2. USING THE MONITOR

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In this section you will be interacting with the System Monitor software. You will learn how to use Monitor commands to

- create and edit text files;
- run and compile simple programs;
- access remote storage devices;
- create a complex catalog structure.

The Monitor commands that you learn are the ones that you will be using later with other software modules.

CONVENTIONS USED

We have adopted certain conventions to demonstrate the format of the Monitor commands.

1. All Monitor commands are in upper case.

2. Expressions in lower case and enclosed in brackets indicate that you are to enter a sequence of characters or set of values of your own choosing. Angle brackets are used to enclose letters; square brackets to enclosed numbers.

   For example, when you see

   OLD <filename>

   you are to follow the command OLD with the name of the file you want to call up. Note that you will NOT include the brackets in your command. Similarly, the expression

   [ln]

   means insert the appropriate line number (always abbreviated as ln). You will not, of course, include the brackets with the line number.

3. Whenever two line number abbreviations are separated by a hyphen, the two lines and all between are indicated. For example,

   [ln-ln]

   means that lines from the first line number through the second are indicated.

4. When two key are to be pressed simultaneously, they are separated by a hyphen. That is,

   CTRL-X

   means to press the CONTROL key and the X simultaneously.

TEXT FILES

A file is a block of information that can be processed by the computer. There are different types of files, depending on the kind of information in them. Text files are made up text typed in, one line at a time, on the terminal keyboard, each line of text starting with a line number. Text files can be SCRIPT compositions, computer programs or text documents for word processing. Other types include:

- executable files such as system software;
- data files which contain data collected by the computer;
- timbre bank files and sequence files which are special files for the Synclavier (R) Real-Time system;
- sound files and spectral files for the Sample-to-Disk (TM) system.

This section is primarily concerned with creating and manipulating text files.

Any file in current computer memory is called the current file, the file that you are currently working on. It has a special name assigned by you called a filename. A file with the same filename can exist also as a stored file on your user diskette or Winchester Disk. As you change your current file, the stored file will not change with it until you instruct the Monitor to "replace" the stored file with the current file.

File Management Commands

NOTE: All Monitor commands can be abbreviated to the first three letters of the command.

NEW

The NEW command is used to tell the Monitor to create a new file. When you type NEW followed by a filename, a space is created in computer memory ready to receive the numbered lines of your new file. The filename that you assign the new file can be any combination of up to eight letters or digits, such as "QUARTET", "PROG1", or "12BAR". Any space inserted in a filename will be ignored by the Monitor. Also, any characters over the eight allowed will be ignored. That is, SYMPHONY1 and SYMPHONY2 will both be interpreted by the Monitor as SYMPHONY.

Besides letters and numbers, the following symbol characters can also be included in filenames:

" # $ _ - . ' ( ) [ ] { } ~ ^ `

These symbol characters, however, are disallowed in filenames:

? ! : ; , / \ < > + = % & * | @

OLD

The OLD command instructs the Monitor to make a copy of a file that has been previously stored on the floppy diskette or Winchester Disk. The copy will be placed in memory and will be the current file. To use the command, type OLD followed by the filename of the stored file.

SAVE

Once a file has been created, use the SAVE command to store it. The SAVE command places a copy of the current file along with its filename onto the user diskette (the diskette in the right-hand drive) or the Winchester Disk. Whenever you want to recall the file later, you will use the OLD command followed by the filename.

UNSAVE

UNSAVE is the inverse of SAVE. The command removes the SAVEd version of the current file from the diskette or Winchester Hard Disk. To erase a file, type UNSAVE followed by the filename of the file to be erased. If you type the UNSAVE command without a filename, the stored version of your current file will be erased. The file will continue to exist in computer memory, only the stored version on your user diskette or Winchester Disk will have been erased.

Display Commands

LIST

The LIST command enables you to examine the lines of text in the current file. When you type LIST, the Monitor will print out the text of the file on the terminal screen, with the line numbers in their proper numerical order regardless of the order you typed them in.

When you LIST a long file, only the first 18 lines will appear on the terminal screen. Press the LINEFEED key to view each of following lines; as the screen fills up, the first lines will begin to scroll off the top. If you want to scan blocks of text quickly, press the RETURN key. Each time you press it, the following 18 lines will be displayed.

PRINT

If you have a printer, you can print out your file instead of LISTing it by using the PRINT command. If your printer is not hooked up to the computer when you type in this command, the Monitor will send the print-out to the printer connector anyway and the Ready prompt will not appear until the print-out is complete. If you do not have the D40 printer interface connected, the computer will simply stop.

Creating a New File

You are now going to use these commands to create a text file. Type them in at the terminal keyboard. If you type an invalid command, the Monitor will respond with "What?" When you see this, check your command for spelling and retype it correctly. Remember that the Monitor will not process the command until the RETURN key is pressed.

You open a new file by typing in the command NEW followed by a filename. Your new file (which is also your current file) will remain "empty" until you have entered your lines of text. When typing in the line numbers that begin each line of text, remember that the 0 (zero) and the O (oh), the 1 (one) and the l (el) are four distinct characters.

If you notice a mistake on a line already typed, retype the entire line with its line number. The Monitor will automatically retain only the latest version. To delete an entire line, type its line number, then press RETURN.

You usually type the line numbers in increments of 10s. This will enable you to insert a line of text between two already typed in lines. Since the Monitor automatically sorts the lines numerically, the inserted line will be assigned to its proper place.

You are ready to start your text file now. Follow these instructions.

1. Load the XPL System as described in "Starting the System" in the Introduction.

2. When the Ready prompt appears, type NEW HANNAH and then press RETURN. You have created a new file with the filename HANNAH ready to be filled with text.

3. Now type the following numbered lines, remembering to complete each line by pressing RETURN. If you forget to type in the line number at the beginning of the line, the Monitor will respond with "What?"

   Retype the line with the line number.

   ```
   10 Hannah Banana
   20 Had a piana
   30 But all she could play was
   40 The Star Spangled Banna.
   ```

4. Type SAVE on your terminal keyboard. You now have a file on your user diskette or Winchester Disk called HANNAH. You also have a copy of the file HANNAH as your current file.

5. Type LIST now and the Monitor will print out your HANNAH file on the terminal screen.

6. When the READY prompt appears, type

```
33 Home on the Range and
35 Salty Dog and
37 Hard Day's Night and
```

7. Type LIST. Your terminal screen should show

```
10 Hannah Banana
20 Had a piana
30 But all she could play was
33 Home on the Range and
35 Salty Dog and
37 Hard Day's Night and
40 The Star Spangled Banna.
```

Notice how the Monitor sorted the lines numerically and assigned each to its proper place in the LISTing. This version of HANNAH is now your current file. The original four-line HANNAH remains the one SAVEd on your diskette or Winchester Disk..

If you want to list only a portion of the file (a single line or a series of lines), type LIST followed by the desired line number or numbers. For example, if you type

```
LIST 20-37
```

you will see lines 20 through 37 LISTed on your screen. If you type

```
LIST 10-30, 35-END
```

the terminal display will include lines 10, 20, 30, 35, 37, and 40. If you want to LIST a single line, you must follow the line number with a comma (,); thus, the command

```
LIST 10,
```

will bring up line 10 alone.

8. Try LISTing different lines of your current HANNAH file. When you have finished, type

```
OLD HANNAH
```

This command will bring up your original version of HANNAH into your current file. The expanded seven-line version of HANNAH, which was only in computer memory, will be lost.

9. Type

    LIST

to see the original four-line HANNAH.

