌 Verification (compare after copy)	
options.	Compress files	
	🗌 Always Full Backup (reset Archive bef	ore copy)
	-	_
Comment:		
comment.		

The Options Window

The Options window allows you to choose various options for the backup, and begin the backup procedure. For an explanation of the Options, please see Chapter 7, "Options and Execution."

• Type a comment in the text box if you wish to attach a note to the backup information.

NOTE: The session comment will appear in the Session Info window.

- Click Execute Now. The backup procedure begins. Retrospect will inform you if additional media are needed.
- When the backup is complete, choose Quit from the File menu to return to the Finder.

As you followed the four steps to back up a volume, Retrospect automatically recorded your choices in a script called "Backup." You can later perform incremental backups of the same volume by simply choosing Backup from Retrospect's Action menu. You can also automate this incremental backup by using Retrospect's calendar to schedule the "Backup" script to run unattended. For instructions on creating, editing, and automating scripts, please refer to Chapter 8, "Scripts."

RESTORING AN ENTIRE VOLUME

This chapter explains how to restore an entire volume. Restoring allows you to quickly rebuild the information on a volume *exactly* as it was the last time you backed up the volume.

Restoring Quick Start

Read this section for basic instructions on using Retrospect for a restore. More detailed instructions are in this chapter.

- Click Restore in the Retrospect window.
- Select the Archive and click Next.
- Select the Snapshot and click Next.
- Select the Destination and click Next. This Destination will be erased before the restore begins.
- When the Browser window appears, all files in the Snapshot will be selected. You may leave all files selected or manually deselect them.
- Click Execute Now.
- NOTE: You can restore without erasing existing files on the Destination volume by defining a Subvolume on the Destination and restoring to it.

About Restoring

Retrospect's Restore function will erase a volume and rebuild it to the state it was in after the previous backup. Restoring your data with Retrospect is extremely easy. Choose the Archive where the backup is located, the "Snapshot" of the volume you wish to restore, and the Destination volume, and Retrospect will recreate the folders and files on your volume just as they were when you last backed up. Retrospect's Snapshot automatically keeps track of your volume's most recent state, so you do not have to locate and retrieve files manually. RESTORE WITH CAUTION! Everything on the Destination volume will be erased. If you do not wish to erase the destination, you can define a Subvolume on the destination and restore to it. Or, you can use the Retrieve function to copy a selected group of files without erasing the Destination. Please see Chapter 11 for information on Subvolumes, or Chapter 5 for information on the Retrieve function.

Your disk may actually speed up after a Retrospect Restore. This is because any files that have become fragmented (stored in various small pieces) will be copied in contiguous areas on the media which are faster for your hard disk to read. If your disk has noticeably slowed down, you may want to back up and restore your hard disk just to defragment your files.

NOTE: If you are restoring a hard disk that failed due to software corruption (like a file system problem or a corrupted driver), you should reinitialize the disk (use the Finder's Erase Disk command) before restoring files to it. You should also reinitialize the disk if you wish to defragment files during the restore. If the hard disk failed due to excessive media defects, you may want to entirely reformat it. Refer to the hard disk manufacturer's manual for details on reinitializing and reformatting.

About Snapshots

A Snapshot depicts a volume's most recent file state. Each time you use Retrospect's Backup function, Retrospect creates a Snapshot of the volume being backed up, and stores it in the Archive catalog file and on the Archive media. When you restore, Retrospect uses the Snapshot to scan all sessions and pick just the most recent version of each file for restore.

If several volumes' backups are in a single Archive, the Archive catalog contains a Snapshot of each volume depicting its most recent file state.

Retrospect only keeps the most recent Snapshot of a volume. If you wish to rebuild a volume to a state previous to its most recent backup, you must use the Retrieve function and the Search Parameters as described in Chapter 5. For example, you could search each backup session previous to a certain date, and use the "only most recent" parameter.

NOTE: If you did not back up all files, only the files you backed up will be available for restore. However, the volume's entire most recent folder structure will appear in the Browser. You can restore any part of the folder hierarchy by marking these empty folders for restore.

The Basic Restore

- Double-click the Retrospect icon to run the program. The main window appears.
- Click Restore. The Archive window appears:

Archive	Restore Snapshot Destin. Select		Пент
Choose	e the Archive, then click "Next"		
	A Backup on Route 66 Last session: Tue, Sep 18, 1990–11 45 AM	DC 2000 🖸 19,760 K free	Create New Open Other Release Archive Info

The Archive Window

The Restore Archive window looks and works just like the Backup Archive window in the backup procedure, except the Create New button is dimmed.

• Highlight the Archive you wish to use.

If the Archive you wish to use does not appear in the list, click Open Other, and a standard directory dialog box appears allowing you to open the Archive catalog file.

If the Archive catalog file has been lost, you must rebuild the catalog from the backup media. Since rebuilding the catalog can take a while, it is convenient to make an extra copy of the catalog file when you back up. If you need to rebuild a catalog file, please see Chapter 11, "Special Features."

NOTE: If the Archive is encrypted, Retrospect will ask for the password when it tries to open the catalog. If an incorrect password is entered three times, an alert will appear and the failure will be recorded in the Message Log. If any files are compressed, they will automatically be decompressed during the Restore.

• Click Next. The Snapshot window appears:

Restore	
Archive Snapshot Destin. Select	Neнt
Choose which Snapshot, then click "Next"	
Route Sixty Six Ф Tue, Sep 18, 1990 6:36 PM	Delete

The Snapshot Window

- Highlight the Snapshot of the volume you wish to restore. Only one Snapshot appears for each volume in the Archive.
- Click Next. The Destination window appears:

	Snapshot Destin Select	then click "Nex	:t"	a an thirthe and the state of the second
<u></u>	A Real Ten		 ⊪™ 80, SCSI ID 0 ℃	
<u>.</u> 030			10,370 K free	Liset
S B	Milo	InnerDrive	•™ 70, SCSI ID 5	Subvolume
30		61 ,527 K used	5,621 K free	
<u>م</u>	milo's backup	DirectDrive	e™ 80, SCSI ID 0	Rename
КD		65,747 K used	1,776 K free	
<u>A</u>	Route Sixty Six	DirectDriv	•™ 80, SCSI ID 0	Erase
y W		61,659 K used	4,859 K free	

The Destination Window

If the original destination volume is available, it will be highlighted in the list. You do not have to restore to the original volume; you can use any destination volume where the contents will fit. The destination volume is first erased.

• Highlight the destination volume you wish to use.

Restore		
Archive Snapshot Destin.	C	Execute Now
Milo:		64 files, 8995
- <u></u>		
🖌 🙀 🗸 🖓 AppleLink 5.0	332 K	application
	. 99 K	
🚍 🚽 🗋 Picture 0	38 K	PICT file
🔚 🔛 🖸 Picture 1	38 K	PICT file
📃 🗸 🗋 Picture 2	29 K	PICT file
Pricture 0 Pricture 0 Pricture 2 Pricture 3	33 K	PICT file
🚃 🚽 🚺 🖍 🗋 REMOTE PICTURES	138 K	(RSG.4.5)
📃 🗸 🗋 Retrieve Options	63 K	(RSG.4.5)
	539 K	application
Applications		
💻 🗸 🛞 Jasmine DriveWare®1	322 K	application
🚽 🗸 🖓 PageMaker 3.0	890 K	application
📃 🗸 🗀 DesignStudio		
✓ DesignStudio ✓ DesignStudio Defaults ✓ DesignStudio™1822 ✓ LaserWriter Plus LPD	1 K	(DesignStudio™ B
🖉 DesignStudio™ 1822	719 K	application
	1 K	(Densities Otherskie Pd. O
	1.15	(Designatudio ^{rm} Is

• Click Next. The Restore Browser appears:

The Restore Browser Window

The Restore Browser file list displays the contents of the volume you chose in the Snapshot window. The files displayed may be stored in several sessions within the Archive, but the Snapshot only displays the most recent versions of each one. If you did not back up all files, empty folders may also be displayed.

• Click Execute Now.

If the Archive is a Combined File type, the restore will begin immediately. If the Archive is a Macintosh Disk or Peripheral Device type, you must insert and select the Archive member.

• Insert the appropriate Archive member. A status window appears informing you about the restore's progress.

Retrospect will request each Archive member in turn until all the files have been copied to the Destination.

Restoring a Hard Disk That Has Crashed

If a local hard disk has crashed, there are a few preliminary steps to take before restoring.

- Prepare the hard disk with the manufacturer's software.
- Start up the Macintosh with the most recent Apple System Tools floppy disk.
- Copy the System Folder from the floppy disk to your empty hard disk and restart the Macintosh. Rename the System Folder "temp." It is necessary to create a temporary System folder since Retrospect and a System folder will not both fit on an 800K floppy disk. If you have a High Density drive, you may not have to do this.
- Copy Retrospect from the Retrospect master disk onto your hard disk.
- If you kept a copy of your Archive catalog on a separate disk, copy it to your hard disk. If you did not, Retrospect will recreate it for you. Follow the instructions in Chapter 11, "Special Features," to rebuild the catalog onto your hard disk.

Now you are ready to perform the restore operation.

- Launch Retrospect from your hard disk, and click Restore.
- When you are asked to select the Archive, open the catalog now on the hard disk and click Next.
- Select the Snapshot of your hard disk and click Next.
- In the Destination window, highlight your hard disk and click Next.
- If everything won't fit on the Destination, or there are files marked that you don't want to restore, make the necessary adjustments by manually unmarking files. If there are empty folders you wish to restore, you can mark them also.
- Click Execute Now.
- Insert the Archive media as requested. The status window will notify you when the restore is complete.
- Quit Retrospect and restart your Macintosh using the System Tools floppy disk.
- Open your hard disk and throw out the "temp" System Folder.
- "Bless" the System Folder on your hard disk (retrieved from the Retrospect Archive) by opening and closing it. The blessed

System Folder is the one with the Macintosh in the folder icon and will be the one you run from the next time you start your Macintosh.

• Restart your Macintosh from the restored hard disk.

That's all it takes for your hard disk to be up and running again!

Restoring a Server you Backed Up over the Network

- Use the instructions in the AppleShare Administrator's guide to install System Software, AppleShare server software, and your backup copy of the Users and Groups file onto the drive you wish to use as the new server volume.
- Launch the AppleShare Admin program. When you are asked to locate a Users and Groups file, open the one you just copied to the server volume.
- Restart the server.
- Log in from the Macintosh from which you had backed up the server.
- Launch Retrospect, and restore the data over the network, using the procedure outlined in this chapter.

ARCHIVING

CHAPTER 4

This chapter explains how to set up a basic Archive operation, and refers you to other chapters where appropriate for information on creating scripts, using the Browser and file Selectors, and configuring various options.

About Archiving

Retrospect's Archive function is a superset of the Backup function. In the Archive procedure, you can choose specific groups of files to copy to the Archive, delete files from your hard disk to make room for others, and perform other functions not available in Backup.

As you make choices in the four archiving steps, Retrospect automatically records these choices in a script called "Archiving." You can later archive files matching the same criteria by simply choosing Archiving from Retrospect's Action menu. For instructions on creating, editing, and automating scripts, please refer to Chapter 8, "Scripts."

When your hard disk fills up with infrequently used files, you may want to move them onto other media to free up space on your disk. You can use the Move Files option in the archiving procedure to easily do this. Files you only need on a periodic basis or files you wish to keep in permanent storage could be moved into an Archive. For example, you could archive files on all your income tax information throughout the fiscal year, and retrieve them when you need to do your taxes.

Choosing the Source

• Double-click on the Retrospect icon to run the program. The main window appears:



The Retrospect Main Window

• Click Archive. The Source window appears:

	rchive Select	Options	alick "blaut"		Net	t
noose	Hoskin's HD		click "Neнt" 68.2 M used	SCSI 0 7,077 K free	Fisci Sisci	
<u>62</u>	AppleShare Rick		File Serv 141.2 M used	er : BurkeServer 5,673 K free	Rename	_
					~	

The Source Window

The four buttons at the top of the window illustrate the four main steps in archiving. The highlighted button corresponds to the step currently displayed. When you click Next, Retrospect will automatically take you to the next step in the archive process. You can also click one of the buttons to go to the corresponding step. Below the four main Retrospect buttons is the Source list. The Source list contains all volumes available for archiving operations.

- Choose the Source by highlighting the volume containing the files you want to archive.
- NOTE: Fast Add Disks in the Action menu lets you archive files from multiple ejectable disks. Please see Chapter 11 for instructions on using this feature.
- Click Next to continue. The Archive window appears:

Archive(s), then click "Ner MB Backup Ission: Wed, Aug 21, 1991 7:45 PM	DC 2000	r C	
ssion: Wed, Aug 21, 1991 7:45 PM		۲ C	
			reate New
ridge (Tu/Th) ssion : Tue, Aug 20, 1991 4:37 PM	Macintosh Disk 21.2 M free		pen Other
er Archive ssion:Fri, Aug 16, 1991-6:05 PM	Combined file 168.5 M free		Release
	333106 (PP), AUG 15, 1991 - 5105 PP	232106 (FFT, AUG 16, 1391 6 (US FFT 168) S FT 168	

The Archive Window

Below the four main Retrospect buttons is the Archive list. When you archive for the first time, the Archive list is empty. After the first time, the list will appear with any Archives you have created.

If the Archive you wish to use has already been created and appears in the Archive list, highlight it by clicking it. If it has been created but doesn't appear in the list, you can add it to the list by clicking Open and opening its catalog file.

Creating a New Archive

Creating an Archive involves two steps: choosing the archive media type and creating the catalog file.

• Click New. A list of the available Archive types will will appear. The available types include Combined File, Macintosh Disk, and Peripheral Devices (for any peripheral devices connected to your Macintosh).





The Media Type List on a Macintosh with a DC-2000 tape unit connected

- Highlight the media type you wish to use.
- NOTE: By checking the Encrypted check box in the Archive window when you are creating an Archive, you can password protect an Archive and encrypt it. Whenever you use this Archive, you will have to enter the password. If you plan to use this Archive in unattended operations, you must select the Remember Password option as described in Chapter 11, "Special Features."
- Click OK. A standard file save dialog box appears.



Creating the Catalog

- Name the Archive. An Archive cannot be renamed once you have created it.
- NOTE: Do not change catalog file or media names using the Finder. The catalog filename is what connects the catalog to its media and vice versa. Retrospect cannot use catalogs and media members whose names have been changed in the Finder.
- Save the catalog file. It's a good idea to keep all of your catalog files in one place on your hard disk. However, if you are creating a Combined File Archive, you must save the file to the destination volume, **not** to your source hard disk.
- Click Create. The Archive window reappears with the new Archive name and media type in the list:




- Make sure the appropriate Archive is selected.
- Click Next to continue. A status window appears, counting the files and folders as they are scanned. The Browser window appears when scanning is complete:

	Archiving		
	Cho	ose	Next
Source Archive	elect Options		
Hoskin's HD :Files :Burk	e Admin:Bus Plan:		7 files, 64 K
	☆ Channel breakout 10/90	2 K	(Excel)
	🗋 BurkeBase is Best	3 K	(Excel)
= -	🗋 Dice Cup/Coaster MarketSize	24 K	(Excel)
	🗋 Floor Tile Pricing Comparison	4 K	(Excel)
	Cove Base Comparisons	4 K	(Excel)
_===	🗸 👘 🗀 Business Plans		
	🖌 🗋 C'Aplan	12 K	(MacWhite)
	🗸 🧹 🗋 Burke 1091	- 10 K	
	🗸 🔎 Goodyear LTO	10 K	(MacWhite)
	🗸 🗸 🖂 🛄 Burke Old Corp.		
	🖌 🗸 🗋 business.pln	123 K	text
	🗸 🗸 a shi 🗋 covrletridoc	12 [′] K	text
	🗸 🗸 🗋 🗋 ovrisheetidoo	1.K.	text 🖡
	🖌 🔷 🗋 markplan.app	7K•	text
	Corporation		
	BurkeExecLease	5 K	(Microsoft Word)
	BurkeExecLease12/90	3 K	(Microsoft Word)
=	🖳 🗋 Minutes for FY913Q	5 K	(Microsoft Word) 📩
	N. D. Companyate Disperies Martine	71/	⊐ا دو سوید هم و میدنه (۲

The Browser Window

Retrospect's Browser is the tool to select the files you want to archive. The following section briefly explains how to use the Browser to mark files for archiving. For a more in-depth discussion of the Browser and file Selectors, please refer to Chapter 6, "Selecting Folders and Files."

Selecting Files for Archiving

You can now use the Browser to select files for archiving. You can select files manually, use Retrospect's file Selectors, or create your own custom Selectors as described in Chapter 6.

Selecting Files Manually

To select a file individually in the Browser file list: double-click to mark a file. A check mark appears next to the file. You can select as many files as you wish using this method.

NOTE: A file that is highlighted is not necessarily marked for archiving. For more information on highlighting and marking, please see Chapter 6.

To select groups of files in the Browser file list: shift-click to highlight consecutive files, and command-click to highlight nonconsecutive files. You can then choose "Mark Hilites" from the Browser menu to mark all highlighted files.

You can also use the Find button in the Browser window to highlight files by matching certain characters in their names or pathnames. For more information, see the section, "Selecting Files Manually," in Chapter 6.

Selecting Files using Selectors

You can use Retrospect's file Selectors to choose groups of files by various criteria, or you can create your own custom file Selectors. The following instructions briefly explain how to use one of Retrospect's file Selectors.

• Click Choose. The standard Selector window appears:

🗰 File Edit Action Config Window	\$
Archivin	ng[_]
● Standard ○ Custom	Apply Cancel
Standard Selectors:	
§ All files	
§ Graphics files	
§ Modified in Last Week	
§ No change in 2 months	
§ No change in 6 months	
§ No change in one year	
§ No files	
§ Only Applications	
§ Only Documents	
§ Only System Folder	
	5
······································	L¥J

The Standard Selector Window

The Selector window contains a list of Retrospect's standard file selectors. If you have already created custom file selectors, you can view them by clicking Custom.

- Highlight a selector you wish to use. For example, "Only Applications" will mark only your applications.
- Click Apply. The Browser will reappear with the files matching the Selector's conditions highlighted and marked.
- Make sure all files you wish to archive are marked. A check appears next to a marked file or folder. In some cases, files have other symbols by their names. Please see Reference for more information on the symbols.
- Click Next. The Standard Options window appears:

	Archiving	Ē
Source Archive	Q Image: Standard Options Select Image: Standard Options Extended Options Execute Now	
Options:	🗌 Verification (compare after copy)	
	🗌 Compress files	
	🗌 Always Full Backup (reset Archive before copy)	
	🗌 Move files (delete copied files)	
Comment:		

The Standard Options Window

The Options windows allow you to choose various options and begin the archiving procedure. For additional information on Standard and Extended options, please see Chapter 7, "Options and Execution."

