Managing files
from the Monitor

Formcopy formatting

Winchester hard disks are ready to use when they are shipped from the factory. New floppy disks, however, must be prepared, or formatted, for use. Macintosh 3 1/2" disks are formatted automatically when you first insert them. All 5 1/4 floppy disks must be formatted using Formcopy.

Formcopy Display

Formcopy functions

Formcopy contains a list of commands and options. Both are used for copying. Only options are used for formatting. Be sure to set options very carefully, as instructed on the following pages.

To set any option

1. Press the arrow keys to move the cursor to the option.

2. Press the Spacebar until the desired option appears.

For an explanation of the commands, see "Setting Formcopy parameters" in the section "Copying and backing up using Formcopy."

FORMCOPY Format and Copy Utility   version of 1 April 1987

> To issue a command, press the key that represents that command. To change an option, move the cursor over the option and press the space bar.

COMMANDS:

S View source catalog
D View destination catalog
I Interchange source & destination
A Set alternate catalog
Q Quit (return to operating system)

RETURN Initiate Copy

OPTIONS:

Mode: Format

Source: W0 (Winchester disk)
Destination: F0 (Leftmost floppy)

Select: No
Alphabetic: No
Erase: No

Disk format:

Formatting floppy disks

1. Insert the disk to be formatted in the F0 drive.

2. On the terminal, type **formcopy.**

    The Formcopy Display appears.

3. Set the following formcopy options

Mode:	Format
Destination:	F0:
Disk format:	N.E.D.

    > **WARNING:** Be sure to select the correct destination.
    > Formatting destroys all files currently on the selected
    > destination. **Never** reformat your Winchester disk unless
    > someone from N.E.D. specifically tells you to do so.

4. Press Return, type **ok,** and press Return again.

    Messages appear on the screen indicating the progress of the
    formatting. If the disk being formatted has defective sectors,
    they are listed on the screen and you are instructed not to use
    the disk.

    When the formatting is complete, the Formcopy Display
    reappears on the screen.

Note: Disks with defective sectors should not be used.

If you try to copy files to an unformatted floppy disk, the computer
freezes. If this happens, reboot the system by inserting the Winches-
ter bootload disk into the F0 drive and pressing the LOAD button.

You can also use the formatting procedure to reformat an old floppy
disk. This procedure erases all files previously stored on the disk
and checks the disk to make certain it is still good for use.

**Formcopy
Formatting (con't)**

Reformatting a hard disk

You may be told to reformat your hard disk(s) by N.E.D.

- before installing a new software release;
- when installing software onto a new hard disk;
- when you are having trouble reading and writing to a hard disk.

Before reformatting a hard disk, back up everything you do not want to lose. Reformatting erases everything.

WARNING: Never reformat a Winchester hard disk unless directed to do so by someone at N.E.D.

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1. On the terminal, type **formcopy.**

2. Carefully set the following formcopy options

Mode:	Format
Destination:	**W0:** or **W1:** depending on the hard disk(s) to be reformatted
Disk Format:	N.E.D.

3. Press Return, type **ok** and press Return again.

    A special hard disk reformat screen appears. Do not use this screen unless directed to do so by N.E.D.

4. Press Return again.

    Progress messages appear and any defective tracks are listed on the screen.

When the reformatting is complete, the Formcopy Display reappears on the screen.

Note: Defective tracks on hard disks are automatically assigned to a list of tracks not to be used by that disk. The disk can be used without loss of data.

Special hard disk options

Before the hard disk reformatting process begins, a special Winchester reformat screen appears. It contains a list of the hard disks attached to the selected device (W0 or W1). Each disk is preceded by a "select mark" (>).

If directed to do so by N.E.D., change the select mark on specified disks by moving the cursor with the arrow keys and pressing the Spacebar.

1. "Deselect" any disk.

   The select mark (>) disappears.

2. Mark the desired hard disk for a primary format.

   The deselect mark changes to a primary format mark (P>).

