Basic storage systems

Creating subcatalogs

Subcatalogs can only be created from the Monitor. When you create a subcatalog, you reserve a storage space of a specified size on the disk. You also set the maximum number of files or subcatalogs that can be saved within the subcatalog.

Subcatalog directory size

When you create a subcatalog, you can set a maximum for the number of files or subcatalogs to be stored in that subcatalog. You do this by designating a directory size.

- A small directory can contain no more than 32 names of files or other subcatalogs. One sector of the subcatalog space is reserved for the directory.

- A large directory can contain up to 128 names of files or other subcatalogs. Four sectors of the subcatalog are reserved for the directory.

The size of the directory in no way affects the actual sector size of the subcatalog. The same size subcatalog can have either a small or a large directory.

Subcatalog directories

Small directory 32 entries
Files and subcatalogs

Large directory 128 entries
Files and subcatalogs
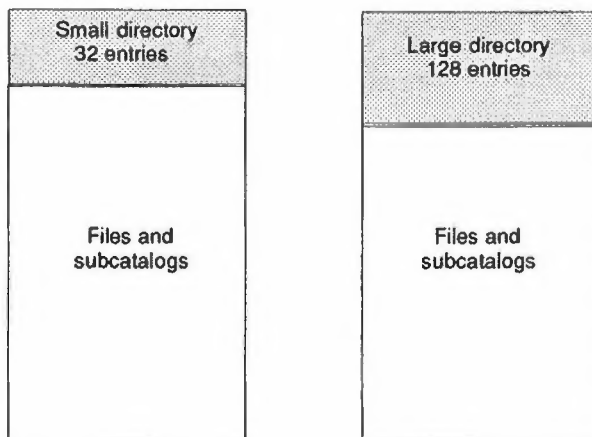
Subcatalog size

When you create a subcatalog, you designate its size in sectors.

On a Winchester, the only limitation on subcatalog size is the number of contiguous sectors available on the disk.

A floppy disk can also be divided into subcatalogs. However, since floppy disks contains only 2400 sectors each, you may want to reserve them to back up Winchester subcatalogs.

If you want to be able to copy the entire subcatalog from the Winchester to a single floppy disk, your subcatalog can be no larger than 2398 sectors (if it has a small directory) or 2395 sectors (if it has a large directory). A catalog of either of these sizes would be large enough, for example, to store the timbre file and sequence files for one Memory Recorder project. It would also be large enough to store several small sound files.

A sound file longer than twelve seconds cannot fit into this size subcatalog. For larger sound files you must create larger subcatalogs.

The following table is a rough guide to determining subcatalog size for sound files and sequences.

Catalog sizes for sound files and sequences

megabytes	sectors	sound file length at 50 kHz	notes in sequence
0.6	1200	6 secs	150,000
1.2	2400	12 secs	300,000
2.0	4000	20 secs	500,000

Create–*Creating the subcatalog*

You use the **create** commmand to create a subcatalog. The syntax for the **create** command is

> **create <subcat name>,<large or small> <sectors>**

The comma (,) following the subcatalog name and the spaces are essential parts of this syntax.

Subcatalog names, like filenames, can only contain eight characters, not including spaces or these characters.

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

If you do not include the words **large** or **small,** a small directory is assigned for a subcatalog of 1000 sectors or less. A large directory is assigned for a subcatalog of more than 1000 sectors.

If you do not specify a size, a default size of 399 sectors is assigned.

For example, if you wanted to store some cello sound files in a sub-catalog on your Winchester that could later be copied onto a floppy disk, you might enter the command

> **create cellocat, small 2398**

When you press Return, a 2398-sector space is reserved on your Winchester with the name of "cellocat," with an additional sector reserved for a small subcatalog directory. Thus the total size of the subcatalog is 2399 sectors, leaving one sector on the floppy disk for the directory of the floppy disk itself.

command	directory size	subcatalog size
create newcat	32 names	399 + 1 for directory
create newcat, 500	32 names	500 + 1 for directory
create newcat, 2395	128 names	2395 + 4 for directory
create newcat, large	128 names	399 + 4 for directory
create newcat, large 500	128 names	500 +4 for directory
create newcat, small 2398	32 names	2398 + 1 for directory

**Creating
subcatalogs
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Resize–Changing the size of a subcatalog

The Resize Utility is used to make an existing subcatalog larger for additional files or smaller to save disk space.

To resize a subcatalog

1. From the Monitor, enter the command

    resize

    The Resize Display appears with instructions at the bottom of the screen.

2. Enter the name of the subcatalog you want to resize.

    The Resize Display reappears with information about the maximum increase or decrease possible.

3. Enter a value to indicate the desired size change. Entering a positive (or negative) number will increase (or decrease) the subcatalog size by that number of sectors. Entering an unsigned number will set the subcatalog size to that number of sectors.

