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K105-D LOGIC ANALYZER

USERS MANUAL ADDENDUM

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DISK STORAGE SYSTEM

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**INTRODUCTION**

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**INTRODUCTION**

The K105-D Disk Storage System is a dual-sided, double-density floppy disk based storage system using a CPM-86 compatible format. This storage system enables the K105-D user to store recorded data and store the various setups used to record the data. The storage system consists of two 5 1/4 inch floppy disk drives enclosed in a single chassis. The chassis is mounted on top of the K105-D Logic Analyzer. This storage system provides 328K<sup>2</sup> bytes of storage capacity per disk. The storage system furnishes space for approximately 70<sup>2</sup> setup files or 70<sup>2</sup> data files or 35 combined setup and data files; providing an approximate total storage capacity of 656K<sup>1</sup> bytes.

The storage system is interfaced to the logic analyzer via a 34-conductor cable from the logic analyzer I/O board. Operating power for the disk storage system is provided by the K105-D, negating the need for a separate power supply. Operator interface to the storage system is accomplished through the K105-D front panel keyboard.

**NOTES:**

1. Total storage capacity = (4096/track) x 80 tracks = 328K  
Formatted data disk = 328K - 8K (loader and directory tracks) = 320K  
Formatted system disk = 328K - 8K - 22K (System) = 297K
2. Maximum number of names that can be stored in any disk directory is 64, including the system file. It is possible to run out of directory space without filling up the disk.



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**SPECIFICATIONS**

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**INTRODUCTION**

This chapter includes the physical characteristics of the Disk Storage System and a description of the controls, indicators and connectors.

**PHYSICAL CHARACTERISTICS**

Dimensions:      Height 3 1/4 inches (8.255cm)  
                         Width 15 inches (38.1cm)  
                         Depth 19 1/2 inches (49.53cm)

Weight:            13 lbs. (5.85kg)

Power: +12V at 1.5A and +5V at 2A  
          approximately 30 watts

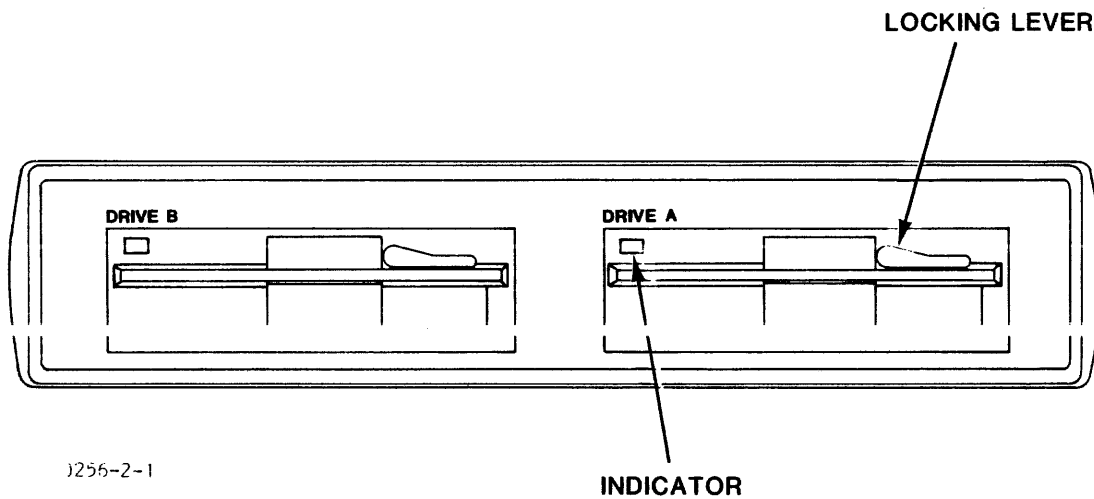
Media: 5 1/4 inch double-sided, double-density floppy disks

Operating Temperature: 0 to 50°C (32° to 122°F)

**CONTROLS, INDICATORS AND CONNECTORS**

The front-panel controls and indicators for the K105-D Disk Storage System are shown in figure 2-1.

### Front-Panel Indicators



1. Drive B indicator: A red LED that lights whenever floppy disk drive B of the storage system is activated by the K105-D. This occurs during the load and command modes of operation.
2. Drive A indicator: A red LED that lights whenever floppy disk drive A of the storage system is activated by the logic analyzer. This occurs during the load and command modes of operation.

