

92067A RTE-IV Software Numbering Catalog

(This manual reflects information that is compatible with
Software Revision Code 1840.)



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PUBLICATION NOTICE

Information in this manual provides the file names and part numbers of the RTE-IV software. Changes in text to document software updates subsequent to the initial release are supplied in manual update notices and/or complete revisions to the manual. The history of any changes to this edition of the manual is given below under "Publication History." The last change itemized reflects the software currently documented in the manual.

Any changed pages supplied in an update package are identified by a change number adjacent to the page number. Changed information is specifically identified by a vertical line (revision bar) on the outer margin of the page.

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This catalog provides cross-reference lists of the 92067A software modules and the media on which the software modules are distributed. The purpose of the lists is to define the software modules currently supported with the product and to indicate the part numbers of different media on which these modules reside.

You will find several uses for this catalog. For example, you can use it to:

- order replacement software on the media type you need.
- find the software residing on any media type.
- determine the names of files on the media's directory.

This catalog contains two lists: the first is collated by software module number; the second by file name. The lists define:

MODULE FILE NAME The unique, 6-character file name of the software module. The file names are the names used in the file directory of any medium which contains more than one software module (for example, an RTE FMP disc directory or a mini-cartridge directory).

MODULE DESCRIPTOR A concise definition of the software module.

SOFTWARE MODULE NUMBER The part number of the software module; the paper tape part number of the software module.

Part Numbers The part numbers of the various media on which the software modules reside. Currently there are seven possibilities:

Paper Tape The number of the software module is the number of the paper tape part.

7900 Disc A collection of software modules stored as named files on a 7900 RTE master software disc.

7905 Disc A collection of software modules stored as named files on an RTE master software disc.

7906 Disc A collection of software modules stored as named files on a 7906 RTE master software disc.

7920 Disc A collection of software modules stored as named files on a 7920 RTE master software disc.

800 BPI (bits per inch) 9-Track Mag Tape	A track-per-track image of a 7900 or a 7905/7906/7920 disc (as defined above) on magnetic tape.
1600 BPI (bits per inch) 9-Track Mag Tape	A track-per-track image of a 7900 or a 7905/7906/7920 disc (as defined above) on magnetic tape.

Note that this catalog lists only paper tape numbers. For the following media, all modules listed in this catalog will be included under the part numbers given below:

92067-13001, if you have ordered the product on a 7900 disc cartridge.

92067-13101, if you have ordered the product on a 7905/7906 disc cartridge.

92067-13201, if you have ordered the product on a 7920 disc cartridge.

92067-13501, if you have ordered the 7900 master software disc on an 800 BPI 9-track magnetic tape.

92067-13601, if you have ordered the 7900 master software disc on a 1600 BPI 9-track magnetic tape.

92067-13502, if you have ordered the 7905/7906/7920 master software disc on an 800 BPI 9-track magnetic tape.

92067-13602, if you have ordered the 7905/7906/7920 master software disc on a 1600 BPI 9-track magnetic tape.