    A message tells you if the catalog is being moved and its new size. When the process is finished, the Ready prompt appears.

```
RESIZE  Resize Utility                          version of 2 June 1987

Options:   +n    Increase subcatalog size by n sectors
            -n    Decrease subcatalog size by n sectors
             n    Set subcatalog size to n  sectors

Subcatalog: ABC                      Current Size: 500
```

Increase Subcatalog Size		Decrease Subcatalog Size	
Without moving		Without shuffling	
Maximum increase:	+150	Maximum decrease:	-10
Maximum size:	600	Minimum size:	150
By moving		By shuffling	
Maximum increase:	+200	Maximum decrease:	-23
Maximum size:	10000	Minimum size:	130

```
Enter amount of increase or decrease, new size, or <RETURN> to quit:
```

Note: You can omit the instructions on the previous page and go directly to the Resize Display by typing **resize** followed by a subcatalog name.

If you know the amounts of change or size you want, you can enter them with the **resize** command using the following syntax

      resize <subcatalog name> <+n, -n or n>

Changing catalogs

The current catalog is the top-level catalog or the sub-catalog in which you are currently working.

When you first load the system, the curent catalog is the top-level catalog of **W0:** (the primary Winchester).

Enter, show catalog—*Changing and identifying the current catalog*

You use the **enter** command to change the current catalog.

■ Type the command **enter** followed by the treename of the desired subcatalog.

    enter <subcatalog name>

    or

    enter <device name>:<subcatalog name>

You use the **show catalog** command to identify the current catalog.

■ Type the command

    show catalog

    The name of the current catalog is displayed.

The following list of **enter** commands and their results illustrates the use of the command.

command	new current catalog
enter newcat	subcatalog newcat in current catalog
enter jazzcat:blooz	subcatalog blooz of the subcatalog jazzcat in current catalog
enter :	top-level catalog of current device
enter :newcat	subcatalog newcat in top-level catalog of current device
enter f0:	top-level catalog of floppy drive 0
enter w1:	top-level catalog of **Winchester drive 1**
enter w1:jazzcat	subcatalog jazzcat on **Winchester drive 1**
enter w1:jazzcat:blooz	subcatalog blooz of the subcatalog jazzcat on **Winchester drive 1**

Viewing catalog directories

Catalog–Viewing the current catalog directory

To view the contents of the current catalog

■ Enter the command

catalog

A short directory of the current catalog is displayed on the screen. The directory includes the names and types of files, including named sequence files, sound files, text files and subcatalogs.

When the directory is too large to fit on the screen, the filenames scroll up until all the files have been displayed.

You can freeze the scrolling by pressing the No Scroll key; you unfreeze the scrolling by pressing No Scroll again.

Screen display of catalog directory

Catalog of W0:, size 23760 sectors

—Name—	Type	—Name—	Type	-Name—	Type	—Name—	Type
PROJECT1	LSubc	MONITOR	Exec	KLUGE	Exec	MEASLIST	Text
NDXMSTR	Subc	SYMED	Exec	ORK-MFM	Exec	DOORQTAB	Subc
BOBM	Subc	SYNCOMM	Exec	COOKE2	Subc	COOKE4	Subc
BUTLIST	Text	ERR.M	Subc	SYNCOM40	Exec	COOKE1	Subc
MISC	Subc	SCRPTCAT	Subc	COOKE5	Subc	YUBA	Subc
TABULATE	Exec	LASER	Subc	PROJECT2	Text	COOKE3	Subc
MODULES	Subc	PS	Subc	DOOR	Subc	MEASLST2	Text
PUMP	Subc	REVELS	Subc	DOORQTEB	Subc	FIND	Exec
WSOURCE	Text	BRASSWKS	Subc	SYMLIB	Data	COOKE7	Subc
GOUNOD	Subc	BOOT	Subc	COOKE8	Subc	COOKE6	Subc

Catalog of–*Looking at another directory*

The **of** modifier is used to look at the directory of another catalog or subcatalog without leaving the current catalog.

You can look at the directory of another subcatalog within the current catalog.

■ Enter the command

  catalog of <subcatalog>

You can look at the directory of the top-level catalog of another device.

■ Enter the command

  catalog of <device name>

In either case, a short directory of the specified device or subcatalog is displayed.

You can use the treename structure to examine any subcatalog on any device in the system except the tape drive.

For example, you could display a short directory of the subcatalog "strings" on floppy drive 0 by entering

  catalog of f0: strings

Catalog length—*Looking at the lengths of files in the directory*

You can also display a directory of the current catalog with the length and origin of each file.

■ Enter the command

  catalog length

  Each file or subcatalog name is followed with a length in both words and sectors and its location on the disk (sector of origin).

Catalog all—*Looking at "hidden files"*

Timbre files (.newdata files) and numbered sequence files (.sq[n]data files) are not listed in the directory when you use the **catalog** or **catalog of** command. Nor are any system files that begin with a period (.) listed.