- Check the "Move Files (delete after copy)" check box if you wish to delete the original files from your hard disk after the archive operation is complete.
- NOTE: You should always check the "Verify" option if you check the "Move Files" option. The verify option will ensure that files have been safely copied before the originals are deleted from your disk. You may also want to copy critical files into two Archives as described in Chapter 9, "Backup and Archiving Strategies."

• Type a comment in the text box if you wish to attach a note to the session information.

NOTE: The session comment will appear in the Retrieval Browser above the file list, or in the Session Info window.

- Click Execute Now. The archiving procedure begins. Retrospect will inform you if additional archive media are needed.
- When the archive is complete, choose Quit from the File menu to return to the Finder.

As you followed the four steps to archive, Retrospect automatically recorded your choices in a script called "Archiving." You can later perform archives of the files matching the same Selector criteria by simply choosing Archiving from Retrospect's Action menu. You can also automate this archive by using Retrospect's calendar to schedule the "Archiving" script to run unattended. For instructions on creating, editing, and automating scripts, please refer to Chapter 8, "Scripts."

RETRIEVING FILES

This chapter explains how to retrieve files from an Archive. The first sections cover choosing the Archive and the Destination, retrieving a few files manually, and retrieving files using the Retrieval Browser and Search Parameters. Chapter 7, "Options and Execution," explains how to select standard retrieval options or set up a custom retrieval.

Choosing the Archive and Destination

The first steps in retrieving files are choosing the Archive that contains the files you wish to retrieve, and choosing the Destination where you wish to copy the files.

- Double-click the Retrospect icon to run the program. The main window appears.
- Click Retrieve. The Archive window appears:

Archive	Retri Destin. Select Options	eving	П Neht
Choose	e the Archive, then click "Next		
	Weekly Last session: Tue, Oct 2, 1990–11:51 AM	DC 2000 🖸 1 28.9 M free	Create New
			Open Other
			Release
			Archive Info
			F

The Archive Window

The Archive window looks and works just like the Archive window in the archiving procedure, but the Create New button is dimmed.

- Highlight the Archive you wish to use. If the Archive you wish to use does not appear in the list, click Open, and a standard directory dialog box appears allowing you to open the Archive catalog file.
- NOTE: If the Archive is encrypted, Retrospect will ask for the password when it tries to open the catalog. If an incorrect password is entered three times, an alert will appear and the failure will be recorded in the Message Log. If any files are compressed, they will automatically be decompressed during the Retrieval.
- Click Next. The Destination window appears.

Archive	estin	Options Retriev	ing and an 	П
Choose	the Destina	tion, then click "Nei	ĸt"	
	Mac Trac II	69,6 M used	SCSLO 5,712 K free	<u>Eject</u>
	Server Larry		ver : DantzServer 6,748 K free	Subvolume Rename
				<u> </u>
			T.	1

The Retrieval Destination Window

The Retrieval Destination window is similar to the Archiving Source window, displaying the same volumes that were listed in the Archiving Source window.

• Highlight the Destination volume where you wish to copy the files. The next step in retrieving is to select folders and files using the Retrieval Browser.

Selecting Folders and Files from an Archive

• Click Next. The Retrieval Browser appears.



The Retrieval Browser

The Retrieval Browser is slightly different than the other Browsers you find in Retrospect. For information on this Browser, see the section in this chapter, "Using the Retrieval Browser."

- Highlight the session in the session list from which you wish to retrieve files.
- Mark the files you wish to retrieve by double-clicking them. A check mark appears next to any file marked for retrieval. If you wish to use file Selectors to mark files for retrieval, please see the section in this chapter, "Selecting Groups of Files using Search Parameters."

You can mark files in any or all of the sessions. Files stay marked as you move between sessions, and all marked files from all sessions appear in Results in the sessions list.

For more information on selecting files manually, see the section "Selecting files manually" in Chapter 6, "Selecting Folders and Files."

- Click Results to display the selected items in the file list. Verify that all the files you want to retrieve are listed and marked.
- Click Next to continue with the retrieval procedure. The Standard Retrieval Options Window appears:

	Retrieving	
Archive Destin.	QImage: SelectImage: StandardExecuteSelectOptionsO CustomizeExecute	Now
Options:	Put just files in a folder	
	🔿 Put files & folders in a folder	
	O Replace corresponding files	
	O Restore entire destination	
	🔿 Custom retrieval	
	Retrieved files will be placed in a top-level folder on the destination. This top-level folder will have the same name as the archive and will be created if needed. Retrieved files will be renamed if conflicts occur.	
		þ

The Standard Retrieval Options Window

- Select a retrieval option. Retrospect's default retrieval option, "Put just files in a folder," will create a new folder on the destination volume and copy just files into it. Folders will not be retrieved unless you select "Put files & folders in a folder." Other retrieval options are described in Chapter 7, "Options and Execution."
- Click Execute Now.

If the Archive is a Combined File type, the retrieval will begin immediately. If the Archive is a Macintosh Disk or Peripheral Device type, you must insert and select the appropriate Archive member.

• Insert the appropriate Archive member. A status window appears informing you about the retrieval's progress.

Retrospect requests each Archive member in turn until all the marked files have been copied to the Destination.

Using the Retrieval Browser

The Retrieval Browser is different from the Browser you encounter when you archive or back up. This section explains these differences.



Selecting Folders and Files in the Retrieval Browser

Selecting items in the Retrieval Browser is somewhat similar to selecting items in other Browsers. You can select files manually, or use file Selectors using the Search Parameters as described in the section in this chapter called "Selecting Groups of Files using Search Parameters."

A check mark appears next to any item marked for retrieval. When an item is marked, the folder containing it is automatically marked. Once you have marked one or more items, you can view the marked items by highlighting **Results** in the session pane.

Results displays in the file list only the items you have marked for retrieval. Use Results to verify that the files you wish to retrieve are listed. You can manually unmark files in Results if you do not wish to retrieve them. Only the marked files in the Results file list will be retrieved.

If you wish to find and select files manually, read the section "Selecting files manually" in Chapter 6. If you wish to find and select files from multiple sessions, or if you want your Selector choices to be recorded in a retrieval script, read the next section.

Selecting Groups of Files using Search Parameters

You can find and select files in one or more sessions using the Search Parameters window. Search Parameters enable you to search through one or more sessions for files using a standard or custom Selector. Any choices you make using the Search Parameters will automatically be recorded in the Retrieval script.

In addition to reading this section, see Chapter 6, "Selecting Folders and Files" for information on Selectors, and see Chapter 8, "Scripts" for information on scripts.

To use the Search Parameters:

• From the Browser window, click Search. The Search Parameters window appears.

	n Selector Parameters	Apply Cancel
Search:	 All sessions Current session Session range: Current Results 	Thu, Sep 13, 1990 3:59 PM Thu, Sep 13, 1990 3:51 PM Thu, Sep 13, 1990 3:40 PM Wed, Sep 12, 1990 3:52 PM
Select:	O Custom Selector S No files ▼	
Find:	○ All versions @ Only most recent	
Mode:	● Add to Results ○ Replace Results	Clear Results

The Search Parameters Window

The Search Parameters window contains a sessions list and four parameter categories. The following is an explanation of the four parameters' options:

• Search determines which session(s) are searched.

All sessions:	searches every session in the Archive.	
Current session:	searches only the session whose files are displayed in the Browser.	
Session range:	searches contiguous sessions highlighted in the list to the right. Drag through the list to highlight the sessions you want searched.	
Current Results:	searches only the files listed in Results.	
Select determines which Selector to apply.		

Custom Selector:	applies the Custom Selector using the Custom Selector radio button at the top of the window. See Chapter 10 for information on creating a Custom Selector.	
Existing Selector:	applies the standard Selector chosen in the pop-up menu. To choose a Selector, drag through the menu to the one you want and release. See Chapters 6 and 10 for information on Standard Selectors.	

• Find determines which version(s) of files are marked. Since Retrospect archives incrementally, there may be different versions of a file in different sessions.

All versions:	marks every version of a file that matches Selector criteria.
Only most recent:	marks only the most recently archived version of a file.

• Mode determines what happens to the Results file.

Add to Results:	newly marked files are added to ones already
	listed in Results.

Replace Results: newly marked files replace ones already listed in Results. If you wish to clear the Results file without adding newly marked files, click Clear Results.

As an example of setting Search Parameters, let's say you wanted to retrieve only the most recent version of each document that was archived in the past week. You would use the Search Parameters as follows:

- Search: Session range with the past week's sessions highlighted
- Select: Existing Selector § Only Documents
- Find: Only most recent
- Mode: Replace Results
- Once you have selected the option you want in each of the four parameters, click Apply.
- NOTE: Some Macintoshes might not have enough memory to retrieve all of the most recent versions in a very large Archive. If that should happen, use Selectors to divide the retrieval into workable segments. For example, using the standard Selectors "Only Documents," "Only Applications," and "Only System Folder" will search the entire Archive in three segments.

When searching is complete, the Browser reappears with Results highlighted and all the matching files marked, both in Results and in their sessions. You can manually unmark files in Results, but manual changes will not be recorded in the retrieval script.

• Verify that all the files you want to retrieve are listed and marked in the Results file list.

- Click Next to continue with the retrieval procedure. The Options window appears. Retrospect will automatically put the retrieved files in a folder on the destination volume unless you select other retrieval options. See the section "Retrieve Options" in Chapter 7, "Options and Execution" for details.
- Click Execute Now to begin the retrieval.

CHAPTER 6

SELECTING FOLDERS AND FILES

This chapter explains how to use Retrospect's Browser and file Selectors to choose files. For the most part, you will use the Browser when you archive and retrieve files, but you may use it during backup and restore operations as well. The Retrospect Browser simultaneously displays all files and folders on your source volume hierarchically.

If you are archiving (or backing up), the Browser appears after you have chosen the Source volume and an Archive, displaying the folders and files on the Source. If you are retrieving, the Browser appears after you have chosen the Archive and a Destination volume, displaying the sessions, folders, and files in the Archive. If you are restoring, the Browser appears after you choose the Archive, Snapshot, and Destination, listing only the most recent version of each file.

Most of this chapter is devoted to the Source Browser you encounter while archiving or backing up. For information specific to the Restoring and Retrieving Browsers, refer to Chapter 3, "Restoring an Entire Volume," and Chapter 5, "Retrieving Files."

In the Browser, the way you designate a file or folder to be copied is by *marking* it. A check mark appears next to a marked file. You can mark files manually or with Retrospect's file Selectors. Selectors allow you to mark groups of files that have something in common, like all the files that have not changed in a year, or only applications, etc.

To use the Selectors while archiving or backing up, click Choose in the Browser window, highlight the Selector you wish to use, and click Apply. This process is covered in the section, "Applying Selectors," in this chapter. You can use Retrospect's standard Selectors or create custom Selectors to choose specific groups of files. Custom Selectors are covered in Chapter 10.



The Archiving Browser Window

There are two parts (called "panes") in the main portion of the Browser window. Both panes represent the hierarchical arrangement of the Source volume, and they both allow you to navigate through the Source files and folders. The folder index on the left displays only the folder arrangement. The file list on the right displays both folders and files. The folder index and file list are described in the section, "General Information about the Browser," in this chapter.

Applying Selectors

This section describes how to apply Selectors so your file choices will be recorded in a Retrospect script. You can also apply Selectors as described in the section, "Highlighting and Marking files with Selectors," but Selectors applied in that manner will not be recorded in a script.

To use a Selector:

From the Browser window, click Choose. The standard Selector window appears.



The Standard Selector Window

- In the list, highlight the standard Selector you wish to use. A description of the Standard Selectors is in the section, "About Selectors," in this chapter.
- Click Apply. The Browser reappears with the files matching the Selector's conditions highlighted and marked.

If necessary, you can manually mark or unmark files, but those adjustments will not be recorded in the script.

- NOTE: If you apply another Selector in the same manner, files matching the first Selector's conditions will **no longer** be highlighted or marked. To use multiple Selectors **and** have your choices recorded in a script, you will need to create custom Selectors as described in Chapter 10.
- Click Next to continue the archiving procedure. The Options window appears, Please refer to Chapter 7 for information on Options.



The Folder Index

In the folder index, each line represents one of the Source volume's folder titles. The length and segments of each line correspond to the length and number of the word(s) in the folder title. The folder hierarchy is indicated by indentations. The folder titles are in the same order as they are in the file list to the right.

The folder currently highlighted in the folder index corresponds to the folder at (or whose contents are at) the top of the file list on the right. If you move the **highlight bar** up and down in the folder index, notice that the highlighted folder appears at the top of the file list. The up and down arrow keys will move the highlight bar up or down to the next folder.

The File List

The file list is where you actually highlight files and mark them. The file list displays folders and files in the same order and indented style as the folder index; files and folders are in alphabetical order within each level of the hierarchy. Your current position in the file list corresponds with the highlight bar position in the folder index. Notice that when you scroll up or down in the file list, the highlight bar moves up or down in the folder index. When you highlight any item in the file list, a **tick mark** appears to the left of its folder in the folder index.

Pressing command and one of the arrow keys will move the file list up or down an entire page. Holding down both the shift and command keys while pressing an arrow key will move the file list to its very top or very bottom.

The folder index's **highlight bar** indicates the folder whose contents appear at the top of the file list. The **tick marks** indicate any folders whose contents are highlighted in the file list. The file list's **highlight count** shows the number of files and the cumulative size of the highlighted items. The **pathname indicator** indicates the folder names leading to the item at the top of the file list.

The Diamond Symbol

If you are adding files to an existing archive, some of the files may have a diamond symbol to the left of their names.

The **Diamond** (*****) means that the file has not been modified since it was last copied into the Archive, so it will not be copied again.

For a complete list of file list symbols and when they appear in Retrospect, please see "Reference."

About Selectors

Groups of files can be selected using Retrospect's Selectors. Selectors work by highlighting and marking files that match certain criteria. Each criterion is called a condition. Selector conditions can use file information such as name, date, folder, and size. There are two kinds of Selectors, standard and custom.

The standard Selectors are designed to meet most archiving needs, but you can also create and apply custom Selectors. Custom Selectors let *you* choose the conditions that mark files. Chapter 10 describes where all Selectors appear in Retrospect, and instructs you how to create and apply custom Selectors.

Standard Selectors are denoted by the § symbol in front of their name. The standard Retrospect Selectors are listed in "Reference" in this manual.

NOTE: All standard Selectors will apply only to files not already in the Archive. Files already in the Archive you are using will not be marked when you apply one of these standard Selectors.

SELECTING FOLDERS AND FILES

Highlighting vs. Marking

In the Browser, you can both *highlight* and *mark* files and folders. Note the difference between highlighting and marking files; *highlighted files are not necessarily marked for archiving*. You can highlight and mark files manually, use the Browser menu commands, or use the Choose button to record your Selector choices into a script as described in the section in this chapter, "Applying Selectors."

Highlighting is for your reference; you can highlight files and look at the Highlight Count to determine the amount of space the highlighted files will require in the Archive. Marking is what designates a file to be included in an Archive. When a file has a check mark by it, it will be included in the Archive. The Browser menu allows you to mark highlighted files and to highlight marked files.

Highlighting and Marking files manually

To highlight a file manually, click it once. To highlight a range of items, drag through the file list, or hold down the shift key. To highlight nonconsecutive items, hold down the command key. You can use shift and command together to highlight multiple non-consecutive ranges of items.

The highlight count indicates the cumulative size of the highlighted items. You can choose Mark Hilited from the Browser menu to mark the highlighted items for archiving.

You can also use the Find button in the Browser window to highlight files matching certain characters in their names or pathnames.

The Find command highlights one or more files according to filename or pathname conditions. Retrospect file and pathnames are not case sensitive.

To mark a file manually, double-click it in the file list. A check mark will appear to the left of its name, signifying that it will be added to the Archive. To mark the contents of an entire folder, double-click the folder, and check marks will appear to the left of the folder and to the left of all enclosed items. To mark the contents of the entire volume, double-click the volume name at the top of the file list. To mark a continuous range of items, doubleclick and drag through the file list. You can deselect items in the same manner. Once you have marked some items, you can choose Hilite Marks from the Browser menu to highlight the marked items for your reference. Once the items are highlighted, tick marks will appear to the left of their folders in the folder index.

To highlight files using the Find button:

• Click Find in the Browser. The following dialog box appears:

Highlight fi	les matching:	ОК
○ At Start	Finance	Cancel
⊖ At End ⊖ Exactly	🗌 Path name	

The Find dialog box

- Type in the text box whatever part of a filename you want to match.
- Select one of the radio buttons.
- Click OK.

The Browser reappears with the matching files highlighted.

Files can be matched by pathname as well as by filename. The pathname consists of a file's root volume and the folders leading to the file.

Highlight fi 🔿 At Start	OK Cancel	
Within	:Finance:88:	<u> </u>
○ At End ○ Exactly	🛛 Path name	

Using a pathname in the Find dialog box

- In the Find text box, Check the Pathname check box.
- Type in the pathname you wish to match. Colons must be included to indicate level breaks in the pathname.
- Select one of the radio buttons.
- Click OK.

Highlighting and Marking files with Selectors

To highlight a group of files with a file Selector, choose a Selector from the Hilite submenu in the Browser menu. All files matching that Selector's criteria will be highlighted. You can highlight additional files or unhighlight files manually using the command and shift keys.

To mark a group of files with a file Selector, highlight the files with a Selector as described in the previous paragraph, and choose Mark Hilited from the Browser menu to mark the highlighted items for archiving. You can mark additional files or unmark files manually by double-clicking them.

NOTE: Selectors applied in this manner will not be recorded into a Retrospect script. To have your Selector choices recorded in a script, you must use the Choose button as described in the section of this chapter, "Applying Selectors."

To mark multiple groups of files with Selectors, highlight a group of files using one of the Selectors from the Hilite submenu in the Browser menu. Then choose Mark Hilites from the Browser menu and repeat these two steps using another Selector. Note that files which match any of the Selectors' criteria will be marked.

For example, let's say you wanted to mark all of your graphics files in addition to all of the files that were modified in the last week. You would choose "§ Graphics files" from the Hilite submenu, choose Mark Hilites, choose "§ Modified in last week" from the Hilite submenu, and choose Mark Hilites again.

NOTE: You can also combine multiple Selector criteria using custom Selectors. To create custom file Selectors, please refer to the Chapter 10.

The Browser Menu

The Browser menu appears with the Browser window. The menu commands are divided into three areas of function: display, highlighting and marking.