More File Management Commands

REPLACE

When you make changes on a file that you have already SAVEd, and then want to save the revised version, you will use the REPLACE command instead of the SAVE command. This command will erase the original version of the file on the diskette or Winchester Disk and REPLACE it with the latest version. You can only use this command when a filename the same as the current filename exists on diskette or Winchester.

RENAME

The RENAME command tells the Monitor that you want to rename your current file. When you type the RENAME command, the computer will respond with

    New filename—

Type in the new filename. You can then SAVE this RENAMEd file like any other file.

Changing Your Text File

The REPLACE command is necessary because the version of the current file and the version of the file of the same name stored on the Winchester or diskette are separate entities. The current file exists only temporarily as the one you are using. Any information that you type in exists only in the current file until you type in the SAVE command (if it's a new file) or the REPLACE command (if it's an old one). When you turn off the system, the current file disappears. The only files preserved are the ones that have been stored using the SAVE or REPLACE commands.

The RENAME command allows you to SAVE both the original and the revised versions of a file. That is, when you RENAME a file, it becomes a separate file. When you SAVE this RENAMEd file, it will be stored under its new filename and the original version will be stored under the original filename.

You can also store both the original and the revised versions of a file by following the REPLACE command with a filename different from your current filename. This will also place a copy of your current file onto diskette or Winchester Disk without erasing the original version. This is useful when you want to store successive revisions of a file.

Now let's use these two commands to play with your HANNAH file.

1. Change the fourth line of your HANNAH file by typing

   40 ROCK!

   This line will replace the fourth line of the HANNAH file that is your current file. The HANNAH file stored on diskette or Winchester Disk, however, remains the original version with "The Star Spangled Banna" as the fourth line of text. If you type LIST now, you should see on your screen

   ```
   10 Hannah Banana
   20 Had a piana
   30 But all she could play was
   40 ROCK!
   ```

   Type RENAME. When the message

   New filename—

   appears on your terminal screen, type in the new filename, HANNAH2.

2. Type SAVE. The second version of HANNAH is now stored under the filename HANNAH2, while the original version remains stored under the filename HANNAH.

3. Type OLD HANNAH and then LIST to see the original version.

4. Type OLD HANNAH2 and LIST to see the second version.

5. Now retype the fourth line again

   40 JAZZ!

6. Type REPLACE. You again have two versions of HANNAH on your user diskette or Winchester Winchester Disk. The original version is still stored under the filename HANNAH, but it is the third version that is stored under the filename HANNAH2. The second version no longer exists anywhere.

7. Type OLD HANNAH and LIST, then OLD HANNAH2 and LIST to see each file.

Other Useful Commands

BUILD

The BUILD command is used to enter text into the current file without having to preface each line with a line number. When you type the command BUILD, the computer enters a special mode where the line numbers are automatically assigned. You will see on your screen the information

```
Entering Build Mode Now

100
```

The line numbers begin with 100 when you use BUILD to create a new file. When you are through with the BUILD mode, press RETURN twice. The computer will respond with the Ready prompt and you can edit the file using the line-number techniques described in the section on basic file editing below.

LENGTH

The LENGTH command is used to find out the length, in 16-bit words, of your current file. Each 16-bit word can store two characters. That is, every two letters of text will require one 16-bit word of storage. Each line number, regardless of how many digits it contains, will also require a 16-bit word.

LAST

The LAST command tells the Monitor to remind you what the last line number in your file is. This is useful when you want to add to a file without having to LIST the entire file to see where you stopped. When you type the LAST command, the Monitor will send this message to the screen:

```
Last line number is [ln]
```

You can use the LAST command with the LIST command to examine the final section of a file. That is, use the LAST command to find out the line number of the last line. Then, use the LIST command followed by the line numbers immediately preceding the last line to look at the final section.

NAME

There is even a command to help you if you happen to forget the name of your current file in the middle of a long session. Simply type in the NAME command and the computer will remind you by printing on the screen:

```
Current File:  <filename>
```

Using the Build Mode

Try writing your own text file using the BUILD command.

1. First type in the command NEW followed by a filename of your own choosing.

2. Press RETURN and then type in BUILD.

3. When the "Entering Build Mode Now" message appears, start typing text, beginning at the line number 100. Each time you press RETURN, a new line number will appear.

4. When you have finished typing in your text, press return twice.

5. Type SAVE to save your text file.

6. Type LENGTH to see how many words and sectors your file contains.

7. Type LAST to find out the line number of the last line in your file.

8. Type NAME to see the filename.

Entering Multiple Commands

When you have several commands that you want to enter one after the other, you can enter them all on the same line separated by semicolons. For example, if you wanted to erase several old files, you could type

    UNSAVE <filename1>; UNSAVE <filename2>; UNSAVE <filename 3>

and if you wanted to LIST an old file, you would type

    OLD <filename>; LIST

(NOTE: The space following the semicolon is not necessary; however, we have used it here for readibility.)

USING THE XPL COMPILER

Up to now, you have been creating and editing text files which contain only lines of text in standard English. A special type of text file contains program statements which can be processed by one of the system programs, the XPL compiler. Program statements are written in the Scientific XPL Language described in the Scientific XPL Reference Manual available from New England Digital. Here we will discuss only the basic commands needed to RUN and COMPILE text files.

Scientific XPL, like other high-level languages, uses program statements which are close to English. The computer, however, can only accept instructions encoded in binary, since computer memory stores only 1's and 0's. To translate source code, or the general commands of Scientific XPL, into object code, or the specific machine instructions necessary for the computer to perform the task indicated, a special program, called the compiler is activated whenever you use the RUN or COMPILE commands.

Performance Commands

COMPILE

The COMPILE command tells the compiler to translate the source code of your XPL program statements into object code the computer can understand. After compilation, the current file contains object code. The file is also renamed automatically. Since object code is a set of machine language instructions using only 1's and 0's, a compiled file cannot be LISTed on your terminal screen.

RUN

The RUN command instructs the Monitor to execute the current file. If the current file contains source code, that is, it has not been compiled, it will be loaded into the compiler for compilation. Once it is compiled, the resulting machine language instructions will be loaded into memory and the program will be executed. If the current file contains object code, that is, it has been compiled, the program will be executed immediately.

Running and Compiling a Program

A short XPL program takes 7-15 seconds to compile, depending on your system's configuration. Try the following:

1. Type NEW TRIVIA. When the Monitor responds with the Ready prompt, type the following lines. Make sure that the punctuation is exactly as shown:

```
100 Print 'Hello dere';
110 Print 'Bye now';
```

   Notice that the PRINT command that you encountered previously was used to print out a copy of your file on paper. Here the PRINT command is part of your program statement. There are specific rules for its use, such as enclosing your text in single quotes and ending the line with a semicolon (;). These rules are covered in the Scientific XPL Reference Manual.

2. SAVE the program.

3. Now type the command RUN. After a few seconds your terminal screen will show:

```
Hello dere
Bye now
```

4. Type COMPILE. The computer will print information about your program on the screen, such as:

```
MEMORY MAP:
  ENVIRONMENT STARTS AT: 000000
  OBJECT CODE STARTS AT: 000354
  OBJECT CODE ENDS   AT: 000373
  RAM AREA    STARTS AT: 020000
  RAM AREA    ENDS   AT: 020100
Memory Required for This Program: 08256 Words.
Compilation successful. Current File is now called "TRIVIA."
```

   Although you cannot LIST your compiled program, the memory map printed on the terminal after compilation allows you to determine how much memory is required to run your program. Note that the numbers in the memory map are printed in the octal number system. The total number of 16-bit words of memory required for execution, however, is printed in decimal for convenience. You will not need this information except in system programming.