SOFTWARE MODULE NUMBERS

Software Module Number	Module File Name	Module Descriptor				
09601-16021	%DVR15	RTE 7261A CARDREADER DRIVER				
12732-16001	%DVR33	RTE FLEXIBLE DISC DRIVER				
20808-60001	%CAL10	RTE CALCOMP PLOTTER DRIVER				
20810-60001	%CALIB	RTE CALCOMP PLOTTER LIBRARY				
24306-60001	%DECAR	RTE DECIMAL STRING ARITHMETIC				
24998-16001	%RLIB1	RTE/DOS RELOC. LIBRARY, PART 1				
24998-16001	%RLIB2	RTE/DOS RELOC. LIBRARY, PART 2				
24998-16002	%FF4.N	FORTRAN IV FORMATTER				
29013-60001	%DVR31	RTE 7900A DISC DRIVER				
29028-60002	%DVR12	RTE 2767A/9866A LINEPRINTER DVR				
29029-60001	%DVR00	RTE TTY/PUNCH/PHOTOREADER DVR				
29030-60001	%DVR11	RTE 2892A CARD READER DRIVER				
59310-16002	%1DV37	RTE HPIB DRIVER WITHOUT SRQ				
59310-16003	%2DV37	RTE HPIB DRIVER WITH SRQ				
59310-16004	%HPIB	RTE HPIB DEVICE SUBROUTINE				
59310-16005	%SRQ.P	SRQ.P TRAP UTILITY				
59310-16011	%MESS	RTE HPIB MESSAGE UTILITY				
72008-60001	%1DV10	RTE 7210A PLOTTER DVR-COMLETE				
72009-60001	%2DV10	RTE 7210A PLOTTER DVR-MINIMUM				
91200-16001	%DVA13	RTE 91200A TV MONITOR DRIVER				
91200-16002	%TVLIB	RTE 91200A TV MONITOR LIBRARY				
91200-16004	%TVVER	91200A TV MON INTERFACE VERIFY				
92001-16020	%DVA12	RTE 2607/10/13/14/17/18 LP DVR				
92001-16027	%4DV05	RTE 2644/45 DRIVER (WITH CTU)				
92001-16028	%0DV05	RTE 2640A/B DRIVER (NO CTU)				
92001-16035	%DVA05	RTE 264X MODEM DVR (WITH CTU)				
92002-12001	%BMPG1	BATCH MONITOR PROGRAM, PART 1				
92002-12001	%BMPG2	BATCH MONITOR PROGRAM, PART 2				
92002-12001	%BMPG3	BATCH MONITOR PROGRAM, PART 3				
92002-16006	%BMLIB	BATCH LIBRARY				
92002-16010	%EDITR	RTE EDITOR				
92060-12005	%CLIB	RTE COMPILER LIBRARY				
92060-16031	%DVR32	RTE 7905/06/20 DISC DRIVER				
92060-16039	%SAVE	RTE SAVE PROGRAM				
92060-16040	%RESTR	RTE RESTORE PROGRAM				
92060-16041	%VERFY	RTE VERIFY PROGRAM				
92060-16042	%COPY	RTE DISC COPY PROGRAM				
92060-16043	%DBKLB	RTE DISC BACKUP LIBRARY				
92060-16044	%DSKUP	RTE OFF-LINE DISC BACKUP				
92060-16045	%RDNAM	RTE READ NAMR PROGRAM				
92060-16052	%KEYS	RTE SOFT KEY UTILITY				
92060-16053	%KYDMP	RTE SOFT KEY DUMP UTILITY				
92060-16092	%FTN4	RTE FORTRAN IV, MAIN				
92060-16093	%FFTN4	RTE FORTRAN IV, SEGMENT ID				
92060-16094	%OFTN4	RTE FORTRAN IV, SEGMENT 0				
92060-16095	%1FTN4	RTE FORTRAN IV, SEGMENT 1				

Software Module Number	Module File Name	Module Descriptor				
92060-16096	%2FTN4	RTE FORTRAN IV, SEGMENT 2				
92060-16097	%3FTN4	RTE FORTRAN IV, SEGMENT 3				
92060-16098	%4FTN4	RTE FORTRAN IV, SEGMENT 4				
92060-16101	%5FTN4	RTE FORTRAN IV, SEGMENT 5				
92060-18046	%UPDAT	RTE UPDATE TRANSFER FILE				
92060-18047	%PKDIS	RTE PACK DISC TRANSFER FILE				
92062-16003	%LP31	RTE 2631A LP SUBROUTINE				
92062-16004	%DVB12	RTE 2608A LINE PRINTER DRVR				
92064-16086	%MSAFD	RTE FLEX DISC BACKUP UTILITY				
92067-16001	%4PVMP	RTE4 PRIV MAPPING ROUTINES.				
92067-16002	%4LDR	RTE4 RELOCATING LOADER				
92067-16003	%4MTM	RTE4 MULTI TERMINAL MONITOR				
92067-16004	%4DP43	RTE4 POWER FAIL				
92067-16005	%4AUTR	RTE4 AUTO RESTART, RELOCATABLE				
92067-16006	%SCNFX	RTE4 CONFIGURATOR EXTENSION				
92067-16007	%4WHZT	RTE4 WHZAT PROGRAM				
92067-16008	%LGTAT	RTE4 TRACK ASSIGN. TABLE LOG				
92067-16009	%RT4G1	RTE4 GENERATOR, PART 1				
92067-16009	%RT4G2	RTE4 GENERATOR, PART 2				
92067-16010	%4SWTH	RTE4 SWITCH PROGRAM				
92067-16011	%4ASMB	RTE4 ASSEMBLER; MAIN				
92067-16012	%4XREF	RTE4 CROSS REFERENCE GENERATOR				
92067-16013	%#EMA	RTE4 EMA FIRMWARE VERIFIER				
92067-16014	%CR4S1	RTE4 MEMORY RESIDENT OP SYS-1				
92067-16014	%CR4S2	RTE4 MEMORY RESIDENT OP SYS-2				
92067-16028	%4SPO1	RTE4 SPOOL, PART 1				
92067-16028	%4SPO2	RTE4 SPOOL, PART 2				
92067-16035	%4SYLB	RTE4 SYSTEM LIBRARY				
92067-16070	%4ASB0	RTE4 ASSEMBLER, SEGMENT 0				
92067-16071	%4ASB1	RTE4 ASSEMBLER, SEGMENT 1				
92067-16072	%4ASB2	RTE4 ASSEMBLER, SEGMENT 2				
92067-16073	%4ASB3	RTE4 ASSEMBLER, SEGMENT 3				
92067-16074	%4ASB4	RTE4 ASSEMBLER, SEGMENT 4				
92067-16075	%DBUGR	RTE4 DEBUG SUBROUTINE				
92067-18005	%4AUTR	RTE4 AUTO RESTART, SOURCE				
92067-18033	%AN4F0	RTE4 7900 GRANDFATHER ANS FILE				
92067-18034	%AN4F5	RTE4 7905/06/20 GF ANS FILE				
92202-16001	%DVR23	RTE 7970 9-TRACK MAG TAPE DVR				
92900-16002	%2DV47	RTE 92900A DRVR W/O DMS				
92900-16003	%3DV47	RTE 92900A(3070) DVR WITH DMS				