Figure 2-1. Front-Panel Indicators



**CONTROL KEYS**

The Disk Storage System is controlled by the user via the K105-D keyboard. The logic analyzer keys listed in the table below are used by the storage system to perform the major functions indicated.

**Table 2-1. Logic Analyzer Major Function Keys**

K105-D KEY	FUNCTION
LEFT ARROW	Moves the CRT cursor left
RIGHT ARROW	Moves the CRT cursor right
PREVIOUS	Selects the previous choice
NEXT	Selects the next choice
I/O	Enters the storage system screen
HELP	Calls the Help menu
F1-F4 Soft-keys	Function of the soft-keys is dependent on the screen and active field being viewed. The definitions of the soft-keys for current conditions are displayed in character line 28.



## INTRODUCTION

This chapter includes descriptions of files and commands, and step-by-step operating procedures.

## OPERATING PROCEDURES

The following paragraphs provide the user with step-by-step operating procedures for the K105-D Disk Storage System.

### Loading the DSS Software

The disk storage system (DSS) software of the K105-D Disk Storage System can be loaded into the logic analyzer RAM using either of the two methods outlined below.

1. Warm Start -- This loading method is performed with power applied to the K105-D Disk Storage System and with no system disk installed. To warm start, load the DSS software into the logic analyzer RAM, proceed as follows:

- a. Gently insert the system floppy disk into disk drive A or B, with the disk slot toward the rear of the unit and the label up. Then, lock the disk in place with the drive latch handle.

```

* * * * *
*                               CAUTION                               *
* * * * *
* It is considered good practice to completely                       *
* remove the disk from the drive, or to unlock                       *
* the drive latch handle (if the disk is installed)                  *
* before removing and applying AC power to the                      *
* system. This avoids possible disruption of                        *
* recorded data which might occur if the disk is                    *
* in contact with the drive spindle during the power*                *
* up/shutdown operation.                                           *
* * * * *

```

- b. Depress the I/O key. An I/O menu appears and prompts the user for a depression of either the 0 or 1 key.
- c. Observe that the red LED of the selected disk drive is illuminated during the time (5 seconds nom.) that the software is being loaded into the logic analyzer RAM, and that after boot loading, the following messages are displayed: BOOT COMPLETE and K105 DOS Loader, Version 1.0.

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## OPERATION

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- d. Observe that the disk storage system directory is displayed on the screen after a depression of the 1 key. The quick mode field is displayed after a depression of the 0 key.
2. Reboot -- This loading method is performed with DSS software previously loaded. To reload the DSS software into the logic analyzer RAM, proceed as follows:
    - a. Gently insert the system floppy disk into the desired disk drive, with the disk slot toward the rear of the unit and the label up. Then, lock the disk in place with the drive latch handle.
    - b. Depress the I/O key and then the 1 key. Observe that the disk storage system directory is displayed on the screen.
    - c. Depress the A key of the logic analyzer to select the Reboot command. Then, depress the F4 key to complete the command selection process.
    - d. Enter the designator A or B for the disk drive being used to reload the software by depressing key 0 or 1, respectively, of the logic analyzer. Then, depress the F4 key to execute the Reboot command.
    - e. Observe that the red LED indicator of the applicable disk drive is illuminated during the time (5 seconds nominal) that the software is being loaded into the logic analyzer RAM, and that after boot loading, the following messages are displayed: BOOT COMPLETE and DOS Loader, Version 1.0.

### DSS Commands Operation

After the DSS software has been properly loaded into the logic analyzer RAM as previously described, the user can execute any of the available 11 system commands. These commands (and the available options) are discussed in detail under the SYSTEM COMMANDS paragraph. To execute a command, proceed as follows:

- a. Either cycle through the command choices using the NEXT/PREVIOUS keys to select the desired command or depress the quick-key corresponding to the desired command. Quick-key choices are as follows:

(0) - Save	(6) - Unlock
(1) - Recall	(7) - Directory
(2) - Delete	(8) - Format
(3) - Copy	(9) - Reboot
(4) - Rename	(A) - Sysgen
(5) - Lock	
- b. Select the desired command option via the appropriate quick-key (refer to tables 3-2 through 3-12) or the NEXT/PREVIOUS keys.
- c. If required, place the unit in the Edit mode, specify the file name(s) and select the floppy disk designator (A or B).