5. Type SAVE. This saves the compiled file, under the filename "TRIVIA.".

   Your current file is now the compiled version of your original source file. You SAVEd the source file under the filename "TRIVIA" and the COMPILE command does not affect that SAVEd version. The object file's filename, you will note, has a period added to it to distinguish it from the original source file. This also ensures that you do not accidentally REPLACE the compiled file over the original source file. Filenames that are exactly eight characters will have the last character of the filename dropped in order to add the period. That is, "FILENAME" will become "FILENAM.".

   In this exercise you SAVEd both the source file and the object file. If you have written a program and plan to use it in the future without modification, you can store it in compiled form. Then it can be RUN with an essentially instantaneous response, since the compilation will not have to be performed at the start of the RUN command. However, you should also save the original source file for every compiled program since compiled files cannot be LISTed and therefore cannot be modified by using line numbers or edit commands.

6. Now type RUN. Your compiled program will be executed without the time delay necessary when it was in its uncompiled form.

7. If you have a printer, you may want to send the output to the printer. To do this, type

   ```
   OLD TRIVIA; RUN,PRINTER
   ```

   or

   ```
   OLD TRIVIA; RUN,P
   ```

   To print out a copy of the source file itself, that is, the program statements with line numbers, type

   ```
   OLD TRIVIA; PRINT
   ```

ADDITIONAL MONITOR FEATURES

The System Monitor has some special commands and files to personalize operation of your Monitor program.

Getting HELP from the Monitor

If you have the file HELPTEXT on your system, you can access the on-line HELP facility by typing

```
HELP
```

The first HELP display will list the major topic areas and explain how to use the HELP system. You can then select one of the areas and type

```
HELP <topic>
```

The Monitor will print out a detailed explanation of the commands in that area. You can also simply type

```
HELP <command name>
```

if you want information about a particular command.

Changing The Ready Prompt

You can create your own Ready prompt by typing, at any time, the PROMPT command followed by the symbol or word you want as your own Ready prompt. For example, if you type

```
PROMPT !!!
```

your next Ready prompt will be

```
!!!
```

and will remain so until you change it with another PROMPT command. The new Ready prompt can contain any combination of no more than 8 letters, numbers and symbols. The only restriction is the semicolon (;), which cannot be used as part of a prompt.

Creating and Using a Command File

A command file is like any other source file, except that it contains Monitor commands which carry out a particular operation. In effect, a command file becomes a customized command in your system which might automatically copy a series of files, for example, or retrieve data from a remote floppy diskette.

You create a command file by entering the commands as lines of text, using either the Monitor or the Screen Editor. Give the command file a filename, just as you would any file, and SAVE it. Then, when you want to have the command file executed, type

DO <command filename>

and press RETURN. The commands within the command file will be executed in the order in which they appear.

Any Monitor command can be used in a command file. In addition to those described elsewhere are two special commands:

WRITE

The WRITE command is used in a command file to specify text that will be printed out when the command file is executed. NOTE: This command can also be used outside a command file, causing the characters following it to be printed on the screen as soon as you press RETURN. For example, if you type

WRITE Now for a word from our sponsors.

and press RETURN, you will see on your screen

Now for a word from our sponsors.

*

The * command is used in a command file to tell the Monitor to ignore the text that follows it. Like the /* command used in source files, it provides a way for you to "comment" on some aspect of your command file. Unlike the /* command, the * command appears only at the beginning of the comment.

One use for a command file is a daily reminder of projects you are working on. Try the following:

1. Type NEW REMIND.

2. Type

```
10 * This is a daily reminder command file
20 WRITE Take the cat to the vet.
30 WRITE Water the plants.
40 WRITE Make an appointment with the dentist.
```

3. Type SAVE.

4. Now type DO REMIND.

You should see on your screen your list of things to do.

You can also use a command file to execute a series of commands on another file. In this case, you recall the file before entering the DO command. The following command file, for example, LISTS your current file, then prints the file length and an ending message:

1. Type

```
NEW LIST
```

2. Type

```
10 * This is a command file for a personalized LISTing
20 LIST
30 WRITE
40 WRITE File length is:
50 LENGTH
60 WRITE
70 WRITE THAT'S ALL, FOLKS!
```

   Notice that the WRITE command of lines 30 and 60 have no text following. This allows you to create spaces between lines.

3. Type SAVE.

4. Now call up an old file, such as HANNAH2, or create a new one.

5. Type DO LIST

   If you used the HANNAH2 file, you should see the text followed by

```
File Length is:
34 words, or 1 sectors

THAT'S ALL FOLKS!
```

Creating a Profile File

A special kind of command file is the profile file. This operates from your system diskette automatically (that is, without a DO command) to add to the sign-on message that appears on your screen when you first LOAD your system. Up to now, you have seen only the default sign-on message

N. E. D. ABLE Series System Monitor - 1 May 1984

followed by the Ready prompt. You can add your own message by creating a command file with the filename PROFILE and SAVing it on your system diskette or top-level Winchester catalog. Whatever message you have written into your profile file will be added to the regular sign-on message.

Try the following:

1. Type NEW PROFILE.

2. When the Ready prompt appears, type

```
10 * This is a sample profile file
20 WRITE +--------------+
30 WRITE |              |
40 WRITE | GOOD MORNING!|
50 WRITE |              |
60 WRITE +--------------+
70 WRITE
80 WRITE
90 PROMPT =>
```

3. SAVE the program on your system diskette by typing

   SAVE/FO

   If you have a Winchester Disk, type

   SAVE

   to SAVE it in your top-level catalog.

   (The /FO identifies the system diskette in the main or left-hand drive for the SAVE command. This "device identifier" is described in the following section. The concept of "top-level" catalog will be discussed in the section on catalogs.)

4. Type the command BOOT. This is the equivalent of pressing the LOAD button on your computer. In addition to the N. E. D. sign-on message, you should see on your screen

=>

The Ready prompt will continue to be

=>

until you change it using the PROMPT command.

You can use a profile file to write in daily messages of any length. Just remember to use the WRITE command at the beginning of each line of text, space, or graphic symbol to be written into the message. You are not, of course, limited to using the WRITE command in a profile file. A profile file can do anything a normal command file can do; the only difference between the two is that the profile file is executed automatically when you boot the system.

STORAGE DEVICE IDENTIFIERS

You have been storing and retrieving files mainly from the storage device that is the default for your system, either the right-hand diskette in the dual diskette drive system or the Winchester Disk. However, the command

```
SAVE/F0
```

was used to store the profile file on the system diskette of the dual diskette drive system. This command used a device identifier to direct the Monitor to store the file on the diskette in the main or left-hand drive instead of the auxiliary or right-hand one.

Each storage device has its own identifier, so that you can store and retrieve files from any device in your system. The identifiers are:

F0	Mini- or Maxidiskette in drive-0 (the main or left-hand drive)
F1	Mini- or Maxidiskette in drive-1 (the auxiliary or right-hand drive)
R0	Minidiskette in remote drive-0
R1	Minidiskette in remote drive-1
W0	Winchester Disk

NOTE: An additional storage device, the Tape Cartridge is not listed here because it can only be accessed using the utility program FORMCOPY. See "Using the Utility Programs."