Browser			
View	•	Changes the view format in a Browser	
Show	•	Changes file list type in a Browser	
Show Legend		Shows/Hides the Legend of a View Format	
Sort By	►	Sorts flat file lists by name, date, size, kind, or color	
Reverse		Reverses/Normalizes the sort order	
Hilite	►	Uses Selectors to highlight files	
Hilite Marks	ЖH	Highlights all marked files	
Save Hilites	жs	——— Saves current highlights in a Selector for later use	
Toggle Folder	ЖΤ	——— Highlights files in the top folder	
Skip Forward	ЖF	——— Skips forward to the next highlighted file	
Skip Backward	ЖB	Skips backward to the next highlighted file	
Mark Hilited	жм	——— Marks all highlighted files	
Unmark Hilited	жU	Unmarks all highlighted files	

The Browser Menu Commands

The Display Commands

The top three display commands (View, Show, and Show Legend) let you control what file and folder information appears in the Browser and how that information is displayed. These commands do not change which files and folders are marked for archiving; they just display the files and folders in different ways. The default display selections are: View "Default" and Show "Folder-file." You can choose the displays that are most convenient for you.

View

View allows you to select different *view formats*. You can use the standard view formats, or create custom ones. To create custom View Formats, see Chapter 10.

A view format is the way file and folder information is displayed in the file list. To change the view format, select one of the view formats from the View submenu in the Browser menu.

For an illustrated description of Retrospect's standard view formats, please see the "View Formats" section in "Reference" in this manual.

Show

The Show command in the Browser menu lets you change which files and folders are displayed. Marked lists are especially helpful when you want to see what will be archived without navigating through the entire Source. The list types available are:

Folder-File:	displays all files and folders in their hierarchical structure.
Marked Flder-File:	displays marked files and folders in their hierarchical structure.
Flat File:	displays files only. When this option is checked, you can change the order in which files are displayed using the Sort By and Reverse commands.
Marked Flat:	displays marked files only. When this option is checked, you can change the order in which files are displayed using the Sort By and Reverse commands.
Folders Only:	displays folders only, in their hierarchical structure.

Show Legend

If you're not sure what information the selected view format is displaying, choose Show Legend in the Browser menu. The Show Legend command places a sample item across the top of the file list showing the meanings of the view format fields. When you are done, you can choose Hide Legend in the Browser menu.

🗸 Icon	Name	owner name
	ДДX	group name

Show Legend activated with the Privileges view format

Sort By and Reverse

Flat File and Marked Flat lists can be sorted by any of five file characteristics. The Sort By options are just like those in the Finder; you can sort by name, date, size, kind, and color.

Reverse will simply reverse the order of the entire list, no matter which Sort By option is selected. The Reverse command toggles between Reverse and Normal, allowing you to change a reversed list back to its original order.

The Highlighting and Marking Commands

The highlighting and marking commands in the Browser menu aid in manual file selection. Note that Selectors applied in this manner will not be recorded into a script. To record Selector choices into a script, you must use the Choose button as described in the section in this chapter, "Applying Selectors."

Hilite	Highlights a group of files using a Selector.
Hilite Marks (第H)	Highlights all marked files.
Save Hilites (೫\$)	Creates a custom Selector that remembers which files and folders were highlighted at a particular time. See the section, "Creating Custom Selectors," for details.
Toggle Folder (%T)	Highlights or unhighlights contents of the folder currently at the highlight bar in the folder index.
Skip Forward (#F)	Moves the file list forward to the next highlighted items.
Skip Backward (#B)	Moves the file list backward to the previous highlighted item.
Mark Hilited (#M)	Marks all highlighted items.

Unmark Hilited (**#U**): Unmarks any highlighted item.

Opening Multiple Browsers

You can open and work with more than one Browser at a time, and you can browse volumes or Archives simultaneously. For information specific to browsing an Archive, please see Chapter 5, "Retrieving Files." Any additional Browsers you open are called "stand-alone" Browsers because the choices you make are not recorded in any script.

You may want to open additional Browsers to locate files on another volume without stopping your archiving procedure. You may also want to open an additional Browser to see different views of the same volume simultaneously. To open a new Browser:

• Choose Volumes or Archives from the Windows menu, depending on whether you wish to browse a volume or an Archive. The following window appears:



The New Browser Window

- Select a Volume or an Archive.
- Click Browse.

If you wish to close the current Browser and open one for another volume or Archive in its place, simply click the Select radio button and select another.

If you wish to open an additional Browser, choose Volume or Archive from the Windows menu, select the Volume or Archive, and click Browse. If you open multiple Browsers for the same volume or Archive, the same items are highlighted and marked in all of them. The number of Browsers you can have open at the same time is limited only by your Macintosh memory and the size of what you're browsing.

NOTE: For information specific to browsing an Archive, please see Chapter 5, "Retrieving Files."

Copying and Pasting Highlights

You can copy and paste highlights from one Browser to another, or into the Scrapbook. This feature is especially useful when you want to transfer highlights from an error Browser or a stand-alone Browser to the Browser in a script.

To copy and paste highlights:

- Highlight the files in the first Browser.
- Choose Copy in the Edit menu.
- Open the appropriate Browser.
- Choose Paste in the Edit menu.

All the files and folders highlighted in the first Browser with corresponding pathnames will be highlighted in the second Browser. Marks are not copied. Use the Browser menu command, Mark Hilited, to add marks to the highlighted files.

Special Browser Functions

You can use the Browser window to print file lists and delete files from a volume. You may want to print a hard copy of a volume or Archive's file list for reference, or a copy of the files marked to be archived. You may also want to delete empty folders or outdated files.

Printing a file list

To print exactly what appears in the Browser, choose Print in the File menu while the Browser is open.

To print only the files on a volume that are marked to be archived, simply mark the files, and choose Marked Fldr-File in the Show submenu of the Browser menu to display only the marked files and folders. Then choose Print from the File menu to print the list.

If you wish to print a list of everything in an Archive, first open the Archive's Browser by choosing Archives from the Windows menu and selecting the Archive. Click Search and set the Search Parameters to All sessions, All files, All versions and Replace Results, and then click Apply. Then choose Print from the File menu to print the list of everything in the Archive.

Deleting files from a volume

USE WITH CAUTION! Using this command is identical to dragging files to the trash can on your desktop and choosing Empty Trash.

To delete files, highlight the files you wish to delete, and choose Delete in the Action menu. The following dialog box appears:

Delete which highlighted items?	ОК
Highlighted files only Highlighted files and empty highlighted folders	Cancel

The Delete dialog box

Select "Highlighted files and empty highlighted folders" if you want folders made empty during the delete to be deleted as well. Click OK, and the selected items will be removed from the Source.

Rebuilding the Browser

The Rescan command in the Action menu rebuilds the Browser to incorporate any new changes made to the Source. This is useful if you're scanning a network volume that changes while you're in the Browser or if you work in MultiFinder and make changes to the Source while the Browser remains open.

To rescan the Source and rebuild the Browser, simply choose Rescan in the Action Menu. If you exit the Browser and the Source changes before you return, Retrospect rescans automatically when you enter the Browser again.



CHAPTER 7

This chapter will familiarize you with the various options for backing up, archiving, and retrieving. Different Options windows appear depending on which operation you are performing.

NOTE: There is no Options window for the Restore procedure, since restoring is automatic. If you wish to restore and use Options, you must use the Retrieve procedure to do so.

Backup Options

The Backup Options window appears when you click Next after selecting files and folders in the Backup Browser:

	Backup 🔤 🖂
Source Archive	Select Execute Now
Options:	□ Verification (compare after copy) □ Compress files □ Always Full Backup (reset Archive before copy)
Comment:	[

The Backup Options Window

The Backup Options are:

• Verification (compare after copy)

Compares the files in the Archive to the original files, byte by byte. The verification is performed after all selected files have been backed up. If there is only one member in the Archive, the verification will proceed automatically. If there are multiple members in the Archive, you will need to reinsert each one for verification.

NOTE: Using Verification option significantly increases the backup time, and it will double-check the integrity of your backup.

• Compress files

Reduces the amount of media required to store the files. Uses the Lempel-Ziv algorithm to compress files to an average of approximately half their original size. Both the amount of compression and the time it takes to compress will vary depending on the type of file. Compressed files are automatically decompressed during restore or retrieval.

• Always Full Backup (reset Archive before copy)

Whenever you run the Backup script, Retrospect erases the Archive and makes a full backup of the Source volume, instead of incrementally copying the new or changed files.

• Comment

The text box is used to attach notes to the session information in the Archive. The annotations you type in the Comments box are seen in the restore or retrieval Browser and in the Session Info Window.

Archive Options

The Standard Archiving Options window appears when you click Next after selecting files and folders in the Archiving Browser. Extended archiving options are also covered in this section.

	Archiving
Source Archive	Select Image: Standard Options Execute Now
Options:	🗌 Verification (compare after copy)
	🗌 Compress files
	🗌 Always Full Backup (reset Archive before copy)
	🗌 Move files (delete copied files)
_	
Comment:	
	· · · · · · · · · · · · · · ·

The Standard Archiving Options Window

The Source and the Archive for the current session are in the upper left corner. The Standard Archiving Options are:

• Verification (compare after copy)

Compares the files in the Archive to the original files, byte by byte. The verification is performed after all selected files have been backed up. If there is only one member in the Archive, the verification will proceed automatically. If there are multiple members in the Archive, you will need to reinsert each one for verification.

NOTE: Using the Verification option significantly increases the archiving time but, to ensure the integrity of archived files, using it is highly recommended whenever files are moved into an Archive with the Move files option described below.

• Compress files

Reduces the amount of media required to store the files. Uses the Lempel-Ziv algorithm to compress files to an average of approximately half their original size. Both the amount of compression and the time it takes to compress will vary depending on the type of file. Compressed files are automatically decompressed during retrieval.

• Always Full Backup (Reset Archive before copy)

Erases the Archive and copies all selected files instead of performing an incremental backup.

• Move files (delete after copy)

Removes original files from the Source volume once they are archived. Only successfully archived files are removed from the Source, and *no* files will be moved if archiving is not completed.

NOTE: If you wish to use this option, you should first make more than one Archive for these files. Having more than one copy of a file is always recommended; the more valuable or irreplaceable a file, the more copies of it you should make.

• Comment

The text box is used to attach notes to the session information in the Archive. Comments are seen in the Retrieval Browser and in the Session Info Window.

Extended Archiving Options

There are several extended archiving options in addition to the standard ones. To access these options, click the Extended Options radio button at the top of the Standard Options window. The following window appears:



The Extended Archiving Options Window

The Standard and Extended options are not exclusive; everything checked in either window will be used.

NOTE: The first two options, Scan to compare and Don't add duplicates default to "on" (checked), even if you never display the Extended Options window. If you uncheck them, they will stay deactivated.

The extended archiving options are:

• Scan to compare source to archive

Compares the contents of the Archive to the contents of the Source. Source files already archived are displayed in the Archiving Browser with a diamond to the left of their filename. This option lets you know what files are already in the Archive.

• Don't add duplicates to archive

Prevents archiving of files that have not changed since they were last archived. This option keeps files from being added to the Archive more than once.

• Only match files in same folder

If, after being copied to an Archive, a file has been moved to a different location on the Source, checking this option will cause Retrospect to no longer think it is the same file. Retrospect will copy the file into the Archive again, even if it has not been modified.

• Store Snapshot (for Restore)

Stores information about the volume's most recent file state to facilitate a later restore. See Chapter 3, "Restoring an Entire Volume," for information on Snapshots.

- Set source volume's backup time
- Set each folder's backup time
- Set each file's backup time

Each Macintosh file, folder and volume has three times associated with it: creation, modification and backup. Checking any or all of the three options above will record as the backup time the moment execution begins. The same time is recorded for all applicable items, even though each file is not actually archived at that precise moment.

NOTE: Most files have January 1, 1904, as their backup time (the year "zero" of the Macintosh calendar) until an application changes it. Retrospect lets you set backup times so they can be used as a

condition in custom Selectors. The backup times set by Retrospect may, however, be changed during normal use of other applications.

• Don't archive open files (report them)

With this option checked, any files open during execution, including the System file and the Retrospect application, will not be archived. A simplified Browser, the Error Browser, will appear to let you know which files were not archived. The Error Browser is described in the next section of this chapter.

• Separate root - down 1 level

Maintains archived files at one folder level lower than their folder structure on the Source. Keeps new archived files separate from the file and folder structure already in the Archive. Creates a superstructure over both.

• On Move, delete empty folders

If you move files using the Move Files (delete after copy) standard option, any folders made empty by the move will be deleted also.

• Compression

Allows you to selectively compress files. Only the files that match this option's Selector will be compressed. Files that don't match will be archived without being compressed. Compress, the default Selector for this option, compresses all *uncompressed* files marked to be archived. The standard option **Compression** must be checked for this option to work.

NOTE: Use selective compression when you don't want to take the time to compress all the files, just the ones that would particularly benefit, such as graphics and spreadsheets.

Retrieve Options

Once you select files in the Retrieval Browser and click Next, the Retrieval Options window appears:

		Botriouina	
Archive Destin.	Select Options	Retrieving	Execute Now
Options:	🖲 Put just f	iles in a folder	
	○ Put files & folders in a folder		
	O Replace corresponding files		
	○ Restore entire destination		
	🔿 Custom retrieval		
	This top-level fol	ill be placed in a top-level folder on t der will have the same name as the a . Retrieved files will be renamed if o	archive and will be
			匕

The Retrieval Options Window

In the Retrieval Options window, the chosen Archive and Destination are listed along with four retrieval Options. A description of the currently selected option appears at the bottom of the window.

• Put just files in a folder

Retrieves *only* files and puts them in a retrieval folder on the Destination. Retrospect automatically creates the folder and names it after the Archive. This type of retrieval eliminates folder structure among the retrieved files. This is the default retrieval method in Retrospect.

• Put files & folders in a folder

Retrieves files *and* folders and puts them in a retrieval folder on the Destination. Retrospect automatically creates the folder and names it after the Archive. Use this option if you want to maintain hierarchical structure within the retrieval folder.
• Replace corresponding files

Puts files where they came from, replacing versions on the Destination. Corresponding files are ones that have the same name and location within the folder hierarchy. Retrospect looks at the file's name and location, so if a file has been moved or its name has been changed it will not be replaced.

• Restore entire destination

Completely replaces the contents of the Destination with the files marked for retrieval.

USE WITH CAUTION! Everything on the Destination prior to retrieval will be erased!

You can restore an entire volume by selecting this option and setting the search parameters to: All Sessions, § All Files, Most Recent Version, and Replace Results. You can also restore your volume to its most recent state using the instructions in Chapter 3, "Restoring an Entire Volume."

• Custom retrieval

See the following section for the Custom Retrieve Options.

Custom Retrieval Options

The last type of retrieval is Custom Retrieval. Custom retrieval lets you set different conditions that determine how the files are retrieved. To access the Custom Retrieval window and set the conditions, click Customize. The following window appears:

Archive Destin.	Select Options) Standard © Customize	Execute Now
Retrieve:	○ To the root	Conflicts:	● Auto-rename ○ Don't copy ○ Replace ○ Name prompt
Structure:	● Flatten to just files ○ Keep folders & file		O Action prompt
	⊖ Keep minimal f & f	Same type:	 Is Conflict Keep older Keep newer
Folders:	● Use existing ○ Replace existing ○ Always make new	Reset:	⊠ Icon locations □ Modify dates
		Reset:	

The Custom Retrieval Window

The Custom Retrieval conditions and the options available in each are:

• **Retrieve** determines where on the Destination the retrieved files and folders are placed.

		1
	To the root:	places retrieved files directly in the root of your Destination.
	To a folder in root:	places retrieved files in a folder in the root of your Destination.
•	Structure determine placed on the Desti	es how the retrieved files and/or folders are nation.
	Flatten to just files:	removes folder structure and places only files.
	Keep folders & files:	places complete folder structure with files.
	Keep minimal f & f:	places files with only immediate folders.
•	Folders determines existing folders.	how retrieved folders will interact with
	Use existing:	places retrieved files in existing Destination folders of the same name.
	Replace existing:	replaces existing Destination folders and contents with retrieved files and folders.
	Always make new:	creates new folders for retrieved files, leaving existing folder structure as is.
•		he problem of files marked for retrieval me as files on the Destination.
	Auto-rename:	retrieves all files; adds successive numbers to conflicting names.
	Don't copy:	doesn't retrieve files with name conflicts.
	Replace:	replaces Destination files with retrieved files.
	Name prompt:	displays a text box for user to rename retrieved files.
	Action prompt:	displays a dialog with the options above.

NOTE: Files and folders never replace each other. If there is a name conflict between a file and folder, Retrospect renames automatically.

• Same type resolves the conflict between files with the same type, creator and name.

Is Conflict:	treats files of the same type as a name conflict and resolves in accordance with the option selected under Conflicts.
Keep older:	keeps the file with the oldest modified date and discards other file(s) of the same type.
Keep newer:	keeps the file most recently modified and discards other file(s) of the same type.

•	Reset updates certai	n file information during retrieval.	
	Icon Locations:	updates position in Finder windows.	

Modify Dates: updates to the date and time of retrieval.

Execution

When you click Execute Now, the appropriate request for your media type will appear. If the Archive is a Combined File type, this dialog box will not appear since the backup device is already connected.

If the car	Cartridge "1 tridge is unavailab ata should fit on th	kup"	Missing Stop
n			
	No media	3M MCD Series II, SCSI 3	Eject Erase Betension

- A Media Request dialog box
- Click Proceed to begin the procedure. The following status window appears:

NOTE: The Custom Retrieval window also allows you to view the default settings of the four standard retrieval types. Select a standard option and click Customize to view the default settings.

Copying from	n Hard Disk		
emaining	8 Files	3080 K	Pause
ompleted	1 Files	238 K	

The Copying Status Window

Retrospect will request additional media as needed. When the procedure is complete, the status window will note the elapsed time.

Execution completed successfully			
Remaining	0 Files	0 K	
Completed	9 Files	3318 K	

The Completed Status Window

• Choose Quit from the File menu or begin another procedure from the Retrospect main window.

Pausing and Resuming

You can pause or cancel the archiving operation from the status window. Click Pause in the window to temporarily stop the operation. Click Continue when you are ready to resume.

Paused; hit	Continue to re	esume proces	sing
Remaining	128 Files	6438 K	Continue
Completed	74 Files	3210 K	
BKrause CVita	le		Stop

The Paused Status Window

To cancel the operation, click Cancel. An alert will appear asking if you really wish to Cancel. Click Yes to stop. Any files copied to the Archive before canceling remain in the Archive.

The Error Browser

The Error Browser helps ensure the integrity of your data by letting you know if any files were not successfully copied. The Error Browser appears when execution is finished. This simplified Browser window will be created if any Source files could not be read or if the "Don't Archive busy files" option is set and there were busy files during the archiving process.