- d. Depress the F4 key (as directed by the messages on the bottom portion of the display) to execute the system command.

NOTE: Refer to the two lines near the bottom of the screen. The two lines, command and message, help guide the user through the command selection and execution process. In addition, character line 2 displays any error encountered by the system. The user does not have to decipher any error codes.

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## OPERATION

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### SYSTEM FILES

Each K105-D Disk Storage System file is a collection of related information that is stored on a floppy disk. Numerous files can be created on the disk, each with a unique name. The K105-D Disk Storage System uses the category of files described below to fulfill its various intended functions in the logic analyzer environment.

1. Setup File: contains setup parameters for the clock select, data format, input mode, logic polarity and trace control specifications; it also contains the timing-display labels. Whenever a setup file is created, it always contains setup parameters for all the K105-D setup menus.
2. Data File: contains recorded data from the logic analyzer trace memories A or B and the active trigger levels for the recorded samples. The data from location 0 through 1023 is stored in a data file.
3. Utility File: contains executable code for the logic analyzer. These files are provided for future use. Storing any information in these files may create invalid data.

These files are stored on tracks 7 through 19 of the 5 1/4-inch floppy disks of the storage system. The file directory is stored on disk track 1. Every time that a file is created or updated, the appropriate entries (filename, location and length) are made in the directory.

The disk storage system can exchange files within some categories (setup file A with setup file B); however, the disk storage system cannot exchange files between categories (i.e., between a setup file and a data file). If illegal file exchanges are attempted, an illegal message is displayed on the message line. This feature prevents the user from inadvertently locking up the logic analyzer by recalling illegal setups.

### File Name

Each file must be assigned a unique name, which consists of a label, version and file type. The file label is six characters in length. The letters A through Z, numbers 0 through 9 and the "space" character can be used for the file label. All other characters are invalid.

NOTE: The file label cannot start with a space nor can spaces be interspersed with alphanumeric characters. In other words, spaces can be used as fill characters following file labels of less than six contiguous alphanumeric characters.

The file version field is two characters in length, with the numbers 0 through 9 being the only valid characters for this field. The file type field determines the type of file i.e., setup, data, or execution file. The field is three characters in length. The character options that are available for the file type are listed in table 3-1.

NOTE: An SA file can be transferred to a SB file or vice versa. An SA or SB file cannot be transferred to memory data, or execution type files.

Table 3-1. File-Type Character Options

OPTION	FILE CONTENTS	QUICK KEY
SM	Setup memory parameters for next recording (M)	(0)
SA	Setup memory parameters for last recording (A)	(1)
SB	Setup memory parameters for reference (B)	(2)
MA	Memory A recorded data	(3)
MB	Memory B recorded data and Don't Care Memory	(4)
HA	High-speed memory A recorded data	(5)
HB	High-speed memory B recorded data and Don't Care Memory	(6)
BA (Types MA and SA combined)	Both the setup parameters for memory A and the memory A recorded data	(7)
BB (Types MB and SB combined)	Both the setup parameters for memory B and the memory B recorded data	(8)
BHA (Types HA AND SA combined)	Both the setup parameters for high-speed memory A and the high-speed memory A recorded data	(9)
BHB (Types HB and SB combined)	Both the setup parameters for high-speed memory B and the high-speed memory B recorded data	(A)
EXE	Disassemblers	(B)
***	Wildcard used in delete, copy, lock, unlock and directory commands	(C)

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## OPERATION

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The user should note that as the Save or Recall command option fields are changed, the file type option field changes to coincide; however, when the file type option field is changed, the Save and Recall command option fields do not change. This dissimilarity in operation allows the user to exchange files within a category.

