

# System Support Tape User's Guide

HP 9000 Series 300 Computers

HP Part Number 98561-90035



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# Printing History

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New editions of this manual will incorporate all material updated since the previous edition. Update packages may be issued between editions and contain replacement and additional pages to be merged into the manual by the user. Each updated page will be indicated by a revision date at the bottom of the page. A vertical bar in the margin indicates the changes on each page. Note that pages which are rearranged due to changes on a previous page are not considered revised.

The manual printing date and part number indicate its current edition. The printing date changes when a new edition is printed. (Minor corrections and updates which are incorporated at reprint do not cause the date to change.) The manual part number changes when extensive technical changes are incorporated.

July 1988...Edition 1

September 1988...Edition 2. Revised the 98561-10835 to Rev 2.1.  
Changed command lines on pages 4, 6 and 10, with additional comments to clarify changes on page 4. Also corrected file listing on page 6.



# System Support Tape User's Guide

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This document provides information about the system support tape (98561-10835 Rev. 2.1) files. It shows you how to:

- check what is on your tape,
- list the files for each test,
- load those files onto your system,
- run each test, and
- reference other available documentation about each of the tests.

The following table lists the tests available:

Directory	Purpose of Test
98720	Tests for the HP 98720 Graphics Subsystem
98730	Tests for the HP 98730 Graphics Subsystem
Vme	Tests for the VME Expander
Ecc	Tests for error correcting memory
Crtadjust	Utilities to help adjust graphics displays
Floatcard	Test and exercise the series 200 float card
Sft	Perform system functional tests
CS80	CS/80 disc exerciser
SYSTEM_S3	Assembly language tests for Series 300 computers
SYSTEM_SF	Pascal based System Functional Tests for off-line use
CE.utilities	98720, 98730, CRTADJ, etc. Must be loaded onto an HP-UX file system

In order to run any of the tests, you need to be logged in as superuser (root).

SYSTEM\_S3 and SYSTEM\_SF are their own operating systems. In order to start these tests, you should first reboot your system. When the system is coming back up, hold down the space bar for a few seconds to keep the computer from rebooting with the default operating system. You should then see a screen similar to the following:

```
Copyright 1987.                               :HP7958, 1400, 0, 0
Hewlett-Packard Company.                     1H SYSHPUX
All Rights Reserved.                         1D SYSDEBUG
                                              1B SYSBACKUP
BOOTROM Rev. C                               :HP7945, 1401, 0, 0
Bit Mapped Display                           2H SYSHPUX
MC68020 Processor                             2D SYSDEBUG
MC68881 Coprocessor                           2B SYSBACKUP
Keyboard                                       :HP9144 TAPE, 1402, 0,0
HP-IB                                          1S SYSTEM_SF
DMA-C0                                         2S SYSTEM_S3
RAM 4194080
HP98644 (RS232) at 9
HP98625 (HPiB) at 14
HP98643 (LAN) at 20, 080009000901
```

All available systems are listed on the right-hand side. In this example, type **1S** to start the SYSTEM\_SF tests or **2S** to start the SYSTEM\_S3 tests.

Refer to *Test Tools Manual for HP 9000 Series 200/300 Computers* (09800-90001) for more information.

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## General Commands

Commands to administrate and run tests are as follows:

### Available tests

To find out what is on your tape, type:

```
lifs /dev/rct 
```

The `rct` file used above and throughout this manual is just an example name for the file where the tape drive can be referenced. Refer to the `/dev` directory or ask your system administrator what your's is called.

The following is a list of the files you should see from the above command:

```
IOMENUC___ TABLESF   PLOTC_____ KERNAL.O   RELMODC___
AUTOSTART  SYSTEM_SF  PRAM.O       PRINTC_____ LIBRARY
ALIGNC_____ DISC_____ MENUC_____ STARTSF    INITSF
DIGITC_____ GATORADEC_ KERNAL.E    SEQ.O      ALU.O
DRAM.O     FPCHIPS.O  SCAN.O      SEQ.E      ALU.E
SCAN.E     PRAM.E    FPCHIPS.E   DRAM.E     HP98635C__
IDMODC_____ DIGITIZERC HILMENUC__  KEYMODC___ BUTTONSC__
AXIS3C_____ REL_POSC__ CURSMODC__  REPORTC___ HP98625C__
CRTADJ     IDMAINC___ FLOAT      SYSTEM_S3  HP98720A
CS80       SFT       VME        ECC        HP98730A
```

From the above display, the files are divided up as follows:

These files are the HP-UX Series 300 CE.utilities test:

```
  CRTADJ      FLOAT      HP98720A   HP98730A
  CS80        SFT        VME        ECC
```

The `SYSTEM_S3` file is the Assembly language based Series 300 Computer tests. All other files are Pascal language based Series 300 System Functional tests.



