HP 2562C
OPERATOR'S MANUAL

Manual Part No. 02562-90901

HEWLETT
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CHAPTER 1
GENERAL INFORMATION

1.1 Introduction

This manual contains information necessary to operate and perform preventive maintenance on the HP 2562C Table Top Line Printer. Read this manual before using your printer so that you will be familiar with all its capabilities and features.

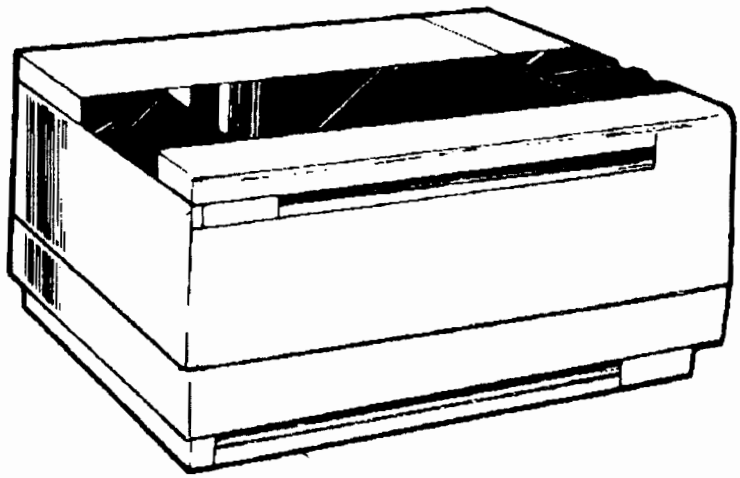


Figure 1-1. The HP 2562C Table Top Printer

What is in this Manual?

The information in this manual is divided into the following chapters:

- **Chapter 1: General Information**

  The rest of this chapter provides a list of related documentation that might be useful to you. This is followed by a functional description of the HP 2562C, and a listing of options and supplies. Finally, there is a word about service and operator safety.

- **Chapter 2: Getting Started**

  Chapter 2 will assist you in choosing a location and setting-up your printer. We will show you how to load the ribbon cartridge and paper; how to adjust for different paper sizes and set Top of Form; how to configure the printer and run the self-tests.

- **Chapter 3: Using The Printer**

  This chapter discusses use of the Operator Control Panel. Each control key is explained in detail. This is followed by information on power fail recovery and reset. Next, we explain the Vertical Forms Control (VFC) capabilities of the HP 2562C.

- **Chapter 4: In Case Of Difficulty**

  This chapter tells you what to do in case of difficulties or printer fault conditions. All printer error numbers are explained, as well as a section (4.1) which discusses possible problems which may not generate error numbers.

- **Appendix: Specifications**

  The appendix lists detailed printer specifications, including physical characteristics, environmental requirements, electrical hook-up, power consumption, performance data and paper specifications.

- **Index**

  Use the index to quickly locate primary sources of information.

- **Reader Comment Sheet**

  This postage-paid form makes it easy for you to give us feedback regarding this manual. Please use it to relay any comments or suggestions.

- **Operator Control Panel User's Aid**

  This fold-out page is provided as a quick reference for using the Control Panel. All operator functions are shown in simple table form. You might want to post a copy near your printer.

- **Self Test Printout**

  Copy of an actual self-test run on an HP 2562C. You might find this useful for comparison purposes.

- **Sales and Service Offices**

  This listing provides a reference to all of HP's Sales and Service offices throughout the world. If you have any questions or needs, just give your nearest office a call.

Related Manuals

- *HP 256X(Family) Cond Oper Manual (02564-90922)*
- *HP 2563B Service Manual* (02563-90924)
- *HP 256X Printer Family Tech Ref Manual (02564-90905)*
- *HP 2563B Parts and Diagrams Manual* (02563-90926)
- *HP Label Card Manual* (26062-90902)
- *RS-232/422 Serial Interface Manual* (26067-90921)
- *Centronics Parallel Interface Manual* (26067-90906)
- *HP-IB Interface Manual* (26067-90901)
- *RS-232 Interface Manual* (26067-90903)
- *RS-422 Serial Interface Manual* (26067-90904)

1.2 Product Description

The HP 2562C is a highly reliable, medium speed printer designed for use in many printing applications. You will find that it has several attractive features available including:

- Multiple character sets requiring no mechanical font change
- Bar code printing capability
- HP Label card (AIAG Barcode Verification) Optional
- 16-channel vertical format control (VFC)
- Normal and compressed print pitch (10 and 13.3 pitch)
- Paper jam detection
- Easy forms alignment

Options

The HP 2562C Line Printer is available in several configurations to match your individual applications and needs. These configurations are stated as options--three-digit suffixes to the model number such as HP 2562C #001. The option numbers are marked on an identification tag which is located near the Main Power ON/OFF (1/0) switch on the back of the printer.

The standard model HP 2562C includes a 16-channel VFC, normal and compressed printing features, raster graphics capabilities, paper jam detection, a Roman8 character set (Standard ASCII plus Roman Extension), compressed, double-size, high density near letter quality high speed (420 lpm) draft quality characters and bar codes. Japanese customers will receive 7-bit Katakana instead of standard Roman 8 and high density 8-bit Katakana in addition to the standard character sets (Opt 047).

The standard printer is configured for HP-IB interface, 120 Vac, 50/60 Hz. operation, and comes equipped with a power cord and one ribbon cartridge.

The following table shows the available options for the HP 2562C.

Table 1-1. PRINTER OPTIONS

CHARACTER SETS

047	7-bit Katakana and high density Katakana character sets

(Refer to Character Set Upgrade Kits or contact Boise Specials)

POWER SUPPLIES

015	220 Vac, 50/60 Hz
016	100 Vac, 50/60 Hz
017	240 Vac, 50/60 Hz

INTERFACE SUBSYSTEMS

049	RS-232-C interface subsystem
050	RS-422A interface subsystem
053	Centronics Parallel interface subsystem

CONVENIENCE OPTIONS

024	HP Label Card (AIAG Barcode Verification)
715	Service documentation (HP 2563B): 02563-90924 and 02563-90926

Supplies and Accessories

Supplies and accessories recommended for use with your printer and available from Hewlett-Packard's Direct Marketing Division (DMK) are listed below. Direct phone service is available to HP customers within the continental U.S. Orders may be taken from 9 a.m. to 5 p.m. in all time zones. Outside the U.S., orders may be placed with the local HP Sales and Service Office (listed in back of this manual). To place an order, call

800-538-8787 (TOLL FREE)
IN CALIFORNIA - (408) 738-4133, DIRECT OR COLLECT

Ribbon Cartridge — One standard ribbon cartridge (average life=20 million characters per ribbon). Part number 92158H.

Character Set Kits (only high density) — HP 26761B Options: #005, 006, 031, 033, 035, 037, 039. (See product Data Sheet)

Label Card Kits — **HP 26062A Option #002**

Paper

PART NO.	DESCRIPTION	QUANTITY
92157A	One-part, white, 8.5 x 11 in., 18 lb	2400 sheets/box
92157B	One-part, white, 8.5 x 11 in., 15 lb., 3 hole punched.	3200 sheets/box
9280-0218	One-part, green bar 9.9 x 11 in., 15 lb., 80-column	3200 sheets/box
9280-0705	One-part, white 8.5 x 11 in., 15 lb., 72-column	3200 sheets/box
9320-1515	One-part, blue bar 14.9 x 11 in., 18 lb., 132-column	2400 sheets/box

Service

Hewlett-Packard offers maintenance agreements, "time and material" service, and other service agreements for the HP 2562C Printer. If you have a need for service or have questions regarding servicing of your printer, contact the HP Sales and Service Office nearest you. A list of these offices is provided at the back of this manual.

Operator Safety

For operator safety, the top access cover should be closed as much as possible when the printer is powered on and during operation. Keep hands, long hair, necklaces, and articles of clothing such as neckties and long sleeves out of the printer.

CHAPTER 2
GETTING STARTED

This chapter will help you to begin using your HP 2562C. We will discuss such things as how to load ribbons and paper, how to set the Top of Form position, how to configure the printer and how to run a self-test. For a more in-depth discussion of printer usage, you should also read Chapter 3, "Using the Printer."

2.1 Printer Location

Your printer should be located in a clean, traffic-free environment, preferably an area not subjected to excessive shocks, vibrations or wide ranges of temperature. Air conditioning is not required to ensure reliable operation of the HP 2562C; however, under no circumstances should the environmental specifications (shown in Appendix) be exceeded.

The location of your printer must provide adequate operator access to both the front and rear of the printer. The area around the printer should be kept clean and dust free at all times so that the air used to cool the printer will not contain excessive dust particles.

If the printer must be operated in either high or low humidity, check with your HP representative for ways to optimize paper handling.

2.2 Power

The HP 2562C has a maximum (peak) power requirement of 600 W.

One of the following power sources must be available for operating the printer: 100, 120, 220, or 240 VAC (+5%/-10%). Your printer has been shipped to match the power source specified in your order. If it becomes necessary to change to a different power source, contact your HP service representative.

See the appendix to this manual for more power requirement information.

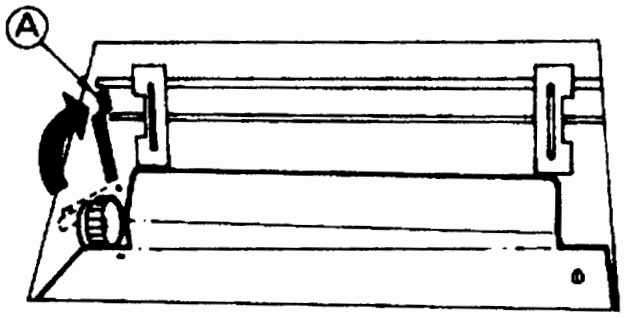
2.3 Printer Installation

Hewlett-Packard provides for the original printer installation and testing at your site. If you are moving the printer, follow the procedure outlined in Section 2-10 of this manual.

