

**HP 3000 SERIES II/III
COMPUTER SYSTEM
MANUAL OF ON-LINE VERIFICATION PROGRAMS**

**ON-LINE HEWLETT-PACKARD
LINE PRINTERS VERIFICATION**

Verification No. D466A

Subsystem Model No.	Line Printer Model No.
30118A	2607A
	2608A
30108A	2610A
30127A	2613A
30109A	2614A
30133A	2617A
30128A	2618A
	2619A

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HP LINE PRINTER VERIFIER

1.0 INTRODUCTION

The On-line Printer Verifier confirms proper operation of the HP Family of line printers through the use of the MPE Operating System.

Model -----	Lines/Min -----	Characters Set -----
2607A	200	64
2607A-001	200	128
2608	400	128
2610A	200	64
2610A-001	150	96
2613	300	64
2613A-001	240	96
2614A	600	64
2614A-001	400	96
2617A	600	64
2617A-001	436	96
2618A	1250	64
2618A-001	925	96
2619A	1000	64
2619A-001	750	96

LINE PRINTER VERIFIER

HP D466A

2.0 MINI OPERATING INSTRUCTIONS

Restore file on HP32230.SUPPORT

:RUN PD466A

Enter Model No.

Enter Number of Characters to be used (64/96/128)

Enter Logical Dev. No.

Select Section Flags

For Looping and Status checks use SLEUTH

3.0 REQUIREMENTS

3.1 Hardware Configuration

The test requires the minimum configuration needed to support MPE III and an HP Line Printer with Interface. (The interface is not tested by this test and is assumed to be operating properly.)

3.2 Software Requirements

The On-Line Line Printer Verifier is designed to run under control of the Multiprogramming Executive (MPE/3000) program and requires a properly Configured Driver be included. The test is coded in System Programming Language (SPL/3000).

3.3 Operating Information

NOTE: The printer being tested must be spooled.

3.3.1 Loading

The test is in store format and should be restored on the HP32230.SUPPORT account. It can be moved to any account thru the use of FCOPY.

3.3.2 Configuring:

The test may be brought to the running state by the command:

```
:RUN PD466A
```

A message will be printed on the terminal
"D1 ON LINE LINE PRINTER VERIFIER (HP466A.xx.x)"

To the questions "Q1 WHICH MODEL? 2607/08/10/13/14/17/18/19:" and "Q2 64/96/128 CHARACTER SET?", enter the particular model under test and the number of characters.

Press RETURN after each entry.

The test will ask for the logical device number. Enter the number as listed on the MPE Configuration printout.

Press RETURN

The final question is "Q4 FLAGS?" - To this, answer with the section numbers separated by a comma.

Example: Q4 FLAGS? 2,3,4,5,6,7

In this example, Section One was not called for. In most cases it will not as Section One tests the ability of the whole system to report the printer off-line. If RETURN is pressed without any response, all test sections applicable to the selected model are executed.

Press RETURN

4.0 DETAILED OPERATING INSTRUCTION

Load "STORE" tape onto FIELD.SUPPORT, (HP32230)

Disable spooling to the printer to be tested.

:RUN PD466A

D1 ON-LINE LINE PRINTER VERIFIER (HP D466A.xx.xx)

"Q1 WHICH MODEL# 2607/08/10/13/14/17/18/19:"

Enter the model #.

Press RETURN

"Q2 64/96/128 CHARACTER SET?"

Enter the number of characters.

Press RETURN

"Q3 LOGICAL DEVICE #"

Enter the logical device number of the line printer to be tested.

Press RETURN

"Q4 FLAGS?"

Enter the number(s) of the section(s) to be tested. If no entry is made a default setting consisting of the entire series of tests applicable to the selected model will be run.