	Archiving Errors			ז
Fred's HD :			0 files, 0	ж
↔	📼 Fred's HD		0	仑
	🗋 Desktop	84 K		
	🗀 HyperCard f			
	D Home	74 K	(HyperCard 1.2.1)	
	Tim's Knitting Patterns	245 K	(HyperCard 1.2.1)	1
	😪 HyperCard 1.2.1	406 K	application	
	🗀 System Folder			
	Backgrounder	5 K	(System)	
	DA Handler	6 K	(DA Handler)	
	🗋 Finder	105 K	(System)	
	D MultiFinder	49 K	(System)	
	🗋 Optima Screen Fonts	106 K	(Font/DA Mover)	
	Stone Serif Screen Fonts	177 K	(Font/DA Mover)	
	D Suitcase™ II	43 K	INIT	
	🗋 System	1008 K	(System)	
				Ю
				¢

The Error Browser

Only the files that didn't get copied are displayed, and the Error Browser can be used to print a list for reference. It can also be used to copy and paste highlights to the Archiving Browser to try to archive those files again.

NOTE: If the archiving operation is canceled, only files Retrospect was unable to completely copy are listed, not all files that were marked but not archived.

If an Error Browser appears after an automatic execution, Retrospect will not quit the application or shut down as usual, so the Error Browser remains displayed. Scripts scheduled to run after the Error Browser appears will not execute until theError Browser has been closed.

The Message Log

The Message Log command in the Windows menu displays a list of error messages generated by Retrospect. The list is an ongoing record of the errors that occur and what caused those errors. Launching and quitting Retrospect are recorded in the Log as are every execution attempt and almost all operational error messages. Most user error messages, such as "Nothing Marked for Archiving," are not logged. Choose Log in the Windows menu for the following window to appear:

Message Log	2
∆ Retrospect version 1.2, launch at 9/30/91 5:18 PM	Ŷ
 Backup Script "Backup" begins at 9/30/91 5:19:18 PM Execution begins at 9/30/91 5:19:18 PM, source: "Hobbes (Bren Smith)", archive: "Server Archive" Execution completed successfully Completed: 54 files, 3650 K 	
Elapsed time 00:01:10 (70 seconds)	
Scanning volume "John's Main Disk",	·····································

The Message Log Window

The Message Log accumulates from session to session up to a maximum size of 16K. After the Log reaches the maximum, the oldest messages are deleted as needed to make room for new ones. You can print the list with the Print command in the File menu. You can also copy and paste all or some of the messages into a word processor. Clear, in the Edit menu, will reset the Log after a confirming alert.

NOTE: If you don't understand a particular error message in the Log, please check the online Help in the Windows menu or turn to Appendix A, "Troubleshooting."

CHAPTER 8

SCRIPTS

Retrospect scripts let you create and save any number of archiving or retrieving procedures so you can repeat a process whenever you want.

If you use any procedure on a regular basis, you'll probably want to create scripts. For example, you may have several volumes to back up with different file choices selected. Or, you may want to back up some files daily, some weekly, and some monthly. Scripts will save the choices in each procedure so you don't have to sit at your desk and go through them step-by-step each time.

You do not need to use scripts in order to use Retrospect. However, if you repeat the same processes frequently, scripts will provide a convenient way to do so. This chapter discusses how to schedule scripts using the Retrospect calendar, and also how to make Master Scripts to execute several scripts in one operation.

NOTE: Scripts and other important Retrospect information are stored in the Retro.Prep file created automatically in your System Folder. Deleting this file will remove any modifications you have made to date.

About Scripts

Every time you go through the four steps in a Backup, Archive, Restore, or Retrieve, you are creating a default Retrospect script for that procedure. After you go through the steps for one of these functions, the default script for that function appears in the Action menu, named for the function it performs. You can later choose the appropriate script name from the Action menu to perform the same procedure with the same Source, Archive, file selections, and options.

If you manually go through the four choices in a procedure again, the script for that procedure changes to reflect the most recent choices. Retrospect will only remember the most recent choices you have made in each of the procedures. If you rename the default script for any procedure using the Scripts command in the Config menu, the next time you manually go through the four steps in that procedure a new default script will be created. Renaming is one way to create multiple scripts.

Using the Scripts Command

Multiple scripts are modified or created with the Scripts command. When you choose Scripts from the Config menu, the following window appears:

	Scripts	
Archiving Backup Restore Retrieving	Archiving Backup Restore Retrieving	New Duplicate Modify Clear
Rename	Backup	6

The Scripts Window after you perform each of the Retrospect functions

All existing scripts are listed in the Scripts list. Each script name is in large letters, and the script type is in small letters. You can create scripts in three ways. You can:

1) create a default script and rename it, so another default script is created the next time you make choices in the four steps for that procedure;

2) duplicate an existing script and modify it; or

3) add a new script to the list and modify it.

To use Scripts, highlight a script in the list and click the button of the operation you want to perform, or click New. The operations are described below.

Renaming a Script

You can rename any script in the list, including the default ones, Backup, Archiving, Restore, and Retrieving. If you rename one of these, Retrospect automatically creates a new default script for that procedure the next time you go through the four steps. To rename a script:

- Highlight the script.
- Type the new name in the text box.
- Click Rename.

Creating A New Script

After you add and rename a new script, it will be blank until you modify it as described in the section, "Modifying a Script."

To add a new script:

• Click New. The script type dialog box appears:

Create what kind of Script?
🖲 for Backup
🔿 for Archiving
🔿 for Restoring
🔿 for Retrieving
○ Master Script (list of other scripts)
Cancel OK

The Script Type Dialog Box

• Select the type of script you wish to make, and click OK. For an explanation of Master Scripts, please see the section in this chapter, "Master Scripts."

	Scripts	D
Archiving Backup Restore Retrieving Untitled	Archiving Backup Restore Retrieving Master	New Duplicate Modify Clear
Rename	Untitled	

Adding a New Script

- Type the name you want to give the script in the text box.
- Click Rename.

Duplicating a Script

Duplicating is especially useful if you want to create a custom script similar to one of the default scripts.

To duplicate a script:

- Highlight the script.
- Click Duplicate. "Copy of ..." will appear in the list.

	Scripts	
	Archiving Copy of Retrieving Documents - Compressed Retrieving	New Duplicate Modify Clear
ĺ	Rename Copy of Retrieving	ß

Duplicating a Script

After you duplicate a script, rename the duplicate and modify it as described in the section, "Modifying a Script."

Deleting a Script

To delete a script:

- Highlight the script.
- Click Clear.

This function removes a script from Retrospect completely, even a default script. A new default script will be created when you go through the four steps in that function.

Modifying a Script

Every time you change a choice in one of the four steps, you are modifying a script. The Modify button in the Scripts window lets you change your choices in a script, with or without executing it. Use this operation in conjunction with New or Duplicate in the Scripts command to create a custom script.

To modify a script:

• Highlight the script.

- Click Modify. The window of the first step of the procedure will appear.
- Make your desired choices in the four steps. Your changes will be recorded in the script.

Master Scripts

A Master Script allows you to combine multiple scripts so that they may be executed with a single command. In addition, you may create a normal Macintosh file that will run the scripts contained in a Master Script whenever it is launched in the Finder or under MultiFinder.

When you modify a Master Script, the following window appears, listing your existing scripts:

Master Script					
Select Scripts to Execute:	Save Document				
DataDAT 1.2 GB	Archiving 🖒				
Monthly Archive	Archiving				
Retrieving	Retrieving				
Weekly Backup	Backup				

Master Script Window

Select the scripts that you wish to execute together by clicking while holding down the shift or command keys. Click the "Save Document..." button if you wish to create an associated file for desktop execution of the Master Script.

Automating Scripts

Once you've archived or retrieved for the first time, Retrospect offers several ways to automate your procedures. Automating lets you easily and reliably repeat procedures you've set up and executed before. If for some reason execution is interrupted, the script will remain paused at that point until you return and respond appropriately. In addition, any other scheduled executions will wait for the first one to finish before proceeding.

• Choose a Script from the Action Menu

All available scripts are listed at the bottom of the Action menu. The script will automatically execute. All you will see is the scanning status and the execution status windows.

Holding down the option key while choosing a script in the Action menu opens the script, but does not execute it until you click Execute Now. This lets you view and edit any of the four steps in a particular script before executing it.

• Execute automatically by double-clicking a Master Script document from the Finder or MultiFinder.

Create a Master Script as described in this chapter. The next time you want to use the script, double-click its icon in the Finder. You may associate one or more scripts of any kind (backup, archive, restore, or retrieve) with a Master Script.

Using the Calendar

Retrospect's calendar feature lets you run a script completely unattended—on the weekend, in the middle of the night, once a month, twice a week—whatever schedule is right for you.

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S N	1	T	Ш	T	F	S
			1	2	3	4
5 6	j	7	8	9	10	11
2 1	3	14	15	16	17	18
9 2	0	21	22	23	24	25
26 2	7	28	29	30	31	
Cycle Run at 3:00 AM						
🗌 Run once at						

When you choose Calendar from the Config menu, the following window appears:

The Calendar Window

To schedule unattended archiving:

- Highlight the script you want to run.
- Set the time(s) and date(s) to run the script.

Select the date you wish to run the script by highlighting it in the calendar, and checking Cycle Run or Run Once.

- Check the appropriate check boxes to activate the calendar.
- Be sure your Archive media is inserted when the script is scheduled.

NOTE: Depending on your particular backup situation, you may need to check one or more of these check boxes to make the calendar work.

The Auto-execute alert appears when a scheduled script is about to be executed automatically. It gives you the option of delaying the execution to a more convenient time. If you don't respond to the alert within 30 seconds, the script will execute immediately. However, you can always pause the operation and continue later.



The Auto-execute Alert

Cycle Run

Use the Cycle Run check box to schedule scripts to run on the same day every month, or on the same day of every week.

To run the script on the same day every month, highlight that day in the calendar, and check the Cycle Run check box.

To schedule a script to run on the same day every week, highlight that weekday at the top of the calendar, and check the Cycle Run check box.

You can also schedule a script to cycle by double-clicking on the date, and you can double-click to remove any settings.



Setting scripts to cycle on the 15th and the 31st of every month and every Friday

When a script is scheduled to cycle on a day of the week or month, the upper-right corner of the date will be highlighted in the calendar.

The currently highlighted calendar setting is listed beneath the Cycle Run check box. The next scheduled execution is listed beneath the calendar.

Run Once

You can schedule a script to run one time using the Run Once check box. Just highlight the date you want the script and check the Run Once check box.

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			1	2	3	4
5	6	7	8	9	10	11
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26	27	28	29	30	31	
ext ru	un : Moi	n, Jan	6,199	2 2 :00) AM	
Cycle Run at 3:00			AM			
3 Ru	in on	ce a	t	2:00	AM	
1onday	j, Janu	iary 6,	1992			

Setting a Run Once for January 6, 1992 at 2:00 AM

When a script is scheduled to run once, its number will appear in outlined text in the calendar. You can remove the setting by highlighting the date and unchecking the Run Once check box.

Setting the Time of Day

You can set the exact time to execute the procedure along with the date. Midnight is the default time; you'll see it appear next to the Cycle Run or the Run Once check box when you set a date. You can change the time by highlighting the hour or the minutes and clicking the up and down arrows. You can also type in the correct hour and minute.



Setting the time for a Cycle Run

Any time and date you set as a Cycle Run will automatically apply to all successive cycles until you change the setting.

The Startup INIT

- **Install Startup INIT** places an initialization file that controls calendar operations in your System Folder. This must be checked if you need to use any of the following options.
- Auto Launch launches Retrospect if it is not running when a script is scheduled, and then proceeds with the script. Your Macintosh must be in the Finder or in any application in MultiFinder for auto launch to work. If it is in MultiFinder, note that there must be enough free memory for Retrospect to operate.
- Notification Icons flashes the Retrospect icon on top of the Apple menu icon if a script is waiting to run. You can then run the script at your convenience.
- **Shutdown Alerts** reminds you if a script had been scheduled to run that day when you Shut Down your Macintosh. You can then run the script by clicking Launch, or proceed with the shutdown.

About Automatic Execution

When the times and dates for your script(s) have been set and the appropriate options checked, close the calendar window and insert the Archive media. Your Macintosh must be left on and the media must be in its drive, with the drive turned on and the media ready for files to be written to it.

Any dialog that pauses Retrospect will halt the automatic execution. However, you can check the **Avoid Stopping on Errors** option to bypass any error dialogs that would normally halt unattended procedures. All errors will still be recorded in the Log, but Error Browsers are not created. Choose Preferences from the Config menu to check this option.

In addition, certain screen savers and other applications that put Retrospect in the background may keep scheduled scripts from executing.

BACKUP AND ARCHIVING STRATEGIES

CHAPTER 9

Now that you know how to use Retrospect, you will probably want to set up a convenient backup and/or archiving routine. You should copy files regularly and move files off your hard disk to another storage medium as soon as they become inactive or impractical to store on your hard disk.

Retrospect's Backup and Archive functions are similar. Using the Backup function is a simple way to maintain a copy of your data. If you need to use options that are unavailable in the Backup function, you can use the Archive function for more comprehensive data management.

This chapter outlines some of the most commonly used archiving and backup routines. You may use parts of these routines, or use more than one of them, to create the most safe and convenient scheme for your needs.

NOTE: Before you start a backup routine, you may want to move some files to make room on your hard disk. Once some files are archived, the first backup will be more efficient since there will be fewer files to copy.

Sessions, Archives, and Members

It is important to define the terms *Session, Archive,* and *Member* before explaining the various backup and archiving strategies.

A Session is a single backup or archive operation. For example, when you back up your hard disk at the end of the day, one session goes into an Archive. If you back up two or more hard disks in the same procedure, a separate session will be created for each one.

An Archive is a library of data backed up or archived by Retrospect. A Retrospect Archive can contain one or more sessions, each of which contains files from a single volume.

A Member is a single piece of media, such as one tape, one Bernoulli cartridge, or one floppy disk.

Basic Rules

• Archive members such as tapes or disks can be lost, damaged, inadvertently overwritten, or just simply wear out. You should have more than one copy of the files from each volume you back up, in case one becomes unreadable. If part or all of your Archive is not retrievable, you can copy the missing files from another Archive. Recommendation number one is:

Keep multiple complete Archives.

• Since it would not be practical to keep an infinite number of Archives, it is necessary to recycle Archive media (especially if you are backing up to relatively expensive media). For example, you could back up to a certain number of Bernoulli cartridges, and after you used the last one, you would erase the first one and begin again. Recommendation number two is:

Recycle Archive media.

• The possibility of unexpected data loss for any number of reasons leads up to recommendation number three for backing up or archiving data:

Keep an up-to-date Archive off site.

Retrospect scripts will make your backup or archiving strategy much more convenient. However, you do not have to use scripts in order to use Retrospect. Refer to Chapter 8, "Scripts," for details.

Backup Strategies

Your backup strategy should allow for maximum security and practicality. Develop a routine which ensures that little or no valuable data is lost in the event of a hard disk failure, software corruption, or a disaster at your workplace. Your routine should also ensure that you do not spend a lot of time backing up.

Your backup strategy may be as simple as one of the following: 1) Recycle 3 sets of Archive media, so you have 3 backups; or 2) Back up daily, alternating to 2 Archives, and back up weekly to a third Archive stored off-site. The procedures outlined in this section provide a basic overview of how to maintain various types of Archives. You may use more than one of these procedures in your strategy. Refer to the other chapters in this manual for specific details on using Retrospect.

The Basic Backup

The easiest backup process is backing up a single volume to a single Archive. If you wish to make multiple copies of the same Archive, refer to the section in this chapter, "Backing up One Volume to Two Archives."

The first time you back up, you will go through the basic steps of choosing the Source volume, creating the Archive, selecting files, and selecting options. Retrospect will automatically record your choices into a script you can use for future incremental backups of the same Source volume.

To back up the first time:

- Double-click the Retrospect application to launch the program.
- Click Backup. The Source Window appears.
- Choose the Source volume that contains the files you want to back up.
- Click Next to continue. The Archive window appears.
- Click Create New. A list of the media types supported by the devices currently connected to your Macintosh appears.
- Highlight the media type you wish to use, and Click OK. A standard file save dialog box appears, asking you to name the Archive.
- Name the Archive, and save the catalog file. If you are creating a Combined File Archive, you must save the file to the volume to which the files are being backed up.
- NOTE: The Archive catalog is what Retrospect uses to locate files in the Archive. For convenient retrieval of one or a few files, you may want to keep the catalog on a local hard disk. For convenient restores, you may also want to copy the catalog onto a floppy disk after the backup is complete. If a catalog is lost, it can always be rebuilt from the backup media, but this could be time-consuming.

The Archive window reappears with the catalog file highlighted in the list.

- Click Next to continue. Retrospect scans the Source volume, and the Browser window appears with all files highlighted and marked for backup.
- NOTE: Retrospect automatically applies the file Selector "All Files" when you back up. If you wish to apply a different Selector, you can click Choose, highlight another Selector, and click Apply. If you use the Choose button to apply a Selector, that Selector choice will be applied to subsequent incremental backups using the Backup script. For information on using the Browser and Selectors, see Chapter 6, "Selecting Folders and Files."
- Click Next to continue. The Options window appears.
- Select any options you wish to use.
- Click Execute Now.

If your Archive is a Macintosh Disk or a Peripheral Device type, insert the first Archive member. If your Archive is a Combined File type, Retrospect will start copying files to the Destination onto which you saved the catalog file.

• As an added convenience, you may want to save a copy of the catalog file to a floppy disk. If anything happens to the original catalog file, an extra copy will allow you to quickly determine what is stored in the Archive.

To back up the next time:

- Double-click the Retrospect application to launch the program.
- Choose Backup from the Action menu.

The "Backup" menu item corresponds to the script that was automatically created when you set up the first backup operation. Anytime you choose Backup from the Action menu, Retrospect will automatically execute a backup using the same choices you selected in the most recent backup operation. For more information on scripts, please see Chapter 8, "Scripts."

• If your Archive is a Macintosh Disk or a Peripheral Device type, insert the first Archive member you used for the first backup session.

Retrospect automatically backs up any new or changed files into the Archive. Since Retrospect backs up incrementally, the Archive will grow larger with each new session. When your backup becomes too large, you can reset the Archive to empty its data so you can make a new complete backup. This section contains instructions on manually resetting an Archive. To manually reset (erase) an Archive:

- In the Archive window, Highlight an Archive you wish to reset.
- Click Archive Info. The Archive information window appears.
- Click Reset. A warning dialog box appears, indicating that the data in the Archive will be erased.
- Click OK to reset the Archive.

The Archive contains no files. To back up again, simply choose your backup script from the Action menu. Retrospect will initially perform a full backup to the empty Archive, and subsequent backups will be incremental.

Backing up One Volume to Two Archives

Backing up to two (or more) Archives will give you the security of having multiple copies of your files. If something happens to one of your Archives, you will have an extra copy from which you can retrieve files.