### Blocks Required Per File Type

Utility File	- 17 Blocks
Setup File	- 3 Blocks
Memory A File	- 5 Blocks
Memory B File	- 9 Blocks
HS Memory A File	- 2 Blocks
HS Memory B File	- 3 Blocks
BA File	- 7 Blocks
BB File	- 11 Blocks
BHA File	- 4 Blocks
BHB File	- 4 Blocks

### Use of Wildcard Character with File Name

An asterisk (\*) is available for use as a "wildcard" character in the file names. The ~ can be entered by depressing the "A" key and can be used in the label, version, and type fields to allow flexibility to the users. When an \* is used in a field, it indicates that any valid character may occupy the position(s) from the \* location to the end of field. Any character in the field to the right of the \* is ignored by the system. For example, the \* can be used in a directory command as follows:

```
DIR A: F*ILEA-*8.SA
```

This command lists all those files whose fields are as follows:

(Drive A is selected)

1. The label field starts with F. All other characters to the right of F (i.e., ILEA) are ignored.
2. All version levels are listed. The 8 is ignored.
3. The file must be SA type.

The list might look as follows:

```
FILEA 01.SA
FILEA 02.SA
FOO    07.SA
FINDA  05.SA
F      09.SA
```



### Default Filename

From an initialized condition, the filename displayed is File-01.SM.

From another command function, the filename displayed reflects the filename used in the last Save or Recall command. The drive number (A or B) of the default filename is used as the default option for commands requiring only a drive number.

### CREATING FILES

When the K105-D is turned on, it looks for a system disk in drive A. If the disk is not available in drive A it goes to drive B to load the operating software. The system creates a filename: "A:FILE -01.SM". This file is called the default file. Whenever a file name is required by a command, the system starts with the default file name. The user changes the name to select a file of their choice. The default name, however, is always displayed first even if other files are stored on the disk.

Creating files from the default filename is simple. Of the three fields in a filename, the user can input valid characters from the keyboard (0 through 9, A through z and space characters) in the label field. To erase a character, replace it with a space character. The version field can be incremented or decremented by using the F1 or F2 soft-key or a version number can be entered directly from the keyboard. The third field (i.e., file type (field) is controlled by the system. To avoid an illegal entry, keyboard entries are not permitted in this field. The user may press a quick-key which is defined in Table 3-1. Alternatively, press the NEXT or PREVIOUS key to select the file type of your choice.

NOTE: As another safeguard against illegal entries, the drive name in the command option cannot be entered directly from the keyboard. Like the file type field, use the quick-keys: 0 for the drive A and 1 for the drive B. Alternatively, use the NEXT or PREVIOUS key to select a drive of your choice.

### AUTO DIRECTORY OPERATION

Auto Directory operation allows the user to select filenames already entered in the directory of the current disk for use in the command line of the DSS. Successive depressions of the F3 key (DIR) alternately display the A drive and B drive directories, thus simplifying Copy and Rename operations.

The user should note that when the selection cursor is progressively moved through the Directory filenames, the Directory scrolls when the cursor reaches the last filename on the screen. The cursor may be aligned to any of the first 16 filenames via the quick-keys. Quick-key (0) corresponds to the first filename, and quick-key (F) corresponds to the sixteenth filename.

## OPERATION

When working with those commands requiring filename entries, the user should note that as the A: filename block is selected for entry, the filename block changes to display the first filename shown in the Directory. When working with the Rename and Copy commands in the edit mode, the information in the two filename blocks changes to coincide with each other as the blocks are alternately selected.

## SYSTEM COMMANDS

As soon as a command is selected, the command and the default option are displayed near the bottom of the screen. Each command has options that can be immediately selected by the depression of the associated quick-key. The NEXT or PREVIOUS keys can also be used to select an option. For most command options, the user must also specify the filename and select the floppy disk drive (A or B) via the analyzer keyboard, after selecting the desired command option.

Then the user must depress the F4 soft-key to execute the desired command. (A message is displayed on the bottom portion of the screen to inform the user of the required F4 soft-key activation.) Figure 3-1 shows the Directory with the selected Save command and its default option displayed on the bottom portion of the screen.

```
K105 Disk Operating System, version 2.2

Directory of A: DOS105-22                               Page 1
Filename          Date      Time      Attribute
-----
A: DOS105-01.SYS  08-31-83  10:38:00  Locked
A: DOS105-01.SM   -----  -----  Unlocked
A: DOS105-01.SA   -----  -----  Unlocked
A: DOS105-01.SB   -----  -----  Unlocked
A: DOS105-01.MA   -----  -----  Unlocked
A: DOS105-01.MB   -----  -----  Unlocked

36 BLOCKS USED,      122 BLOCKS REMAINING
-----
EDIT MODE
SAVE      HS Memory B      to A: DOS105-01.HB
[F1]= INC VER  [F2]= DEC VER  [F3]= DIR      [F4]= EXECUTE
MEMORY=M MAIN                                MAIN=RDY
```

Figure 3-1. Directory with a Selected Save Command

SYSTEM COMMANDS (cont'd)

The following paragraphs describe the functions of the 11 system commands and their associated options.

