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K105-D LOGIC ANALYZER
USER'S MANUAL ADDENDUM

DISK STORAGE SYSTEM

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INTRODUCTION

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* bytes of storage capacity per disk. The storage system furnishes space for approximately 70** setup files or 70** data files or 35 combined setup and data files, providing an approximate total storage capacity of 656K* 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:

- * 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) = 298K
- ** 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.

K105-D DOS SOFTWARE VERSIONS

This section describes version 3.1 of the K105-D DOS software. This version supersedes and is downward compatible with earlier DOS versions 3.0 and 2.2. This new software version, 3.1, corrects problems associated with the CPM-86 compatible format. Version 3.1 will load and copy files generated on diskettes by earlier versions 3.0 and 2.2.

A Utility Conversion program, CONVRT-01.EXE is provided on the DOS version 3.1 diskette which allows the user to update existing work diskettes and system diskettes to the version 3.1 level without losing existing files except as stated in the note which follows.

NOTE: The single exception to losing files is that the DOS version 2.2 system diskette may lose one file (User Option) if the diskette does not contain sufficient space to accommodate the conversion processing. The DOS version 3.1 employs one more block of disk space than version 2.2 and it may be necessary to delete one of the existing files to free up space for the conversion processing.

Full operating instructions for running the CONVRT-01.EXE utility are displayed on the K105-D screen after the utility, CONVRT-01.EXE, is loaded from the version 3.1 diskette. Refer to these procedures for executing the utility routine.

The screen display generated by the DOS Directory command is altered after files of DOS version 3.0 and 2.2 diskettes have been updated by the CONVRT utility. The content for BLOCKS USED and BLOCKS REMAINING may be incorrect after a file is written to the diskette using the CPM.86 Operating System. This discrepancy, however, does not effect correct operation of either DOS or CPM processing.

The K105-D DOS version 3.1 software provides compatibility with double-sided, double-density IBM-PC, CPM-86 format only. If additional information is required regarding internal file headers and data formats, please contact the Marketing Department of Gould Inc., Design and Test Systems Division on the toll-free, hot line number which is listed in the Preface of the K105-D User's Manual.

Chapter 2

SPECIFICATIONS

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 (8.25 Cm)
 Width 15 inches (38.1 Cm)
 Depth 19 1/2 inches (49.5 Cm)

Weight: 13 lb. (5.85 kg)

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

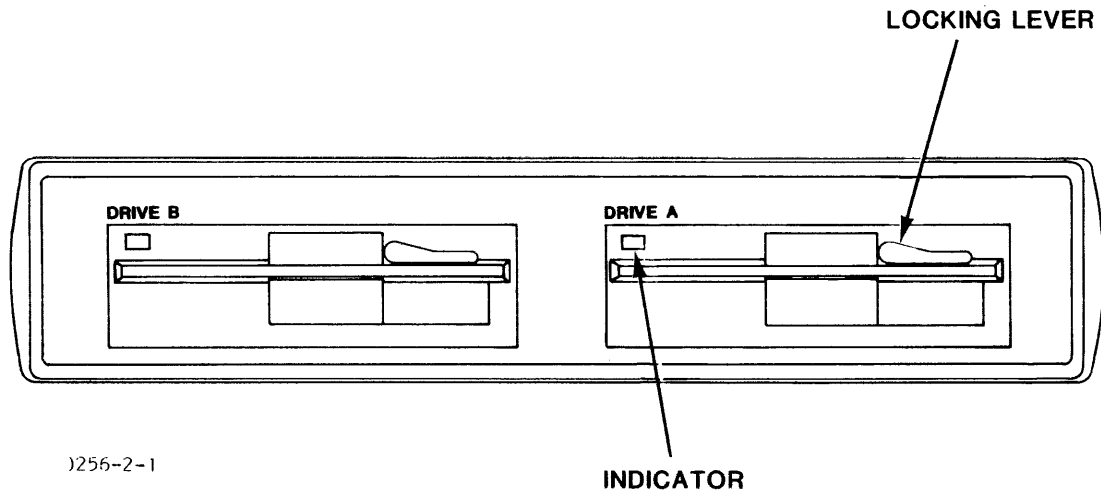
Media: 5 1/4 inch double-sided, double-density floppy disks

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

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



Drive B indicator: A red LED that illuminates 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.