2.4 Ribbon Cartridge Loading and Removal

No tools are required to install or remove the ribbon cartridge.

To install a ribbon cartridge:



A = PLATEN LEVER OPENED

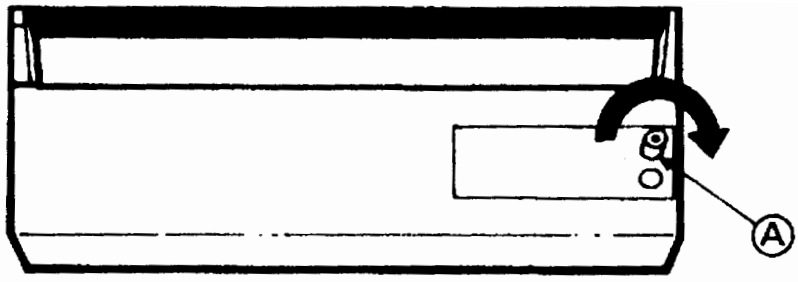
Figure 2-1. Opening the Platen

a. Open the platen.

Push the platen lever (Fig. 2-1, A) away from you to open the platen.

NOTE

A fault indication is displayed (the number 12 flashes on the display) during ribbon removal and installation when the platen is open. (An interlock switch prevents printing with the platen open.) Disregard the error number at this time.



A = ROTATE THIS KNOB

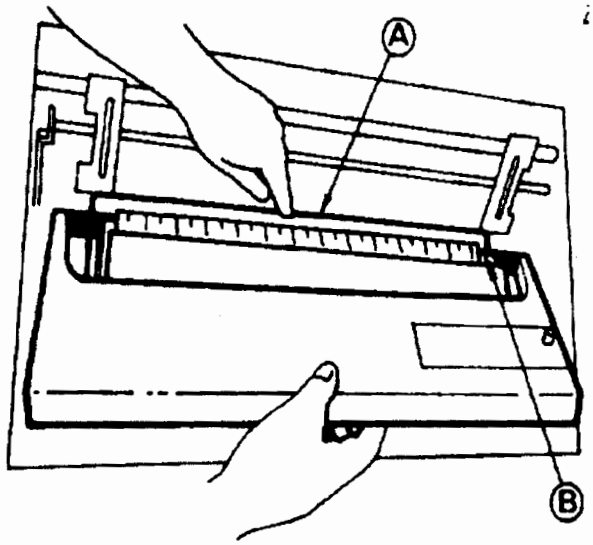
Figure 2-2. Tightening the Ribbon

b. Tighten the ribbon.

Use the knurled knob on the upper right side of the cartridge (Fig. 2-2, A). Turn the knob clockwise until the ribbon is snug.

NOTE

If the knurled knob is difficult to turn, the ribbon may have gotten packed tightly in the cartridge during shipping. Lightly tap the end of the cartridge (opposite the knurled knob) on a table-top or other hard, horizontal surface to loosen.



A = HOLD DOWN RIBBON SHIELD
B = SLIDE RIBBON IN PLACE

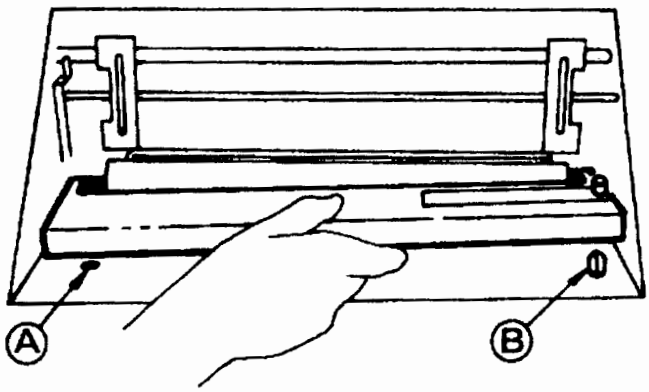
Figure 2-3. Inserting the Ribbon

c. Slide ribbon in place.

Push **lightly** against the center of the ribbon shield (Fig. 2-3, A) with your left hand and slide the ribbon into place between the ribbon shield and the column indicator plate (Fig. 2-3, B).

CAUTION

BE CAREFUL WHEN HANDLING THE RIBBON SHIELD. DAMAGE CAN RESULT IN PRINT QUALITY PROBLEMS.



A = MOUNTING SLOT
B = DRIVE SHAFT

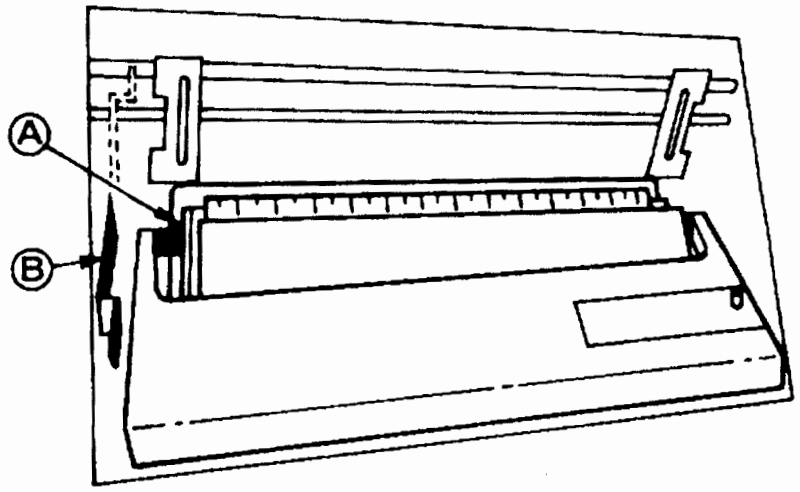
Figure 2-4. Securing the Cartridge

d. Seat the cartridge.

Fit the oblong locating tab on the lower left underside of the ribbon cartridge into place over the locating slot (Fig. 2-4, A) on the metal base. Push the cartridge down while rotating the knurled knob until the cartridge aligns on the drive shaft (Fig. 2-4, B).

NOTE

The ribbon should be tightened before it is aligned on the drive shaft because once the ribbon is in place the knurled knob is difficult to turn.



A = RIBBON PATH
B = PLATEN CLOSED

Figure 2-5. Checking Ribbon Positioning

e. Check ribbon position.

Make certain the cartridge is secured on both the left and right ends, and that the ribbon is positioned in front of the print mechanism. The ribbon should pass around the far right and left sides of the column indicator plate (Fig. 2-5, A) and **the ribbon should have no folds in it.**

NOTE

There is a slight offset designed into the mounting. When properly installed, the ribbon cartridge will not be level.

---

f. Close the platen.

CAUTION

BE CAREFUL NOT TO ALLOW THE PLATEN LEVER TO SLAM CLOSED. THIS CAN CAUSE MISALIGNMENT AND POSSIBLE DAMAGE TO THE FORMS THICKNESS ADJUSTMENT MECHANISM.

Pull the lever toward you to close the platen (Fig. 2-5, B).

Removing a Cartridge

To remove a ribbon cartridge, the procedure is basically the reverse of installation:

a. Open the platen.

Push the platen lever away from you to open the platen.

b. Lift the cartridge.

Lift the body of the ribbon cartridge until you have removed it from the drive shaft and the locating slot in the metal base.

c. Slide out the ribbon.

Use the knurled knob on the top right side of the cartridge to maintain tension on the ribbon and remove the ribbon from the print mechanism by pushing it slightly forward and then lifting it upward and out of the printer.

d. Clean the housing.

Clean any paper, dust or residue from the area under the ribbon cartridge. Proper cleaning will result in optimum print quality and will help ensure a longer life for your printer.

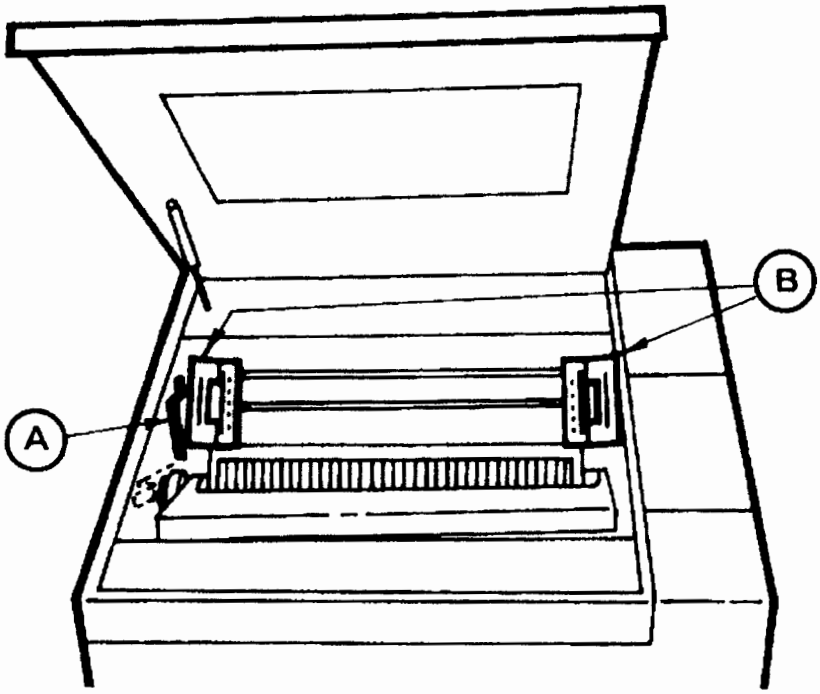
e. Load a new ribbon.

See the previous instructions for ribbon loading.

2.5 Paper Loading and Adjustment

The paper used with the table-top printers is loaded through the slot at the bottom-front of the printer. (See Figure 2-7)

To load paper:



A = PLATEN OPENED
B = TRACTORS OPENED

Figure 2-6. Open the Platen and Tractors

a. Open the platen.