WARNING: Do not attempt a primary format unless directed to do so by someone at N.E.D.

Monitor file management

When you enter a Monitor command, you first type in the command and then press Return. The command is not executed until you press Return.

If you misspell a command, a What? message appears on the screen followed by a Ready prompt. Reenter the command.

New—Creating a new current file

There may be occasions when you want to create a new file from the Monitor or erase the current file from memory without recalling an old file to replace it.

■ Enter the command

    new <filename>

A new empty file is opened in computer memory as a temporary working space. The file does not yet exist on disk.

The **new** command is most often used to clear computer memory before returning to the RTP system.

Old—Recalling a file to current memory

To recall a file from the current catalog

■ Enter the command

    old <filename>

The file becomes the current file.

To recall a file from anywhere else in the system

■ Enter the **old** command and the entire treename

    old <device>:<subcatalog name(s)>:<filename>

If the computer cannot find the file, an error message appears.

    File <filename> is not on disk

Check the appropriate directory for the correct filename or file location.

File backup routines

You should take time after every work session to make a copy of each new file on your hard disk and store it on a clearly labeled, formatted floppy disk or tape.

One type of file backup routine involves rotating disks. For example, Monday's backups are made on the first set of disks, Tuesday's on the second. Wednesday's backups are made by writing over the data on the first set, Thursday's by writing over the data on the second set, and so on. This type of backup routine prevents the loss of more than one day's work in the event of a fire, theft or power surge that wipes out your hard disk.

As part of your file backup routines, you can also rename files so that you can store different versions, replace old versions with new versions and erase unwanted files.

At regular intervals—once a week or once a month—you should back up entire subcatalogs from your hard disk onto tape or floppy disk. At this time you can also erase unwanted files and subcatalogs and reorganize the contents of your Winchester.

Backing up the current file

When you back up your current file, you store the file in memory into a catalog on the hard disk or a floppy disk using the **save** command. If the file has been previously stored on disk, you can replace the older version with the current file using the **replace** command. You can save both versions by saving the current file under a different filename. Use the **rename** command to rename the current file. You can also rename a file on disk using the **drename** command (disk rename).

Monitor file management (con't)

Save—*Storing a file*

You can store any file to any location in your system using the **save** command.

■ Enter the command

   save

   A copy of the current file with the current filename is written to the current catalog. If the current catalog already contains a file with the same filename, the following message appears

   File <filename> is already saved

You can also save the file under a different filename.

■ Enter the command

   save <filename>

   A copy of the current file with the specified filename is stored in the current catalog. Do this, for instance, when you want to store two different versions of the same file in the same catalog.

Replace—*Overwriting a file with the current file*

If the current file is already stored on disk, use the **replace** command instead of the **save** command.

■   Enter the command

replace

The stored version on the disk is replaced by the current file.

You can replace any file stored on disk with the current file.

■   Enter the command

replace <filename>

The stored version of the specified file is replaced by the current file.

You can use the treename structure with this command to replace files on other devices and in other subcatalogs.   Both current and stored files must have the same filename and file type.

Monitor file management (con't)

Rename—*Renaming the current file*

You can change the name of the current file.

■ Enter the command

    rename \<filename>

The name of the current file is changed to the specified name. If a stored version of the current file exists on disk, it is not affected.

Drename—*Renaming a file on disk*

You can change the name of a stored file without recalling it to memory.

■ Enter the command

    drename \<old filename> \<new filename>

The old name of the stored file is changed to the new name. This command does not have any effect on the current file, only on the file stored on disk.

You may use the treename structure for \<old filename> with this command to rename files on other devices and in other subcatalogs.

Copying files and small subcatalogs

Sometimes in your backup procedures, you may want to copy a file from one subcatalog to another or copy a small subcatalog from one device to another. You do this by recalling the file or subcatalog into memory using the **old** command and then storing it to disk using the **save** or **replace** commands.