The first procedure in this section describes how to copy the same files to two Archives every time you back up. The second procedure in this section describes how to copy the same files to two Archives at different times (you would use this procedure to alternate between two Archives).

Copying to two archives each time you back up

If you copy files to two Archives every time you back up, you will always have two up-to-date backups of your hard disk. However, backups will take a little longer than they would if you used a single Archive each time.

NOTE: If you are backing up to two different devices, both of which are connected to your Macintosh, you can follow the procedure in this section to back up to both of them.

To back up the first time:

- For the first backup session, follow the procedure "to back up the first time" in the previous section, "The Basic Backup." However, create two Archives by clicking Create New twice, and naming the Archives "Archive A" and "Archive B" (or any suitable names).
- After you create the Archives, choose both of them in the list by dragging through them or shift-clicking.
- Click Next, select any options you wish to use, and click Execute Now to begin the backup.

• Insert Archive media as requested, and label the Archive members with their names.

To back up the next time:

• Select Backup from the Action menu, and insert the Archive media as requested. You can also schedule the Backup script on the Retrospect calendar.

Copying to two Archives alternately

If you alternate between two Archives, the backup will be faster since new or changed files are only copied once each time. However, if something happens to your most recent Archive, you may not have a completely up-to-date backup.

To back up the first time:

• For the first backup session, follow the procedure to back up for the first time in the previous section, "The Basic Backup." When you are asked to name the Archive, name it "Archive A" (or any suitable name). Label the Archive member(s) with the name. As you were backing up to Archive A, Retrospect automatically recorded your choices into a script called "Backup." The following steps explain how to create a copy of this script so you can easily copy the same files from the same Source volume to another Archive at a different time.

To create a copy of the script:

"Archive A."

- Choose Scripts from the Config menu. The Scripts window appears.
- Highlight "Backup" in the Scripts list. "Backup" in the Scripts list corresponds to the script that was automatically created when you set up the first backup to
- Rename the "Backup" script "Archive A's Script" (or any suitable name) by typing the name into the text box and clicking Rename.
- Highlight "Archive A's Script" in the scripts list.
- Click Duplicate to make a copy of the script.
- Rename the copy by typing "Archive B's Script" into the text box and clicking Rename.
- Highlight "Archive B's Script" in the scripts list.
- Click Modify. The Source window appears. Leave the same Source volume highlighted.
- Click Archive. The Archive window appears.

- Create a new Archive, naming it "Archive B."
- Close the Archive window.
- Close the Scripts window.
- Look at the Action menu to confirm that "Archive A's Script" and "Archive B's Script" both appear.

You can repeat this process to create more Archives and their associated scripts, and rotate among them. You may have a daily, weekly, and/or monthly rotation scheme. For more information on creating and modifying scripts, please see Chapter 8.

To back up the next time:

• When you wish to back up to Archive A, insert the media for Archive A and choose "Archive A's Script" from the Action menu. When you wish to back up to Archive B, insert the media for Archive B and choose "Archive B's Script" from the Action menu. Or, you can use Retrospect's calendar to schedule the scripts for different times.

Backing up Multiple Volumes to the same Archive

The procedure for backing up multiple volumes to a single Archive is simple. All you have to do is select multiple volumes in the Retrospect Source window.

To back up files from multiple volumes to a single Archive:

- Follow the instructions in the section, "The Basic Backup." When the Source window appears, choose multiple Source volumes by shift-clicking or command-clicking.
- Follow the rest of the procedure as described in "The Basic Backup."

Backing up a Folder

You can back up a single folder two ways: You can mark only that folder in the Browser, or you can define the folder as a Subvolume and choose it as the Source volume. Backing up a folder defined as a Subvolume is particularly useful if you wish to only back up a small portion of a volume. Using a Subvolume as a Source minimizes memory usage and scanning time by reducing the number of files. To back up a folder:

- Define a folder as a Subvolume as described in the section "Using Subvolumes" in Chapter 11, "Special Features."
- Follow the procedure in "The Basic Backup," choosing the Subvolume as the Source.

Backing Up a Server

The Retrospect application can back up any AppleShare server volume or any published TOPS volume from any workstation. Any network volume that can be mounted on the Macintosh desktop can be used as a Retrospect Source volume. Only files that are accessible from the workstation can be backed up. You may want to define a folder as a Subvolume to reduce scanning time.

The Backup Administrator can also back up the entire server using one of two methods:

1) By shutting it down and running Retrospect at the server Macintosh; or

2) By backing up files over the network.

NOTE: Only the second method, backing up files over the network, will preserve all AppleShare ownership and access privilege information.

To back up files from a workstation:

- Follow the procedure in "The Basic Backup," choosing the server volume as the Source.
- For subsequent backups, choose Backup from the Action menu.

To back up the entire server at the server:

- Shut down the server, start it up with a floppy disk that contains a copy of Retrospect.
- Launch Retrospect, and follow the procedure in "The Basic Backup," choosing the server volume (or volumes) as Source(s).

To back up the entire server from a workstation:

To maintain a complete backup of your file server, the administrator must back up the Users & Groups file in the Server Folder, and then back up all files over the network.

• Run the AppleShare Administrator program at the server Macintosh.

- Choose Save Users & Groups File, and save the file onto a floppy disk. Store this disk in a safe place.
- Log onto the server from any workstation as the user called "Administrator."
- Launch Retrospect from the workstation.
- Follow the rest of the procedure in "The Basic Backup."

NOTE: Only use the following method of restore if you backed up the server at the server. AppleShare ownership and access privilege information will not be restored if you use this method.

To restore the entire server at the server:

- Shut down the server, and start it up with a disk that contains Retrospect.
- Launch Retrospect, and follow the instructions in Chapter 3, "Restoring an Entire Volume," choosing the server volume as the Destination.

To restore the entire server from a workstation:

To restore the server from a workstation, the Administrator must restore the Users & Groups file to the Server Folder, and then restore all files over the network.

- Install System Software and the AppleShare server software onto the drive that you will use as the server volume.
- Copy the Users and Groups file that you backed up previously.
- Launch the AppleShare Admin program while the server is still shut down and when it prompts you for a Users and Groups file, direct it to the one you copied to the server volume.
- Restart the server, allow it to load as an AppleShare server.
- Log in from a workstation as the user called "Administrator."
- Launch Retrospect from the workstation, and follow the instructions in Chapter 3, "Restoring an Entire Volume," choosing the server volume as the Destination.

Always Full Backup

Although Retrospect is designed to back up incrementally, you may want to Reset (erase) the Archive and make a full backup each time.

To always make a full backup:

• Follow the instructions in "The Basic Backup," and check the "Always Full Backup" option in the Options window.

Whenever you run the Backup script, Retrospect will erase (Reset) the Archive and make a full backup of the source volume instead of copying just the new or changed files.

Archiving Strategies

The procedures outlined in this section provide a basic overview of when and how to archive. Refer to the other chapters in this manual for specific details on using Retrospect.

NOTE: It is highly recommended that you copy files into two or more Archives before you delete the originals from your disk. If anything happens to one of the Archives, you can retrieve files from the other one.

Examples of files you may want to archive are older versions of applications, applications you rarely use, files that have not changed in a long time, very large files, or files you only use occasionally. You may also want to archive files that are created periodically, like permanent records that accumulate on a weekly or monthly basis.

The Basic Archive

This section explains how to use the archiving function to move files off your hard disk onto other media. You do not have to use this option when you use the archiving function, but it is commonly used to store inactive files.

IMPORTANT: If you plan to delete the original files from your Source, you should maintain at least two Archives. Since you cannot use the Move Files (delete after copy) option to move files into two Archives simultaneously, you must first copy the files to another Archive before you move the files as described in this section.

- Double-click the Retrospect application to launch the program.
- Click Archive. The Source Window appears.
- Choose the Source volume that contains the files you want to archive.
- Click Next to continue. The Archive window appears.
- Click Create New. A list of the media types supported by the devices currently connected to your Macintosh appears.
- Highlight the media type you wish to use, and Click OK. A standard file save dialog box appears, asking you to name the Archive.
- Name the Archive, and save the catalog file onto your Source volume. (Note: If you selected Combined File Archive, you must save the file to the destination volume, **not** to your Source volume.)
- When the Archive window reappears, select the Archive you created.
- Click Next to continue. Retrospect scans the Source volume, and the Browser window appears with no files highlighted or marked for archiving.
- Use the Choose button to apply a file Selector. (Note: If you use the Choose button to apply a Selector, that Selector choice will be applied to subsequent archives using the Archiving script.) For information on using the Browser and Selectors, see Chapter 6, "Selecting Folders and Files."
- Click Next to continue. The Options window appears.

	Archiving	p]
Source Archive	Select Options Options	Execute Now
Options:	🛛 Verification (compare after copy)	
	🗌 Compress files	
	🗌 Always Full Backup	
	🛛 Move files (delete copied files)	
Comment:		
		<u> </u> 2

The Archiving Standard Options Window

• Check the Verification (compare after copy) and the Move Files (delete after copy) check boxes.

Verification double-checks that your files were copied successfully into the Archive, by reading the data back from the Archive media and comparing it with that of the Source. Move Files will delete the original files from your Source volume after they have been successfully copied to the Archive. For more information on Options, please see Chapter 7, "Options and Execution."

• Click Execute Now.

If your Archive is a Macintosh Disk or a Peripheral Device type, insert the first Destination volume. If your Archive is a Combined File type, Retrospect will start copying files to the Destination onto which you saved the catalog file.

Archiving a Folder

There are two ways to archive the contents of a folder:

For a one-time folder Archive, follow the instructions in "The Basic Archive" and simply mark the folder in the Browser window by double-clicking it, instead of applying a file Selector. Check marks will appear by all items in the folder, indicating that the items will be moved into the Archive.

To archive the same folder periodically, follow the instructions in Chapter 11 to define a Subvolume. The Subvolume will appear in the Source window, allowing you to choose it like you would any other Source. Next, follow the instructions in "The Basic Archive," choosing the Subvolume in the Source window. The Archiving script will remember the Subvolume as the Source volume.

You may favor the Subvolume method if your Source volume contains many files, since the length of time it takes to build the Browser is a function of how many files Retrospect must scan on a volume. You may also want to define a Subvolume if you plan to keep a "to be archived" folder on your Source volume and add files to it as you wish to move them off of your Source.

Archiving Periodically

You may want to create an Archiving script to archive the same group of files. Simply follow the instructions in "The Basic Archive" for the first archive. For subsequent archives:

- Double-click the Retrospect application to launch the program.
- Choose Archiving from the Action menu.

The "Archiving" menu item corresponds to the script that was automatically created when you set up the first archive operation. Anytime you choose Archiving from the Action menu, Retrospect will automatically execute an archive using the same choices you selected in the first archive operation. For more information on scripts, please see Chapter 8.

• If your Archive is a Macintosh Disk or a Peripheral Device type, insert the first Destination volume you used for the first session.

Retrospect will automatically copy any new or changed files into the Archive, and then delete them from the Source.

Archiving Versions of a Changing File

There are many ways to archive versions of a changing file or group of files, since Retrospect is designed to back up incrementally. You could define a Subvolume to contain the files, or use a file Selector to choose the files for the Archive, or simply choose the file manually each time you wish to copy it into the Archive.

To archive versions of a changing group of files using the Subvolume method, follow the instructions in Chapter 11 to define a Subvolume. The Subvolume will appear in the Source window, allowing you to choose it like you would any other Source. Next, follow the instructions in "The Basic Archive," choosing the Subvolume in the Source window. The Archiving script will remember the Subvolume as the Source volume. Each time you wish to archive files in the Subvolume, simply choose Archiving from the Action menu.

To archive versions of a changing group of files using the Selector method, follow the instructions in "The Basic Archive," applying the file Selector that corresponds to the appropriate group of files. You may also create a custom Selector as described in Chapter 10.

Archiving Files from Multiple Disks

Fast Add Disks quickly copies information from Macintosh Disks to other media. You may want to copy all of your original application disks to a single Archive for easy access. Any type of ejectable HFS media can be a Source volume. Fast Add will not delete files from the Source disks. Choose Fast Add Disks in the Action menu. The Fast Add window appears:

Compress Files						
Add a s	series of disks to which Archive:					
00	120 MB Backup Last session: Thu, Sep 27, 1990 5:10 PM	DC 2000 🕹 40.8 M free	Create New			
	Cartridge (Tu/Th) Last session:	Macintosh Disk O.K. free	Open Other			
	Server Archive Last session: Tue, Oct 2, 1990 4:49 PM	Combined file	Release			
	Last session. The, Oct 2, 1990 4.49 min	OK Hee	Archive Info			
		ন্য				

The Fast Add Window

- Create an Archive, and highlight it in the list.
- Select Compression, if desired.
- Click Execute Now. The following request appears:

Pause
Cancel

The Insert Disk Request

- Insert another disk when the first one is ejected. Repeat this for all the disks you wish to archive. When all the disks have been archived, click Cancel. An alert appears, asking if you really wish to stop archiving.
- Click Yes to end the Fast Add procedure.

CHAPTER 10

STANDARD AND CUSTOM SELECTORS AND VIEW FORMATS

Retrospect gives you the power to adapt two of its regular features to meet your specific needs.

If you need to select highly specific groups of files and folders, you can create custom Selectors to do so automatically. The first part of this chapter is devoted to Selectors and how to customize them.

If you want the files and folders in the Browser to be displayed differently, you can create custom View Formats to display the specific information you need. The second part of this chapter discusses View Formats and how to customize them.

NOTE: Selectors, view formats and other important Retrospect information is stored in the Retro.Prep file created automatically in your System Folder. Deleting this file will remove any modifications you have made to date.

Standard and Custom Selectors

Selectors are used in many places throughout Retrospect, allowing you to select files based on conditions in name, date, type, or other criteria. You are probably familiar with Retrospect's standard Selectors if you have been using the Archiving and Retrieving procedures.

Chapter 6, "Selecting Folders and Files," discusses how to apply standard Selectors in the archiving procedure. Chapter 5, "Retrieving Files," explains how to apply Standard Selectors in the retrieving procedure.

About Custom Selectors

Custom Selectors let you specify what conditions characterize the files you wish to archive or retrieve. You can create your own custom Selectors and use them wherever you would find standard Selectors. Selectors have one or more *conditions*. A condition is a distinguishing criterion relating to a file or folder. Standard Selectors have relatively simple conditions; custom Selectors can be simple or extremely complex.

Custom Selectors allow you to specify and relate multiple conditions to select only the files you desire. You can add as many different conditions to a custom Selector as you want. You can even use another custom Selector as a condition. You can relate conditions in a custom Selector, so the selector can be designed to mark, or *not* to mark, certain groups of files.

NOTE: If you use a custom Selector within another custom Selector, it will not appear in the Selector popup menus or lists. Also, if you ever modify any Selector that is used within a custom Selector, the custom Selector will reflect the change.

Where Standard and Custom Selectors are Displayed

Just standard Selectors are displayed when you click Choose in the Browser when you are backing up or archiving. Chapter 6, "Selecting Folders and Files," explains how to use the standard Selectors in this window.

◉ Standard ○ Custom	Apply	Cancel
Standard Selectors:		
 § All files § Graphics files § Modified in last week § No change in 2 months § No change in 6 months § No change in one year § No files § Only Applications § Only System Folder 		

NOTE: If you want a custom Selector to appear in this standard Selector Window, you must choose Selectors from the Config menu and rename the custom Selector like a standard Selector as described in the section, "Renaming a Selector."

Both standard and custom Selectors are displayed when you choose Selectors from the Config menu or when you encounter various Selector popup menus. Selector pop-up menus appear in the following places:

- In the Hilite submenu in the Browser menu, allowing you to highlight files that match a Selector's conditions.
- In the Compression menu in the Archiving Extended Options window, allowing you to compress files that match a Selector's conditions.
- In the Retrieving Browser's search parameters window, allowing you to search an Archive for items that match a Selector's conditions.
- In all custom Selector creation windows, allowing you to use an existing Selector within a custom Selector.
- In the View Format Creation window, allowing you to display an information field only when an item matches Selector criteria.

How Custom Selectors are Created

One way to create a custom Selector is during a Backup, Archive, or Retrieve procedure. This type of custom Selector is embedded within the script for that procedure.

- To create a custom Selector during a backup or archiving procedure, click Choose in the Browser window. When the standard Selector window appears, click the Custom radio button.
- To create a custom Selector during a retrieval procedure, click Search in the Browser window. When the search parameters window appears, click the Custom Selector radio button.

Another way to create a custom Selector is by choosing Selectors from the Config menu. When the Selectors window appears, click New, and then click Modify. The Selectors window can also be used to delete, rename and modify existing Selectors.

See the section, "The Custom Selector Creation Window," for instructions on these methods.

You can also create a custom Selector by highlighting files in the Browser and choosing Save Hilites from the Browser menu. This will create a custom Selector that will remember just the files you highlighted.

The Custom Selector Creation Window

The Custom Selector Creation window appears when:

- you choose Selectors from the Config menu and click New or Modify;
- you click the Custom radio button in the Archiving Standard Selector window; or
- click the Custom Selector radio button in the Retrieval Search Parameters window. The Custom Selector Creation window looks like this:

Standard	Backup Canad
Custom	Apply Cancel
Files matching: And Or None (nor)	New Item ▼ Selectors ▼ Nemove
	_ folders _ Enclosed _ Not _ Enable

The Custom Selector Creation Window

The Custom Selector Creation window contains a number of elements: The scrolling **conditions list** is where you view the conditions in the Custom Selector. The **Selectors** and **New Item** popup menus and the Remove button allow you to add and remove conditions in the list. The four **check boxes** perform their functions on individual conditions in the list. The three **radio buttons** relate all conditions in the list. The following sections discuss their respective functions.

Adding Conditions

The New Item and Selectors pop-up menus allow you to add conditions to your custom Selector. You can add as many conditions as you wish.

- New Item adds a condition relating to individual file and folder attributes. See the section, "The New Item Menu," for details.
- Selectors adds a condition using the existing Selectors list and the Find command. See the section, "The Selectors Menu," for details.
- **Remove** deletes the highlighted condition from the conditions list.

Modifying a Condition

The Folders, Enclosed, Not, and Enable check boxes modify individual conditions in the list. To use these functions, highlight a condition and check one or more of the boxes. When you check any of these check boxes, notice that the icon to the left of the condition illustrates which of these boxes is checked.

- Folders matches folder(s) to the condition, then marks all first level files within the folder. Folders within marked folders are not included unless they also match the condition.
- **Enclosed** is used in conjunction with Folders above to mark *all* levels of files and folders within matching folders. Folders within marked folders are included automatically even if they do not match the condition.
- Not marks files that do not match the condition.
- Enable enables and disables a condition within the Selector.

Relating the Conditions

The And, Or and None (nor) radio buttons under "Files Matching" relate all conditions in the conditions list.