Save Command

The Save command allows the user to store logic analyzer information (setup parameters, recorded data, etc.) on floppy disk A or B. The Save command has the eleven options described in table 3-2. Each command option, in turn, can be selected in the Save command mode by pressing the quick-key indicated in the quick-key column, or alternatively using the NEXT or PREVIOUS keys.

As with all other commands, the Save and Recall commands may be selected via the quick mode (see figure 3-2). This mode allows the user to access specific files without proceeding through the directory display. When the quick mode is selected, the lowermost portion of the screen prompts the user for selection of parameters relative to the Save and Recall commands. The advantage of the quick mode is that the major portion of the original display remains on the screen.

```

                DISPLAY MAIN DATA                CLK= 50 nSEC

SEARCH = X XXXX XXXX XXXX XXXX
          L HHHH HHHH HHHH HHHH
C 0000   0 0000 0000 0000 0000
 0001   0 0101 0101 0101 0101
 0002   0 0202 0202 0202 0202
 0003   0 0303 0303 0303 0303
 0004   0 0404 0404 0404 0404
 0005   0 0505 0505 0505 0505
 0006   0 0606 0606 0606 0606
 0007   0 0707 0707 0707 0707
 0008   0 0808 0808 0808 0808
 0009   0 0909 0909 0909 0909
 0010   0 0A0A 0A0A 0A0A 0A0A
 0011   0 0B0B 0B0B 0B0B 0B0B
 0012   0 0C0C 0C0C 0C0C 0C0C
 0013   0 0D0D 0D0D 0D0D 0D0D
 0014   0 0E0E 0E0E 0E0E 0E0E
 0015   0 0F0F 0F0F 0F0F 0F0F
 0016   0 1010 1010 1010 1010
 0017   0 1111 1111 1111 1111
 0018   0 1212 1212 1212 1212
-----
                K105 DOS, v2.2
-----
SAVE          Setup M          to A:FILE  -01.SM
[F1]= INC VER  [F2]= DEC VER  [F3]= DIR    [F4]= EXECUTE
MEMORY=A MAIN                                MAIN=RDY

```

Figure 3-2. Quick Mode Display

Table 3-2. Save Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY
SAVE Setup M to Drive:Filename	Causes the setup parameters (and timing-display labels) in high-speed memory M to be stored on the selected floppy disk (A or B), under the specified filename.	(0)
SAVE Setup A to Drive:Filename	Causes the setup parameters (and timing-display labels) in storage memory A to be stored on the selected floppy disk (A or B), under the specified filename.	(1)
SAVE Setup B to Drive:Filename	Causes the setup parameters (and timing-display labels) in reference memory B to be stored on the selected floppy disk (A or B), under the specified filename.	(2)
SAVE Memory A to Drive:Filename	Causes the recorded data (and the active trigger level for each sample recorded) in memory A to be stored on the selected floppy disk (A or B), under the specified filename.	(3)
SAVE Memory B to Drive:Filename	Causes the recorded data (and the active trigger level for each sample recorded) in memory B to be stored on the selected floppy disk (A or B), under the specified filename.	(4)
SAVE HS Memory A to Drive:Filename	Causes the high-speed recorded data (and the active trigger level for each sample recorded) in memory A to be stored on the selected floppy disk (A or B), under the specified filename.	(5)
SAVE HS Memory B to Drive:Filename	Causes the high-speed recorded data (and the active trigger level for each sample recorded) in memory B to be stored on the selected floppy disk (A or B), under the specified filename.	(6)

Table 3-2. SAVE Command Options (cont'd)