Drive A indicator: A red LED that illuminates 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.

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 I/O menu 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.

OPERATION

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 use of the K105-D Disk Storage System (DSS).

Loading the DSS Software

The operating software for the DSS can be loaded into the logic analyzer RAM using either of two methods outlined below.

1. Warm Start -- This loading method is performed with power applied to the K105-D DSS and with no system disk installed. To warm start, load the DSS operating software into the logic analyzer RAM by proceeding 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
*
* A possible disruption of recorded data can occur
* if the disk is in contact with the read/write
* head during power-up or shutdown of the K105-D
* A good practice is to remove the disk from the
* drive or if the disk is still installed in the
* drive, unlock the drive latch handle prior to
* applying power to or removing power from the
* K105-D.
*
* * * * *
```

- b. Depress the I/O key. An I/O menu appears which includes the 0 and 1 disk mode selection keys. Depress either the 0 or 1 key.
- c. Observe that the red LED of the selected disk drive is illuminated during the time (5 seconds, nominal) that the software is being loaded into the logic analyzer RAM, and that during the loading, the following messages are displayed:

BOOT COMPLETE
and
K105 DOS Loader, Version 1.2

- 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 0 or 1 key. Observe that the disk storage system directory is displayed on the screen.
 - c. Depress the A key or the disk quick mode field to select the Reboot command, then move the cursor right to access the drive selection field.
 - d. Enter the designator A or B for the disk drive being used to reload the software by depressing the 0 or 1 key, respectively, or by using the NEXT/PREVIOUS keys. Next, 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 during boot loading the following messages are displayed:

BOOT COMPLETE
and
DOS Loader, Version 1.2

- f. Observe that the disk storage system directory is displayed on the screen after a depression of the 1 key and that the quick mode field is displayed after a depression of the 0 key.

Using the DSS Software

After the DSS software has been properly loaded into the logic analyzer RAM, the user can execute any of the available 12 system commands. These commands (and the available options) are discussed in detail under the SYSTEM COMMANDS section of this chapter. To execute a command, proceed as follows:

- a. Depress I/O, then 0 or 1.
- b. 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) - Timestamp
(3) - Copy	(9) - Format
(4) - Rename	(A) - Reboot
(5) - Lock	(B) - Sysgen

- c. Move the cursor right to the option field, and then down to the correct file.
- d. If required, place the unit in the Edit mode by depressing the EDIT key, specify the file name(s), and select the disk drive designator (A or B).
- e. 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 soft-key, 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.

SYSTEM FILES

Each K105-D DOS 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 DOS 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; this file also contains the timing display labels. Whenever a setup file is created, it always contains setup parameters for all 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 locations 0 through 1023 is stored in the data file.
3. Utility file: contains executable code for the logic analyzer. These files are provided for disassembler and future use. Storing any information in these files without having loaded a utility file will create invalid data.

The above described files are stored on tracks 7 through 79 of the 5 1/4 inch floppy disks of the storage system. The file directory is stored on disk track 1. Every time a file is created or updated, the appropriate entries (filename, location and length) are made in the directory.

The DOS can exchange files within the setup file category (setup file A with setup file B), but files cannot be exchanged between categories; for example, a setup file cannot be exchanged with a data file. If illegal file exchanges are attempted, an error 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 consisting 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 only 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 (setup, data, or execution file). The field is three characters in length. The character options available for the file type are listed in Table 3-1.

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

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	- Variable
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

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, diagnostics, other util.	(B)
***	Wildcard used in delete, copy, lock, unlock and directory commands	(C)

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 "X" 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 the 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 (that is, 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 for 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 DSS I/O screen is initially invoked, 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 and display the Directory or the disk quick mode fields. The system creates a filename: "A:FILE -01.SM". This file is called the default file. Whenever a filename is required by a command, the system starts with the default filename. 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 requires that the user enter the Edit mode by depressing the EDIT key. 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 using the F1 or F2 soft-key or a version number can be entered directly from the keyboard. The third field (the file type field) is controlled by the system. To avoid illegal entries, keyboard entries are not permitted in this field. The user may depress a one of the quick-keys defined in Table 3-1. Alternatively, the user may depress the NEXT/PREVIOUS keys to select a file type.

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 drive A and 1 for drive B. Alternatively, use the NEXT or PREVIOUS keys 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 DOS. Successive depressions of the F3 key (DIR) alternately display the A drive and B drive directories, thus simplifying Copy and Rename operations.

When the cursor is moved from the command field, the top directory entry is placed in reverse video and the file appears in the command line. By moving the cursor up or down, all files in the directory can be accessed.

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 (O) corresponds to the first filename, and quick-key (F) corresponds to the sixteenth filename.

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 non-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 default option are displayed near the bottom of the screen. Each command has options that can be selected by the depression of the cursor right key, EDIT key and the associated quick-key. The NEXT/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.

The user must then 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 depression.) Figure 3-1 shows the Directory with the selected Save command and its default option displayed on the bottom portion of the screen.

Directory of A:	-	Page 1	
Filename	Date	Time	Attribute
A: DOS105-30.SYS	10-02-84	10:58:00	Locked
A: DOS105-30.SA	-----	-----	Unlocked

17 BLOCKS USED, 141 BLOCKS REMAINING

SAVE Setup M to A:FILE -01.SM
F1= INC VER F2= DEC VER F3= DIR F4= EXECUTE
MEMORY=M MAIN MAIN=RDY