SOFTWARE MODULE FILE NAMES

Module File Name	Module Descriptor	Paper Tape					
!DSKUP	RTE OFF-LINE DISC BACKUP	92060-16044					
%EMA	RTE4 EMA FIRMWARE VERIFIER	92067-16013					
%SCNFX	RTE4 CONFIGURATOP EXTENSION	92067-16006					
%ODV05	RTE 2640A/B DRIVER (NO CTU)	92001-16028					
%OFTN4	RTE FORTRAN IV, SEGMENT 0	92060-16094					
%1DV10	RTE 7210A PLOTTER DVR-COMplete	72008-60001					
%1DV37	RTE HPIB DRIVER WITHOUT SRQ	59310-16002					
%1FTN4	RTE FORTRAN IV, SEGMENT 1	92060-16095					
%2DV10	RTE 7210A PLOTTER DVR-MINIMUM	72009-60001					
%2DV37	RTE HPIB DRIVER WITH SRQ	59310-16003					
%2DV47	RTE 92900A DRVR W/O DMS	92900-16002					
%2FTN4	RTE FORTRAN IV, SEGMENT 2	92060-16096					
%3DV47	RTE 92900A(3070) DVR WITH DMS	92900-16003					
%3FTN4	RTE FORTRAN IV, SEGMENT 3	92060-16097					
%4ASB0	RTE4 ASSEMBLER, SEGMENT 0	92067-16070					
%4ASB1	RTE4 ASSEMBLER, SEGMENT 1	92067-16071					
%4ASB2	RTE4 ASSEMBLER, SEGMENT 2	92067-16072					
%4ASB3	RTE4 ASSEMBLER, SEGMENT 3	92067-16073					
%4ASB4	RTE4 ASSEMBLER, SEGMENT 4	92067-16074					
%4ASMB	RTE4 ASSEMBLER, MAIN	92067-16011					
%4AUTR	RTE4 AUTO RESTART, RELOCATABLE	92067-16005					
%4DP43	RTE4 POWER FAIL	92067-16004					
%4DV05	RTE 2644/45 DRIVER (WITH CTU)	92001-16027					
%4FTN4	RTE FORTRAN IV, SEGMENT 4	92060-16098					
%4LDR	RTE4 RELOCATING LOADER	92067-16002					
%4MTM	RTE4 MULTI TERMINAL MONITOR	92067-16003					
%4PVMP	RTE4 PRIV MAPPING ROUTINES	92067-16001					
%4SPO1	RTE4 SPOOL, PART 1	92067-16028					
%4SPO2	RTE4 SPOOL, PART 2	92067-16028					
%4SWTH	RTE4 SWITCH PROGRAM	92067-16010					
%4SYLB	RTE4 SYSTEM LIBRARY	92067-16035					
%4WHZT	RTE4 WHZAT PROGRAM	92067-16007					
%4XREF	RTE4 CROSS REFERENCE GENERATOR	92067-16012					
%5FTN4	RTE FORTRAN IV, SEGMENT 5	92060-16101					
%BMLIB	BATCH LIBRARY	92002-16006					
%BMPG1	BATCH MONITOR PROGRAM, PART 1	92002-12001					
%BMPG2	BATCH MONITOR PROGRAM, PART 2	92002-12001					
%BMPG3	BATCH MONITOR PROGRAM, PART 3	92002-12001					
%CAL10	PTE CALCOMP PLOTTER DRIVER	20808-60001					
%CALIB	RTE CALCOMP PLOTTER LIBRARY	20810-60001					
%CLIB	PTE COMPILER LIBRARY	92060-12005					
%COPY	RTE DISC COPY PROGRAM	92060-16042					
%CR4S1	RTE4 MEMORY RESIDENT OP SYS-1	92067-16014					
%CR4S2	RTE4 MEMORY RESIDENT OP SYS-2	92067-16014					
%DBKLB	RTE DISC BACKUP LIBRARY	92060-16043					
%DBUGR	RTE4 DEBUG SUBROUTINE	92067-16075					