## Available files

To find out what files are available for a certain test, type:

```
lifcp -r /dev/rct:(filename1) - | cpio -ictv [ > filename2 ] 
```

(*filename1*) = any of the 8 CE.utilities files, CRTADJ, CS80, etc.

[ > *filename2* ] = any filename you choose to use.

If the optional > *filename2* is appended to this line, the list of files from the *filename1* will be stored under *filename2*. To see the listing of *filename2*, type:

```
more filename2 
```

Typing the `lifcp` command above without appending the > *filename2* will cause the list to scroll up your screen. You will find the listing of the results of a `lifcp` for each test under the section about the particular test.

## Loading the files onto the system

To load the files from the tape onto your system, inside the directory `/usr/CE.utilities`, type:

```
cd /usr/CE.utilities 
```

```
lifcp -r /dev/rct:(filename) - | cpio -icdvm 
```

(*filename*) = any of the 8 CE.utilities files, CRTADJ, CS80, etc.

---

# Crtadj

## Available files

To list the files available for Crtadj, type:

```
lifcp -r /dev/rct:CRADJ - | cpio -ictv 
```

You should see:

```
Crtadjust  
Crtadjust/adjust  
Crtadjust/catdevname  
Crtadjust/crtadj.c  
Crtadjust/devmenu  
Crtadjust/helptext  
Crtadjust/help
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:CRADJ - | cpio -icvxm 
```

## Running the test

Before running the test, you will need to know the type of device used and the absolute path name. It is recommended that you use overlay planes if the device under test is not the system console. If the device under test is the system console, use  to toggle the overlay planes and  to toggle the image planes. To run the test, type:

```
cd /usr/CE.utilities/Crtadjust   
./adjust 
```

Enter the necessary information at each prompt. Use  to step through the test patterns. If you use overlay planes, it is normal for the test to repeat the multi-colored bars rather than the gray, red, green, and blue color bars because it does not have the range of colors available to do the last four tests.

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# HP98720A

## Available files

To list the available files for HP98720A, type:

```
lifcp -r /dev/rct:HP98720A - | cpio -ictv 
```

You should see:

```
98720
98720/ucode/ace.2      98720/ucode/ace.3      98720/ucode/ace.1
98720/ucode/frame_dump 98720/ucode/make_crtmap 98720/ucode/dat
98720/ucode/refcrc_D  98720/ucode/refcrc_E  98720/ucode/refcrc
98720/ucode/spinonce  98720/ucode/td_backup 98720/ucode/spininit
98720/ucode/alu.o      98720/ucode/cdma.o     98720/ucode/test_disable
98720/ucode/crc.o      98720/ucode/clear.o    98720/ucode/tcram.o
98720/ucode/fbt.o      98720/ucode/dram.o     98720/ucode/dram.o
98720/ucode/opt.o      98720/ucode/fconfig.o 98720/ucode/fpchips.o
98720/ucode/pram.o     98720/ucode/seq.o      98720/ucode/reg.o
98720/ucode/rt.o       98720/ucode/tec.o      98720/ucode/tec.o
98720/ucode/temp.o     98720/ucode/time.o     98720/ucode/tri.o
98720/CLEAN            98720/ucode/help.txt   98720/help.txt
98720/Taf              98720/help
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:HP98720A - | cpio -icdvxm 
```

## Running the test

To run the HP98720A test, type:

```
cd /usr/CE.utilities/98720 
./START 
```

## Reference

See the *HP 98720A Hardware Support Document (98720-90030)* for further information.