Any device that is not the default device for your system is specified by typing a slash and device name after the filename. For example, to call up a file from a minidiskette in the remote drive in the R0 position, type

```
OLD <filename>/R0
```

To SAVE a file on the remote drive in R1 position, type

```
SAVE/R1
```

You will use these commands especially when you want to transfer a file from one diskette to another. For example, to transfer a file from the current catalog in either the dual drive or the Winchester systems to a diskette in the remote 0 drive, type

```
OLD <filename>; SAVE/R0
```

Or, to copy a file from one floppy diskette to another, replace the system diskette in the main or left-hand drive with a formatted diskette and type

```
OLD <filename>; SAVE/F0
```

Except in special cases, such as formatting and copying using FORMCOPY as described in the "Using the Utility Programs" you will not use the default identifiers, F1 for floppy diskette dual drive systems, and W0 for Winchester Disk systems.

CATALOGS

Each time you SAVE a file, its filename is entered into a permanent catalog for the storage device on which it is saved. Also included in the catalog are the filenames of various files that have been created here at New England Digital. To look at the catalog, type in one of several CATALOG commands.

If you do not follow the CATALOG command with a device identifier, the Monitor will give you information about the default device, that is, the right-hand diskette in dual drive systems or the Winchester in Winchester systems. By following the CATALOG command with a device identifier, you can examine the contents of any storage device in your system.

Catalog Commands

NOTE: In this list, the fully spelled-out command is followed within parentheses by its more commonly used abbreviation. The Monitor will recognize the commands either way.

CATALOG (CAT)

The CAT command brings up a list of user files stored on the selected diskette or Winchester Disk. Next to each filename is the type of file that it is, i.e., executable, text, data and so on.

CATALOG LENGTH (CAT L)

CAT L tells the computer to include the length of each file with the other catalog information. The length is listed in both words and sectors.

CATALOG ALL (CAT A)

CAT A instructs the Monitor to list all the files stored on your diskettes. This includes all user files plus system files. You will generally use this option when checking on versions of the system files or when installing new system files.

CATALOG SNAMES (CAT S)

The CAT S command tells the Monitor to sort the catalog entries alphabetically by name before printing. In general, the catalog is printed in the order in which the computer has kept track of your files, a pattern which may mean little to you. If you specify SNAMES as a catalog option, you will see your files listed alphabetically from left to right.

CATALOG SLENGTH (CAT SL)

The CAT SL command will bring up your catalog sorted by length, beginning with the shortest file.

CATALOG STYPE (CAT ST)

The CAT ST command displays the catalog sorted by type, such as text, data, and so forth.

CATALOG SORIGIN (CAT SO)

The CAT SO command sorts the files by origin. That is, the files are listed in the order they occur on the diskette.

CATALOG FILE (CAT F)

You may wish to print a copy of your catalog contents for archive purposes. This may be done by using the FILE option on the CATALOG command. This option tells the Monitor to replace your current file by the catalog directory. You can then type the PRINT command for a permanent copy. NOTE: Since this command replaces your current file with the catalog directory, be sure to SAVE the current file before entering it.

Using Your Catalog

You should familiarize yourself with CATALOG commands.

1. Type CAT.

   If you have dual floppy diskette drives, you should see listed on your terminal screen the following:

—Name—	Type	—Name—	Type	—Name—	Type	—Name—	Type
HANNAH	Text	HANNAH2	Text	TRIVIA	Text	REMIND	Text
LIST	Text	TRIVIA.	Exec				

   The files listed are the ones you created and SAVEd as exercises. You will notice that following each filename is the type of file. All the files in the list are text files with the exception of TRIVIA., the compiled version of the text file TRIVIA.

   If you have the Winchester Disk, the CAT command will bring up many other catalog entries, as the Winchester Disk contains all user software, including several demonstration files.

2a. If you have a dual floppy diskette drive, type

```
CAT ALL/FO
```

   to see the system software filenames. Include the "/FO" after the command because your operating system software is stored on the diskette in your main or left-hand drive.

You should see listed on your screen a series of filenames, each preceded by a period plus your profile filename. Following each filename is the type of file, its length in words and sectors, and its sector of origin.

2b. If you have a Winchester Disk, type

```
CAT ALL
```

to see the filenames of both system and user files.

3. Try typing the other CATALOG commands to see how each command gives you different information.

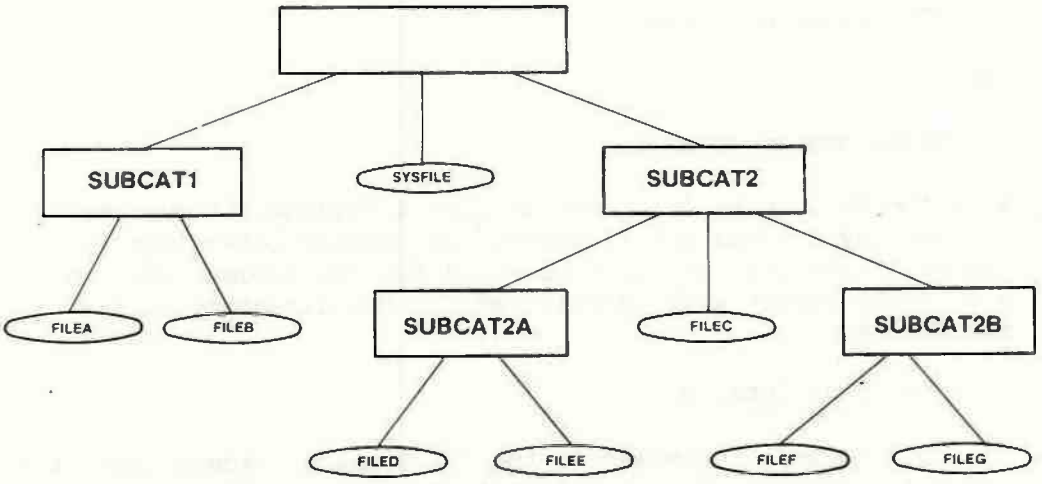
Catalog Structure

There are also a number of Monitor commands used in organizing the large numbers of files that can be stored on a Winchester Disk or floppy maxidiskette. These commands allow you to create a tree-like catalog structure with a top-level catalog that branches into subcatalogs.

Here each subcatalog has a name and a directory in which names of files or further subcatalogs will be listed. The directory will hold either 32 or 128 names, depending upon the command used to create the subcatalog.

When you first LOAD your system, your current catalog, that is, the catalog you have immediate access to, is the top-level catalog on the default storage device in your system. This is your general directory for the entire user storage space on your Winchester Disk or floppy diskette. A Winchester Disk has room for 128 names in the top-level catalog; the dual floppy diskette drive system has room for 32 names in the top-level catalog. These names can be names of subcatalogs from which either files or further subcatalogs can be accessed; or they can be filenames of system or user files. The most efficient use of a top-level catalog, especially on a Winchester system, is to use it solely for system software and for subcatalogs.

The figure on the following page shows a possible structure for a series of subcatalogs and files. The subcatalog names are contained within rectangles, the filenames are in ovals.



Within this tree-like structure, you can use the catalog structure commands that follow to create any number of subcatalogs and subcatalogs within subcatalogs. The one general rule for moving from one catalog to another is that movement can only be accomplished from a higher level catalog to a lower. Thus, for example, you can move directly from the top-level catalog to SUBCAT2 and then on to SUBCAT2A. But if you want to move from SUBCAT1 to SUBCAT2A, you will have to return to the top-level catalog first and then move downward through the branches.

Notice that the top-level catalog has no name. Also notice that any catalog, top-level or sub, can contain either files or subcatalogs or both.

Catalog Structure Commands

NOTE: In certain catalog structure commands, the Monitor recognizes only the command abbreviation. For these, the abbreviation is listed first, followed in parentheses by the full command name.