Module File Name	Module Descriptor	Part Numbers					
		Paper Tape	Mini-Cartridge	7900 Disc	7905/7906 Disc	Flexible Disc	7920 Disc
%DECAR	RTE DECIMAL STRING ARITHMETIC	24306-60001					
%DVA05	RTE 264X MODEM DVR (WITH CTU)	92001-16035					
%DVA12	RTE 2607/10/13/14/17/18 LP DVR	92001-16020					
%DVA13	RTE 91200A TV MONITOR DRIVER	91200-16001					
%DVB12	RTE 2608A LINE PRINTER DRVR	92062-16004					
%DVR00	RTE TTY/PUNCH/PHOTOREADER DVR	29029-60001					
%DVR11	RTE 2892A CARD READER DRIVER	29030-60001					
%DVR12	RTE 2767A/9866A LINEPRNTER DVR	29028-60002					
%DVR15	RTE 7261A CARDREADER DRIVER	09601-16021					
%DVR23	RTE 7970 9-TRACK MAG TAPE DVR	92202-16001					
%DVR31	RTE 7900A DISC DRIVER	29013-60001					
%DVR32	RTE 7905/06/20 DISC DRIVER	92060-16031					
%DVR33	RTE FLEXIBLE DISC DRIVER	12732-16001					
%EDITR	RTE EDITOR	92002-16010					
%FF4.N	FORTAN IV FORMATTER	24998-16002					
%FFTN4	RTE FORTAN IV, SEGMENT ID	92060-16093					
%FTN4	RTE FORTAN IV, MAIN	92060-16092					
%HPIB	RTE HPID DEVICE SUBROUTINE	59310-16004					
%KEYS	RTE SOFT KEY UTILITY	92060-16052					
%KYDMP	RTE SOFT KEY DUMP UTILITY	92060-16053					
%LGTAT	RTE4 TRACK ASSIGN. TABLE LOG	92067-16008					
%LP31	RTE 2631A LP SUBROUTINE	92062-16003					
%MESS	RTE HPID MESSAGE UTILITY	59310-16011					
%MSAFD	RTE FLEX DISC BACKUP UTILITY	92064-16086					
%RDNAM	RTE READ NAMR PROGRAM	92060-16045					
%RESTR	RTE RESTORE PROGRAM	92060-16040					
%RLIB1	RTE/DOS RELOC. LIBRARY, PART 1	24998-16001					
%RLIB2	RTE/DOS RELOC. LIBRARY, PART 2	24998-16001					
%RT4G1	RTE4 GENERATOR, PART 1	92067-16009					
%RT4G2	RTE4 GENERATOR, PART 2	92067-16009					
%SAVE	RTE SAVE PROGRAM	92060-16039					
%SRQ.P	SRQ.P TRAP UTILITY	59310-16005					
%TVLIB	RTE 91200A TV MONITOR LIBRARY	91200-16002					
%TVVER	91200A TV MON INTERFACE VERIFY	91200-16004					
%VERIFY	RTE VERIFY PROGRAM	92060-16041					
%4AUTR	RTE4 AUTO RESTART, SOURCE	92067-18005					
%AN4F0	RTE4 7900 GRANDFATHER ANS FILE	92067-18033					
%AN4F5	RTE4 7905/06/20 GF ANS FILE	92067-18034					
%PKDIS	RTE PACK DISC TRANSFER FILE	92060-18047					
%UPDAT	RTE UPDATE TRANSFER FILE	92060-18046					

GRANDFATHER DISC CARTRIDGE

APPENDIX

A

This appendix provides you with some information about the structure, contents, and initial use of your 92067A grandfather disc cartridge. When you order 92067A on a 7900/7905/7906/7920 disc cartridge, you receive what we call a grandfather disc cartridge. Your grandfather disc platter contains a standard RTE-IV system containing a file manager cartridge. The part number for your grandfather disc cartridge is:

92067-13001, if you have ordered the product on a 7900 disc cartridge,
92067-13101, if you have ordered the product on a 7905/7906 disc cartridge.
92067-13201, if you have ordered the product on a 7920 disc cartridge.