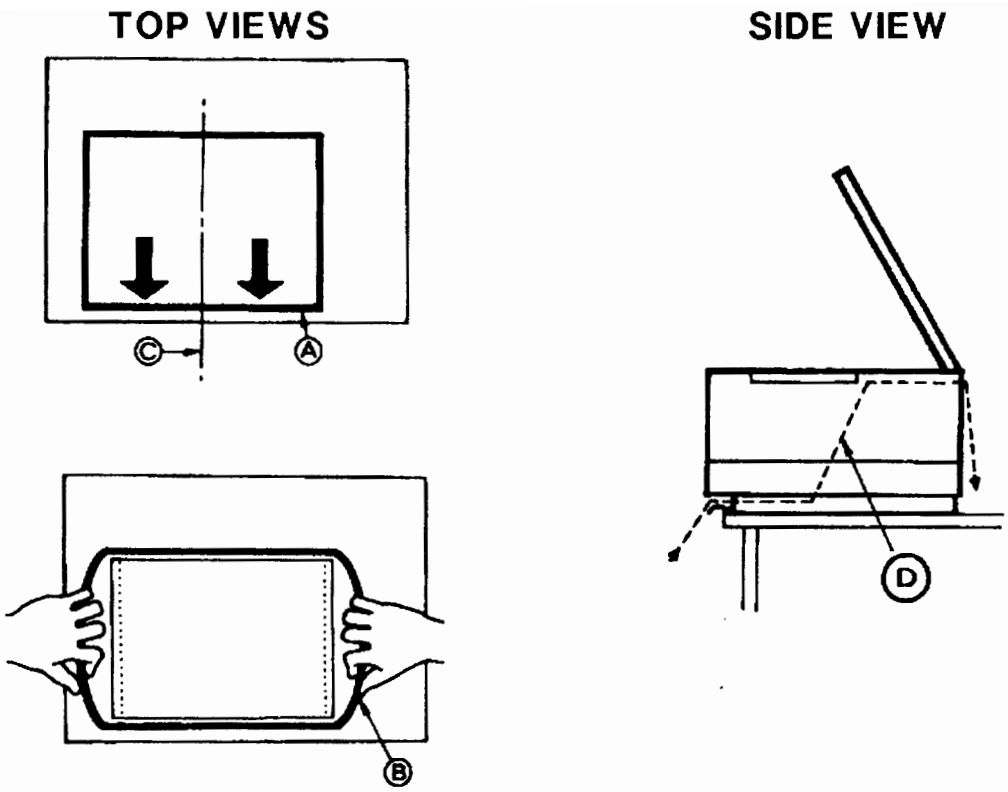
Open the top access cover and push the platen lever away from you to open the platen (Fig. 2-6, A).

NOTE

A fault indication is displayed (the number 12 flashes on the display) during paper loading and adjustment, indicating that the platen is open.

b. Open the tractors.

Open both tractors (Fig. 2-6, B). If a different form or horizontal position is required, unclamp the tractors so they may be adjusted to a different width. (To unclamp the tractors, open the tractor locks as shown in Figure 2-10.)



A = MOVE PAPER FORWARD
B = SPREAD SIDES OF TIGHT BOX
C = CENTER SUPPLY BOX IN LINE WITH PAPER POSITION IN TRACTORS AND ALIGN UNDER PRINTER FOR LEAST AMOUNT OF RESISTANCE

D = PAPER PATH - TABLE TOP PRINTER

Figure 2-7. Positioning the Paper

c. Position the paper.

Position the paper so that it can feed easily into the front slot. Remove the foam plug from the front paper slot so that paper can be fed into the slot.

NOTE

Some boxes of paper can cause jams because their sides are too tightly in contact with the paper stack. If the paper box seems to be tight, you should spread the sides of the box before using the paper (Fig. 2-7, B).

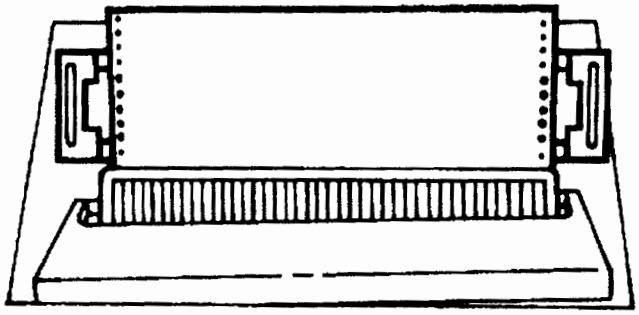
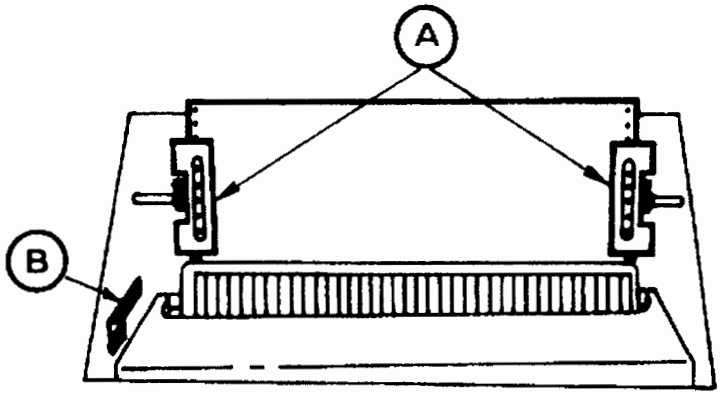


Figure 2-8. Paper Inserted in Tractors

d. Insert the paper.

Insert the paper into the front slot on a table-top printer. Slide the paper in until it appears above the print mechanism; then pull the paper up until the holes can be matched to the tractor feed pins.



A = TRACTORS CLOSED
B = PLATEN CLOSED

Figure 2-9. Paper is Loaded

e. Close tractors and platen.

Make certain the paper is not skewed to either side. Close the tractors (Fig. 2-9, A). Pull the platen lever toward you to close the platen (Fig. 2-9, B). If you want to change the horizontal tractor positioning, see "Adjusting Forms Width", later in this section. If the forms thickness has been changed, see "NOTE" below.

CAUTION

BE CAREFUL NOT TO ALLOW THE PLATEN LEVER TO SLAM CLOSED. THIS CAN CAUSE MISALIGNMENT AND POSSIBLE DAMAGE TO THE FORMS THICKNESS ADJUSTMENT MECHANISM.

---

f. Set Top of Form.

Proceed to the next page to set the Top of Form position.

NOTE

To remove paper, tear off below the paper loading slot and eject the remaining paper using the FORM FEED key. Do not pull the paper downward, as damage will result.

Setting Top of Form

The Top of Form (TOF) position is an arbitrary indicator of the first line of printing. Once the Top of Form is set, any succeeding FORM FEED advances paper one page length until the same position on the next page is reached. This enables you to move swiftly to the first print line on the succeeding page.

Perform the following steps to set the Top of Form position:

a. **Press** [SET T.O.F.]

All three decimal points on the display will illuminate to indicate the **SET T.O.F.** mode.

b. **Adjust the paper.**

Move the paper using the LINE FEED or FINE ADJUST keys so that the first line you want to print rests on top of the ribbon shield; that is, the top of the ribbon shield corresponds to the bottom of the first line of print desired on the page.

NOTE

The [ ] FINE ADJUST (down) key causes the printer to retract paper; however, you must open the platen to allow paper to move in the reverse direction.

---

c. **Press** [ENTER]

Close the top access cover and press the ENTER key. The paper advances to the next form with the print mechanism aligned exactly at the desired Top of Form. If a paper-out error (error 11) was in effect before the SET T.O.F. key was pressed, setting the Top of Form clears the error. Also, paper jam is cleared if corrected.

NOTE

The ribbon shield is the Top of Form indicator. However, after the paper advances to the next Top of Form position, the ribbon shield will not line up with the Top of Form. The print mechanism hammers, located below the top of the ribbon shield, will be ready to print at the correct position.

If the actual length of the form is not equal to the forms length stored in memory, the printer will not advance paper to the correct Top of Form. To change the forms length setting, see "Adjusting Forms Length" later in this chapter.

---

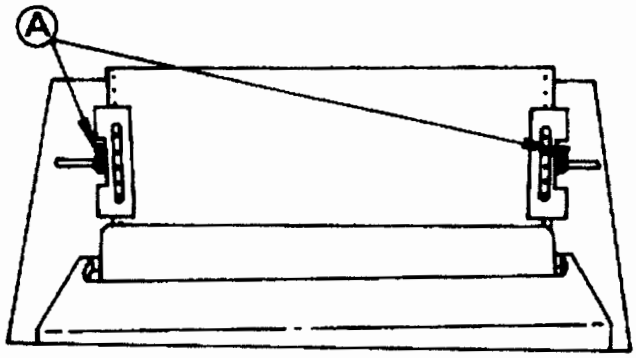
d. **Press** [ON LINE]

Check to ensure that the platen is closed and then press the ON LINE key to resume normal printing.

Adjusting Forms Width

The horizontal positioning of the tractors is an important adjustment to allow use of different width forms and to help minimize the possibility of paper jams.

To adjust forms width:



A = TRACTOR LOCKS (PUSH DOWN TO RELEASE)

Figure 2-10. Releasing the Tractor Locks

a. Release tractor locks.

Release the tractor locks on both tractors (Fig. 2-10, A) and load the paper into the platen as described earlier.

b. Adjust paper.

Move the paper left or right, sliding both tractors simultaneously until the left tractor corresponds to the desired positioning of the left margin.

NOTE

Pressing the TEST key and then pressing the PRINT 1 LINE key prints an alignment pattern that shows how far left on the page your text will be printed. After printing, use the LINE FEED key to advance the paper a few lines to see the pattern.

---

c. Lock left tractor.

Press the tractor lock on the left tractor all the way up to lock that tractor in place. Do NOT lock the right hand tractor yet.

d. Tighten the paper.