1. Enter the command

    old <treename>

    A copy of the file or subcatalog becomes the new current file in memory. Any information in the previous current file is erased.

    If the file or subcatalog you try to recall is too large, an error message appears.

    Program is too large to process

    In this case you have to use the Formcopy Utility to copy or move the file. (See the section "Copying and backing up using Formcopy.")

2. Enter the command

    save (or **replace**)

    If you want to store the file in a catalog other than the current catalog, follow the **save** command or the **replace** command with a treename.

**Monitor file
management
(con't)**

Copying files and small subcatalogs (con't)

If there is not enough space on the disk or subcatalog, an error
message appears.

No space to save current file

Save the file to another disk or subcatalog. You can also resize a
subcatalog. (See "Resize—Changing the size of a subcatalog" in the
section "Creating subcatalogs.")

If the floppy disk or subcatalog to which you are saving the file or
subcatalog does not have sufficient contiguous space, another error
message appears.

Not enough contiguous storage available

In this case, use the Shuffle Utility to free up the space needed. See
"Utility programs" in the *Reference Guide.*

Unsave—*Erasing a file or subcatalog*

When you copy a file to a new location, you may want to erase it from its previous location. The **unsave** command can be used to erase a stored file from any location in the storage system.

To erase a file or subcatalog anywhere in the system

■ Enter the command

      unsave <treename>

    A designated file is erased from the designated location.

If a subcatalog has been designated for erasure, you are asked to confirm your intentions by pressing Return a second time.

Erasing files and subcatalogs leaves empty spaces on the disk. Since some files and all subcatalogs require contiguous space, collecting these empty spaces into one area of the disk makes more efficient use of disk space. You can repack all the files and subcatalogs in any catalog by "shuffling" that catalog using the Shuffle Utility. (See "Utility programs" in the *Reference Guide* manual.)

Write protecting floppy disks

Once you have copied files onto a floppy disk, you may wish to **write protect** the disk; that is, "lock" it so that you or someone else can't accidentally erase or overwrite a file or files and lose valuable information. Different floppy disks are made in different ways. Refer to the instructions on the floppy disk box for write protecting your disks.

Formcopy file management

When you are working with large numbers of files, you may want to back up or copy groups of files and large sub-catalogs. You do this using the copying function of the Formcopy Utility.

Setting Formcopy parameters

Copying files and subcatalogs to and from any storage device in the system can be controlled by commands and options chosen from the Formcopy Display. An option is set by moving the cursor to the option and pressing Spacebar, as described in the section "The Formcopy Display."

Mode

Copy	Files are copied from source to destination.
Move	Files are copied from source to destination and then deleted from source.
Format	Formats destination disk or tape.
Format and copy	Formats destination disk or tape, then copies files.
Format and move	Formats destination disk or tape, then moves files.

Source and destination

Source and destination options include any storage device attached to your system (W0, W1, F0, etc.) and any subcatalog (CC—current catalog or AC—alternate catalog). Use the commands on the left of the screen to help you set up the catalogs you want.

Setting Formcopy parameters (con't)

Commands

>Type "S" to view the source directory.

>Type "D" to view the destination directory.

>Type "I" to interchange source and destination.

>Type "A" and then a subcatalog treename to include that subcatalog among the source and destination options (AC).

>Type "Q" to return to the Monitor.

Select

>Yes   Allows you to select files to be copied from a directory of the source catalog or subcatalog.

>No   All files from the source catalog are copied.

Alphabetic

>Yes   Files are copied in alphabetic order.

>No   Files are copied in the order in which they appear in the source catalog.

Erase

>Yes   The selected destination catalog is erased before files are copied.

>No   Files are added to the destination catalog.

**Formcopy file
management
(con't)**

Copying files or subcatalogs

You can copy a single file, a series of selected files, an entire subcata-
log or the contents of an entire floppy from one device to another.
You can also copy from one storage device into a subcatalog and
from one subcatalog to another.