4.1 Flag Options

Flag 1 - Section 1 - On/Off Line Test

- 2 - VFU Tests (Default VFC for 2608)
- 3 - Character Test
- 4 - Ripple Test
- 5 - Triangle Test
- 6 - Horizontal, Vertical Test
- 7 - Nonprinting Character Codes
(Not for 2607 or 2608)
- 8 - Character Backspace, Shift-Out/
Shift-In (Character Set Switching),
Line Overprint Test (2608 only).
- 9 - Download VFC Test (2608 only)
- 10 - Download Left Margin Test (2608
only)

Press RETURN

4.2 Looping and Status Checks

Use SLEUTH for looping and status checks.

5.0 TEST DESCRIPTIONS

The test is divided into sections. Each section (1 through 10) tests one or more functions of the line printer. The sections are described below.

5.1 Section 0 (Initialization)

- a - Prints the test title.
- b - Requests the model number.
- c - Requests the number of characters to be used (94/96/128).
- d - Requests the logical device number.
- e - Requests the sections to be tested.

This section also tests the device type as defined to MPE and checks to be sure the spooling is disabled. Finally, the section arms the CONTROL Y trap.

If CONTROL Y (Y^C) is pressed during execution, D466A suspends and will accept one of three entries from the keyboard:

E[ND]: Skip any remaining tests, terminate D466A.

C[ONTINUE]: Resume execution at the point of suspension.

S[ECTION 0]: Enter new printer specifications.

After "Q4 FLAGS", enter "C" or "E", per above. Note that you cannot restart the diagnostic; you may only resume at the point of suspension. The "S" option is useful only for correcting errors in any of the specifications of Section 0 which affect sections not yet executed.

5.2 Section 1 (Ready/Not Ready Test)

A console message requests the operator to take the printer OFF line. PD466A then attempts to output a message. If the printer is off line, the operating system reports to the system console "I/Ox.xx/LDEV#XXX NOT READY."

If the printer is on-line and ready, a message to that effect will be printed on the terminal.

The operator is requested to put the printer on-line and an output is directed to the printer. This time, if the printer is still off-line, a message will be printed on the system console. "I/O x.xx/LDEV#XXX NOT READY."

The test depends upon the status as returned by the driver and does not attempt direct contact with the device itself.

5.3 Section 2 (Line Spacing and VFU)

This section tests the following line spacing functions:

	Format Code -----	Function -----
all except 2607	00	Suppress Space
	01	Single Space
	02	Double Space
	03	Triple Space
	%12	Space 10 Lines
	%17	Space 15 Lines

Also tested are the vertical format unit (VFU) channels 1 through n (n varies with the printer model as listed below).

Format Code -----	VFU Channel -----	Function -----
%300	1	Top of Form
%301	2	Bottom of Form
%302	3	Single Space
%303	4	Double Space
%304	5	Triple Space
%305	6	Next 1/2 Page
%306	7	Next 1/4 Page
%307	8	Next 1/6 Page
%310	9	Bottom of Form
%311	10	One Line Before Bottom Of Form

%312	11	One Line Before Top Of Form
%313	12	Top Of Form
%314	13	Next Seventh Line
%315	14	Next Sixth Line
%316	15	Next Fifth Line
%317	16	Next Fourth Line

Model # -----	VFU Channels Tested -----
2607/10/14	1-8
2613/17/18/19	1-9
2608	1-16

5.4 Section 3 (Character Test)

Prints one line of each printable character.

5.5 Section 4 (Ripple Pattern Test)

The test prints a ripple pattern; that is, a set of lines with each line containing all the printing characters. The character set is shifted by one character each time a line is printed.

5.6 Section 5 (Triangle Pattern Test)

Checks the printers ability to clear all print positions after each print cycle. The test prints a triangle pattern of the character "M"; the first line containing a character in each print position, and each succeeding line containing one less character than the preceding line.

5.7 Section 6 (Horizontal/Vertical Alignment Test)

Tests the horizontal and vertical alignment.

- a - Prints 60 lines of "E", to check vertical alignment.
- b - Prints 60 lines of "M", to check horizontal alignment.
- c - Prints 60 lines of "H", to check the dot matrix (2607 and 2608 only).