Pull the paper to the right so the tractors feed pins are against the papers feed holes. It is important not to distort the holes horizontally. Paper that is either too loose or too tight can cause problems (see step "g").

e. Lock right tractor.

Press the tractor lock on the right hand tractor to lock in place.

f. Feed 1 form.

Close the printer's top access cover and press FORM FEED to advance a full page of paper.

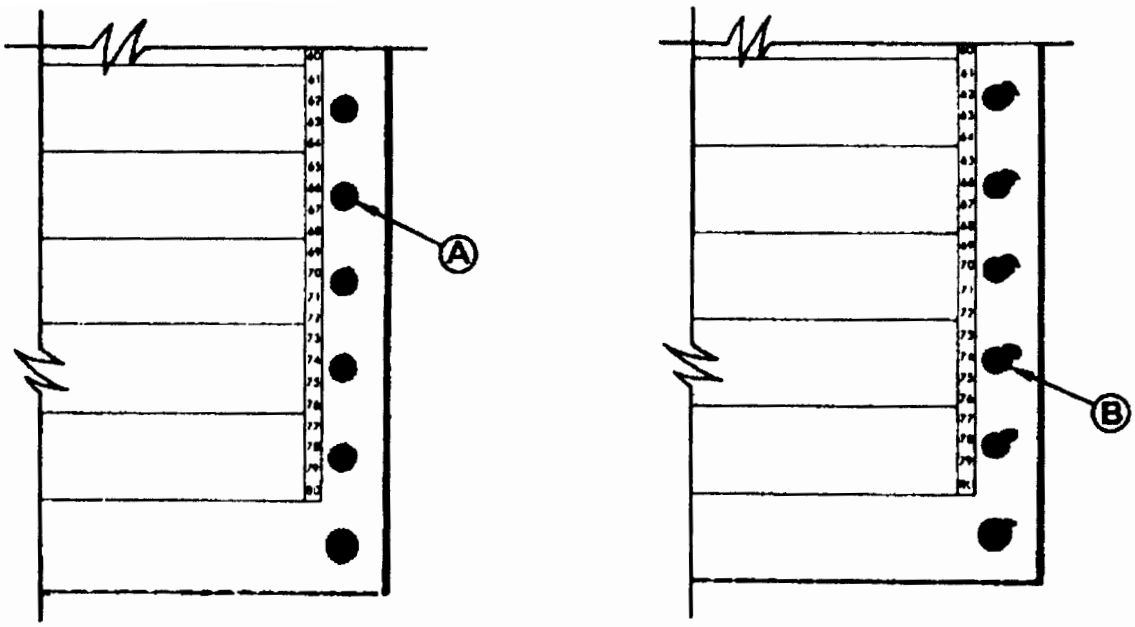


Figure 2-11. Tractor Strip Distortion

g. Check tractor strips.

Inspect the holes in the paper's tractor strips that have just passed through the tractors. The tractor holes should have no distortion or only a slight teardrop shape (Fig. 2-11, A). If the holes show a definite angled teardrop shape (Fig. 2-11, B) then the tractors are probably too far apart and paper jams may result. Unlock the right tractor and go back to step "d".

NOTE

If the tractors are too close together, the paper may bunch up, causing smearing of print and possible paper jams.

Setting Lines/Inch
(In 1/2 inch increments)

There are two methods for entering forms length into the printer. It can be entered in inches (1/2" increments) or in lines per page which is controlled by the lines per inch setting.

NOTE

If a VFC file is sent to the printer, this information will over ride the default settings.

Setting Forms Length

It is usually important to set forms length via the front panel of the printer. The setting that is entered is stored in a battery back-up memory location. The value entered is stored as a default page length which the printer will use as a reference for a paper out condition. This is so the printer has a reference for completing the printing on the last form and does not continue to print if the paper has moved beyond the print area of the printer.

If the length of the currently loaded paper differs from that which was previously used, the form length must be set to match the new paper size. The form length can be set in 1/2 inch increments from 2 to 16.0 inches.

To set the forms length:

a. Enter Configuration Mode

While off-line, press and hold the CONFIG. key and either of the FINE ADJ. keys (FINE ADJ. or). Two decimal points will illuminate, indicating that the printer is in the **CONFIGURATION** mode. Set configuration mode 7 to zero (0).

b. Press PAGE L. ADJ.

Press down on the PAGE LENGTH ADJUST key and release. The current page length setting will be displayed in inches.

c. Change the setting.

Increment or decrement the displayed page length by pressing the FINE ADJ. keys (FINE ADJ. or) until the desired page length is displayed.

d. Press ENTER

Press the ENTER key to set the displayed page length. The printer returns to the **STATUS** mode after the ENTER key is pressed, indicating that the desired page length was entered.

NOTE

To exit this mode without changing the page length, press the PAGE L. ADJ. key a second time, or press the ON LINE key.

Setting Forms Length (Lines-per-page)

If the length of the currently loaded paper differs from that which was previously used, the form length must be set to match the new paper size. The total form length can be set in number of lines- per-page with a front panel setting of: 12 to 96 lines @ 6 LPI or 16 to 128 lines @ 8 LPI. The length value should include all lines on the page. (The perf skip area is typically 1/2 inch at the top and 1/2 inch at the bottom of the page or six lines at 6 lpi and eight lines at 8 lpi.)

Vertical Line Spacing

Vertical line spacing (6 or 8 lines per inch) is selected via the LPI ADJUST key on the Operator Control Panel or by program control (escape sequences). Programmatically setting the line spacing overrides the Operator Control Panel setting except under power-on or reset conditions.

To set the forms length:

a. Enter Configuration Mode

While off-line, press and hold the CONFIG. key and either of the FINE ADJ. keys (FINE ADJ. or). Two decimal points will illuminate, indicating that the printer is in the **CONFIGURATION** mode. Set configuration mode 7 to one (1).

b. Press PAGE L. ADJ.

Press down on the PAGE LENGTH ADJUST key and release. The current page length setting will be displayed in total number of lines-per- page based upon vertical line spacing.

c. Change the setting.

Increment or decrement the displayed number of lines-per-page by pressing the FINE ADJ. keys (FINE ADJ. or) until the desired lines-per-page is displayed.

d. Press ENTER

Press the ENTER key to set the displayed number of lines-per-page. The printer returns to the **STATUS** mode after the ENTER key is pressed, indicating that the desired page length was entered.

NOTE

To exit this mode without changing the page length, press the PAGE L. ADJ. key a second time, or press the ON LINE key.

Adjusting Forms Thickness

The forms thickness adjustment knob (located next to platen lever... refer to Fig 3-4, item C for location) is provided to allow the printer to accomodate various thicknesses of paper, such as when changing from single to multi-part forms, or when using different weights of paper. This adjustment is also used to help obtain the best possible print quality, as outlined in steps a through c, below.

When changing number of forms being used, start by turning the knob to the number corresponding to the number of parts in the form (not the number of form copies). For example, if changing from a single to a six-part form, begin by turning the knob to "6", then use the following procedure to fine-adjust:

a. Run sub-test 90.

(See page 2-25 for sub test selection)

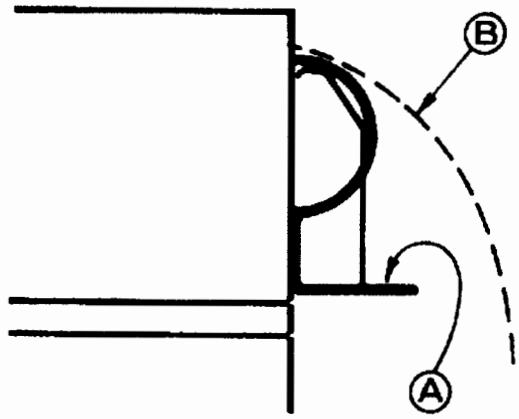
Use the TEST and FINE ADJ. keys to run sub-test 90. This produces a test pattern consisting of a series of four patterns. Check the double wide patterns (last test pattern on page) for consistent

c. Return to step "a."

Continue running the sub-test and adjusting the setting until the vertical lines are straight and the best print quality is obtained.

Using the Paper Bail

The paper output bail is used to help guide the output paper away from the back of the printer where static charges can cause the paper to stick, resulting in paper misfolds. Figure 2-12 shows how to use the paper bail.



A = DON'T ROUTE THROUGH BAIL
B = CORRECT PAPER PATH

Figure 2-12. Paper Bail Usage

2.6 Printer Configuration

The HP 2562C is configurable from the Operator Control Panel. Table 2-1 lists the configurable printer functions and their associated numbers. Each function has two or more possible parameter values which can be selected as desired. Some of the functions can be set remotely via escape (ESC) sequences.
See the *HP 256X Printer Family Technical Reference Manual* (02564-90905) for information concerning remote configuration.

To configure a function from the Operator Control Panel:

a. **Enter CONFIGURATION mode.**

While off-line, press and hold the CONFIG. key and either of the FINE ADJ. keys (FINE ADJ. or). Two decimal points will illuminate, indicating the **CONFIGURATION** mode.

b. **Display function number.**

While continuing to press the CONFIG. key, increment or decrement the function number using either FINE ADJ. key until the desired function number is displayed.

c. **Release** CONFIG.

When the CONFIG. key is released, the display now shows the current value for the function number displayed in step "b".

d. **Set the parameter.**

Using the FINE ADJUST keys, increment or decrement the parameter number until the desired number is displayed.

NOTE

Some configuration parameters can only be modified by a Hewlett-Packard Service Representative. In those cases, the FINE ADJ. keys have no effect.

e. **Press** ENTER

The new parameter will be entered and the printer will return to the **STATUS** mode.

NOTE

To avoid entering the new parameter value, press the CONFIG. or ON LINE key before pressing the ENTER key. This retains the original configuration for that function. This is helpful when you want to keep the original parameter for a particular function after viewing it.