OPTION FORMAT	FUNCTION	QUICK-KEY
SAVE MA & SA to Drive:Filename	Causes both the setup parameters and recorded data in memory A to be stored on the selected floppy disk (A or B), under the specified filename.	(7)
SAVE MB & SB to Drive:Filename	Causes both the setup parameters and recorded data in memory B to be stored on the selected floppy disk (A or B), under the specified filename.	(8)
SAVE Both HA & SA to Drive:Filename	Causes both the high-speed setup parameters and high-speed recorded data in memory B to be stored on the selected floppy disk (A or B), under the specified filename.	(9)
SAVE Both HB & SB to Drive:Filename	Causes both the high-speed setup parameters and high-speed recorded data in memory A to be stored on the selected floppy disk (A or B), under the specified filename.	(A)
SAVE Utility to Drive:Filename	DO NOT USE this option. It is reserved for Gould use. Storing information in these files may create invalid data.	(B)

Should the user attempt to execute a Save command that specifies a filename that already exists on the selected floppy disk, the following message appears on character line 2 of the screen: "(Filename), FILE ALREADY EXISTS". In this case, the user can either depress the F4 soft-key again to erase the previous file and execute the present command, change the file name or select another system command via the disk storage system menu. If the F4 soft-key is depressed all information on the existing file is erased and new information is saved.

---

## OPERATION

---

### Recall Command

The Recall command allows the user to load information files (setup parameters, setup menus, recorded data, etc.) from floppy disk A or B into the logic analyzer memory A or memory B. The Recall command has the eleven options described in table 3-3. Each option can in turn, be immediately selected in the Recall command mode by pressing the quick key indicated.

Table 3-3. Recall Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY
RECALL Setup M from Drive:Filename	Causes the setup parameters (and timing-display labels) of high-speed memory M that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer Setup M menus. The setup M menus are updated with the new information.	(0)
RECALL Setup A from Drive:Filename	Causes the setup parameters (and timing-display labels) of storage memory A that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer setup A menus. The setup A menus are updated with the new information.	(1)
RECALL Setup B from Drive:Filename	Causes the setup parameters (and timing-display labels) of reference memory B that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer setup B menus. The setup B menus are updated with the new information.	(2)

Table 3-3. Recall Command Options (Cont'd)

OPTION FORMAT	FUNCTION	QUICK-KEY
RECALL Memory A from Drive:Filename	Causes the recorded data (and the active trigger level for each sample recorded) of memory A that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer memory A. The memory A is updated with the new information.	(3)
RECALL Memory B from Drive:Filename	Causes the recorded data (and the active trigger level for each sample recorded) of memory B that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer memory B. The memory B is updated with the new information.	(4)
RECALL HS Memory A from Drive:Filename	Causes the high-speed recorded data (and the active trigger level for each sample recorded) of memory A that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer memory A. The memory A is updated with the new information.	(5)
RECALL HS Memory B from Drive:Filename	Causes the high-speed recorded data (and the active trigger level for each sample recorded) of memory B that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer memory B. The memory B is updated with the new information.	(6)

Table 3-3. Recall Command Options (Cont'd)

OPTION FORMAT	FUNCTION	QUICK-KEY
RECALL MA & SA from Drive:Filename	Causes both the setup A parameters and recorded data of memory A that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer setup A menus and memory A. The setup A menus and memory A will be updated with the new information.	(7)
RECALL MB & SB from Drive:Filename	Causes both the setup B parameters and recorded data of memory B that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer setup B menus and memory B. The setup B menus and memory B will be updated with the new information.	(8)
RECALL HA & SA from Drive:Filename	Causes both the high-speed setup A parameters and high-speed recorded data of memory A that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer setup A menus and memory A. The setup A menus and memory A will be updated with the new information.	(9)
RECALL HB & SB from Drive:Filename	Causes both the high-speed setup B parameters and high-speed recorded data of memory B that are stored on the selected floppy disk (A or B), under the specified filename, to be loaded into the logic analyzer setup B menus and memory B. The setup B menus and memory B will be updated with the new information.	(A)
RECALL Utility from Drive:Filename	This option is used for recalling disassemblers.	(B)



Should the user attempt to execute a Recall command that specifies a filename that does not exist on the selected floppy disk, the following message appears on the screen: "(Drive:Filename), NO FILE FOUND". In this case, the user should then select the Directory command via the disk storage system menu to ascertain which files are available on the floppy disks.

### Delete Command

The Delete command enables the user to erase the specified unlocked files from floppy disk A or B. This command has the two options described in table 3-4. Each option can be immediately selected in the Delete command mode by pressing the quick-key indicated.