5.8 Section 7 (Non-printing Character Code Test)

This tests the non-printing character codes (%0-%37); they should print blanks. Since the 2607 and 2608 print something for all print characters, this test is bypassed for these printers.

5.9 Section 8 (Shift-out/Shift-in, Backspace, Line Overprint Test)

For the 2608 only. This section tests:

- a - The ability of the 2608 to select and print the default (power-on) secondary and primary character sets.
- b - The ability to perform single character overstrike using the imbedded CONTROL-H code. All upper case letters should be underlined; other characters should not.
- c - The ability to overprint the entire line using the print-with-no-advance (%200) carriage control code. A ripple pattern is printed without advancing paper, then underlined on the next request.

5.10 Section 9 (Download VFC Test)

For the 2608 only. At power on, the 2608's electronic Vertical Format Control (VFC) is loaded with an HP standard pattern from a self-contained ROM. This section tests the ability to externally program the 2608's VFC, and restore the default VFC at completion. The test requests the operator to download the required files. For simplicity, the test file is a left-to-right mirror image of the default file. For example, the test file VFC image for channel 1 is the same as the default VFC channel 16; test channel 2 is the same as default channel 15, etc.

5.11 Section 10 (Download Left Margin Test)

For the 2608 only. The 2608 may be programmed to print the first character of each line in any of physical columns 1 to 16. This section tests this capability by printing a reference column heading and two ripple patterns; one starting in column 1 and the other in any column from 1 to 16 (operator selectable). The operator is asked to perform the required downloading.

APPENDIX A
TEST MESSAGES

MESSAGE FORMAT

All test messages to the operator begin with an alphabetic character to which is appended the step number in which the message was generated. The alphabetic prefixes identify the class of the message. Message classes are defined as follows:

Class -----	Definition -----
D	Data or information output; requires no operator action.
E	Error messages.
P	Test has paused; waiting for operator action.
Q	Test is waiting for operator input.

MESSAGES

Messages that may be printed during execution of the test are listed below.

Section -----	Message -----	Comments -----
0	D1 ON-LINE PRINTER VERIFIER (HP D466A)	
0	Q1 WHICH MODEL? 2607/08/10/13/14/17/18/19	Enter Model No.
0	Q2 64/96/128 CHARACTER SET?	Enter number of characters.
0	Q3 LOGICAL DEVICE?	Enter the device No. from MPE.
0	Q4 FLAGS?	Enter the sections to be tested.
0	E1 INVALID NUMERIC VALUE	Bad binary conversion. Enter again.

Section -----	Message -----	Comments -----
0	E2 INVALID LOGICAL DEVICE	Re-enter.
0	E3 DEVICE IS NOT LINE PRINTER	LDEV type is not a line printer type.
0	E4 SPOOLING IS NOT DISABLED	Operator must take line printer out of service. "SPOOL <ldev>, STOP"
0	E12 FOPEN REQUEST NOT GRANTED	MPE rejected the FOPEN request. Re-enter.
1	D7 PRESS CR TO CONTINUE	Type return to continue. (A wait loop.)
1	P50A PRINT SW.ON., THEN PRINT, SW.OFF.	2607 only.
1	P50B PRESS 'ON/OFF' LINE SW. 'ON' THEN 'OFF'.	Depress ON LINE and OFF LINE push- buttons on printer panel.
1	P50C COMPUTER CONSOLE SHOULD PRINT 10/X:XX/LDEV# NOT READY	MPE message.
1	E51 DEVICE STATUS IS READY, SHOULD NOT BE READY.	Printer should be off-line.
1	P52A PRINT SW. ON	2607 only.
1	P52B PRESS 'ON/OFF' SW ON	Depress ON LINE pushbutton.

Section -----	Message -----	Comments -----
1	E53 DEVICE STATUS IS NOT READY. SHOULD BE READY.	Check to ensure printer is on line.
8	LINE PRINTER VERIFIER TEST TERMINATED.	End of Test.
ALL	D5 FWRITE REQUEST NOT GRANTED	MPE did not allow the write request.
ALL	D6 END OF SECTION X	End of Section.