Notice the label on the upper surface of your grandfather disc cartridge:

GRANDFATHER RTE DISC CARTRIDGE.
MASTER FILES. DO NOT ERASE OR
RUN DISC DIAGNOSTIC.

Please use this disc cartridge carefully; it contains the 92067A master files for your system.

DISC CARTRIDGE CONTENTS AND STRUCTURE

The grandfather disc contains the current 92067A product, organized as a standard system containing a file manager cartridge. Included in the system's file manager cartridge are the files listed in the tables on pages 3 and 5 of this manual. **THESE FILES ARE THE CURRENT 92067A PRODUCT.** The file manager cartridge has been assigned a file manager cartridge reference number of 32767, its master security code is NULL, and it starts at track 100 of the 7900 system platter or track 125 of the 7905/7906/7920 system platter. Each file in CR 32767 has a security code of RT.

The file &AN4Fx (where x = 0 for a 7900 disc platter and = 5 for a 7905, 7906 or 7920 disc platter) contains the answer file used to generate your grandfather disc. It may be used to regenerate the disc.

In addition to the files listed in this manual, CR 32767 contains 3 files created during the manufacturing process of the grandfather disc cartridge. They are named:

WELCOM A file which displays a welcome message each time the system is booted up from this disc.

&LISTF A generation map of the system created when the master disc was generated.

!BOOT A bootstrap loader created when the master disc was generated.

Note that WELCOM, &LISTF, and !BOOT are created by the software manufacturing process. They do not have part numbers; they cannot be ordered (this is why they do not appear in the lists of part numbers for 92067A).

DISC CARTRIDGE BACKUP AND UPDATING

We strongly urge you to back up the disc cartridge as soon as practicable after you receive it. You can back up the disc cartridge onto magnetic tape or onto another disc cartridge by following the instructions contained in the "Disc Backup Programs" section of the *RTE Utility Programs Reference Manual* (92060-90017).

You should use the disc cartridge as a storage place for the current version of 92067A. That is, as changes to the software modules in the product occur, you should update your disc cartridge to insure that you always have the current version of every 92067A software module. You can find procedures required for updating this product in the *RTE Utility Programs Reference Manual*, in the "Disc Update Program" section.

Note that the reason this grandfather disc cartridge is distributed with a file manager cartridge reference number or 32767, and the reason that all files in CR 32767 have a security code of RT is that these values are prerequisites for the use of the updating procedures described in the "Disc Update Program" section of *RTE Utility Programs*.

DISC CARTRIDGE I/O STRUCTURE

Your grandfather disc cartridge has been copied and verified from a master software cartridge which was generated at the factory to a standard I/O configuration. The basic information on the grandfather disc cartridge I/O structure is given in Table 1. Information for the 7900 disc structure is given in Table 2, and information for the 7905/7906/7920 disc structure is given in Table 3 and illustrated in Figure 1.

BOOT-UP OF DISC CARTRIDGE

The disc cartridge can be booted up using the standard I/O and memory configurations, or it can be booted up with reconfigured I/O and/or memory structure. Below are brief explanations of both procedures.

1. Standard boot-up procedures can be found in the *HP 12992 Loader ROM Installation Manual*. Note that if no I/O or memory reconfiguration is to be done, bit 5 of the switch register should be set to 0.

Below is an example of the switch register settings if the 12992B RPL-compatible 7905/7906/7920 disc ROM loader is used:

- Bits 0-2 = surface number of the disc where the RTE-IV system starts (surfaces are numbered starting at 0).
- 3-4 = reserved.
- 5 = 1 if I/O or memory reconfiguration is desired,
= 0, otherwise.
- 6-11 = select code of the disc.
- 12 = 1 to indicate a manual boot from the switch register.
- 14-15 = loader ROM selection; i.e., number of the ROM cell that contains the disc boot loader.

- If I/O and/or memory reconfiguration is to be done, set bit 5 of the switch register to 1 and follow the specific procedures given in the Memory and I/O Reconfiguration section of the *RTE-IV Programmer's Reference Manual (92067-90001)*.

Note that reconfiguration of I/O and/or memory can be made permanent, but be sure that the grandfather disc has been properly backed up before beginning this procedure.

See the *RTE-IV Programmer's Reference Manual* for an explanation of any error messages that may be encountered during boot-up.