Figure 3-1. Directory with a Selected Save Command

The following paragraphs describe the functions of the 12 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 twelve options described in Table 3-2. Each command option, in turn, can be selected in the Save option field by depressing the quick-key indicated in the quick-key column, or alternatively using the NEXT/PREVIOUS keys.

As with all other commands, the Save command 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 allows the user to select a pre-recorded file via the Auto Directory mode or Edit mode. 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
-----
K125 DOS. 08.0

-----
SAVE Setup M to A:FILE -01.5M
[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 (EDIT)
SAVE Setup M to Drive:Filename	Causes the setup parameters (and timing display labels) in high-speed and main memory M (current setup) 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 trace 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 trace level for each sample recorded) in memory B and the Don't Care memory 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 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 in memory B and the Don't Care memory 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 (EDIT)
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 A 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 B to be stored on the selected floppy disk (A or B) under the specified filename.	(A)
SAVE Utility to Drive:Filename	Causes a currently loaded disassembler or other executable file to be stored on the selected floppy disk (A or B) under the specified filename. Storing information in these files without having a valid executable file in memory creates an invalid executable file which will cause a machine malfunction if an attempt is made to load the file.	(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 filename or select another system via the disk storage menu. If the F4 soft-key is depressed, all information on the existing file is erased and new information is saved.

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 12 options described in Table 3-3. Each option can in turn be selected in the Recall option field by pressing the EDIT key and then the quick-key indicated.

Table 3-3. Recall Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
RECALL Setup M from Drive:Filename	Causes the setup parameters (and timing-display labels) of high-speed and main 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)
RECALL Memory A from Drive:Filename	Causes the recorded data (and the active trace 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)

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

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
<p>RECALL Memory B from Drive:Filename</p>	<p>Causes the recorded data (and the active trace level for each sample recorded) of memory B and the Don't Care memory 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.</p>	<p>(4)</p>
<p>RECALL HS Memory A from Drive:Filename</p>	<p>Causes the 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 memory A. The memory A is updated with the new information.</p>	<p>(5)</p>
<p>RECALL HS Memory B from Drive:Filename</p>	<p>Causes the high-speed recorded data of memory B and the Don't Care memory 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.</p>	<p>(6)</p>
<p>RECALL MA & SA from Drive:Filename</p>	<p>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 are updated with the new information.</p>	<p>(7)</p>
<p>RECALL MB & SB from Drive:Filename</p>	<p>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 are updated with the new information.</p>	<p>(8)</p>

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

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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 are 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 are updated with the new information.	(A)
RECALL Utility from Drive:Filename	This option is used for recalling disassemblers and other executable files.	(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), FILE NOT FOUND". In this case, the user should 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 selected in the Delete option field by depressing the EDIT key and then the quick-key indicated.

Table 3-4. Delete Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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 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 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 informs the user that this file is already on disk. The user can take any of the following actions: continue by depressing the F4 soft-key. In this case, the old file is erased and the new information is copied from the source file. A second choice is to change the filename and depress the F4 soft-key to execute the command. A third choice is to abandon the process by reselecting the command.

The Copy command has the four options described in Table 3-5. Each option can be selected in the Copy option field by depressing the EDIT key and then the quick-key indicated.

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

Table 3-5. Copy Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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 A or 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 or B.	(1)
COPY A=SOURCE B=DESTINATION	Causes all files (except system) of floppy disk A to be copied to the destination.	(2)
COPY B=SOURCE A=DESTINATION	Causes all files (except system) of 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 can be selected in the Rename option field by depressing the EDIT key and then the quick-key indicated.

Table 3-6. Rename Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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 two options described in Table 3-7. Each option can be selected in the Lock option field by depressing the EDIT key and then the quick-key indicated. When a file is locked, the system can only read this file.

- NOTES: 1. The wildcard character (*) described in the paragraph titled "The Use of Wildcard Character" 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 (EDIT)
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 selected in the Unlock option field by depressing the EDIT key and then the quick-key indicated.

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

Table 3-8. Unlock Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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 selected in the Directory option field by depressing the EDIT key and then the indicated quick-key.

NOTE: The wildcard character (*) described in the paragraph titled "The Use of Wildcard Character with Filename" can be used with the Directory command.

When the Directory command is executed, the filename and file attribute (locked or unlocked) is displayed on the screen. File size is also displayed when a single file is listed. A typical screen is shown in Figure 3-3. 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 (EDIT)
DIR A:Filename	Causes the specified filenames on floppy disk A to be displayed.	(0)
DIR B:Filename	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 (EDIT)
DIR A	Causes all filenames on floppy disk A to be displayed.	(2)
DIR B	Causes all filenames on floppy disk B to be displayed.	(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: - Page 1
Filename      Date      Time      Attribute
-----
A: DOS105-30.SYS 10-02-84 10:58:00 Locked
A: DOS105-32.SA  -----  -----  Unlocked

17 BLOCKS USED,      141 BLOCKS REMAINING

DIR      A: DOS105-32.SA
[F1]=    [F2]=    [F3]= DIR    [F4]= EXECUTE
MEMORY=A MAIN                                MAIN=RDY
    
```