CCA (Create CAtalog)

The CCA command does for catalogs what the NEW command does for files. Entered with a subcatalog name, it creates an empty subcatalog with the specified subcatalog name. The subcatalog name can consist of up to eight characters, letters and digits plus allowed symbols as defined in the NEW command.

You create a subcatalog by typing

CCA <subcatalog name>

and then

SAVE,[number of sectors]

When the SAVE command is used to save a catalog, it must be followed by a comma and a number. The number determines the number of sectors that will be saved for the subcatalog. An additional sector will be reserved for the directory of the subcatalog.

CLC (Create Large Catalog)

The CLC command is similar to the CCA command, except that it creates a subcatalog with a directory of up to 128 names. Again, follow it with a SAVE command, a comma and a number to reserve sectors for the subcatalog. An additional four sectors will be reserved for the directory of this larger subcatalog.

When using the CCA and the CLC commands, the number of sectors that you reserve depends both on the size of the files you are planning to save within the catalog and the device on which you save backup copies.

For example, a single density floppy diskette has 175 sectors of storage space. If you save 173 sectors when you create a subcatalog, then the entire subcatalog would fit exactly onto the diskette (with one sector reserved for the subcatalog directory and one for the top-level catalog directory). Thus, the subcatalog could be copied in toto onto the single density minidiskette for backup purposes. Double-density minidiskettes have a total of 400 sectors and 8-inch maxidiskettes have a total of 616. Instructions for copying subcatalogs onto diskettes using FORMCOPY are in the "Using the Utility Programs."

When you enter the CCA or CLC commands, the newly created subcatalog becomes the current file. That is, the current catalog remains the same, but the current file is the new subcatalog instead of a file. Whatever was in your current file will be lost.

ENTER

The ENTER command is used to access a catalog different from the current catalog. If you wish to access a subcatalog listed in the current catalog, use the command followed by the name of the subcatalog you want to access. For example, if you want to access SUBCAT2A from SUBCAT2, type

```
ENTER SUBCAT2A
```

If you want to access the top-level catalog from any subcatalog, you can't follow the ENTER command with a name as the top-level catalog has no name. Instead follow the space after ENTER command with a colon and the Monitor will interpret this as signifying the no-name top-level catalog. Thus, type

```
ENTER :
```

to access the top-level catalog from SUBCAT2 or any other subcatalog.

If you want to enter a subcatalog from another branch of the tree, you will have to access it through the top-level catalog. For example, to access SUBCAT1 from SUBCAT2, type

```
ENTER :SUBCAT1
```

The Monitor will look in the top-level catalog directory for SUBCAT1 and will then enter this subcatalog.

You can use repeated colons in the same command to climb down a branch of the catalog structure. For example, to access SUBCAT2B from SUBCAT1, type

```
ENTER :SUBCAT2:SUBCAT2B
```

Note that in any of these tree-climbing commands, the ENTER command need only be typed once.

CAT OF (CATALOG OF)

The CAT OF Command is used to display a directory of a catalog different from the current catalog without leaving the current catalog. You use this command followed by the name of the subcatalog you want to display. Again, to display the top-level catalog from a subcatalog, follow the CAT OF command with a colon. Or, to display a subcatalog from another branch of the tree, follow the CAT OF command with a colon and the name of the second subcatalog.

CNAME (Catalog NAme)

The CNAME Command causes the Monitor to print out the name of your current catalog. This is a useful check when you are about to ENTER or display another catalog.

Creating A Catalog Tree Structure

Although the subcatalog architecture was designed to organize the large amount of storage space on the Winchester Disk, it can be used equally well with dual floppy diskettes, especially the 8-inch maxidiskettes.

Now you are going to create the catalog structure shown in the diagram on page 2-22.

1. Type

   CCA SUBCAT1

   You have just created the subcatalog shown in the diagram that is farthest to the left.

2. Type

   SAVE,20

   The SAVE command followed by a comma and the number 20 reserves 20 sectors for SUBCAT1 plus one for the subcatalog directory. Remember, your current catalog is still the top-level catalog. Your current file is SUBCAT1. Check this out by typing

   CNAME

   You should see on your terminal screen

   Current catalog:

   signifying the top-level (no-name) catalog. Now type

   NAME

   to see that your current file is SUBCAT1.

3. In order to store files in SUBCAT1, you need to make it your current catalog. Type

   ENTER SUBCAT1

4. Type

    CAT

   and you should see on your screen

    Catalog of SUBCAT1, size 21 sectors

    —Name— Type —Name— Type —Name— Type —Name— Type

    No entries in catalog

   because SUBCAT1 is a new and empty catalog.

5. Now create FILEA and FILEB by typing

    NEW FILEA; SAVE; NEW FILEB; SAVE

   If you type the CAT command now, you will see your two new files listed.

6. In order to create SUBCAT2 (the rightmost subcatalog on the second level of the diagram), you will need to return to the top-level catalog. Do this by typing

    ENTER :

   Now type

    CCA SUBCAT2

   followed by

    SAVE,20

7. You are still in the top-level catalog, so type

    ENTER SUBCAT2

   to create the remaining subcatalogs in the tree structure.

8. Type

    CCA SUBCAT2A; SAVE, 5

   and

    CCA SUBCAT2B; SAVE, 5

   to create the two subcatalogs within SUBCAT2. With these commands, you have used 12 of the 20 sectors in SUBCAT2.

9. Type

    NEW FILEC; SAVE

    to create the file in SUBCAT2.

    You are still in SUBCAT2. To create FILED and FILEE, type

    ENTER SUBCAT2A

    and then

    NEW FILED; SAVE; NEW FILEE; SAVE

10. To create FILEF and FILEG, return to the top-level catalog and move down the branch into SUBCAT2B:

    ENTER :SUBCAT2:SUBCAT2B

11. Now type

    NEW FILEF; SAVE; NEW FILEG; SAVE

    to create the two files.

Accessing Catalogs

Now that you have created the catalog structure of the diagram, practice using the ENTER command to move from one catalog to another. Remember, you can only move directly from a higher level catalog to a lower level one on the same branch.

Try this:

1. Find out where you are now by typing

    CNAME

    You should be in SUBCAT2B. To enter the top-level catalog, type

    ENTER :

2. Now access SUBCAT2 by typing

    ENTER SUBCAT2

3. Move from SUBCAT2 to SUBCAT1. Remember, you need to access the top-level catalog first by typing the ENTER command followed by a colon and SUBCAT1

```
ENTER :SUBCAT1
```

If you forget to access the top-level catalog in this case, you will get the error message

```
Catalog SUBCAT2 not found
```

since SUBCAT1 is not contained in the directory of SUBCAT2.

4. Now see if you can access FILEG. There are two ways to do this.

The first way allows you to recall FILEG without leaving SUBCAT1. Type the OLD command first and follow it with the catalog names in order:

```
OLD :SUBCAT2:SUBCAT2B:FILEG
```

Your current catalog is still SUBCAT1 but your current file is now FILEG, the file contained in SUBCAT2B. Check this with the CNAME and NAME commands.

The second way is to enter SUBCAT2B first and then recall FILEG. The several catalogs can all be typed on one line:

```
ENTER :SUBCAT2:SUBCAT2B
```

This command takes you from SUBCAT1 to the top-level catalog, then to SUBCAT2, and then to SUBCAT2B. Now you can use the OLD command to make FILEG your current file.