Table 2-1. CONFIGURATION FUNCTION NUMBERS

FUNCTION NUMBER AND MEANING	PARAMETER RANGE	COMMENTS
1 Select primary character set	0-95	See below
2 Select secondary character set	0-95	See below
7 Select page length representation	0,1	See below
20-29 Configure Interface	00-FF	See Section 2.7
50 Disconnect Modem	0,1	See below
51 Graphics Speed	0,1	See below
*52 Horizontal graphics density	60,70	See below
*53 Difficult Forms Mode	0,1	See below
60 Perforation skip	0,1	See below
61 Display functions	0,1	See below
80 Enable/Disable Inline Converter	0,1	See HP Label Card Manual (26062-90902)
81 Printronix P-series line feed emulation	0,1	See HP Label Card Manual
85-89 Configure Inline Converter	00,FF	See HP Label Card Manual

* HP2563B $\geq$ 2825

Character Set Selection

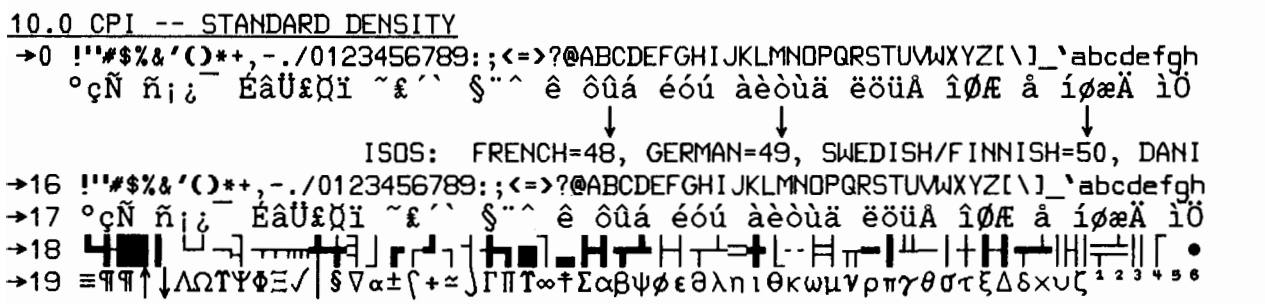
To be compatible with both 7-bit and 8-bit terminals, your HP 2562C has 7-bit and 8-bit character sets. The standard 7-bit sets are ASCII and Roman Extension. Roman8 is the standard 8-bit set, combining ASCII plus Roman Extension characters. The printer may contain up to a maximum of 16 character sets. Your printer contains the sets which were specified in your purchase order. Two character sets (primary and secondary) may be selected at any one time and are selected either through the **CONFIGURATION** mode from the Operator Control Panel or remotely via escape sequences.

Selecting the Primary Character Set
FUNCTION 1

Select the primary character set by accessing function 1 of the **CONFIGURATION** mode and selecting the parameter number associated with the desired primary character set. The character sets and their associated parameter numbers are listed on your self-test print out. Figure 2-13 shows an example of the top portion of a self-test printout. The arrows in the figure point out the character set parameter numbers assigned. Note that the assigned numbers will vary from printer to printer. Check your printer's self-test to find actual character set numbers.

Selecting the Secondary Character Set
FUNCTION 2

Select the secondary character set by accessing function 2 of the **CONFIGURATION** mode and entering the parameter number associated with the desired secondary character set (Fig. 2-13).



Arrows indicate the parameter number for that character set. Actual numbers assigned for your printer may vary. Check your printer's self-test to determine character set numbers.

Figure 2-13. Character Set Parameter Numbers

Remote Character Set Selection

The character sets shown in your self-test printout may also be selected remotely if character set selection is to be performed under program control. Character set selection commands override the Operator Control Panel configuration setting (except under power-on or reset conditions). When taken off-line, the printer remains in the character set last commanded. See the *HP 256X Printer Family Technical Reference Manual* (02564-90905) for information on remote character set selection. Standard ASCII shift-in and shift-out codes may be used to select primary and secondary character sets. Shift-out selects the secondary language and shift-in returns the printer to the primary set. Any number of character sets may be used within one print line if they are the same pitch.

Select page length representation
FUNCTION 7

Page length can be selected in either lines-per-page or in 1/2 inch increments. Refer to "Setting forms length" on page 2-14 for specific information.

Disconnect Modem
FUNCTION 50

If a serial interface (or multipoint I/O) is installed in the printer and is connected to a modem, it is possible to disconnect the modem from the printer's Operator Control Panel. Setting Function Number 50 to a "1" and then pressing the ENTER key causes the Data Terminal Ready line to go to the off state for two seconds. If the modem Data Terminal Ready line is connected, this action should disconnect (hang-up) the modem.

Graphics Speed Selection
FUNCTION 51

In normal graphics the HP 2562C printers have two print speeds. The HP 2562C prints at either 14.5 or 29 inches/minute. Graphics speed is selected by setting Function 51 of the **CONFIGURATION** mode to parameter 0 for the slower print speed and parameter 1 for the higher print speed. The print speed may NOT be set programmatically. The slower print speed provides higher quality print, and therefore it is recommended for applications requiring higher-quality graphics.

Horizontal Graphics Density Selection
FUNCTION 52

Horizontal graphics density (60 or 70 dots per inch) is selected via Configuration Function 52. Programmatically setting the density overrides the operator control panel setting except under power-on or reset conditions. The 70 dpi setting will provide slightly better print quality. The 60 dpi setting may be utilized for HP Label Card (opt. 024) applications.

Difficult Forms Mode
FUNCTION 53

Some complex multi-part forms such as statement mailers or invoices may result in a loss of the top-of-form position. If this problem arises, the printer can be placed in a low speed, high torque mode by accessing function 53 of the configuration mode and selecting a parameter of 1. Since this will affect throughput, ensure function 53 is set back to 0 when the high torque is not required.

Perforation Skip Mode
FUNCTION 60

Under normal operation, an automatic page eject occurs when the perforation skip region is entered. This is to prevent printing too close to the page perforations. This automatic page eject may be enabled by setting Perforation Skip Mode (Configuration Function 60) to a value of "1" (ON). Default value is "0" (OFF). Auto perf skip will slew from the printers bottom of your setting for one inch. Typically three or four lines before perforation of the form, depending on the (6 or 8 lpi) setting, to 3 or 4 lines below the perforation perf skip slews paper for one inch when turned on.

Display Functions Mode
FUNCTION 61

Display Functions Mode is activated by setting Configuration Function 61 to a value of "1" (ON). In the display functions mode, the printer prints representative character symbols for the control code characters instead of actually executing the control commands. For example, if the printer encounters the SHIFT OUT command (to access the secondary font), the command will not be executed. The symbol ^{S}O will be printed instead. The only exception to this is the carriage return command. The carriage return control character will cause a ^{C}R symbol to be printed **and an actual carriage return and line feed to be performed.** Configuration Function 80 **must** be set to "0" if the display function mode is enabled. The default value for Display Functions Mode is 0 (OFF).

Vertical Line Spacing

Vertical line spacing (6 or 8 lines per inch) is selected via the LPI ADJUST key on the Operator Control Panel or by program control (escape sequences). Programmatically setting the line spacing overrides the Operator Control Panel setting except under power-on or reset conditions.

2.7 Interface Configuration

All of the interface options are configured from the Operator Control Panel. Each interface has its own set of configuration parameters which are set by accessing functions 20 through 29 of the **CONFIGURATION** mode and using the ENTER key to select the proper code numbers. (Refer to the Interface Manual shipped with your HP 2562C.) Once your printer has been configured properly, **mark the configuration parameter numbers** on the label located underneath the top access cover (see Fig. 2-14). Thereafter, if you must configure the interface again, the parameters will be easily accessible and you can avoid a service call.

NOTE

If your printer is equipped with an HP-IB interface, see Section 2.8 for HP-IB Address Selection. If it is equipped with another interface, see the Interface manual shipped with your printer.

Configuring Interfaces:

a. Enter CONFIGURATION mode.

While off-line, press and hold the CONFIG. key and either of the FINE ADJ. keys (FINE ADJ. or). Two decimal points will illuminate, indicating that the printer is in the **CONFIGURATION** mode.

b. Display function number.

While holding down the CONFIG. key, increment or decrement the function number using either FINE ADJ. key until the desired number (20 through 29) appears on the display.

c. Look up parameter.

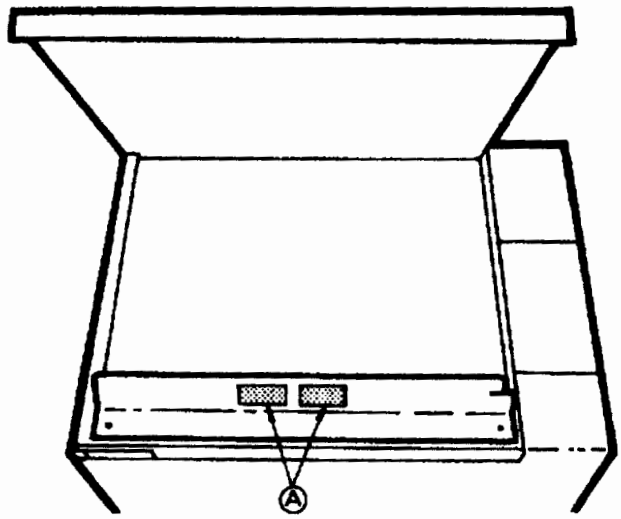
Release the CONFIG. key and look up the configuration parameter for the function (20-29) indicated on the operator information label located under the top access cover (Fig. 2-14).

d. Set the parameter.

Select the desired configuration parameter using either FINE ADJ. key until the desired number is displayed.

e. **Press** ENTER — This step saves the configuration parameter.

f. **Set next parameter.** — Repeat steps a. through e. until all the configuration parameters for functions 20 through 29 have been entered.