---

## CS80

### Available files

To list the files available for the CS80 test, type:

```
lifcp -r /dev/rct:CS80 - | cpio -ictv 
```

You should see:

```
/usr/CE.utilities/CS80/exerciser  
/usr/CE.utilities/CS80/README  
/usr/CE.utilities/CS80/bdblk  
/usr/CE.utilities/CS80/spare  
/usr/contrib/man/man1m/spare.1m  
/usr/contrib/man/man1m/bdblk.1m
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:CS80 - | cpio -icdvm 
```

### Running the tests

---

#### **WARNING**

**These tests should be run only in *single user mode*. Running the exerciser incorrectly could cause you to lose files. If spare is run incorrectly, you could lose access to your disc.**

---

## Exerciser

To run the test, type:

```
cd /usr/CE.utilities/CS80   
./exerciser 
```

The test will first print out a welcome message, possibly followed by a warning message, like:

```
Welcome to the CS80 Exerciser.  
  
*** WARNING! System SHOULD BE in single-user mode.  
System currently is NOT in single-user mode.  
The CS80 Exerciser WILL DISRUPT other users.
```

If the warning message above is printed you should ask your system administrator to invoke single user mode before you run this test.

The welcome message alone is the signal to type in the password:

```
bolide 
```

You will then be prompted for the printer address. This can be found in the `/dev` directory under `/dev/lpt`, if there is a printer configured into the system. After this you'll be shown the table of devices available. An example is listed below:

```
CS80 Devices Available for Test:  
  
Device   Select   Bus   Type  
Number   Code     Addr  
1         14       0     7958  
2         14       1     7945  
3         14       2     9144  
4         14       5     9144
```

You may want to copy down the available devices for your system. You may need to reference them when you're running the tests.

After the available devices table is on the screen, press any key to get the function selection table. In this table is the command to toggle service engineer mode on and off (c). The password you should type for turning service engineer mode on is:

```
corium 
```

The following is the function selection table that you should see:

```
Exercise Parameter and Function Selection:
D - Device number to test :    1 (Bus 14, Address 0)
U - Unit number to test   :    0
V - Volume number to test :    0
O - Output device (Results): Screen
L - Loop count for test   :    1
Y - Long/short Test       : Short
C - Service Engineer Mode : off
S - Display CS80 devices available for testing
T - Display units & volumes on Device 1
Z - Identify a CS80 device that can't be found
E - Begin exercising or printing logs
! - To stop the Exerciser
```

### Spare

Before you run the spare test, you will need to know the absolute device path and the sector number. To run the test, type:

```
/usr/CE.utilities/CS80 
./spare device_path sector# [sector#] 
```

### References

For further information on the function of the parameters in the “Exercise Parameter and Function Selection” table, see *Test Tools Manual for HP 9000 Series 200/300 Computers* (09800-90001).

For further information type one or both of the following commands:

```
man spare 
more README 
```

# Float

## Available files

To list the available files for Float, type:

```
lifcp -r /dev/rct:FLOAT - | cpio -ictv 
```

You should see:

```
Floatcard  
Floatcard/help  
Floatcard/float.h  
Floatcard/float.mk  
Floatcard/fltaccept.c  
Floatcard/fltexhaust.c  
Floatcard/helptext
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:FLOAT - | cpio -icdvm 
```

## Running the tests

To run the tests, type:

```
cd /usr/CE.utilities/Floatcard   
make -f float.mk   
./fltaccept 
```

or

```
cd /usr/CE.utilities/Floatcard   
make -f float.mk   
./fltexhaust 
```

## Reference

For additional information on executing a make, type:

```
./help 
```

---

# Sft



## Available files

To list the available files for Sft, type:

```
lifcp -r /dev/rct:SFT - | cpio -ictv 
```

You should see:

```
Sft
Sft/discmenu
Sft/graphicsmenu
Sft/readterm.c
Sft/testpattern
Sft/disctest
Sft/get6digits
Sft/readterm
Sft/runtest
Sft/tapetest
Sft/float.h
Sft/98248A.test
Sft/help
Sft/graphics.c
Sft/helptext
Sft/tablet.c
Sft/topmenu
Sft/diactest2
Sft/graphicstest
Sft/rs232test
Sft/sft
Sft/termtest
Sft/soptest
Sft/optest.gold
Sft/tablet.o
Sft/dgraphics.c
Sft/printrmenu
Sft/tapemenu
Sft/fastcat.c
Sft/get4digits
Sft/printertest
Sft/rungrafxtest
Sft/tablettest
Sft/fltaccept.c
Sft/optest
Sft/soptest.gold
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:SFT - | cpio -icdvxm 
```

## Running the tests

Before running the tests, you may need to know the select code, device address, unit number, and volume number of your device. Whether you need to know any or all of these depends on what device you are testing. The test will prompt you for the needed information. To run the test, type:

```
cd /usr/CE.utilities/Sft 
./sft 
```



---

# Vme

## Available files

To list the files available for Vme, type:

```
lifcp -r /dev/rct:VME - | cpio -ictv 
```

You should see:

```
help
vme_test
vme_README
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:VME - | cpio -icdvm 
```

## Running the test

To run the test, type:

```
cd /usr/CE.utilities/VME 
./vme_test 
```

## References

For more information on the test, type:

```
more vme_README 
```

For further information, refer to the *VMEbus Expander Familiarization Guide* (98577-90000).