- And marks files that match *every* condition you add to the list.
- Or marks all files that match at least one condition.
- None (nor) marks all files that *do not match any* condition.

You can only use one of these options in any custom Selector. However, you can use a custom Selector within another custom Selector.
Sample Custom Selectors

These samples will give you a basic idea how you would use the Custom Selector Creation window to make your own Selector.

Sample #1: Let's say you wanted to create a custom Selector that marked just document files that were in your folder named "For Archive."

- Use the Selectors popup menu to add the Standard Selector § Only Documents to the conditions list.
- Use the New Item popup menu to add the "**Name**" item to the conditions list.
- Modify the Name item by highlighting it in the conditions list and doing the following:
 - Type "For Archive" into the text box.
 - Select the Exactly radio button.
 - Check the **Folders** check box.
 - If you wish to mark documents in folders within the For Archive folder, check the **Enclosed** check box.
- Leave the And radio button selected at the top of the window.

When you click Apply, all files and folders within your "For Archive" folder will be marked. No other files will be marked.

Sample #2: Let's say you wanted to create a custom Selector that marked just files that had not been modified in the last year that were in your System Folder.

• Use the Selectors popup menu to add two Standard Selectors to the conditions list: § System Folder and § No change in last year. Leave And selected to mark all files that match both of these conditions.

When you click Apply, all files within your System Folder that have not changed in the last year will be marked. No other files will be marked.

Sample #3: Let's say you wanted to create a custom Selector that marked the **non-document files** that were **not located in your** System Folder. Here are two ways to do this:

• Use the Selectors popup menu to add two standard Selectors to the conditions list: § System Folder and § Only Documents.

Then, click **None (Nor)** to mark all files that match neither of these conditions.

OR

• Add the condition § System Folder, highlight it and click the Not check box. Add the condition § Only Documents, highlight it and click the Not check box. Leave the And radio button checked.

Both Selectors in Sample #3 will produce the same result when you clicked Apply: nothing in your System Folder will be marked, and no documents will be marked. All other files will be marked.

The Selectors Menu

The Selectors pop-up menu allows you to add another Selector as a condition within a custom Selector. If you have already created custom Selectors, they will appear in this menu.

Sample #4: Let's say you wanted to back up everything except your System Folder and your graphics files.

- Choose § System Folder from the Selectors popup menu to add it to the conditions list.
- Choose § Graphics files from the Selectors popup menu to add it to the conditions list.
- Select None (Nor).

When you click Apply, neither Graphics files nor the System Folder will be marked. All other files and folders will be marked.

The New Item Menu

The New Item pop-up menu allows you to add file and folder characteristics as conditions. You can use the same item as a condition more than once, selecting different options for it each time. When you add an item (or highlight an item in the conditions list), the options available for it appear in the lower part of the window.

The next series of illustrations show an example of how each New Item condition could be used in a custom Selector.

Date	🗌 Folders 🗌 Enclosed	🗌 Not	🛛 Enable
Modified	Current date		
● before ○ on/after ○ exactly	○ no offset ○ plus ● minus (months/daus/years)		

Set to mark all files modified more than three months ago.

File Kind

File Kind	[] Folde	urs 🗋 Enclosed	🗆 Not	🛛 Enable
View:	◉ List Вох ⊖ Direct Entry	Word 3.02		Ŷ
Match:	○ Creator only ○ Type only @ Both	Word 3.02 MSWD G	:GLOS Los	⊽

Set to mark all Microsoft Word files.

Flags

Flags	🗌 Folders 📋 Enclosed	🗌 Not	🛛 Enable
	◆ Archive Flag		
			日

Set to mark all files already in Archive.

Folders

Folders		🛛 Enclosed	
	System	•	
			 Ð

Set to mark all files and folders in the System folder.

icon Color		🛛 Fold	ers 🛛 Enclose	d 🗌 Not	🛛 Enable
🗌 Or 🗌 Re	-	⊠ Magenta □ Light Blue		🗌 Brown 🗋 Black	
t to mark		and folds	in magnit	colored fo	1.1.000
el lo mark	an jne	s ana joiae	ers in magenta	i colorea [0	iuers.
ame					
Name		🗌 Fold	lers 🗌 Enclose	ed 🗌 Not	🛛 Enable
● At Start ○ Within [○ At End ○ Exactly	88	Path name			
			' at the beginn		
uiuilagaa					
		S fald	es:s 🔲 Enclose	d 🗌 Not	🛛 Enable
Privileges () At Start () Within []	Walt	🖾 Fald	es Enclose	d 🗌 Not	🛛 Enable
Privileges O At Start			63% 🗌 Enclose Group 🔿 Log		🛛 Enable
Privileges O At Start Within O At End O Exactly	۲	Owner ()	Group 🔿 Log		⊠ Enable
Privileges O At Start Within O At End O Exactly	۲	Owner ()	Group 🔿 Log		⊠ Enable
Privileges O At Start Within O At End O Exactly	۲	Owner ()	Group 🔿 Log		⊠ Enable
Privileges O At Start Within O At End O Exactly	۲	Owner ()	Group 🔿 Log		⊠ Enable
○ At Start ● Within [○ At End	۲	Owner ()	Group 🔿 Log		⊠ Enable

Size					
Size	🗌 Folders	Enclosed	🗆 Not	🛛 Enable	
On Disk	Greater-Equal	100		K Bytes	
					P

Set to mark all files greater than or equal to 100K.

Use any combination of the conditions and their options to create your Custom Selector.

The Selectors Command

When you choose Selectors from the Config menu, you can create new Selectors, modify or rename existing Selectors, or delete Selectors. Selectors created in this manner are available in the various Selector pop-up menus throughout Retrospect.

You can choose Selectors from the Config menu any time you are running Retrospect. When you choose Selectors, the following window appears:

(graphics files list)		-
Compress		
Fast Add	Duplicate	
§ All files		Ξ
§ Graphics files	Modify	
§ Modified in last week		
§ No change in 2 months	Clear	
§ No change in 6 months	校	

The Selectors Window

All existing standard and custom Selectors are listed. Selectors with parentheses do not appear anywhere except in this window. They can be used as intermediate Selectors within other Selectors.

Highlight a Selector and click the button of the operation you want to perform. The different operations are described below.

Renaming a Selector

To rename a Selector, highlight it in the list, type the new name in the text box, and click Rename.

Standard Selectors have § at beginning of their names. Standard Selectors appear in the Archiving Standard Selector window in addition to the Selector pop-up menus. You can make any custom Selector into a Standard Selector simply by adding "§," the standard Selector indicator, to the front of its name. Simply highlight the appropriate Selector, type Option-6 and two spaces at the beginning of its name in the text box, and click Rename.

Duplicating a Selector

To duplicate a Selector, highlight it in the list and click Duplicate. "Copy of ..." will appear in the list. You can now modify or rename the duplicate Selector.

Creating A New Selector

To create a new Selector, Click New. "Untitled" will be added to the Selector list. Type the name you want to give the Selector in the text box, and click Rename.

This creates a "blank" Selector. Highlight the Selector and click Modify, and the Custom Selector Creation Window appears. To add conditions to the Selector, follow the instructions in the section "The Custom Selector Creation Window."

Deleting a Selector

To delete a Selector, highlight the Selector in the list and click Clear.

This removes the Selector from the Selectors list and from Retrospect completely. If you delete any standard Selector in this manner, you can get them back by throwing away the Retro.Prep file in your System Folder. However, throwing away the Retro.Prep file will erase all of your custom Selectors.

Modifying A Selector

Highlight the Selector and click Modify, and the Custom Selector Creation window appears. The previous section, "The Custom Selector Creation Window," describes how to add conditions and configure them.

NOTE: The Custom Selector Creation window you access from the Selectors window is almost identical to the one you access from the Browser. The only difference is that there isn't an Apply button because the Selectors command is not a part of a backup, archiving, or retrieval procedure.

Creating a Custom Selector from Highlights

The Save Hilites command in the Browser menu creates a Custom Selector that remembers which files and folders were highlighted at a particular time. This command allows you to make a Selector out of arbitrary manual file selections.

Highlight files in the Browser, and choose Save Hilites from the Browser menu. The following dialog box appears:

Choose the selector options:	ОК
● Files ○ Files & Folders ○ Files & Folders, Enclosed	Cancel

The Save Hilites dialog box

Select an option:

- Files selects only highlighted files.
- Files and Folders selects highlighted files, highlighted folders and the first level of files within highlighted folders.
- Files and Folders, Enclosed selects highlighted files, folders and all their enclosed files and folders.

Click OK. A dialog box to name the Selector will appear. Type the name you want in the text box and click Save, and the Browser reappears.

The Selector you created will now appear in all of the popup menus. You can use this Selector just like you would use any other custom Selector.

Custom View Formats

A view format is the way file and folder information is presented in the Browser's file list. Retrospect has several view formats built into the application. The View submenu in the Browser menu allows you to display the Browser's files and folders in different ways.

Custom view formats let you determine exactly what information will appear, and where it will appear for each listing. Custom view formats allow you to display only the information you need, in the configuration that is most convenient for you.

The View Formats command in the Config menu lets you modify existing view formats or create new ones. The following section describes how to use the View Formats command.

Using The View Formats Command

When you choose View Formats from the Config menu, the following window appears:

Diew For	nats Energy P
Default Extended Icons Pathname Privileges Small Icons Technical	<pre> New Duplicate Modify Clear </pre>
Rename Default	

The View Formats Window

The View Formats Window contains the list of Retrospect's standard View Formats. You can create new formats or modify the existing ones. You can also copy an existing format and modify the copy.

To add a new view format, click New. "Untitled" will appear in the list. Type the name you want to give the format in the text box, and click Rename. The new view format will be blank. To add fields of information, click Modify, and the View Format Editing window will appear. See the section, "The View Format Editing Window," for instructions. **To modify a view format**, highlight the view format to be modified. Click Modify, and the View Format Editing window will appear. See the section, "The View Format Editing Window," for instructions.

To rename a view format, highlight it in the list, type the new name in the text box, and click Rename.

To duplicate a view format, highlight it in the list, click Duplicate, and "Copy of..." will appear in the list. Once the duplicate appears in the list, you can rename and modify it.

To delete a view format, highlight it in the list, click Clear, and the format will be removed from Retrospect.

The View Format Editing Window

This section describes how to use the View Format Editing window to create, arrange, and size the information fields in a format.

Each view format has three layers that combine to make up its appearance in the Browser file list. When you create a custom View Format, you add information fields separately to the file, folder, and background layers. The Editing popup menu allows you to edit the file, folder, and background layers separately.

File and folder layer information will appear in their respective items in the Browser file list. The background layer information will appear in both file and folder items.

The View Format Editing window looks like this:

NOTE: If you delete a standard View Format, the only way to retrieve it is to throw away the Retro.Prep file in your System Folder. If you throw away this file, all of your custom View Formats will be deleted.



you wish to work on using the Editing popup menu. Then, select a field type from the New Field menu. After the field appears in the editing area, you can use the options described in the section, "Manipulating Fields."

The New Field items are:

- **Box Graphic** is a square or rectangle in which to place patterns, graphics, or color.
- Date can be the creation, modification or backup date in your choice of configurations.
- Icon gives you the choice of either the normal file, folder or application icon, or a small generic icon.
- **Kinds** can be the file kind, creator kind, maximum info, type, or creator.
- Name can be the filename, pathname, owner name, or group name.

NOTE: A view format must have a filename field in its file layer to appear in the Browser menu.

- Sizes gives you the choice of on disk, logical, resource fork, or data fork size, with adjustable formats.
- Text provides a box in which to type comments or annotations.

Manipulating Fields

To move a field: Click the center top of the new field. An "arrowed" cross will appear. Click on it and drag the field to the desired location.

The **Grid** check box constrains the movement of all items in the editing field to increments of four pixels. When the box is not checked, fields can be moved one pixel at a time.

To back places the currently highlighted field behind all others so its information will be drawn behind the other fields. Return a field to the front by clicking on it. (Last field clicked will remain in front.)

Remove deletes whichever field is highlighted.

To size a field: Click on the dark square in the lower right corner. A diagonal arrow will appear. Click on it and drag to the desired size.

The **Position** and **Size Indicator** appears as you drag a field to change its size. A field's coordinates are measured in pixels from the top left corner of the Format Field. Changes to both size and location are shown as you drag the arrow.

The **Top**, **Bottom**, **Left**, and **Right** check boxes draw borders around the currently highlighted field. Highlight the appropriate field and check which sides of it should have a border.

The Always, Marked, and Selector, radio buttons control when a field appears in the Browser file list. Highlight a field and select one of the following radio buttons:

- Always indicates the field always appears.
- Marked means the field only appears when the item is marked.
- Selector means that the field appears when the item matches a Selector you choose from the Selector popup menu. (The Selector popup menu appears when you click this radio button.)
- The Not check box is used in conjunction with one of the options above to draw the field for items that are not marked or that do not match the Selector. You can temporarily remove a field from a view format (without deleting it) by checking this box and clicking Always.

The Resize Menu

Resize is a pop-up menu allowing you to determine the various positions each information field will take relative to the format field Highlight the field to resize; click on the menu, drag to the appropriate item and release.

The Resize items and how they position the fields of information are:

- Fixed keeps the field in one place relative to the format field's left edge. For example, if you create an Icon field that is Fixed, all icons will be aligned in a column regardless of folder and file hierarchy (just like the icons in Retrospect's "Extended" view format).
- Slide positions the right edge of the field relative to the format field's right edge. For example, the "file type" field in Retrospect's Default view format has a Slide position.

- Indent positions the left edge of the field relative to the format field's left edge, with an indentation. Each decreasing level of hierarchy is indented once more than the previous level. For example, the Folder icon in Retrospect's Default view format has an Indent position.
- **Stretch** stretches the field so its left and right edges are placed fixed distances from the left and right edges of the format field. The field shrinks and grows with the resizing of the format field.
- Ind-Str combines Indent with Stretch.
- Center positions the field relative to both margins in the format field. The field shrinks and grows proportionately to the resizing of the format field.
- **Repeat** indents and repeats the information field. Each time the field is indented, its information is displayed again.

The Text Menu

The Text menu appears in the menu bar when the View Format Editing window is open. It lets you choose the font, size, and style for text information fields. It also lets you add color and text alignment to any information field.

The font, size and style options will be whatever is available in your system. The Color submenu consists of the standard Macintosh Finder colors. You can also select a new color using the text menu. New colors appear in the Color submenu when you select them. If a new color is not used, it will be replaced in the submenu by the next new color.

Any field of information can be colored. To color a field, highlight the field and choose the appropriate color from the Text menu. You can change the background color in any field by holding down the option key while you choose a color.

Seeing Your View Format as You Create it

To see the changes or additions you make to a view format while you're editing, you can keep a Browser window open and select the format being edited from the View Submenu of the Browser menu. (Remember, in order for a view format to appear in the View submenu, it must have a filename field in the file layer.)

SPECIAL FEATURES

CHAPTER 11

The special features in Retrospect can be used during an archiving or retrieval procedure or as separate functions at any time. Use them to facilitate Retrospect's procedures, get information, prepare media, manage files, and maintain Archives.

Using Subvolumes

A Subvolume is a folder you define as a volume to be used as a Source or Destination volume for Retrospect functions. You can define a Subvolume on any volume that appears in the Retrospect Source or Destination lists.

Using a Subvolume minimizes memory usage and scanning time, and is particularly useful if you wish to restore files to a volume you do not wish to completely erase. You could define a Subvolume on a file server and back up file from or restore files to it. You could also create a folder on your hard disk called "Backup Folder," define it as a Subvolume, and create a script that would back up that folder.

Follow these steps to define a folder as a volume:

- Highlight the parent volume in the Source list.
- Click Subvolume. A Macintosh directory dialog box appears.
- In the directory, highlight the folder you want to define as a volume.

Defining a Folder as a Volume Mac Trac II	
 □ Applications □ Files □ Hypercard f □ Retrospect □ System f □ Telcom f □ Utilities □ Cancel]

Defining a Folder as a Subvolume

• Click Define.

The Source window will reappear with the folder you defined highlighted in the list.

Source	Archive Select Optic	Backu ns	ip 	Neнt
Choos	e the Source(s), t	hen click "Next"	ı	
	Files	69.6 M used	on "Mac Trac II" 🏠 5,693 K free	Forget
	Mac Trac II	69.6 M used	SCSI 0 5,693 K free	Subvolume
ഫ്	Server	File Serv	ver : DantzServer	Rename
	Larry	140.2 M used	6,735 K free	Erase
			ŀ) [<u>D</u>

The Subvolume in the Source List

Retrospect treats a subvolume the same as any other volume.

NOTE: If you use both a subvolume and its parent volume as Sources for the same Archive, they will be treated as separate entities. The corresponding files and folder structure will not be correlated either in the Archive or when retrieved.

Preferences

Preferences lets you set execution options and other preferences in addition to the standard and/or extended options in the Options windows. When you choose Preferences in the Config menu, the following window appears:

Retrospect O	ptions:	ОК
Execution:	☐ Fewer Safeties ☐ MultiFinder: Pause in Background ⊠ Auto Format Disks	Cancel
Auto- execute:	— © Quit Retrospect when done O Shutdown when done O Stay in Retrospect D Avoid stopping on Errors	SCSI Protect

The Preferences Window

The Preferences options are:

- Fewer Safeties prevents various confirming alerts from appearing during a procedure. This speeds up the archiving procedure.
- **MultiFinder: Pause in Background** automatically pauses a procedure if Retrospect is in the background under MultiFinder. You must bring Retrospect to the foreground and click Continue in the status window to complete the procedure.
- NOTE: Tape performance in particular may suffer if you are running Retrospect in the background, reducing the responsiveness of your foreground application at the same time. Use this preference to avoid that problem.
- Auto Format Disks activates Retrospect's automatic format operation for blank 3.5" disks being used for the first time. Auto format occurs when a disk is inserted during execution.

USE 1.4 MB DISKS WITH CAUTION! They appear blank in 800K disk drives and may be automatically erased and formatted by Retrospect when this preference is checked.

• Quit Retrospect when done quits the application when an automatic execution is completed and nothing else is scheduled

for the next 2 hours. If a script is scheduled to execute after the 2 hour look-ahead time, Retrospect will re-launch at the appointed time.

- Shutdown when done shuts down your Macintosh immediately after an automatic execution is completed and nothing else is scheduled for 2 hours. If another script is scheduled to execute after the 2 hour look-ahead time, it will not be able to until you restart your Macintosh.
- **Stay in Retrospect** remains in Retrospect after the operation is complete.
- NOTE: You can set scripts to execute just minutes or seconds apart from each other. If one script is executing when another is scheduled to start, the second script will wait for the first to finish and then begin.
- Avoid Stopping on Errors allows you to bypass any error dialogs that would normally halt unattended procedures. All errors will still be recorded in the Log.
- SCSI... Displays device versions and SCSI information. Allows you to set Retrospect to ignore the device at a particular SCSI address. Use this option when you want Retrospect to avoid accessing a device.
- **Protect...** Allows you to set a password to prevent others from using Retrospect at your Macintosh.