A = WRITE I/O PARAMETER NUMBERS HERE

Figure 2-14. Configuration Parameter Label

2.8 HP-IB Selection

When selecting an HP-IB address, the same basic procedure is followed as that for configuring other printer features such as character set selection. To select an HP-IB address, perform the following steps:

a. Enter CONFIGURATION mode.

While off-line, press and hold the CONFIG. key and either of the FINE ADJ. keys (FINE ADJ. or). Two decimal points will illuminate, indicating that the printer is in the **CONFIGURATION** mode.

b. Display function 20.

Press either FINE ADJ. key until the number 20 appears on the display.

c. Check current value.

Release the FINE ADJ. and CONFIG. keys. Releasing these keys displays the current HP-IB address (parameter) number in the display.

d. Set desired address.

Select the desired address number (0 - 7) by pressing the FINE ADJ. key (up or down) until the desired number is displayed.

e. Press ENTER

This step finalizes the configuration and returns the printer to normal operation. (If the ENTER key is not pressed, the new address selection is not saved.)

NOTE

The HP-IB cable loading is set at the factory to match a single cable length appropriate for the interface option selected. To match the HP-IB loading to a different length cable, call your HP Service Representative.

---

f. Display Function 25

This step allows configuring the HP-IB I/O to three (3) different protocols. Configuration should be done in the following sequences:

Ciper (Function 25=0)	This is used for 1000 (A/E/F/M), 3000 (3x/4x/5x/6x/7x), 9000 (SRM), 9845 B/C (SRM).
Block (Function 25=1)	This is used for 250/260 and the 64000 systems.
Character (Function 26=19) (Function 27=83) (Function 25=2)	This mode is used for 9000. (200 series direct connect)

2.9 Test

The printer self-test is used to verify the printer's operational status. The self-test function can be run from the Operator Control Panel or can also be run remotely using escape sequences. See the *HP 256X Printer Family Technical Reference Manual* (02564-90905) for details. The standard self-test can be run or specific subtests can be performed and run continuously if desired (individual subtests can be initiated from the Operator Control Panel only).

The printer must be off-line (on-line indicator not illuminated) to execute a self-test from the Operator Control Panel. If a paper-out or platen-open fault condition exists (error numbers 11 and 12), or if any other errors exist, self-test will not execute.

Standard Self-Test

To perform the standard self-test function (excluding interface tests), depress the TEST key once to enter the test mode and then press the ENTER key to begin test execution. To run a continuous standard self-test, depress the TEST key for more than two seconds (until a number 4 appears on the display) and then press the ENTER key. Self-test can be exited any time by pressing either the TEST or ON LINE keys momentarily.

NOTE

After you have pressed the TEST key to initiate a self-test, there is a delay of a few seconds before the printer starts to print a test printout. **While self-test is active, the right-most decimal point blinks.**

During the standard self-test, a two-page printout is completed as shown in the Test Printout Illustration located in the back of this manual (directly preceding the HP Sales and Service Offices). The printout lists power-on time and print time in hours, HP-IB address selection (if applicable), the date code of some of the printed circuit assemblies, all of the installed character sets and bar codes, and prints graphics and various characters for checking print quality. The graphics part of the selftest will be printed in the density set from the Operator Control Panel.

When the test has been completed and there are no errors, the printer returns to the **STATUS** mode. If an error occurs during test execution, an error number flashes on the display. Refer to the paragraph, "Test Failure" later in this section for more information.

Continuous Test

To run a continuous self-test, press the TEST key and hold it down for more than two seconds until the display changes from a 5 to a 4. This sets the printer up so that when the ENTER key is pressed the displayed test runs continuously. Exit the continuous test by pressing the TEST or ON LINE key momentarily.

Specific Subtest Selection

When executing the printer test from the Operator Control Panel, individual subtests can be selected by pressing the TEST key once. This action causes a subtest number to be displayed and the right decimal to illuminate indicating the printer is in the **TEST** mode. The subtest number can be incremented or decremented using the FINE ADJUST keys until the desired number is displayed (refer to Table 2.2 for a listing of the sub-tests). Once the number is displayed, press the ENTER key to execute the displayed subtest.

To execute a **continuous subtest**, follow the instructions under "Continuous Test," incrementing the display to the desired subtest number before pressing ENTER.

EXAMPLE: CONTINUOUS SUBTEST

To perform the "Standard Ripple Print" subtest continuously, you would do the following:

a. **Enter CONTINUOUS TEST mode.**

With the printer off-line, press the TEST key and hold it down for more than two seconds; the displayed number 5 will change to a 4. Release the TEST key.

b. **Select Ripple Print test.**

Press one of the FINE ADJ. keys until the number 1 is displayed.

c. **Press** ENTER

Pressing ENTER begins the self-test.

Unless an error occurs, the subtest will run continuously. Press the TEST key to stop the subtest.

NOTE

Pressing the ON LINE key also aborts the self-test and puts the printer on-line.

Table 2-2. SUBTEST NUMBERS

SUBTEST	SUBTEST NUMBERS
Standard Self-Test	0
Standard Ripple Print	1
Double Size Ripple Print	2
Compressed Ripple Print	3
High Density Ripple Print	4
Raster Graphics (herring bone)	5
Printer Configuration print-out	8
Reserved for future use	10
Digital	11
I/O Tests	30-38
Graphics tests (if installed)	40-48
Graphics Print Quality Test	90

Test Failure

If a detectable problem exists within the printer, an error number will flash on the display. These numbers indicate a general failure area within the printer. If your printer fails the self-test, refer to Chapter 4 of this manual for help.

2.10 Moving the Printer

Hewlett-Packard provides for the original installation and testing of the printer. If it becomes necessary to move the printer to a new location, follow these procedures:

a. Power OFF.

With the printer off line, switch the Main Power ON/OFF (1/0) switch located on the back of the printer to the OFF (0) position. Unplug the power cable from the supply. (Section 3.4 explains which printer configuration parameters are saved in memory when power is turned off.)

b. Disconnect I/O.

Unplug the printer's interface cable from the rear of the printer. The printer is now ready to move. IT IS RECOMMENDED THAT TWO PEOPLE BE UTILIZED TO LIFT THE PRINTER ON TO AND OFF OF THE MOVING CART.

At New Location:

a. Connect the I/O cable.

Connect the interface cable from the computer system to the interface connector on the back of the printer. If you have an HP-IB Interface, use the supplied shielded cable. Failure to use the appropriate cable could increase the level of radiated radio frequency interference and could also make the printer more susceptible to electrostatic discharges.

b. Connect the power.

Connect the AC power cord to the AC power input jack on the back of the printer and plug the other end into the AC outlet.

c. Switch ON.

Switch the Main Power ON/OFF (1/0) switch located on the back of the printer to the ON (1) position.

Verify that the printer's I/O configurations are correct for the new location.

d. Load ribbon and paper.

If needed, load the ribbon and paper as described in the ribbon and paper loading discussions, Sections 2.4 and 2.5.

e. Run a self-test.

With the printer off-line, press the TEST key on the Operator Control Panel. Then press the ENTER key. A self-test printout will be printed. Compare the printout with the self-test printout at the back of this manual. (Note that the self-test printout varies depending on which character set options are installed.) The printer is now ready for operation if no error numbers are flashing on the display and the characters on the self-test printout are clear and well-formed.

CHAPTER 3
USING THE PRINTER

This chapter discusses the printer status (or modes) and the controls, indicators, and other features of your printer. Using your printer efficiently requires that you understand these easy-to-use features.

The printer is controlled through the Operator Control Panel and/or control codes (such as escape sequences). The Operator Control Panel operation is detailed in this chapter and the control codes are explained in the *HP 256X Printer Family Technical Reference Manual* (02564-90905).

3.1 Printer Modes

The decimal points on the Operator Control Panel display indicate which mode the HP 2562C is in. When no decimal points are illuminated, the printer is in the **STATUS** mode. When the rightmost decimal point is illuminated, the printer is in the **TEST** mode. When the middle and rightmost decimals are illuminated, the printer is in the **CONFIGURATION** mode and when all three decimals are illuminated, the printer is in the **SET T.O.F.** mode. The numbers displayed in each of these conditions are listed in "Printer Configuration" (Section 2.6), "Test" (Section 2.9), "Printer Status" (Section 3.2), and "Printer Errors" (Section 4.2).

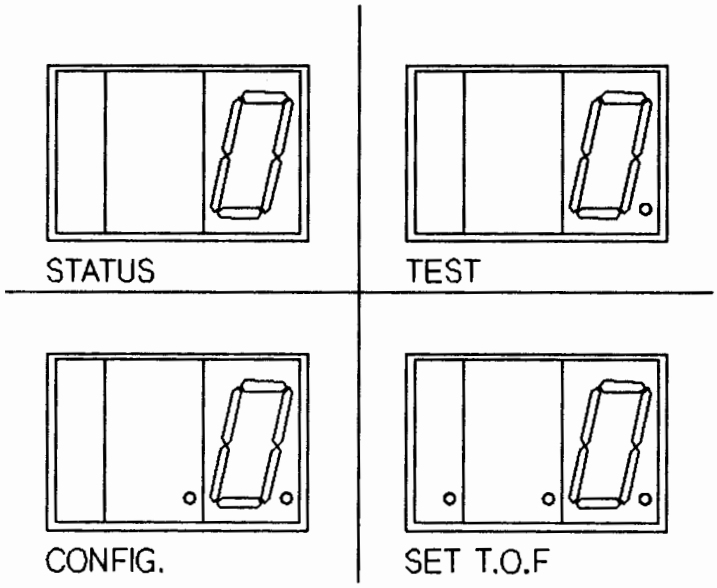


Figure 3-1. Display Modes

3.2 Printer Status Mode

Under most conditions, the printer is in the **STATUS** mode and displays its current status via the Operator Control Panel display. When in the **STATUS** mode, none of the decimal points on the display are illuminated and a status number is displayed. This number corresponds to a specific status as shown in Table 3-1.