Table 1. Standard System Assignments for 92067A Grandfather Disc Cartridge

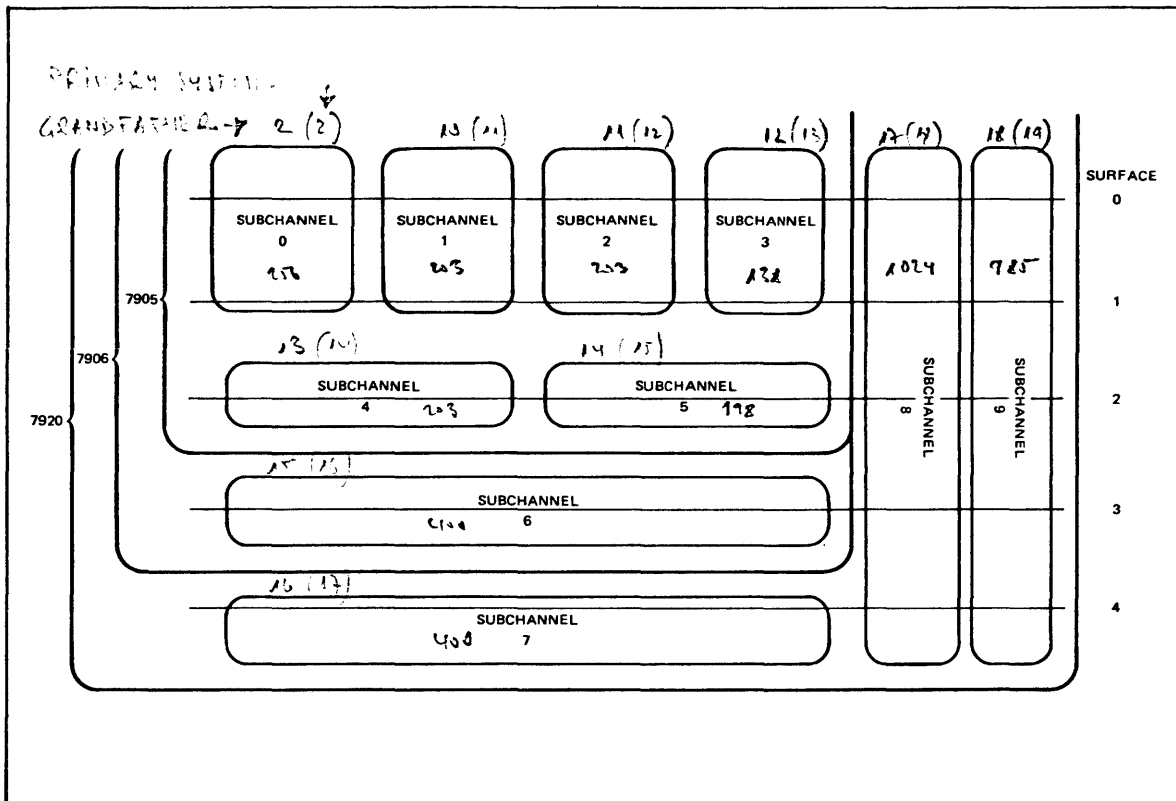
Device or Accessory	Driver is	Uses DMA ?	Buffered Output ?	Timeout Value =	EQT Extension	I/O Slot	LU #	EQT #	Subchannel
Time-base Generator 12539C						10			
Disc, if 7900	DVR31	Yes				11 12	2 10	1 1	1 0
Disc, if 7905 or 7920*	DVR32	Yes				11	2 14 10 15 11 16 12 17 13 18	1 1 1 1 1 1 1 1 1 1	0 5 1 6 2 7 3 8 4 9
System Console 2645	DVR05	No	Yes	T=12000	X=13	13	1 4 5	2 2 2	0 (console) 1 (left CTU) 2 (right CTU)
Terminal 2600	DVR00	No	Yes			14	7	6	0
Photoreader 2748B	DVR01	No		T=50		15	9	7	0
Magnetic Tape 7970B	DVR23	Yes	Yes	T=9999		16 17	8	3	0
Line Printer 2607/13/17/18	DVA12	No	Yes	T=100		20	6	8	0
Line Printer 2767A	DVR12	No	Yes	T=100		21	20	5	0
Tape Punch 2895B	DVR02	No	Yes	T=50		22	19	4	4
Unassigned							3		
<p>Note: This information is compiled from the &LISTF file; you may wish to get a copy of &LISTF to ensure that this information is current. *If your grandfather disc is a 7905, do not attempt to execute a "MOUNT CARTRIDGE" command for the LU#'s 15, 16, 17, or 18. If your grandfather disc is a 7906, do not attempt to execute a "MOUNT CARTRIDGE" command for the LU#'s 16, 17, or 18.</p>									