Searching for Files in Subcatalogs

Anytime you get the error message

    Catalog <Catalog name> not found

or the message

    File <filename> not found

it means that you are in the wrong subcatalog for accessing that catalog or file. You can conduct a search without leaving your current file by using the CAT OF command. Try searching for FILED.

1. First, find out where you are by typing the CNAME command. You should still be in SUBCAT1. Display this directory using the CATALOG command.

2. Now search in SUBCAT2. Use the CATALOG OF command this way:

        CAT OF :SUBCAT2

3. Now look at SUBCAT2A. Set up the CAT OF command this way:

        CAT OF :SUBCAT2:SUBCAT2A

    FILED should appear in this directory. Remember, your current catalog is still SUBCAT1. Check this by typing the CNAME command.

Copying Files from Subcatalogs

Usually when you make backup copies of files, you use the FORMCOPY program as described in the "Using the Utility Programs." Sometimes, though, you may want to SAVE a single file onto a backup diskette. You can do this even if the file is in a subcatalog. Suppose you wanted to make a copy of FILEA. With a dual floppy diskette drive system, use the following procedure:

1. Remove your system diskette from the main or left-hand drive and replace it with the diskette that contains the above catalog structure including FILEA.

2. Place a formatted diskette in the auxiliary or right-hand drive.

3. Type

        OLD :SUBCAT1/FO:FILEA; SAVE

    These commands tell the Monitor to search for FILEA in SUBCAT1 on the diskette in the main or left-hand drive and then to SAVE it in the current catalog of the diskette in the auxiliary or right-hand drive.

For this catalog tree on a Winchester Disk, use this procedure:

1. Remove the Winchester Bootload diskette from the main diskette drive and replace it with a formatted diskette.

2. Then type

```
OLD :SUBCAT1:FILEA; SAVE/FO
```

   These command tell the Monitor to look for FILEA in SUBCAT1 on the Winchester Disk and then to SAVE it on the diskette in the main or left-hand diskette drive.

Erasing Subcatalogs

Since you will be using your own subcatalog names when you create a working catalog structure, you will want to erase all the subcatalogs you have just created in this exercise in order to conserve space on your diskette or Winchester Disk. You can do this all on one line by preceding the multiple UNSAVE commands with the ENTER command this way:

```
ENTER :; UNSAVE SUBCAT1; UNSAVE SUBCAT2
```

Now only your top-level catalog will remain since when the two subcatalogs are erased, all the subcatalogs and files contained within them are erased as well.

A final note on catalog structure. If you change diskettes while your current catalog is a subcatalog, you will still have to access the top-level catalog even if your new diskette contains only a top-level catalog. So, if you share your system with someone else, it is a good practice to end your work session by typing

```
ENTER :
```

so that your colleague can begin work in the top-level catalog.

BASIC FILE EDITING

We have already seen that errors in your text files may be corrected by retyping the line containing the error. This can be a tedious process, especially if there is only one incorrect character in the line. There are two ways to modify files without retyping entire lines. The Screen Editor is more efficient as an editing system, but Basic File Editing is also a useful tool.

The Basic File Editing commands address the Editor section of the Monitor Program. They are typed in from the terminal keyboard. Each command operates on the current file. If you are modifying a program already SAVEd, then your current file will, of course, be different from your SAVEd file until you REPLACE the file on the diskette or Winchester Disk with the current file using the REPLACE command.

Changing Line Numbers

These commands are used to change the line numbers that are associated with each line of a program. This is often done to prepare a program for a "clean" printout using the LIST or PRINT commands.

RESEQUENCE

RESEQUENCE changes all the line numbers in the program. After RESEQUENCing is completed, the first line number will be 100 with the following lines numbered in increments of 10. Thus, if you have written a program that consists of

```
10 This is the first line.
20 This is the second line.
30 This is the third line.
25 This is an afterthought.
```

and then LIST it, you will have

```
10 This is the first line.
20 This is the second line.
25 This is an afterthought.
30 This is the third line.
```

When you type the RESEQUENCE command followed by LIST, you will see

```
100 This is the first line.
110 This is the second line.
120 This is an afterthought.
130 This is the third line.
```

SEQUENCE

SEQUENCE is similar to RESEQUENCE. After a SEQUENCE command, the first line number will be 1 with each following line numbered one greater than the preceeding one. If you were to SEQUENCE the above lines and then LIST them, you would see

```
1 This is the first line.
2 This is the second line.
3 This is an afterthought.
4 This is the third line.
```

DESEQUENCE

DESEQUENCE removes the line number from each line in a file. It is useful when you want to print a text file without having each line preceeded by a line number. The above lines DESEQUENCEd and LISTed would read

```
This is the first line.
This is the second line.
This is an afterthought.
This is the third line.
```

To continue working on your file after DESEQUENCing it, you will probably want to type in the RESEQUENCE and LIST commands to display the file on the screen with line numbers.

Deleting and Extracting Text

DELETE

The DELETE command deletes individual lines, or groups of lines from the current file. The line number or numbers of the line(s) to be DELETEd follow the command. Individual lines are DELETEd by specifying the line number; several lines can be designated for DELETion by separating each line number by a comma (and no space); entire blocks of lines can be DELETEd by specifying the starting and ending line numbers separated by a hyphen. For example, the command,

```
DELETE 100,130,180-200
```

will instruct the Monitor to delete lines 100, 130, 180, 190 and 200. The line numbers must be specified in increasing order for the DELETE command. For example, the command

```
DELETE 200,100,500-550,430
```

will not perform correctly. It should be typed instead:

```
DELETE 100,200,430,500-550
```

EXTRACT

The EXTRACT command is the opposite of the DELETE. The specified line, or groups of lines, will be EXTRACTed from the current file. All other lines will be lost. For example,

```
EXTRACT 50-150,200-270
```

instructs the Monitor to extract the lines from 50 to 150 inclusive and the lines 200 to 270 inclusive and to erase all the other lines in the file. As with DELETE, line numbers must be specified in increasing order.

NOTE: In both the DELETE and EXTRACT commands, you may not have a space following the comma between designated line numbers. If you do include a space, the Monitor will indicate a formatting error.

Moving Blocks of Text Around

MOVE

The MOVE command is used to move one line, or a block of lines, to a different section of the program. RESEQUENCing is automatically performed after the MOVE. For example, the command

```
MOVE 50-100,200
```

instructs the Monitor to take lines 50 through 100 and move them to a position in the file after line 200. The entire file will then be RESEQUENCEd. It is possible to move a line or group of lines to an earlier position in the file as well as to a later one.

Appending Files To the Current File

There are two ways to append files to the end of the current file.

JOIN

JOIN appends one or more files that have been SAVEd on diskette or Winchester Disk to the end of the current file. The command is followed by the filename or names separated by a comma (and, again, no space), as in

```
JOIN FILEA,FILEB
```

In this case, the two files named FILEA and FILEB will be JOINed to the current file. Each file will still have its original line numbers, however.

APPEND

APPEND is similar to JOIN, except that the file is RESEQUENCEd automatically. For example, the command

```
APPEND FILEA,FILEB
```

would cause the two named files to be appended to the current file and the entire sequence to be RESEQUENCEd.

Search Commands

A text string is any sequence of letters, numbers, spaces and/or symbols. You can direct the Monitor to locate text strings using the LOCATE command; or locate and then make specified changes in the string using the CHANGE command.