NOTE

When the printer is in the **SET T.O.F.** mode, printer status is still displayed, but all three decimal points are illuminated.

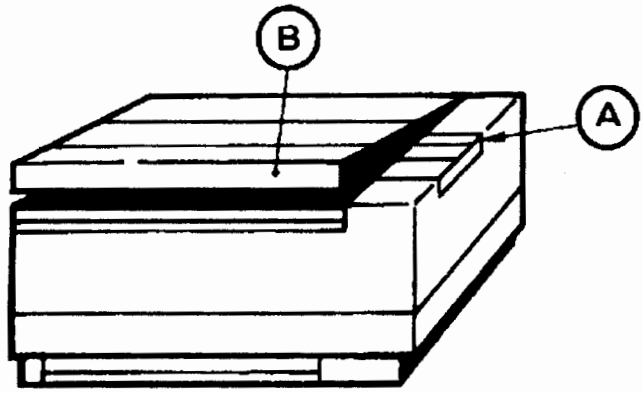
Table 3-1. PRINTER OPERATIONAL CODES

Status Code	Description
0	Printer ready (also modem disconnected for serial interfaces)
1	Printer ready, modem connected (serial interfaces)
2	Silent run--data recovery for some HP-IB & Multipoint interfaces
4	Performing a subtest in continuous mode
5	Standard self-test/subtest active
6	Print One Line (file data) activated
7	Print One Line (test pattern) activated
Operator Correctable Problems	
11	Printer out of paper
12	Platen open
13	Paper jam

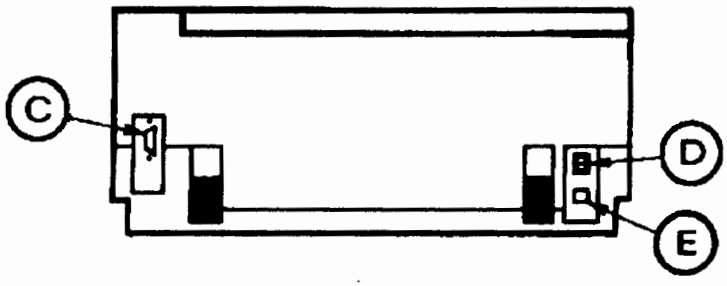
Error numbers 14 through 91 indicate Run Time or Self-test errors and are explained in Chapter 4 of this manual.

3.3 Operator Controls and Indicators

This section explains the location and function of the printer controls and indicators. To assist in the operation of the various printer functions, an *Operator Control Panel Guide* (foldout) is also provided in the back of this manual.



A = OPERATOR CONTROL PANEL
B = TOP ACCESS COVER



C = I/O PORT
D = POWER (ON/OFF) SWITCH
E = POWER SUPPLY INPUT

Figure 3-2. Printer Control Locations

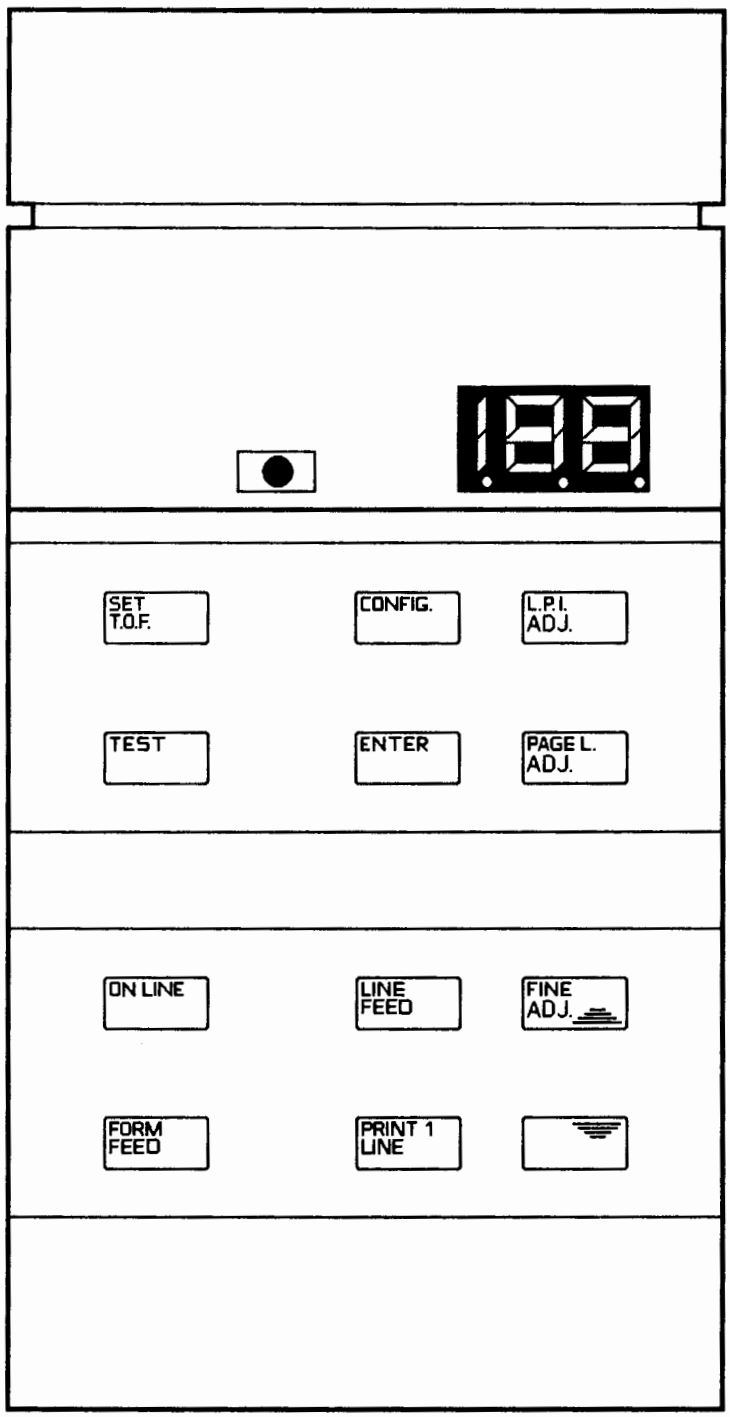


Figure 3-3. Operator Control Panel

ON LINE INDICATOR

This yellow LED (Light-Emitting Diode) illuminates when the printer is on-line. When on-line, printing is enabled, all Operator Control Panel keys are disabled (except ON LINE key), and the printer is controlled by the controlling device (computer system).

DISPLAY INDICATOR

The display consists of three seven- segment LEDs and is located on the top portion of the Operator Control Panel. The displayed numbers are used to convey information in four different modes: a) **STATUS**, b) **TEST**, c) **CONFIGURATION**, and d) **SET TOP OF FORM**. The decimal points indicate which mode the printer is in: no decimals illuminate when in the **STATUS** mode, the right-most decimal illuminates when in the **TEST** mode, the middle and right decimals illuminate when in the **CONFIGURATION** mode, and all three decimals illuminate when in the **SET T.O.F.** mode.

Usually the printer is in the **STATUS** mode and displays a number indicating the present status of the printer. This number corresponds to a specific status listed in the Section 3.2 "Printer Status Mode."

When in the **TEST** mode, the display indicates a number corresponding to the particular subtest that is to be performed. When a test is executing, the right decimal point blinks. See Section 2.9 "Test" for more information on the **TEST** mode.

When in the **CONFIGURATION** mode, the function number to be configured is displayed while the CONFIG. key is held down and its corresponding parameter is displayed when the CONFIG. key is released. See Section 2.6 for more information.

In the **TEST** and **CONFIGURATION** modes, the displayed numbers can be incremented or decremented by using the FINE ADJ. keys.

SET T.O.F. KEY

This key, in conjunction with the ENTER key, is used to set the Top of Form (TOF). When this key is pressed, all three decimal points on the display are illuminated to indicate that the **SET T.O.F.** mode has been entered. Once the mode has been entered, pressing the ENTER key identifies the new Top of Form and advances paper to the new TOF position. This mode can be exited by pressing the SET T.O.F. or ON LINE key without changing anything. If an error condition exist, pressing this key will clear the error and display a zero; however, the error will be displayed again if the condition is not corrected when the mode is exited. A new Top of Form must be set to clear a paper jam. See "Setting Top of Form" in Section 2.5 for more information.

CONFIGURATION KEY

CONFIG.

This key, in conjunction with the FINE ADJ. keys, is used to enter the **CONFIGURATION** mode. Pressing the CONFIG. key alone has no result. When the CONFIG. key and one of the FINE ADJ. keys are pressed simultaneously, the printer enters the **CONFIGURATION** mode. The middle and right decimal points are illuminated to indicate that the printer has entered the **CONFIGURATION** mode. When the CONFIG. key is held down, a function number is displayed. This function number can be changed by using the FINE ADJ. keys until the desired function number is displayed. When the CONFIG. key is released, the parameter associated with the function just displayed appears on the display. Pressing the FINE ADJ. keys changes the displayed parameter so that a new value can be selected. The displayed parameter is stored and the **CONFIGURATION** mode exited by pressing the ENTER key. This mode can be aborted and the original parameters saved by pressing the CONFIG. key (assuming the ENTER key has not been pressed). Pressing the ON LINE key also exits the **CONFIGURATION** mode and additionally puts the printer on-line. For more information on printer configuration, see "Printer Configuration" Section 2.6 of this manual.

LPI ADJUST KEY

L.P.I. ADJ.

Pressing this key causes the current LPI (vertical lines per inch) setting (6 or 8) to be displayed. Both decimal points are illuminated to indicate that the **CONFIGURATION** mode has been entered. At this point, the FINE ADJUST keys can be used to change the LPI setting. When the desired setting is displayed, pressing the ENTER key selects the displayed setting as the current LPI value and returns the printer to the **STATUS** mode. The LPI adjust mode can be aborted without making any changes by pressing the LPI ADJ. or ON LINE key (assuming the ENTER key has not been pressed).