Table 2. 7900 Grandfather Disc Configuration

The 7900 grandfather disc contains two subchannels with 203 tracks each. The disc configuration is as follows:			
LU NUMBER	PLATTER	STARTING TRACK	NUMBER OF TRACKS
2	1 (upper)	0	203
10	0 (lower)	0	203

Table 3. 7905/7906/7920 Grandfather Disc Configuration

The 7905/7906/7920 grandfather disc contains ten subchannels. The disc configuration is as follows:							
LU NUMBER	SUBCHANNEL	STARTING TRACK	NUMBER OF TRACKS	STARTING HEAD	NUMBER OF HEADS	UNIT NUMBER	NUMBER OF SPARE TRACKS
2	0	0	256	0	2	0	8
10	1	132	203	0	2	0	5
11	2	236	203	0	2	0	5
12	3	340	138	0	2	0	4
13	4	0	203	2	1	0	5
14	5	208	198	2	1	0	5
15	6	0	400	3	1	0	11
16	7	0	400	4	1	0	11
17	8	411	1024	0	5	0	26
18	9	621	985	0	5	0	25



7700-128

Figure 1. 7905/7906/7920 Grandfather Disc Layout

LOADING FROM MAGNETIC TAPE

APPENDIX

B

This appendix provides you with some information about the structure, contents, and initial use of your 92067A grandfather disc cartridge image on magnetic tape. When you order 92067A on magnetic tape, you receive what we call a grandfather disc cartridge image on magnetic tape. Your magnetic tape is a track-per-track image of a grandfather disc platter that contains a standard RTE-IV system containing a file manager cartridge. The part number for your magnetic tape is:

92067-13501, if you have ordered the 7900 master software disc on an 800 BPI 9-track magnetic tape.

92067-13601, if you have ordered the 7900 master software disc on a 1600 BPI 9-track magnetic tape.

92067-13502, if you have ordered the 7905/7906/7920 master software disc on an 800 BPI 9-track magnetic tape.

92067-13602, if you have ordered the 7905/7906/7920 master software disc on a 1600 BPI 9-track magnetic tape.

If you ordered the 92067A product on magnetic tape, you will also receive the disc backup utility program (!DSKUP) on mini-cartridge (part number 92067-13301) and on paper tape (part number 92060-16044). Follow the procedures in this appendix to load !DSKUP from either the mini-cartridge or from the paper tape, and then execute this program to copy your magnetic tape onto a disc. See the *HP 12992 Loader ROM Installation Manual* for further instructions for using the mini-cartridge and paper tape ROM loaders.

CAUTION

If you are replacing a previous version of the grandfather disc, you should back up that disc on magnetic tape before overwriting it with the new grandfather. See the *RTE Utility Programs Reference Manual* for further instructions regarding disc backup.

LOADING !DSKUP FROM MINI-CARTRIDGE

The procedures given below for loading the disc backup utility assume the presence of an HP 2644/2645/2648 Display Station terminal on the system. Note that the mini-cartridge has a file directory as its first file.

1. Put the terminal in local mode by making sure the REMOTE key is not depressed, and press the CAPS LOCK key down.
2. Press the RESET key twice to clear terminal memory.

3. Insert the mini-cartridge into the left cartridge tape unit (CTU).
4. Press the gold key, f1 function key (FROM: L.TAPE), f7 function key (TO: DISPLAY) and then the READ key. The choice of the left cartridge tape unit is purely arbitrary. If the right CTU is used, press f2 instead of f1.

The Directory file at the beginning of tape will be displayed on the terminal screen. This step is necessary to get past the first file (Directory file), which cannot be read by the tape cartridge ROM Loader during bootup. The tape is now positioned at the beginning-of-file for the absolute disc backup utility program. Although the first file could be skipped in REMOTE mode, the off-line procedure is recommended for display to ensure that the correct mini-cartridge is inserted.

5. Press the REMOTE key down to put the terminal in REMOTE mode.
6. At the computer control panel, display the S-register by pressing the Register Select switch until the indicator light is over the S-register label.
7. Press the CLEAR DISPLAY switch.
8. Enter the address of the Tape Cartridge ROM Loader in bits 14 and 15. Enter the select code of the system console in bits 6-11.
9. Press the STORE switch, then press the IBL switch.
10. Press the PRESET switch, then press the RUN switch.

If you have followed the procedures correctly, the disc backup utility program will be read into main memory from the tape cartridge. The loading process will be indicated by the blinking of the green indicator light on the CTU.

When the loading is completed, a halt of 102077 will be displayed in the T-register. The CTU indicator light will emit a steady glow, and the mini-cartridge can then be rewound and removed.