The next three sections in this chapter describe Retrospect's file, volume, peripheral device, and Archive management capabilities that provide for complete management of your files.

Special Browser Functions

In addition to marking files, a Browser can be used to perform file management functions. These functions can be performed in a procedural Browser or a stand-alone Browser.

Printing File Lists

You can print a hard copy of any Browser's file list for reference. Choose the Print command in the File menu and print as you do in other Macintosh applications. Retrospect automatically prints in columns, as many as will fit on a page. Use the Reduce/Enlarge option in Page Setup to increase or decrease the columns and number of items on a page. You can change the file and folder information that is printed by changing the view format in the Browser.

Use this function to keep a hard copy of the files marked to be archived. To do that, mark the files in the archiving Browser and choose Marked Fldrs-Files in the Show submenu. When the new list appears showing only the files and folders to be archived, print it as described above.

Printing from a Retrieval Browser yields a file list of the session being displayed. If you want a list of everything in the Archive, set the Retrieval Search Parameters to All sessions, All files, All versions, and Replace Results and click Apply. Then print the file list that appears in Results.

Deleting Files from a Volume

To delete files, highlight them in the file list and choose Delete in the Action menu. The following dialog box will appear:

```
Delete which highlighted items?
```

- Highlighted files only
- O Highlighted files and empty highlighted folders



The Delete dialog box

Choose whether folders made empty should remain or be deleted as well and Click OK. The appropriate items will be removed from the Browser and from the Source. Files can be deleted with an archiving Browser or a stand-alone Browser.

USE WITH CAUTION! Using this command is the same as dragging the file to the trash can on your desktop and choosing Empty Trash.

Volume and Device Management

With Retrospect, you can access both desktop volumes and peripheral device media from any point in the application.

Volume Management

Volumes in the Windows menu lets you manage volumes that appear on your Macintosh desktop from anywhere in Retrospect.

When you choose Volumes, the following window appears:

		Browsen	~-1	
Sele Sele Brou				
Volume	B\$			
ráS1	Admin	File Serv	er : Sales/Mktng ᅌ	
	Launa R.	48,4 M used	15.0 M free	Unmount
	Mac Trac II		SCSI O	Subvolume
		69.5 M used	5,829 K free	
ſΩ	Server	File Serv	er : Sales/Mktng	Rename
	Laura R.	142.5 M used	4,343 K free	<u>(</u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u> <u></u>
			ন্য	

The Volumes Window

All the local and server volumes and all the folders defined as volumes will be listed. The volumes window looks like and performs the same functions as the Source window.

NOTE: If a padlock icon appears next to a volume in the list, that volume is locked and must be unlocked before you can make any changes to it.

Peripheral Device Management

Devices in the Configuration menu lets you manage peripheral devices that do not mount on your desktop, just as the Volumes command gives you access to mountable volumes. Choose Devices anytime you want to access peripheral device media or get information on Archive members using that media.

Use Devices to prepare archiving media ahead of time. Preparing media ahead of time helps to insure successful unattended archiving. Retensioning tape is recommended any time the tape

has not been used in a long time or if the environment (especially the temperature or humidity) has changed significantly.

When you choose Devices, the following window will appear:

	ble devices	K	
20	1-Daily Archive Ready Irwi	in DC 2000, SCSI 4	(E)ect
নিত্রী			Retension
	No media	Teac 45S2, SCSI 5	
			£rase
			format

The Devices Window

Each of the devices currently connected to your Macintosh will appear in the list. The buttons will be greyed until media is inserted in a device and highlighted in the list. A button will also be greyed if its function does not work for the highlighted media.

The buttons and their functions are:

- Eject unloads tape from its drive; ejects optical disks.
- **Retension** runs tape one complete pass both forward and backward to even its alignment and tension.
- Erase conditions media to be reused; usually takes very little time.
- Format formats media for use; entails a complete pass over the media and can be time-consuming.

Some devices can format the same media in more than one way. In those cases, a special dialog box to choose the format will appear before naming. If a dialog box appears for format type and you're unsure which format to choose, please refer to the information on your device in the Release Notes.

Archive Management

The two parts of a Retrospect Archive, the media and the catalog, need to parallel each other, file for file, at all times. Rebuilding the catalog synchronizes the two parts. Verifying checks the files in an Archive to be sure each reads properly. In addition, you can compare an Archive to its Source to find out which files are on one and not the other, or which files have changed.

Rebuilding an Archive Catalog

The Rebuild Catalog command in the Action menu uses the information on the Archive media to recreate a missing catalog or update an out-of-date catalog.

NOTE: If the catalog and the media don't correspond, the Rebuild Catalog alert will appear after you click Execute Now.

Rebuilding a Missing or Out-of-Date Catalog

Retrospect will consider a catalog missing if it was renamed in Finder, or was removed or deleted and is truly missing.

Follow these steps to recreate a missing catalog:

• Choose Rebuild Catalog from the Action menu. This dialog box appears:



Choosing the Rebuild Operation

- Choose the desired operation. You will be asked to choose the catalog or Archive, depending on which operation you selected:
- When the catalog or Archive appears in the list, highlight it and click Execute Now. A media request appears.

- Insert the Archive's media members as requested. Retrospect will read each in turn and rebuild or update the catalog. A status window appears during the process.
- When you have inserted all the members, click Missing. The Missing Member dialog box will appear.

Are there any more cartridges?	Yes
Yes – Mark "4-PBJ Archive" missing and continue No – This operation is complete	NO
	Cancel

The Missing Member dialog box

• Click No to indicate all the Archive's members have been read.

A final status window will appear to show how many files were recataloged and how long it took. Unreadable files will not be listed in the new catalog.

Verifying the Files in an Archive

The Verify command in the Action menu reads each archived file in its entirety, then notifies you if any part of a file is not readable. Use Verify to ensure data integrity: if an archived file is no longer readable, archive another version of it. Choose Verify from the Action menu, highlight the Archive you want verified, and click Execute Now. During verification, a status window tracks the number of files verified and how long it took.

Verify	
1 ,076 Files	Pause
40 Files	
	Cancel

The Verification Status Window

If there are discrepancies, an error Browser is created to display all the archived files that couldn't be verified. Use the copy and paste commands to transfer the highlights from the Error Browser into an archiving or stand-alone Browser.

Comparing the Archive to the Source

Compare in the Action menu compares the files in an Archive to the files on the Source volume. This can be useful for virus screening or detecting corruption.

For the comparison to be successful, the Archive and the Source must have the same folder structure.

To compare an Archive to a volume:

- Choose Compare from the Action menu.
- Choose the Archive and click Next.
- Choose the Source volume with which to compare the Archive and click Next.
- Mark the files you want compared and click Next.
- Execute the comparison.

You will be asked for each media member in turn. If a member is missing or you've inserted the last media member, click Missing in the Media Request window.

The compare Browser will appear when the operation is finished.

Run :			O files, C
	🖒 📼 Run		0
	D Desktop	84 K	
	🗀 HyperCard f		
	D Home	74 K	(HyperCard 1.2.1)
	🗀 System Folder		
	D System	1008 K	(System)
	🗀 Uniform '90		
	🗅 New		
	🗋 The Wall	16 K	PICT file
	🗀 Pandora Project		
	🗋 Truax Demo	26 K	(MacDraw II)
	<u>7</u>		

The Compare Browser

Any files on the Source that are different from those in the Archive are reported in the Compare Browser.

Compare Options

There are two options in Compare's execute window you can employ. Their default setting is off.

- Check exact Resource Fork (very picky) does an extremely detailed comparison between the Archive and Source files' resource forks. Files with discrepancies will be listed in the Compare Browser, although such discrepancies normally do not affect the files' data.
- NOTE: Check exact Resource Fork (very picky) is only useful to compare the file in the Archive to the exact file it was copied from, on the original Source volume. If you compare a copy of the same file from a different source volume, you will see compare errors if this option is checked.
- **Report missing files (not on volume)** reports files in the Archive but no longer on the Source volume by placing a diamond next to them in the Compare Browser.

Making a Copy of an Archive

Archive Copy lets you transfer some or all of the contents from one Archive to another. Use Archive Copy if you want to change the media on which your files are stored, back up an Archive or create a new Archive containing only certain files from an existing Archive.

NOTE: Archive Copy does not copy any Snapshots created during a backup or archive.

Copying one Archive to another requires a separate drive for each Archive, even if they use the same media type. If you don't have separate drives, copy temporarily to a Combined File Archive on your hard disk, then copy back again to the original drive.

To copy an Archive's contents to another Archive:

- Choose Archive Copy in the Action menu.
- Choose the Source Archive.
- Choose (creating a new one if necessary) the Destination Archive.
- Mark the files you want copied (double-click the volume name in the file list or apply the Standard Selector "§ All files" if you to transfer the entire Archive).

• Execute the copy.

You can use the Browser during Archive Copy to selectively transfer files to the new Archive. For example, if you've archived every week for a year but only want to keep the files archived in the past six months, follow these steps.

- Choose Archive Copy in the Action menu.
- Choose the Archive with the files you want to transfer. Click Next.
- Create a new Archive for the transferred files. Click Next.
- Set the Search Parameters for: All versions, a session range spanning the last six months, Replace Results, and § All Files. Click Apply.

🗳 File		indows
	n Selector 1 Parameters	nive Copy Apply Cancel
Search: Select:	 All sessions Current session Session range: Current Results Custom Selector § All files 	Fri, Dec 1, 1989 Fri, Jan 5, 1990 Fri, Feb 2, 1990 Fri, Mar 2, 1990 Fri, Mar 2, 1990 Fri, May 4, 1990 Fri, Jun 1, 1990 Fri, Jun 6, 1990
Find:	○ All versions ● Only most recent	Fri, Aug 3, 1990 Fri, Sep 7, 1990 🖓
Mode:	○ Add to Results ● Replace Results	Clear Results

Setting Search Parameters for Selective Transfer

• Click Execute Now.

Whenever you click Execute Now in Archive Copy, Retrospect will ask for each media member in turn, first of the Source Archive and then of the Destination Archive, alternating between the two until all files have been read and copied.

Session information and folder structures are copied intact to the new Archive.

Fast Add Disks

Fast Add Disks quickly archives information on Macintosh Disks to other media. Any type of mountable Macintosh Disk media can be the Source; anything *but* Macintosh Disk media can be the Archive.

Choose Fast Add Disks in the Action menu. The Fast Add window will appear:

Соп	Fast Ad	d 	Execute Now
Add a	series of disks to which Archive:	~	
F	Applications Archive		Create New
	Last session: Weekly	0 K free DC 2000	Open Other
	Last session: Tue, Oct 2, 1990 11:51 AM	28.9 M free	Release
i			Archive Info
		小	þ

The Fast Add Window

Create or open an Archive to store the disks' files and highlight it in the list. Compression is the only option available for Fast Add. Select it, if desired, and click Execute Now. The following request will appear:

Fast Add	
Please insert disk to add to archive	
	Pause
	Stop

The Insert Disk Request

Insert the first disk that has files to be archived. Scanning and archiving begin automatically. A status window tracks the progress. When everything on the disk has been copied, the Archive catalog will be updated and the disk ejected.

When the media request reappears, insert the next disk. When all the disks have been archived, click Cancel. This alert will appear:

Really stop execution?	
	No Yes

The Stop Archiving Alert

Click Yes to end the Fast Add procedure. Once the files have been copied, the Archive functions exactly the same as any other Retrospect Archive.

Archive Options

You can change the options for a particular Archive by highlighting it in the Archive list, clicking Archive Info, and then clicking Options. (This is not the same as the Options dialog box described in Chapter 7, "Options and Execution.") All options are not available for all Archives. If the Options button is dimmed, it means that none of the options are currently available.

Password-Protecting and Encrypting an Archive

By checking the Encrypted check box in the Archive window when you are creating a New Archive, you can password protect an Archive and encrypt it. Whenever you use this Archive, you will have to enter the password. When you click Encrypted, the following dialog box appears:

Select the encryption type:
 Password Only (no encryption) SimpleCrypt (fast) DES (more secure)
Cancel OK

The Encryption Type dialog box

• Choose an Encryption type and click OK.

The new Archive appears highlighted in the Archive list. Whenever this Archive is used, the password must be entered unless you select the Remember Password option as described below.

Using an Encrypted Archive in Unattended Operations

For unattended operations, you must select the "Remember Password" option, since the password must be supplied in order for the Archive to be used. To select this option:

- Highlight the Archive in the Archive list and click Archive Info.
- Click Options, and select Remember Password.

NOTE: The Options button may be dimmed if you did not already set the password for the Archive.

The password will be stored in your Retro.Prep file. Whenever you access the protected Archive with your copy of Retrospect, you will no longer have to enter the password. If another copy of Retrospect tries to access this Archive, the password will be required.

APPENDIX A

TROUBLESHOOTING

Retrospect has undergone extensive development and testing to minimize the occurrence of problems. Should difficulties arise, however, Retrospect displays informative messages to help you resolve the situation.

If you encounter a problem, first read the message displayed when you choose Log from the Windows menu, then choose Help from the Windows menu and check the Error Message section. "Error Messages" lists and explains the messages that can appear in the Log. Often the explanation will be all you need to solve your problem.

If, after checking the Log and the on-line help, you are unable to resolve the problem, try shutting down, turning off, and then restarting your Macintosh. You might also want to try running another program to see if the problem persists and is therefore unrelated to Retrospect.

If you still need help, please call Dantz Development Corporation Technical Support at 510/849-0372. When you call, please have your Retrospect serial number available. Also please write down any error messages you have seen so technical support will be able to help you more readily.

This appendix details the most common problems that may arise during the course of normal Retrospect operation and the best way to deal with them. Often there are simple solutions to these situations that will save you time.

Errors during Automatic Execution

If you schedule a script to run using the calendar and errors occur, the following message appears the next time you start up your Macintosh:



When this occurs, launch Retrospect and choose Log from the Windows menu. Any errors that occurred are listed along with a record of the successful operations. Choose Help from the Windows menu and check the Error Message for an explanation of the messages that can appear in the Log.

If a power failure occurred or the Macintosh was shut down improperly during the backup, the following message appears the next time you start up your Macintosh:



From Retrospect: Automatic Execution unexpectedly terminated. (power failure? system crash?)

This error means that the scheduled script failed because the Macintosh was unplugged or turned off while running, or because a System error occurred during the operation. You can run the script by choosing it from the Action menu, or reschedule it with the calendar.

Compare Errors

If you perform a backup or archiving session with the Verification option on and errors are reported, this could mean that some files changed during the backup process or that there may be a communication problem on your SCSI bus.

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Often, when you run under MultiFinder, files on your source volume may change due to other actions you carry out while the backup is running. These errors do not necessarily mean there is a problem. Retrospect is simply reporting that the files are now different from when they were backed up. Performing an incremental backup will cause Retrospect to back up these files again.

On the other hand, if you know that you or someone else did not change the files that generated errors, then you may have a problem on your SCSI bus that causes data transfer errors. Most often this type of error is generated by a problem on your SCSI bus. See the section "SCSI Termination" for more details about how to track this type of problem down.

No Files to Copy

The message "No files to copy" appears when you are performing an incremental backup or archive and none of the marked files have changed since the last backup or archiving session. If you wish to copy the duplicate files into the Archive, you can deselect "Don't add duplicates to Archive" in the Options window. You can also mark different files to be archived.

Out of Memory

There are circumstances in which your Macintosh might not have enough memory to complete a Retrospect operation. One of the most common is searching an extremely large Archive to mark files for retrieval. In that case you will get an "Out of memory, try more selective search criteria" alert and you'll need to segment your retrieval using session ranges or a combination of Selectors.

Other situations where you might get a "..not enough memory..." alert include scanning a large Source, executions involving a very large number of files, and having several applications and/or windows open. Try closing unnecessary windows, removing INITs from your System Folder, or increasing the application memory size for Retrospect. You can also define a folder as a Subvolume on the Source and scan the Subvolume rather than the entire Source.

Virus Alert

If you run with a virus protection utility, you may get an alert after checking the Install Startup INIT option in the Calendar window. The alert appears because Retrospect adds this INIT to the Retro.Startup file in your System Folder. If you get an alert, read the message carefully. If it suggests that Retrospect itself—as opposed to the Retro.Startup file—is being modified, do NOT give permission and check your hard disk for viruses. Otherwise, adding the Calendar INIT to the Retro.Startup file is a normal operation.

Bad Archive Header Found

If you get a "Bad Archive Header found" message, it is most likely due to improper SCSI termination or bad media. Retrospect reports a bad header when it has trouble reading an archived file. If you see this message, use the Verify command in the Action menu to determine the extent of the media corruption. Verify does an extremely detailed reading of all the files in the Archive, then lists the ones it could not verify. See the section "SCSI Termination" for more information.

Archive Media Missing

If a media member becomes lost or damaged, check Missing when the Members window appears. When a member is checked as missing, Retrospect puts a diamond (the Archive Flag) next to the file in the Retrieval Browser. If the member is recovered later, you can uncheck its missing status.

To find out which files are on a missing member, open a Retrieval Browser for the Archive catalog after you have designated the member as missing. When the file list is displayed, a diamond will appear next to the missing files. To get all the missing files into Results, set the Search Parameters as follows: All sessions, All versions, 'Archive Flag' Selector, and Replace Results. Click Apply. Retrospect searches the Archive, marking the files with the Archive flag and listing them in Results.

Retrospect can copy files on missing media members back into the Archive to the extent that the files are still on your hard disk or in another Archive. This is one instance when keeping a second copy of files that have been moved to an Archive would be essential.

The missing files still on your hard disk can be re-copied to the Archive, along with all the other Source files that have changed, in one quick procedure using the standard Selector 'All files.'

If the files are in a second Archive, they can be re-copied to the first Archive using Archive Copy in the Action menu.

To quickly copy *only* the missing files from either a hard disk or another Archive, copy the highlights from Results in the retrieval Browser and paste those highlights into the appropriate archiving Browser, then mark the highlighted files and execute.

Catalog Missing or Out-of-Date

In order to avoid missing catalogs, store them directly on your hard disk. You can choose to store your catalog on any disk that is not an Archive member (except if you are making a Combined File Archive), but storing it on your hard disk is strongly recommended. Keeping at least one current copy of the catalog file on another disk is also recommended.

If, in spite of your precautions, all copies of a catalog are deleted or lost, Retrospect can rebuild it using the Rebuild Catalog command. All file information, including session comments, will be recreated in the new catalog.