You can look at a complete directory of the current catalog, including all of these files.

■ Enter the command

   catalog all

The complete directory of the current catalog is displayed. The directory includes the size of each file, both in words and sectors, as well as the exact location of the beginning of each file.

• The Sectors column displays the number of sectors in the file.

• If the file length is less than 256 sectors, the Words column displays the number of 16-bit words (two bytes each) in the file. These are data words, not English words.

• The Origin column displays the number of the starting sector of the file.

You can combine the **of** and **all** modifiers with a treename to look at the entire contents of any catalog or subcatalog in the system.

■ Enter the command

   catalog all of <device name>: <subcatalog name>

The complete directory of the designated catalog is displayed.

Catalog of W0:, size 23760 sectors

—Name—	Type	Words	Sectors	Origin	—Name—	Type	Words	Sectors	Origin
.SYSTEM	LSubc		501	4	MONITOR	Exec	27910	110	3124
NDXMSTR	Subc		501	16066	SYMED	Exec	24191	95	4234
BOBM	Subc	25856	101	4329	SYNCOMM	Exec	20188	79	6606
BUTLIST	Text	1018	4	4430	ERR.M	Subc	51456	201	4434
MISC	Subc		501	5137	SCRPTCAT	Subc	38656	151	6455
TABULATE	Exec	10365	41	6685	LASER	Subc	25856	101	6726
MODULES	Subc		501	6827	PS	Subc	51456	201	7328
PUMP	Subc		991	7529	REVELS	Subc		501	8520
WSOURCE	Text	8128	32	9021	BRASSWKS	Subc	64256	251	9053
GOUNOD	Subc		901	9452	BOOT	Subc	5120	20	10854
KLUGE	Exec	13261	52	10874	MEASLIST	Text	2187	9	10454
ORK-MFM	Exec		777	10926	DOORQTAB	Subc		950	11703
COOKE2	Subc		502	3234	COOKE4	Subc		501	16567
SYNCOM40	Exec	20188	79	3736	COOKE1	Subc		450	12664
COOKE5	Subc		1001	19521	YUBA	Subc		502	17068
.WORK	Text	2000		13565	COOKE3	Subc		501	15565
DOOR	Subc		1000	17570	MEASLST2	Text	2189	9	3911
DOORQTEB	Subc		951	18570	FIND	Exec	15522	61	3920
SYMLIB	Data	36	1	3981	COOKE7	Subc		1001	21523
COOKE8	Subc		1001	22524	COOKE6	Subc		1001	20522

Catalog contains 40 entries, 20756 sectors used, 3004 sectors remaining

Sorting catalog directories

In general, the catalog directory is displayed in the order in which the computer has saved your files, a pattern which may mean little to you. You can change the display order of the files in a number of ways.

You can display the current catalog with the files and subcatalogs listed in alphabetical order from left to right.

■ Enter the command

catalog snames

You can display the contents of the current catalog arranged by length, beginning with the shortest file.

■ Enter the command

catalog slength

You can display the current catalog with the files and subcatalogs arranged by type (text, data, etc.).

■ Enter the command

catalog stype

You can display the contents of the current catalog listed in the order in which they are stored on disk

■ Enter the command

catalog sorigin

These catalog modifiers can be combined by adding them in any order after the catalog command.

Catalog file—*Placing the catalog directory in a file*

You can make a copy of a catalog directory as a text file and place it in the current file.

1. Make sure your current file is saved.

2. Enter the command

    catalog file

    The catalog directory becomes the current file.

Once a catalog directory is a file, you can make a hardcopy of it.

1. Make sure your printer is attached to the system.

2. Enter the command

    print

    The directory is printed and you are returned to the Ready prompt of the Monitor.

You can also edit the directory using the Screen Editor. See "Managing files from the Screen Editor."

Summary of catalog modifiers

command	abbreviation	result
catalog	**cat**	displays a short directory of the current catalog.
catalog of <treename>	**cat o**	displays a short directory of the catalog specified.
catalog all	**cat a**	displays a complete directory of the current catalog.
catalog all of <treename>	**cat a o**	displays a complete directory of the catalog specified.
catalog file	**cat f**	a short directory of the current catalog replaces the current file. The default name of this file is **-cat**.
catalog file all of <treename>	**cat f a o**	a complete directory of the catalog specified replaces the current file. The default name of this file is **-cat**.

command	abbreviation	result
catalog length	cat l	displays a directory including file size and origin.
catalog snames	cat s	displays a short directory of the current catalog in alphabetical order.
catalog all snames	cat a s	displays a complete directory of the current catalog in alphabetical order.
directory	dir	same as **catalog all snames** above.
catalog slength	cat sl	displays a short directory in order of length.
catalog stype	cat st	displays a short directory in order of type (text, exec, data, etc.).
catalog sorigin	cat so	displays a short directory in order of origin.