NOTE: The wildcard character (\*) described under the Use of Wildcard Character with Filename paragraph can be used with the Delete command.

Table 3-4. Delete Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY
DELETE A:FILE	Causes the specified unlocked files of floppy disk A to be erased.	(0)
DELETE B:FILE	Causes the specified unlocked files of floppy disk B to be erased.	(1)

### Copy Command

The Copy command enables the user to copy the specified unlocked files from the source floppy disk (A or B) to the destination floppy disk (A or B). Although the system software allows a floppy disk drive to be both the source and destination device, one drive is normally selected as the source and the other drive is normally selected as the destination. In order to execute the Copy command, the destination floppy disk must be properly formatted. Use the Format command to format a new disk.

If a file already exists, the system will inform the user that this file is already there. The user can continue by pressing the F4 soft-key. In this case the old file will be erased and the new information will be copied from the source file. The second choice is to change the filename and depress the F4 soft-key to execute the command. The third choice is to abandon the process using the F3 soft-key.

The Copy command has the four options described in table 3-5. Each option can be immediately selected in the Copy command mode by pressing the quick-key indicated.

NOTE: The wildcard character (\*) described under the Use of Wildcard Character with File Name paragraph can be used with the COPY command.

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**Table 3-5. Copy Command Options**

OPTION FORMAT	FUNCTION	QUICK-KEY
COPY A:Filename to Drive:Filename	Causes the specified files (except system) on floppy disk A to be copied to a specified file on floppy disk B.	(0)
COPY B:Filename to Drive:Filename	Causes the specified files (except system) on floppy disk B to be copied to a specified file on floppy disk A.	(1)
COPY A=SOURCE B=DESTINATION	Causes all files (except system) on floppy disk A to be copied to the destination.	(2)
COPY B=SOURCE A=DESTINATION	Causes all files (except system) on floppy disk B to be copied to the destination.	(3)

**Rename Command**

The Rename command enables the user to change the name of a floppy disk A or B file. This command has the two options described in table 3-6. Each option is selected in the Rename command mode by depressing the quick-key indicated.

**Table 3-6. Rename Command Options**

OPTION FORMAT	FUNCTION	QUICK-KEY
RENAME A:Filename TO A:Filename	Causes the specified "old" file name on floppy disk A to be changed to the desired new name.	(0)
RENAME B:Filename TO B:Filename	Causes the specified "old" file name on floppy disk B to be changed to the desired "new" name.	(1)

The user must specify both the "old" and "new" filenames completely before executing the Rename command. If not, the following message appears on the bottom portion of the screen: "ILLEGAL FILENAME".

Should the user attempt to execute a Rename command that specifies a filename that already exists on the selected floppy disk, the following message appears on the screen: "(Drive:Filename), FILE ALREADY EXISTS". In this case, the user can either depress the F4 soft-key again to erase the previous file and execute the present command, select another filename, or select another system command via the storage operating system menu.

NOTE: A file cannot be renamed from drive A to drive B or vice-versa.

### Lock Command

The Lock command enables the user to protect a file (or group of files) from being either overwritten or erased. This file protection can only be removed via the Unlock command. The Lock command has the two options described in table 3-7. Each option can be immediately selected in the Lock command mode by depressing the quick-key indicated. When a file is locked, the system can only read this file. It does not erase or overwrite a locked file.

- NOTES: 1. The wildcard character (\*) described under the Use of Wildcard Character with File Name paragraph can be used with the Lock command.
2. The Lock command does not protect against the Format or Sysgen commands.

**Table 3-7. Lock Command Options**

OPTION FORMAT	FUNCTION	QUICK-KEY
LOCK A:Filename	Causes the specified files on floppy disk A to be write and erase protected.	(0)
LOCK B:Filename	Causes the specified files on floppy disk B to be write and erase protected.	(1)

### Unlock Command

The Unlock command enables the user to overwrite or erase a file (or group of files) by removing the lock protection from the files. The Unlock command has the two options described in table 3-8. Each option can be immediately executed in the Unlock command mode by depressing the quick-key indicated.

NOTE: The wildcard character (\*) described under the Use of Wildcard Character with File Name paragraph can be used with the Unlock command.