LOCATE

The LOCATE command tells the computer to LOCATE a string you have specified. You can tell the Monitor to LOCATE the string at its first occurrence, at all its occurrences in a specified line or group of lines, or all its occurrences in the entire file. For example,

```
LOCATE SAMPLE
```

tells the Monitor to LOCATE the word "SAMPLE" the first time it occurs in the file. The command

```
LOCATE SAMPLE,20
```

tells the Monitor to LOCATE the word "SAMPLE" at each of its occurrences in line 20. Similarly the commands

```
LOCATE SAMPLE,20-100
LOCATE SAMPLE,20-END
LOCATE SAMPLE,ALL
```

can be used to LOCATE "SAMPLE" as it occurs in blocks of lines or in the entire file.

After the Monitor has LOCATEd the specified string, it will print out the line or lines in which the string occurs, followed by a message indicating how many lines were found.

Note that the Monitor distinguishes between upper and lower case when LOCATing words. Thus the above commands will not LOCATE the words "Sample" or "sample."

If the string that you want to LOCATE contains a semicolon, then you will have to tell the Monitor to distinguish between the semicolon in the string and the semicolon that signifies the "end of commmand" in a multiple command entry. To do this, precede the semicolon in the string with a slash (/).

This tells the Monitor that the semicolon immediately following the slash is part of the string. For example, to LOCATE the string "X=2.4; Y=4.8," you would use the command

```
LOCATE X=2.4/; Y=4.8
```

CHANGE

CHANGE operates similarly to LOCATE except that, in addition to locating the specified string, it tells the computer to CHANGE it in the manner indicated. Examples of the CHANGE command are

```
CHANGE SMPLE,SAMPLE
CHANGE SMPLE,SAMPLE,20
CHANGE SMPLE,SAMPLE,20-100
CHANGE SMPLE,SAMPLE,20-END
CHANGE SMPLE,SAMPLE,20-100,150-300
CHANGE SMPLE,SAMPLE,ALL
```

In all these commands, the Monitor is being instructed to respell SAMPLE correctly in the specified lines. Again, if you use upper case letters, the Monitor will ignore the specified text string if it uses lower case.

If the string that you want to CHANGE contains a comma, as in A,B, then you will have to tell the Monitor to distinguish between the comma in the string and the comma that is part of the CHANGE command. To do this, precede the comma in the string with a slash (/). This tells the Monitor that the comma immediately following the slash is part of the string. For example, to CHANGE the string "A,B" to "A*B" you would use the command

```
CHANGE A/,B,A*B
```

You will also have to use this slash when you want to CHANGE a string that itself contains a slash. For example, to CHANGE "A/B" to "A-B" you would use the command

```
CHANGE A//B,A-B
```

And, as in the LOCATE command, you will use the slash when you want to CHANGE a string that contains a semicolon.

SUMMARY OF MONITOR COMMANDS

page	command	definition
System Commands		
1-14	SED	activates Screen Editor module
1-14	SFM	activates Signal File Manager module
1-14	PLAY	activates Real-Time module
1-14	PLAY <RTP version>	activates special version of Real-Time module
1-14	PLOT	activates Music Printing module
1-14	PLOT <MP-REVB>	activates Revision B of Music Printing module
1-14	PATCH	activates Patch module
1-14	PATCH <Patch version>	activates special version of Patch
Basic File Management Commands		
2-4	NEW <filename>	initiates entry of a new file
2-4	OLD <filename>	calls up a previously SAVEd file
2-4	SAVE <filename>	stores a new file on a User Diskette or Winchester Disk
2-4	UNSAVE <filename>	erases the SAVEd copy of a file
2-7	RENAME <filename>	renames the current file
2-7	REPLACE <filename>	stores a revised copy of a file
Display Commands		
2-4	LIST [ln-ln]	prints entire file [or selected lines] on terminal screen
2-4	PRINT [ln-ln]	prints entire file [or selected lines] on printer
2-15	WRITE <string>	prints string on terminal screen
2-14	PROMPT <string>	replaces Ready prompt with string
2-15	* <string>	causes string to be ignored
Performance Commands		
2-11	COMPILE	initiates compilation of XPL source file
2-11	RUN	initiates compilation and execution of a source file or execution of a compiled source file
2-15	DO <command filename>	executes command file
2-18	BOOT	reinitializes system

page	command	definition
	Auxiliary Commands	
2-9	LENGTH	prints out the number of words in a file
2-9	NAME	prints out the name of the current file
2-9	BUILD	directs the system to enter the line numbers automatically
2-9	LAST	prints the number of the last line of the program
2-14	HELP	accesses HELPTEXT file
	Catalog Commands	
2-20	CATALOG	prints a list of SAVEd files
2-20	CATALOG ALL	prints a list of SAVEd files plus a list of system files
2-20	CATALOG LENGTH	prints a list of SAVEd files with their length
2-20	CATALOG SNAMES	prints a list of SAVEd files sorted by names alphabetically
2-21	CATALOG SLENGTH	prints a list of SAVEd files sorted by length
2-21	CATALOG STYPE	prints a list of SAVEd files sorted by type
2-21	CATALOG SORIGIN	prints a list of SAVEd files sorted by origin
2-21	CATALOG FILE	replaces current file with list of SAVEd files
2-25	CATALOG OF <catalog name>	causes display of named catalog's directory
2-24	CCA <subcatalog name>	creates a subcatalog with a given subcatalog name
2-24	CLC <subcatalog name>	creates a large subcatalog with a given subcatalog name
2-25	ENTER <catalog name>	changes the current catalog to the named catalog
2-26	CNAME	causes Monitor to print out current catalog name

page	command	definition
	Editing Commands	
2-32	RESEQUENCE	renumbers the lines of a program starting with 100 and incrementing by 10s
2-33	SEQUENCE	renumbers the lines of a program starting with 1 and incrementing by 1s
2-33	DESEQUENCE	removes the lines numbers from each line of a program
2-33	DELETE [ln,ln-ln]	deletes selected lines from the current file
2-34	EXTRACT [ln,ln-ln]	extracts selected lines from the current file
2-34	MOVE [ln-ln,ln]	moves the block of lines specified by the first line numbers to the location right after the second specified line number; also RESEQUENCEs the file
2-34	JOIN <filename>	appends the specified file to the end of current file
2-35	APPEND <filename>	appends the specified file to the end of the current file and RESEQUENCEs
2-35	LOCATE [string,ln]	locates the specified character string in the specified line or lines
2-36	CHANGE [string1, string2,ln]	changes specified string1 to read string2 in the specified line or lines

MONITOR ERROR MESSAGES

Sometimes when you type a command, the Monitor will respond with an error message. You can consult this section to find out what the error is and how to correct it. Errors produced by typing errors may be rectified by simply retyping the command. Other messages may indicate a more serious problem and will require some analysis to correct. If you are unable to solve the problem with the following information, you can, as a last ditch option, press the LOAD button on the computer. This erases your current file as it initializes the system. But you will be able to continue your work.

General Warnings

These messages tell you of common problems in dealing with files and disks. They do not affect your current file or indicate a problem with your system.

Catalog <catalog name> not found

You have typed the ENTER command to access a subcatalog, but have not typed the name of a subcatalog. Check the contents of your current catalog for a list of subcatalog names.

<Catalog name> is not a subcatalog

You have typed the ENTER command to access a subcatalog, but have typed a filename instead of the name of a subcatalog. Check the contents of your current catalog for a list of subcatalog names.

Drive specifier too large

You have typed a device identifier, such as /R0 or /R1, in which the drive number is too large. The drive number may only be 0 or 1. Check to make sure that you have not typed a letter 'O' for the digit '0'.

File <filename> is already saved

You are trying to SAVE a file when the name of the file is the same as one which is already SAVEd on the diskette or Winchester Disk. You must use the REPLACE command if you want to overwrite the file which is on the diskette or Winchester Disk.