LOADING !DSKUP FROM PAPER TAPE

Follow the procedures given below for loading the disc backup utility from paper tape.

1. Insert the disc backup utility paper tape into the photo reader and ready the tape reader.
2. At the computer control panel, display the S-register by pressing the Register Select switch until the indicator light is over the S-register.
3. Press the CLEAR DISPLAY switch.
4. Enter the address of the Paper Tape ROM Loader in bits 14 and 15. Enter the select code of the photo reader in bits 6-11.
5. Press the STORE switch, then press the IBL switch.

6. Press the PRESET switch, then press the RUN switch.

If you have followed the procedures correctly, the disc backup utility program will be read into main memory from the photo reader. When loading is completed, a halt of 102077 will be displayed in the T-register.

STORING TO THE DISC FROM MAGNETIC TAPE

Follow the procedures given below to execute the !DSKUP program and load the magnetic tape onto disc. Note that further information regarding the use of the disc backup utility program can be found in the *RTE Utility Programs Reference Manual*.

1. Load the master mag tape for the product to be produced onto the 7970 mag tape drive and set the mag tape drive to ON-LINE.
2. Place one of the following disc cartridges in the appropriate disc drive (depending on which product is to be created) and set either the LOAD/UNLOAD switch (7900) to LOAD or the RUN/STOP switch (7905/7906/7920) to RUN:
 - a. 9164-0045 7900 Disc Cartridge
 - b. 12940-60001 7905/7906 Disc Cartridge
 - c. 13394A 7920 Disc Pack.
3. Display the S-register on the computer control panel by pressing the Register Select switch.
4. Enter the system console select code in bits 0-5. Press the STORE switch.
5. Display the P-register by pressing the Register Select switch until the indicator light is over the P-register label.
6. Press the CLEAR DISPLAY switch, then set address 2 (octal) in the DISPLAY register.
7. Press the STORE switch and then press the PRESET switch. Press RUN to begin execution.

The disc backup utility will then execute and the following message will be displayed on the console.

DISC BACKUP UTILITY TASK?

The next two subsections will describe the dialogue that will take place with the operator when restoring the magnetic tape master to 7900 or 7905/7906/7920 discs, respectively. Operator responses will be in capital letters and messages output by the utility will be in boldface type.

Note that the operator may type a double question mark (??) in response to any question, and a description of the desired entry will be printed on the console.

The operator may also restart the utility by typing AB in response to any question.

STORING TO A 7900 DISC FROM MAGNETIC TAPE

The following dialogue occurs when storing to a 7900 disc:

TASK?

RE (restore)

MAG TAPE CHANNEL #?

Enter the lower-numbered select code of the mag tape.

MT FILE#?

1 (enter a 1 for the first file)

FILE ID:

The program will read the file ID off the mag tape and display it on the console.

TAPE #: 01

OK?

If the file ID number is correct, type YES.

DEST DISC CHANNEL #?

Enter the lower-numbered select code of the disc.

DEST DISC DRIVE #?

Enter the unit number of the disc drive to be used.

TO TRACK #?

0 (begin at track 0)

PLATTER #?

1 (removable platter)

VERIFY?

YES (the transfer should always be verified)

The program will proceed to store from the master mag tape to the disc. When it has finished, it will rewind the mag tape, print the following message on the console, and then proceed to do the verification:

VERIFYING

When the verification is complete, the mag tape will be rewound, and the following message will be displayed:

VERIFY COMPLETE

TASK?

The mag tape can now be removed from the mag tape drive, and the disc can be booted up by following the procedures described in Appendix A.

STORING TO A 7905/7906/7920 DISC FROM MAGNETIC TAPE

The following dialogue occurs when storing to a 7905, 7906, or 7920 disc:

TASK?

RE (restore)

MAG TAPE CHANNEL #?

Enter the lower-numbered select code of the mag tape.

MT FILE #?

1 (enter a 1 for the first file)

FILE ID:

The program will read the file ID off the mag tape and display it on the console.

TAPE #: 01

OK?

If the file ID number is correct, type YES.

DEST DISC CHANNEL #?

Enter the lower-numbered select code of the disc.

DEST DISC DRIVE #?

Enter the unit number of the drive to be used.

VERIFY?

YES (the transfer should always be verified)

The program will proceed to store from the master mag tape to the disc. When it is finished, it will rewind the mag tape, print the following message, and then proceed to do the verification:

VERIFYING

When the verification is complete, the mag tape will be rewound, and the following message will be displayed.:

VERIFY COMPLETE

TASK?

The mag tape can now be removed from the mag tape drive, and the disc can be booted up by following the procedures described in Appendix A.