1. If copying to a floppy disk, insert the floppy disk into the F0
    drive.

2. On the terminal, type **formcopy** and press Return.

    The Formcopy Display appears.

3. Set the Formcopy options as desired.

4. Press Return, type **ok** and press Return again.

    If the Select option is set to No, messages appear on the screen
    indicating the names of the copied files. Otherwise, the Select
    Option Display appears.

5. Move the cursor to the desired filename.

6. Press the Spacebar.

    The "|" preceding the filename changes to ">."

7. Repeat steps 5 and 6 for each file you want selected.

8. Press Return.

    Messages appear on the screen to indicate that the selected
    files are being copied.

Copying a file or subcatalog larger than 2400 sectors to floppy disks

If the file or subcatalog you are copying is larger than one entire floppy disk, Formcopy will continue copying onto as many additional floppies as are required to hold the file. This is called dumping a file to floppy disks. The following message appears in the upper right corner of the screen.

> Copy file: <filename> to disk 1
> Total disks: [number]

The **Total disks** number represents the number of empty floppy disks required to store the entire file.

When the first disk is full, a message appears at the bottom of the screen telling you to insert another floppy. Label each floppy carefully with the number specified on the screen.

Once the file has been copied onto the series of floppy disks, it cannot be recalled directly into memory. The entire file must be copied back onto the Winchester using Formcopy. Make sure you insert the floppy disks in the correct order as requested by the instructions on the screen.

The Master Timbre/Sequence Storage Disk

The Master Timbre/Sequence Storage Disk contains a timbre file and eight empty sequence files. You can copy these files into subcatalogs or onto floppy disks for storing your own timbres and sequences.

The blank timbre file on this disk is 392 sectors long. Like all timbre files, it has the filename .newdata and holds up to 64 timbres in eight banks.

There are eight blank numbered sequence files with the filenames .sq0data, .sq1data and on up to .sq7data.

You can copy individual files from this Master into a subcatalog or onto floppy disks using the **old** and **save** commands. You can copy the entire disk into a subcatalog or onto another floppy disk using the Formcopy Utility.

*Master Timbre/
Sequence Storage Disk
sequence lengths*

filename	button	sequence directory entry	size in sectors
.sq0data	1	<seq #1>	500
.sq1data	2	<seq #2>	500
.sq2data	3	<seq #3>	250
.sq3data	4	<seq #4>	250
.sq4data	5	<seq #5>	125
.sq5data	6	<seq #6>	125
.sq6data	7	<seq #7>	125
.sq7data	8	<seq #8>	125

Old, save—*Copying a timbre file*

As you work on a series of projects, you may want to place a timbre file in each subcatalog of your system. The subcatalog must be large enough to hold the timbre file (392 sectors) plus the other files of the project.

If you have not already created your customized storage system, see "Files, catalogs and devices" and "Basic storage systems" for instructions.

1. Insert the Master Timbre/Sequence Storage Disk into the F0 drive.

2. Make the destination subcatalog the current catalog by entering the command

    enter <treename>

3. Enter the command

    old F0:.newdata

    Make sure you type the command with the punctuation as shown. The device specifier locates the F0 drive; the period is an essential part of the filename.

    A copy of the timbre file on the floppy disk is placed in memory.

4. Enter the command

    save

    The blank timbre file is stored in the current catalog.

Old, save—*Copying a sequence file*

As you work on a series of recording projects, you may want to place one or more sequence files in each subcatalog of your system. The subcatalog must be large enough to hold the desired sequence files plus other project files.

If you have not already created your customized storage system, see "Files, catalogs and devices" and "Basic storage systems" for instructions.

1. Insert the Master Timbre/Sequence Storage Disk into the F0 drive.

2. Make the destination subcatalog the current catalog by entering the command

    enter <treename>

3. Enter the command

    old F0:.sq[n]data

    using a number between 0 and 7 for n. Make sure you type the command with the punctuation as shown. The device specifier locates the F0 drive; the period is an essential part of the filename.