---

## Ecc

### Available files

To list the files available for Ecc, type:

```
lifcp -r /dev/rct:ECC - | cpio -ictv 
```

You should see:

```
/etc/ecclogger  
/etc/eccscrub  
/usr/man/man1m.Z/ecclogger.1m
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:ECC - | cpio -icdvm 
```

### Where is it?

Ecc is different from the other tests because its files are not loaded into the same directories. The others put their files into the directory `/usr/CE.utilities`. The executable files for Ecc are stored in `/etc` and the manual pages are under `/usr/man/ecclogger`.

### Reference

There are no immediate executable files for Ecc. For more information on setting up and executing the Ecc tests, type:

```
man ecclogger 
```

---

# HP98730A

## Available files

To list the available files for HP98730A, type:

```
lifcp -r /dev/rct:HP98730A - | cpio -ictv 
```

You will see 98730 preceding each of the following entries:

```
/davucode                /davucode/the_demo      /davucode/field
/davucode/mkcrmap.T      /davucode/ace1.T        /davucode/ace2.T
/davucode/ace3.T         /davucode/ace4.T        /davucode/ace_blue.T
/davucode/ace_grn.T      /davucode/ace_hang.T    /davucode/ace_rect.T
/davucode/ace_rect1.T   /davucode/ace_rect2.T   /davucode/ace_rect3.T
/davucode/ace_rect4.T   /davucode/ace_rect5.T   /davucode/ace_red.T
/davucode/ace_vio.T     /davucode/ace_white.T   /davucode/glass1_d.T
/davucode/glass1_v.T    /davucode/gs3ddiag.msg  /davucode/refcrc.T
/davucode/shutdown.T    /davucode/spring_d.T    /davucode/spring_v.T
/davucode/disable.T     /davucode/dl_script.T   /davucode/torus_d.T
/davucode/torus_v.T     /davucode/vw_d.T        /davucode/vw_v.T
/davucode/sprite.T      /davucode/rb_rect.T     /davucode/rb_line.T
/davucode/crosshair.T   /davucode/crc.d         /davucode/fp.d

/davucode/fpx.d          /davucode/t_addfsp0.d   /davucode/t_addfsp1.d
/davucode/t_addfsp2.d   /davucode/t_addfsp3.d   /davucode/t_addfsp4.d
/davucode/t_addfsp5.d   /davucode/t_ccreg0.d    /davucode/t_divfsp0.d
/davucode/t_divfsp1.d   /davucode/t_divfsp2.d   /davucode/t_divfsp3.d
/davucode/t_divfsp4.d   /davucode/t_divfsp5.d   /davucode/t_mulfsp0.d
/davucode/t_mulfsp1.d   /davucode/t_mulfsp2.d   /davucode/t_mulfsp3.d
/davucode/t_mulfsp4.d   /davucode/t_mulfsp5.d   /davucode/t_pramaddr.d
/davucode/t_grotate0.d  /davucode/t_ready1.d    /davucode/t_test10.d
/davucode/t_test11.d    /davucode/t_test12.d    /davucode/t_test13.d
/davucode/t_test14.d    /davucode/t_test15.d    /davucode/t_test16.d
/davucode/t_test17.d    /davucode/t_test23.d    /davucode/t_test8.d
/davucode/t_test9.d     /davucode/te_data.d     /davucode/t_dataram0.d
/davucode/t_dcram0.d    /davucode/t_dcram0.d    /CLEAN
/START                  /help                   /helptext
/section                /what_tests             /how_many
```

To load these files onto your system, type:

```
lifcp -r /dev/rct:HP98730A - | cpio -icdvxm 
```

## Running the test

To run the test, type:

```
cd /usr/CE.utilities/98730   
./START 
```

## References

For information on how to run the test, type:

```
more helptext 
```

For more information, see the *HP 98730A Hardware Support Document* (98730-90030).

## Notes



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