You will get the message "Catalog out of sync with archive" if the catalog does not correspond file-for-file with the media. This could happen if the power was lost or your Macintosh was reset before a catalog was completely updated during an archiving session. You can finish updating the catalog with the Rebuild Catalog command.

If there is bad Archive media and certain files can't be read while the catalog is being rebuilt, the message "Resynchronizing (slow)" will appear in the Rebuild Catalog status window. This process may take awhile. Files that cannot be read will not be added to the catalog.

Device Not Responding

If, when you are creating a new Archive, Retrospect does not display the media type for your peripheral device, choose Devices in the Configuration menu. All compatible devices currently connected to your Macintosh will appear. If yours does not appear, quit Retrospect and perform the following:

- Check that each device is plugged in and turned on.
- Check your SCSI cable connections for loose or disconnected cables.
- Check that each SCSI device has a unique ID number (0 through 6).
- Check your SCSI termination.

NOTE: You must shut down and turn off your Macintosh before removing or rearranging SCSI cables connected to it.

Launch Retrospect. If your device still doesn't appear in the Devices window, it may not be compatible with Retrospect. Check the Release Notes for a list of the currently compatible devices. If your device is not listed, contact Technical Support for the status of Retrospect compatibility with your device.

If you still can't get your tape drive to show in Devices, open the Preferences window and click on the "SCSI..." button. Retrospect then lists all the the devices that it can see on the SCSI bus. Retrospect purposefully ignores any device that has a "driver" installed for it, such as a hard disk or scanner. This means, however, that Retrospect will ignore any tape drive that has a driver installed, since having more than one application talk with one device at the same time can cause major problems. If a driver is installed for your tape drive, it may mean that an INIT is already reserving the tape drive for use. If this is the case, try running without any INITs installed to see if this makes the tape drive show up in Devices. If this allows the drive to appear, try to determine which INIT is causing the problem, and remove it.

Power Failure/Reset

If the power goes off or the Reset button on your Macintosh is pressed during a Retrospect operation, your entire archiving session is not necessarily lost. First, use Rebuild Catalog to update the catalog with the files that were successfully copied to the Archive. After updating the catalog, execute the exact same archiving procedure to finish copying the rest of the files.

The number of files that remain to be copied or need to be recopied to the Archive will depend on the type of media you are using. Streaming tape devices and WORM drives will recover up to and including the last file copied in its entirety. Macintosh Disk Series and block-addressable tape devices, however, will recover only the current session files on media that was *not* in the drive at the time of the power failure/reset. Files from previous sessions will not be affected in any case.

Internal Consistency Check Errors

Retrospect contains many internal checking mechanisms to ensure that your data is dealt with properly. These checks are called "Internal consistency checks," and you should rarely, if ever, see any reference to them. From time to time when a problem has occurred, Retrospect will put up a dialog reporting that a check has failed. If this happens to you, make a note of what the error code is, and give Dantz Technical Support a call.

If you are unable to contact Technical Support when the problem occurs, you may be able to resolve the problem yourself. First, try the same sequence of actions again to see if the problem recurs. If not, then it was most likely due to a one-time corruption in memory. Second, if the error is reported when you launch the program, then it means that the Retro.Prep file in your System folder has become corrupted. Simply remove it, and Retrospect will create a new one. If you wish to preserve any scripts and Custom Selectors you created, you can retrieve a Retro.Prep file from a previous backup. If the error occurs at some other point in the program and you can reproduce the occurrence, contact Technical Support for more extensive troubleshooting.

Displayed Tape Capacity Incorrect

On some streaming tape drives that can use various tape capacities, the drive will not inform Retrospect of the true tape capacity. This will not cause any problems when you back up. However, you may wish to have the proper capacity displayed for your reference. To do this:

- Highlight the Archive in the Archive list and click Archive Info.
- Click Options, select Override Tape Capacity, and enter the proper capacity.

SCSI Termination

When using SCSI devices, it is crucial to proper data transfer that the SCSI bus be properly set up. Problems on the SCSI bus can lead to data transfer errors and/or data corruption. There are many factors that enter into the equation including cable length, device order, and most importantly, termination.

Terminators are resistors that regulate the electrical signals on the SCSI bus. You can damage your Macintosh and your other SCSI devices if there are more than two terminators on your SCSI bus. If there is more than one SCSI device and only one terminator, data reliability could suffer. If there is no termination, none of the devices will work.

If there is only one SCSI device (not including the Macintosh) on the SCSI bus, it must be terminated. If there are two or more SCSI devices on the SCSI bus, the first and last ones must be terminated.
Internal hard disk drives normally have built-in termination, and a few other SCSI devices have built-in termination. Check the manuals for your devices to determine whether they are terminated. If they are not, you may need to attach external terminators as appropriate.

Many data transfer errors reported by Retrospect are caused by running a Macintosh with one or more SCSI devices turned off. For example, running your Macintosh with a scanner or CD ROM drive connected to the bus but turned off can cause subtle data transfer errors that only show up when you do a backup with Verification turned on. As a general rule, it is important to leave all devices powered up when you have your Macintosh turned on.

If you are getting Compare Errors with Retrospect that cannot be explained by actual changes in data that you or other users have made, then often it is helpful to simplify the configuration of the Backup Macintosh SCSI bus. If you have several devices connected, often you can track down a conflict between the devices by finding a simpler configuration that eliminates the errors. For example, if you disconnect your film recorder and three extra hard disks, and backups work properly, then you should try adding devices one at a time until things fail again. This can help narrow down an otherwise difficult problem.

For more guidelines and assistance in setting up your SCSI chain, please contact your the manufacturer of your SCSI devices, or call Dantz Technical Support.

Retrospect Error Messages

Retrospect Specific Error Codes:		
100	device rejected command	
101	improper request	
102	trouble communicating	
103	unexpected beginning of media	
104	unexpected end of media	
105	unexpected end of data	
106	data overwrite attempt	
107	out of memory	
108	media changed	
109	unexpected filemark	
202	wrong device settings	
203	hardware failure	
204	device busy	
205	no media	
206	media failure	
207	unformatted media	
208	media content unknown	
209	media content damaged	

- 212 media erased
- 217 incompatible format
- 401 selector too deep or circular
- 402 selector empty
- 403 selector error
- 404 password required
- 2783 stopped by user

Apple Error Codes:

- -28 Appletalk/ADSP not installed
- -34 volume full
- -36 i/o error, bad media?
- -38 file not open
- -39 premature end of file
- -42 too many files open
- -43 file/folder not found
- -48 duplicate name
- -54 file is busy/locked
- -108 not enough memory
- -120 folder missing
- -124 server disconnected
- -127 volume corrupted?
- -5000 no privileges



Action

APPENDIX B

Config	Config Devices %D Remotes %R Calendar Scripts %S Selectors View Formats Preferences	 Accesses the media in peripheral devices Accesses desktop volumes Schedules scripts for unattended archiving Edits and creates scripts Edits and creates Selectors Edits and creates view formats Displays execution preferences and other options 	
Windows	Archives %N Volumes %T Session Info Help Log %L Retrospect VOpen Window	 Opens stand-alone Browsers Opens stand-alone Browsers Shows comment for session displayed in Browser Displays Retrospect's on-line help Shows the Message Log Brings the Retrospect window to the front Brings other open windows to the front 	
Browser	Show Legend Sort By Reverse Hilite Hilite Marks % Save Hilites % Toggle Folder % Skip Forward % Skip Backward % Mark Hilited %	 Changes the view format in a Browser Changes file list type in a Browser Shows/Hides the Legend of a View Format Sorts flat file lists by name, date, size, kind, or col Reverses/Normalizes the sort order Uses Selectors to highlight files Highlights all marked files Saves current highlights in a Selector for later use Kips forward to the next highlighted file Skips backward to the next highlighted file Marks all highlighted files Unmarks all highlighted files 	
Text	Text Font Style Size Color New Color Align Left Align Middle Align Right	 Sets the font style of a view format field Sets the text style Sets the text size Sets the color Creates a new color Aligns text to the left in a view format field Aligns text to the center Aligns text to the right 	

Standard Selectors

The following table lists the standard Selectors and provides an example of how each might be used.

Standard Selectors	Example of When to Use	
§ All files	Use regularly to back up an entire hard disk.	
§ Graphics files	Use to locate graphics files, which often take up large amounts of space on a hard disk.	
§ Modified in last week	Use to back up a week's worth of changes.	
§ No change in 2 months	Use to see which files have not changed in the given	
§ No change in 6 months	periods of time. Depending on how much room you have on your hard disk, you may want to move	
§ No change in one year	some of these files into an archive to free up space.	
§ No files	Use to mark files manually. No files is automatically used in new scripts.	
§ Only Documents	Use to regularly back up documents. Backing up documents uses less media than backing up all files.	
§ Only Applications	Use to regularly back up applications.	
§ Only System Folder	Use to regularly back up the System Folder.	

Status Symbols

There are several symbols that appear in Retrospect to indicate the status of a volume, folder, file, Selector condition, or Archive member. This section is a list of the symbols, where they appear, and what they indicate.

DIAMOND

Volume Windows	Volume is a member of an open Archive.
Devices Window	Media is a member of an open Archive.
Archiving or Backup Browser* Retrieval or	File is already in the Archive.
Restore Browser*	File is stored on a missing Archive member.
Compare Browser*	File is in Archive but no longer on the Source.

* The standard Selector, "Archive Flag," will mark the files with diamonds in any of these Browsers.

POOF

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Any Browser* Members Window Selector Conditions File is invisible on the desktop. Member has been designated as missing. Condition has been disabled.

* The poof symbol appears in a Browser only when the Extended, Privileges or Technical view format is used.

PADLOCK

Volume Windows
Archive WindowsThe volume is locked.Archive Windows
Any Browser*The Archive catalog is locked.Devices Window
Media RequestThe media member is locked.

* The padlock symbol appears in a Browser only when the Extended, Privileges or Technical view format is used.

HOURGLASS*

Any Browser File is open/busy.

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* The hourglass symbol appears only when the Extended, Privileges or Technical view format is used.

In the Custom Selector Window

In addition to the poof symbol:

- O The condition is another Selector.
- □ The condition matches folders OR "Folders" has been checked.
- The condition matches files.
- Solution Files that do NOT match this Selector condition will be marked.
- Files that do NOT match this folder attribute will be marked.
- Files that do NOT match this file attribute will be marked.

In the Privileges View Format

In addition to the padlock, poof and hourglass symbols:



- You can't make changes to this folder.
- You can't see folders in this folder.

You can't see files in this folder.

These privileges are set for AppleShare files servers with the Get Privileges command in the Finder File menu. The privileges that will appear are the ones that existed when the Server was scanned.

Keyboard Shortcuts

There are several rules that generally apply when using the Macintosh keyboard with Retrospect.

- Pressing the key of the first letter of a button's name will activate that button, unless there is a text field or another button with the same first initial in the window.
- If a text field or list exists in the window, activate a button by holding down the shift and command keys while pressing the letter key.
- If there is a conflict with another button, a letter key won't activate either.
- Navigate through a list with the Up or Down Arrow keys or by pressing a letter key to select the first item in the list with the letter as its first initial.
- Use the Tab key to move between text and date fields in a window.
- Use the Left and Right Arrow keys to move within text or date fields.

In addition to these general rules, there are several functions in Retrospect that can be activated by holding down the command key and pressing a letter key.

These keys and their functions are:

Command~A	Select All	Command~U	Unmark Hilited*
Command~B	Skip Backward*	Command~V	Paste
Command~C	Сору	Command~W	Close
Command~D	Duplicate	Command~X	Cut
Command~F	Skip Forward*	Command~Y	Rescan Disk*
Command~H	Hilite Marks*	Command~Z	Undo
Command~L	Log	Command~1	Go to Step 1
Command~M	Mark Hilited*	Command~2	Go to Step 2

Command~N	New Browser	Command~3	Go to Step 3
Command~Q	Quit	Command~4	Go to Step 4
Command~S	Save Hilites*	Command~.	Cancel
Command~T	Toggle Folder*		

* These commands are only available when a Browser is the active window.

The Retro.Prep File

The Retro.Prep file is automatically created in your System Folder the first time you run Retrospect. As you use and customize Retrospect, the Retro.Prep file stores your configurations. If you throw away this file, all of your configurations will be removed. The next time you run Retrospect, the Retro.Prep file will be recreated, and all Retrospect's default configurations will be used. The Retro.Prep file contains:

- Script information
- Selector information
- Preferences
- Source and Archive information
- View Format information

	The following is a glossary of terms unique to Retrospect or of particular importance to backing up or archiving. You may want to quickly go over all the terms, and refer back to them while using Retrospect.
access privileges	The privileges given to (or withheld from) users to see folders, see files, and make changes to server files. Retrospect will only allow a user to back up files to which he or she has read access. Retrospect will only allow a user to copy files to a server folder to which he or she has write access.
archive (v)	To <i>move</i> files from your disk to an Archive, to make room on your hard disk. You may want to archive files you seldom use before you start a backup routine. Retrospect's Archive function will not delete the original files after copying them to the Archive unless you specify that you wish to do so. Also see back up.
Archive (n)	Retrospect stores all files in Archives. A Retrospect Archive is produced using the Backup or the Archive function. There are two parts to an Archive: the catalog file that keeps track of the files, and the files themselves. There are three general classes of Archives, depending on the Archive media you use: (1) Macintosh Disk Series (for multiple ejectable HFS volumes), (2) Combined File (for a single HFS volume), and (3) Peripheral Device (for non HFS media).
back up (v)	To <i>copy</i> files from your disk to an Archive, such as tape, another hard disk, floppy disks, etc. You should regularly back up your files for safekeeping in case something happens to your disk or any of your files. Also see Archive.
backup date	The most recent time and date a file, folder or volume was copied to the Archive. Retrospect will set this date for volumes, folders, and/or files ONLY if you check the appropriate boxes in the Archiving Extended Options window. Also see "creation date" and "modification date."
Browser	Retrospect's tool that allows you to view the folder and file structure of a volume. You can also use the Browser to see the files and folders stored in an Archive. The Browser allows you to manipulate files and mark them to be copied.
catalog (n)	Retrospect's index of the files and folders in an Archive. The catalog file allows you to mark files for restore or retrieval without having to sort through your Archive media. In a Macintosh Disk or Peripheral

	Device Archive, the catalog file is stored on your hard disk. In a Combined File Archive, it is stored with the archived files.
Combined File Archive	One of the three types of Retrospect Archives; combines the catalog and the Archive in a single Macintosh file. The Archive media must be a single volume that appears on the Macintosh desktop.
condition	In Retrospect's file Selectors, a distinguishing criterion relating to file or folder characteristics. You can choose multiple conditions to make your own custom Selectors. Also see Selector.
creation date	The time and date a file, folder or volume was created. A file's creation date is set when the file is first saved or made. A folder's creation date is set when you select New Folder. A volume's creation date is set any time the volume is formatted. Also see backup date and modification date.
creator code	The four-letter code that represents the creator of a file. For example, all documents created by Microsoft Word have a creator code of MSWD. With Retrospect, you can select files according to creator code. Also see type code.
destination	The storage medium to which files are being moved or copied. While backing up or archiving, the destination is the archive media. While restoring or retrieving, the destination is your disk.
device	Any piece of equipment connected to your Macintosh, like a hard disk, a tape drive, etc. In this manual, the term "backup device" refers to any SCSI device that handles archive media.
disk	Any volume on your desktop from which you can back up or archive files. Usually this is a hard disk, but, it can also be an optical drive or other large capacity volume, or even a floppy disk.
file header information	A file's name, size, and dates (creation date, modification date, and backup date). This information is part of every file, and is also indexed in any Retrospect catalog.
file server	A dedicated computer running file server software, allowing users to share information over a network.
incremental	The type of backup that only copies the files that are new or have changed since the previous backup. Retrospect automatically backs up and archives incrementally unless you specify otherwise.
Macintosh Disk Series Archive	One of the three types of Retrospect Archives; creates a catalog file on your Source disk and creates an Archive on any ejectable media that appears on the Macintosh desktop, such as floppy disks or removable disk cartridges.

marking	Selecting files in the Retrospect Browser to be archived or retrieved. Files can be marked (or unmarked) manually, or they can be marked according to various criteria using file Selectors. In the Browser, a check mark appears next to any marked file. Note: Files that are highlighted in the Browser are not necessarily marked.
Master Script	A script that controls the execution of other scripts. You can run a Master Script that will execute as many scripts as you wish for backing up, archiving, restoring, and retrieving. Also see script.
media	Anything to which Macintosh files can be copied. In this manual, this term refers to archive media.
member	An individual piece of media in an Archive.
modification date	The time and date a file was last changed; this date is automatically attached to the file by the Macintosh. A file's modification date is reset anytime you make changes and save them. Also see "backup date" and "creation date."
Peripheral Device Archive	One of the three types of Retrospect Archives; creates a catalog file on your Source disk and creates an Archive on any media that does not appear on the Macintosh desktop. This type of Archive is used with tape drives.
Remote Macintosh	When using Retrospect Remote, any network Macintosh whose volumes are available for backup to the Backup Macintosh. This can be any Macintosh with the Remote files installed. Also see "Backup Macintosh."
restore	To entirely rebuild a desktop volume from a backup. Retrospect's Restore function automatically erases a hard disk and rebuilds it to the state it was in when it was last backed up.
retrieve	To copy one or more files from an Archive to a desktop volume. Retrospect's Retrieve function will create a folder on the Destination volume and place the retrieved files in it, unless you specify otherwise.
Retro.prep	A file created automatically in your System Folder that stores your preferences and configurations, including all scripts and custom Selectors and View Formats. If you delete this file, all of your customized information will be lost, and default configurations will be restored.

root	The highest level of folders in a data structure. When you double- click a Macintosh desktop volume icon in the Finder, you see the root folders and files.
script	A record of your choices in the four basic Retrospect steps. You can create as many scripts as you wish for backing up, archiving, restoring, and retrieving. Also see Master Script.
Selector	In the Retrospect Browser, the tool to find files that match certain conditions. You can use Retrospect's standard Selectors, or create your own Custom Selectors. Also see Browser.
session	A single backup or archive operation. There can be up to 2400 sessions in a single Archive.
Snapshot	A Retrospect Snapshot is created during a Backup operation to depict a volume's most recent file state. When you restore, the Snapshot automatically scans all sessions in the Archive and restores just the most recent version of each file, so your hard disk is in the exact state it was in after the last backup.
Source	The desktop volume, such as your hard disk or a Remote volume, from which files are backed up or archived.
Subvolume	With Retrospect, a folder you designate as a volume for archive or backup purposes. The folder appears in the Retrospect Source list, and is treated just like a separate volume.
volume	A hard or floppy disk, a partition of a hard disk, a Subvolume, a file server, a Remote Macintosh, or any other data storage medium that can be used as a Retrospect Source.

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