    A copy of the designated sequence file on the floppy disk is placed into memory.

4. Enter the command

    save

    The blank sequence file is stored in the current subcatalog.

5. Repeat steps 3 and 4 to copy other sequence files into the subcatalog.

Copying the entire Master Timbre/Sequence Storage Disk

You can copy the entire Master Timbre/Sequence Storage Disk into a subcatalog on the Winchester. The subcatalog must be large enough to hold the timbre file and all eight sequence files (2392 sectors), plus any other files of the project. If you have not already created your customized storage system, see "Files, catalogs and devices" and "Basic storage systems" for instructions.

1. Insert the Master Timbre/Sequence Storage Disk into the F0 drive.

2. Make the destination subcatalog the current catalog by entering the command

   enter <treename>

3. Enter the command

   formcopy

   The Formcopy Display appears on the terminal screen.

4. Set the Source option to F0 and the Destination option to CC.

   By default, the source and destination are set the opposite of this. You can interchange the default selections by typing i for "interchange."

5. Press Return, type **ok** and press Return again.

   The Formcopy Display is replaced by a screen that shows each file as it is copied from the Master Timbre/Sequence Storage Disk into your current catalog.

6. When the copying is complete, press Return.

   The Formcopy Display reappears.

7. Return to the Monitor by typing q for "quit."

   The Formcopy Display disappears and the Ready prompt appears.

New—*Creating new sequence files*

Each of the empty sequence files on the Master Timbre/Sequence Storage Disk has a set length. You can create sequence files with varying lengths using the **new** and **set type** commands.

To create a new sequence file

1. Enter the command

    new <sequence filename>

    The sequence filename must be one of the filenames listed on the chart on the opposite page.

2. Enter the command

    set type sync

    The file type is set to "Synclavier," the file type required for the sequence file to appear in the sequence directory in the RTP system.

3. Enter the command

    save, [size in sectors]

    Or, if you want the sequence file stored somewhere other than in the current catalog, use the syntax

    save <treename>, [size in sectors]

    The new file is stored on the disk.

sequence file names	appears in sequence directory
.sq0data	<seq #1>
.sq1data	<seq #2>
.sq2data	<seq #3>
.sq3data	<seq #4>
.sq4data	<seq #5>
.sq5data	<seq #6>
.sq6data	<seq #7>
.sq7data	<seq #8>

sequence size	storage space
500 sectors	32,000 notes and space for editing
250 sectors	16,000 notes and space for editing
125 sectors	8,000 notes and space for editing

A note contains starting time, pitch and duration only. Additional storage space is required for the timbre and any editing or real-time effects.

Managing sequence and timbre files (con't)

Recall, store—*Copying the notes in a sequence to a new sequence file*

If the sequence you are recording in the RTP system is too large for any existing sequence file, you have to stop recording, save as much of the sequence as possible and go to the Monitor to create a larger sequence file. After you have created the new sequence file as described previously, you can recall the actual notes of the sequence and store them in the new sequence file, all from the Monitor.

1. Create a sequence file as described on the previous pages.

2. Enter the command

    recall [number from 1 to 8]

    The number corresponds to one of the numbered buttons on panel 4. The recalled sequence becomes the new current file.

3. Enter the command

    store [number from 1 to 8]

    If you enter a number that does not correspond to an existing sequence file, an error message appears on the screen.

    Sequence not available on this disk

You may use the treename structure with both the **recall** and **store** commands.

Rename—*Naming a numbered sequence file*

When a sequence is stored under a sequence storage button in the RTP system, it appears in the Sequence Directory as <seq #[n]>. You can give it a name that better defines it by recalling it to the Monitor, renaming it and saving it under its new name.

1.   Enter the command

        recall [number from 1 to 8]

2.   Enter the command

        rename <filename>

4.   Enter the command

        save <treename>

     The renamed file is stored in the designated catalog.

When you access the Sequence Directory from the RTP system, the sequence appears under its new name.