File not found on disk

You are trying to access a file which is not stored in the current catalog. This may be caused by typing the filename incorrectly, by having the wrong disk in the system, or by selecting the wrong subcatalog. Check the contents of your current catalog for a list of filenames using the CATALOG command. If it is not there, search for it in other catalogs using the CAT OF command.

File types do not match for REPLACE

When using the REPLACE command, the file type of the file SAVEd on diskette or Winchester Disk and the file type of the file that you are REPLACing it with must be the same. This is to prevent you from accidentally overwriting a source file with a compiled code file, for instance. If you really wish to make the REPLACEment, first UNSAVE the copy from the diskette or Winchester Disk, and then SAVE the new copy.

Format error in command

You have a typing error in your input format. This may be an incorrect entry of a line number specification in a LIST, PRINT, LOCATE, or CHANGE command.

Format error in filename

You have entered a filename which is blank, or has an invalid part in a subcatalog tree specification. This may also be caused by typing invalid characters in a filename.

Invalid sequence name

In a STORE or RECALL command, a sequence name must be a single digit from 1 to 9. This message appears when you have typed a sequence name not one of these digits.

No changes made

You have used a CHANGE command when the original string does not occur in the selected lines of the file.

No space in subcatalog

You are trying to SAVE a file into a subcatalog where there is not enough available space. Or, you may have enough space available but too many names. Each subcatalog has a limit of 32 filenames (or 128 if you have used the CLC command to create a large subcatalg).

No space on disk

You are trying to SAVE a file on your floppy diskette or Winchester Disk top-level catalog where there is not enough available space. Total storage capacity is 175 sectors for single-density minidiskettes, 400 for double-density and 616 for maxidiskettes.

You may have enough total space but the available space is divided up into small areas, each too small to SAVE your file. The SHUFFLE utility may be used to "re-pack" the diskette or Winchester Disk, collecting the free space into one area.

Or, there may be sufficient space on your diskette or Winchester Disk, but too many names (filenames or subcatalog names) in your catalog. There is a limit of 32 names in the top-level catalog of a floppy maxidiskette, or 128 names in the top-level catalog of a Winchester Disk.

Unrecognized remote device specifier

You have typed an invalid device identifier. Check the list of device identifiers in the section "Storage Device Identifiers" in "Using the Monitor."

Sequence not available on this disk

In a RECALL command, this message is the equivalent of "File not found on disk".

Errors Which Prevent You From Proceeding

The following errors indicate why the system cannot carry out your command. Usually you will have to take some action to continue.

Current file is empty

You are trying to edit or list a file which is empty. This message also appears when you attempt to execute a command file on your current file without SAVing your current file.

Current file is not a SCRIPT or sequence file

You have typed the PLAY command, which activates the SCRIPT system, but your current file is not a SCRIPT composition or a Synclavier (R) sequence file. Thus, the current file may not be played. You will need to recall another file, or else clear the current file with the NEW command.

Current file is not text - it may not be listed or edited

Your current file is a file which is not made up of letters and characters, such as a compiled code file, or a data or sound file. Such non-text files cannot be displayed on the screen or changed from the terminal.

Current file may not be run

You have typed a RUN command activating the XPL compiler when your current file is not a source file or a compiled code file.

Command file is non-text or is empty

The specified command file does not contain any commands.

Command file is too large

A command file may only be 1024 words long. This message appears when you type the DO command followed by the name of a command file which is longer than that.

DO may not be followed by other commands

The DO command may not have additional commands located after it on a multi-command line.

File is too large to list, run, or edit

Your current file exceeds the length limit of 256 sectors. Such a file may not be LISTed, RUN, or edited. If this message appears, it may be that you are not running a program or compiled code file, but are accidentally trying to RUN a large data file.

Filename not allowed after <command>

You have typed a filename after a command which does not operate on a filename, or need one to be specified. For example, the SFM command cannot be followed by a filename.

File too big -- cannot add more lines

You have added another line to a file which is already near the maximum size and the new line produces a file which is too large. You will have to break up your file into smaller pieces by using the RENAME command to place another copy of the same file on the diskette or Winchester Disk and then DELETing the first half of one copy and the second half of the other.

File too big - cannot insert new string

If the new string in a CHANGE command is longer than the original string, the file size will increase during the processing of the command. This error message means that some of the CHANGEs have been made but the remainder cannot be as the file is too large. You should LIST the file to see which CHANGEs were made and then break it into smaller pieces using the RENAME and DELETE commands.

Invalid character in filename

You have entered a filename which contains a character that may not be used in a filename. See list of allowed characters under the NEW command in "Using the Monitor."

Incorrect file type for STORE

You are trying to STORE a file that is not a Synclavier (R) sequence file.

Nested DO files not allowed

A DO command may not invoke another DO command, unless it is the last line of a command file.

No help available on that topic

You have used the HELP command to ask the Monitor for information it does not have. For general information, type HELP SYSTEM or HELP COMMMANDS.

No space to save current file

Before processing a file, the Monitor must place it in a temporary area on the diskette or Winchester Disk. This message appears if your current file is not SAVEd anywhere and there is no temporary area available to store it.

Please save your program before compiling

When you enter the COMPILE command, the compiled code version of your program replaces your source file as your current file. This message appears if your source file is not SAVEd anywhere, as a check to prevent you from losing your current file.

Program is too large to process

You are trying to RECALL a file too large for the system to handle. The limit is a function of your memory size and disk configuration, but is typically 256 sectors.

Remote catalogs may not be entered

The Monitor does not allow you to use the subcatalog feature on remote floppies. Only top-level catalogs may be accessed on remote devices.

Sequence too long to STORE

There is not enough space available on the diskette or Winchester Disk to save your sequence. See the suggestions for the "Not enough space on disk" message above.

You have no HELPTEXT file

Your system software does not contain the HELPTEXT file which gives HELP information.

Errors Which Indicate a System Problem

The following errors indicate a potentially serious error with your system software. This may be caused by loading incorrect versions of the programs or by not having all of the pieces present.

Error found in catalog

The System Monitor has found a validity error in your catalog, which prevents the system from locating your files. You should contact NED Customer Service, and we will try to patch up your catalog using special commands. If the entire catalog has been corrupted, it is due to a system error in the hardware or software, and you will probably have to press the LOAD button to initialize your system.

Incorrect configuration for <command>

This message appears when the configuration of your system is not the system configuration required to execute the specified command. For instance, to run the SCRIPT system, you must have the Synclavier (R) keyboard unit. If this message occurs incorrectly, you should use the CONFIGUR utility to verify that your configuration is entered correctly.

Not a valid Synclavier sequence

The sequence that was selected by the RECALL command does not match the correct format for Synclavier (R) sequences. It may have been created incorrectly or the copy on the diskette may be defective.

System Error - .LD-5 file missing

The ".LD-5" file contains information essential to operation of the system. All system diskettes and Winchester Disks sent from the factory contain this file, but if you created your own system diskette, it may be missing. The file can be copied from another system diskette. Do NOT copy the file ".LD-4" from an earlier diskette, as it contains very different information.

System file <filename> is not on your disk

You have typed a command such as PLAY, RUN, or SFM, and one or more software pieces needed are not on your floppy diskette or Winchester Disk. If you have a dual floppy diskette drive system, this may be because you have loaded the wrong diskette. Also, they may be part of optional software that you have not purchased for your system.

If you are sure that you should have the software option on your system, please contact NED Customer Service so that we can check the configuration and installation of your software.