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**Table 3-8. UNLOCK Command Options**

OPTION FORMAT	FUNCTION	QUICK-KEY
UNLOCK A:Filename	Causes the specified files on floppy disk A to be completely accessible to the user.	(0)
UNLOCK B:Filename	Causes the specified files on floppy disk B to be completely accessible to the user.	(1)

**Directory Command**

The Directory command allows the user to display all or a few selected file names that are stored on floppy disk in drive A or B. This command has the four options described in table 3-9. Each option can be immediately selected in the Directory command mode by depressing the quick-key indicated in the quick-key column.

NOTE: The wildcard character (\*) described under the Use of Wildcard Character with File Name paragraph can be used with the Directory command.

When the Directory command is executed, the filename, file attribute (locked or unlocked) is displayed on the screen. File size is also displayed when a single file is listed. (See figure 3-3 for a typical screen.) In addition, the number of blocks used and unused are indicated on the bottom portion of the screen.

**Table 3-9. Directory Command Options**

OPTION FORMAT	FUNCTION	QUICK-KEY
DIR A:Filename	Causes the specified filenames on floppy disk A to be displayed.	(0)
DIR B:File Name	Causes the specified filenames on floppy disk B to be displayed.	(1)

Table 3-9. Directory Command Options (cont'd)

OPTION FORMAT	FUNCTION	QUICK-KEY
DIR A	Causes all filenames on floppy disk A to be displayed on the analyzer CRT.	(2)
DIR B	Causes all filenames on floppy disk B to be displayed on the analyzer CRT.	(3)

NOTE: Only 16 filenames can be displayed at one time. The PAGE UP or PAGE DOWN soft-keys must be used to access other groups of 16 filenames (rollover performed from last filename to first filename).

```

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Directory of A: DOS105-22                Page 1
Filename      Date      Time      Attribute  Size
-----
A: DOS105-01.SM ----- Unlocked    3

36 BLOCKS USED,      122 BLOCKS REMAINING

DIR          A: DOS105-01.SM
[F1]=       [F2]=       [F3]= DIR      [F4]= EXECUTE
MEMORY=A MAIN                                MAIN=RDY

```

Figure 3-3. Typical Screen Display of an Executed Directory Command

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### Format Command

The Format command enables the user to initialize floppy disk A or B to a recording format that is acceptable to the storage operating system software. Disks must be formatted before any of the remaining system commands can be executed. The Format command has the two options described in table 3-10. Each option can be immediately selected in the Format command mode by pressing the quick-key indicated.

**Table 3-10. Lock Command Options**

OPTION FORMAT	FUNCTION	QUICK-KEY
FORMAT A:Diskname	Causes floppy disk A to be properly formatted.	(0)
FORMAT B:Diskname	Causes floppy disk B to be properly formatted.	(1)

A six-character name may be assigned to a disk in the Format and Sysgen operations.

When the user depresses the F4 soft-key of the logic analyzer to execute the Format command, the following message appears on the screen: "WARNING DISK WILL BE TOTALLY ERASED". The user can then either depress the F4 soft-key again to execute the Format command or select another system command via the disk storage system menu.

### Reboot Command

The Reboot command enables the user to reload the storage operating system software (loader and programs) on floppy disk A or B into the RAM area of the logic analyzer. The Reboot command has the two options described in table 3-11. Each option can be immediately executed in the Reboot command mode by depressing the quick-key indicated.

NOTE: Only like versions of the storage operating system can be rebooted. Other versions may cause this system to malfunction.

Table 3-11. Reboot Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY
REBOOT A	Causes the disk storage system software on floppy disk A to be loaded into the logic analyzer RAM.	(0)
REBOOT B	Causes the disk storage system software on floppy disk B to be loaded into the logic analyzer RAM.	(1)

**Sysgen Command**

The Sysgen command enables the user to copy the storage operating system programs from floppy disk (source) to the floppy disk (destination). The Sysgen command has the two options described in table 3-12. Each option can be immediately executed in the Sysgen command mode by depressing the quick-key indicated. This command may also be performed with one drive functioning as both the source and destination.

Table 3-12. Sysgen Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY
SYSGEN A=SOURCE B=Diskname	Causes the disk storage system programs on floppy disk A to be copied to the destination.	(0)
SYSGEN B=SOURCE A=Diskname	Causes the disk storage system programs on floppy disk B to be copied to the destination.	(1)