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

Timestamp Command

The Timestamp command enables the user to insert date and time information into filenames contained in the disk drive A or B floppy disk directories. The filename to which this information is to be added must be that of an unlocked file. Timestamp information can only be entered when in the Edit mode and is entered in the inverse order as that displayed in the directory (that is, time is entered first, then date). Characters 0-9 and * are accepted in any format.

Table 3-10. Timestamp Command

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
TIMESTAMP A:Filename	Allows the user to make time and date entries into floppy disk A filenames.	(0)
TIMESTAMP B:Filename	Allows the user to make time and date entries into floppy disk B filenames.	(1)

Format Command

The Format command enables the user to initialize floppy disk A or B to a recording format that is acceptable to the disk 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 3-11. Each option can be selected in the Format option field by depressing the quick-key indicated.

Table 3-11. Format Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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 (execute), 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 command via the DOS menu.

Reboot Command

The Reboot command enables the user to reload the disk 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 3-12. Each option can be selected in the Reboot option field by depressing the quick-key indicated.

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

Table 3-12. Reboot Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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 disk operating system programs from floppy disk (source) to floppy disk (destination). The Sysgen command has two options described in Table 3-13. Each option can be selected in the Sysgen option field by depressing the quick-key indicated. This command may also be performed with one drive functioning as both source and destination.

Table 3-13. Sysgen Command Options

OPTION FORMAT	FUNCTION	QUICK-KEY (EDIT)
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)

When the user depresses the F4 soft-key (execute), 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 command via the disk storage system menu.