TEST KEY

TEST

This key is used to test the printer to determine if it is in proper operating condition. A complete test or specific subtests can be executed using this key. Test failure is indicated by a flashing error number on the Operator Control Panel display. A detailed description of the test key function and a list of tests is presented in Section 2.9 of this manual.

ENTER KEY

ENTER

When in the **CONFIGURATION** mode, pressing the ENTER key causes the selected parameter to be set. When in the **TEST** mode, pressing the ENTER key causes the printer to start execution of the selected test. When in the **SET T.O.F.** mode, pressing the ENTER key sets the new Top of Form. The printer is returned to **STATUS** mode after the ENTER key is pressed.

PAGE LENGTH ADJUST KEY

PAGE L. ADJ.

Pressing this key causes the physical page length to be displayed. Although the printer is in the **CONFIGURATION** mode, only one decimal point is lit (for example, 11.5 for 11 1/2 inches). The displayed page length can be adjusted using the FINE ADJUST keys. After the desired page length is displayed, pressing the ENTER key sets the page length to the displayed value and the printer returns to **STATUS** mode. Page length can also be adjusted according to number of lines-per-page. (Refer to section 2.5 for more information)

ON LINE KEY

ON LINE

This key is used to give control of the printer to the operator (off-line) or to the computer system (on-line). The ON LINE indicator illuminates when the printer is on-line. The printer must be off-line to respond to any of the other keys on the Operator Control Panel. This key can also be used to abort from the **CONFIGURATION**, **TEST**, **SET T.O.F.**, **LPI Adjust** and **Page Length Adjust** modes; this action places the printer on-line, saves the previously active configuration and Top of Form, and aborts self-test if self-test is active. The printer will not go on-line if there is an error condition present.

LINE FEED KEY

LINE FEED

This key is used to advance paper to the next print line using the line spacing increment which has been set by the LPI ADJ. key. If the LINE FEED key is pressed and held down, the printer will pause momentarily and then advance paper at an increased rate. This action will continue as long as the key remains depressed. The LINE FEED key functions only when the printer is off-line and not in the test mode.

FORM FEED KEY

This key is used to advance the paper to the next Top of Form position. If pressed momentarily, the printer performs one form feed. If the key is held down, the printer performs successive form feeds until pressure is released from the key. This key functions only when the printer is off-line and not in the test mode.

PRINT 1 LINE KEY

This key is used to print one line of data on the installed form at the current line position. If the key remains in the down position, successive lines of data will be printed until pressure is released from the key.

NOTE

If a single line is printed, use the line feed key to advance the paper so that the line is visible above the ribbon shield. This is not necessary when printing multiple lines.

Two kinds of data may be printed using this key, the type printed depending on which mode the printer is currently in.

If the printer is in the **TEST** mode (accessed by pressing the TEST key), a test pattern is printed to aid forms alignment. If the printer is not in the **TEST** mode, the printer goes on-line momentarily, prints one line of data, and then returns off-line. If no data is available from I/O or host within 1.5 seconds, the printer returns off-line without printing.

FINE ADJUST (UP/DN) KEYS

The two FINE ADJUST keys are used to move the paper up or down in small increments; this action is repeated if either key is held down. The FINE ADJUST keys are also used to increment (UP) and decrement (DOWN) the display when in the **TEST**, **CONFIGURATION**, **LPI Adjust** and **Page Length Adjust**.

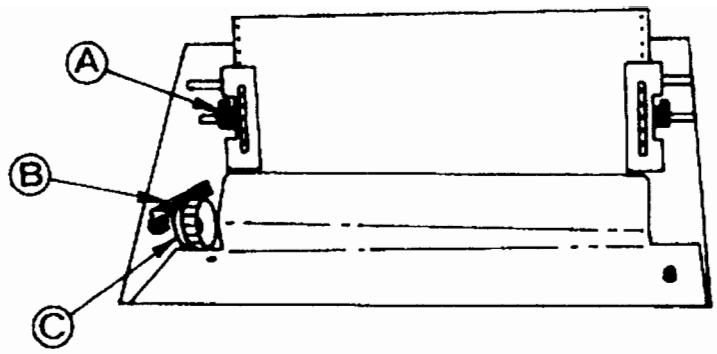


Figure 3-4. Forms Loading Controls

A = TRACTOR LOCK

This lever is located on the outward side of both tractors and if pulled forward it allows the tractor to slide left and right. Pushing the lock up locks the tractor into position after adjustment.

B = PLATEN LEVER

This lever is located on the left side of the print mechanism and is used to open and close the platen so that paper and ribbon may be loaded or removed. Paper should not be pulled down through the platen gap when being removed. Tear paper off below the paper loading slot and then eject the remaining paper by using the FORM FEED key.

CAUTION

BE CAREFUL NOT TO ALLOW THE PLATEN LEVER TO SLAM CLOSED. THIS CAN CAUSE MISALIGNMENT AND POSSIBLE DAMAGE TO THE FORMS THICKNESS ADJUSTMENT MECHANISM.

C = PLATEN ADJUST KNOB

This rotary control is used to adjust the platen-to-hammer gap for the best print quality with different forms or thicknesses. The numbers on the knob roughly correspond with the number of parts in a multi-part form, but fine adjustments of the knob must be made to optimize print quality.

3.4 Power-On Parameters and Power-Fail Recovery

When the Main Power ON/OFF switch (back of printer) is toggled OFF and ON or a loss of power to the printer occurs, some of the printer's configuration settings are retained in (non-volatile) memory, and some are returned to defaults, as follows:

Values Retained In Printer Memory

When power is restored to the printer, the following configuration settings are returned to the same state as prior to the power-off condition:

- On/off-line in the same state as prior to removing power
- Primary and secondary character sets selected as configured from the Operator Control Panel
- Vertical line spacing (6/8 LPI) as selected from the Operator Control Panel
- Physical Page length remains at the same value as before power loss
- Page length representation as selected from the Operator Control Panel
- I/O configuration
- Inline Converter configuration
- Enable/Disable Inline converter
- Printronix P-series linefeed emulation
- Graphics speed
- Graphics Horizontal Density
- Perforation skip

Values Returning to Default State

Following a power-off state, these printer functions revert to the following conditions:

- Paper moves to the next Top of Form position
- Print buffer cleared
- Standard VFC channel assignments selected
- Left margin offset at zero
- Display functions off

The recoverability of the HP 2562C following a power failure is dependent upon which system the printer is connected to. When using an HP-IB interface on some systems, the printer will display the number "2" (Silent Run) and may take several minutes to recover your job until it reaches the point where the power-fail occurred. DO NOT DISTURB THE JOB! Recovery time varies with the size of the job and the system load. Refer to the appropriate system manual for more information on this subject. The HP 2562C has no power fail indicator.

Reset

The reset operation causes the printer to default to the power-on parameters as explained above. Therefore, a reset is intended to be used only in the case of a self-test error or by a Hewlett-Packard Service Representative.

Reset is performed by pressing the FORM FEED and LPI ADJUST keys simultaneously. When reset, the printer moves paper to the Top of Form, reverts to the power-on parameters, and stays off-line. A programmable reset can also be performed. The programmable reset affects the printer similarly except that the printer remains on-line.

More information about the programmable reset is contained in the HP 256X Printer Family Technical Reference Manual (02564-90905).

On-Line/Off-Line

When the printer is on-line, data and commands can be transmitted to it from a controlling device (computer system). When it is off-line, data and commands from the system are ignored by the printer. The printer must be off-line in order to use any of the keys on the Operator Control Panel.

The printer is placed on/off-line by using the ON LINE key on the Operator Control Panel. Fault conditions such as paper out, platen open, etc. cause the printer to be set off-line. When this happens, the printer will not return on-line until the error has been corrected and the ON LINE key is pressed.

3.5 Graphics Printing

The HP 2562C graphics printing capability is escape sequence driven. Consult the *HP 256X Printer Family Technical Reference Manual* (02564-90905) for graphics printing information.

3.6 Vertical Forms Control

The HP 2562C printer is equipped with a standard and a programmable Vertical Forms Control (VFC). The standard VFC is defaulted to whenever the printer is powered-up or reset.

Vertical Forms Control allows the user to skip to a predefined line on a page of print with typically one or two commands instead of using a number of line feeds; this capability can greatly increase the speed of a print job.

The standard VFC contained in the HP 2562C is a "computed VFC" meaning that the VFC automatically adjusts its skip lengths when the form length is changed.

The standard VFC channel definitions are listed in the following table. The terms Top of Form and Bottom of Form refer to the top and bottom of text on the page. More information about the programmable VFC is contained in the *HP 256X Printer Family Technical Reference Manual* (02564-90905).

Table 3-2. VFC CHANNEL DEFINITIONS

VFC CHANNEL	CHANNEL DEFINITION
0	Conditional Top of Physical Page
1	Top of Form (line 1)
2	Bottom of Form (BOF) last line of text
3	Single space (lines 1,2,3,4,...)
4	Double space (lines 1,3,5,7,...)
5	Triple space (lines 1,4,7,10,...)
6	Half Form
7	Quarter Form
8	Tenth space (lines 1,11,21,31,...)
9	Bottom of Form
10	BOF - one line (BOF - 1)
11	TOF - one line (TOF - 1)
12	Top of Form
13	Seven space (lines 1,8,15,...)
14	Six space (lines 1,7,13,...)
15	Five space (lines 1,6,11,...)
16	Four space (lines 1,5,9,...)

3.7 Preventive Maintenance

Maintain the printer in a state of general cleanliness. Accumulated dust, bits of paper, and lint can lead to serious problems.

Watch for indications of physical damage and report problems or potential problems to your HP service representative.

3.8 Fault Conditions

All fault conditions are signified by flashing of the display on the Operator Control Panel. The following error conditions cause the corresponding error number to be displayed. These error indications are provided to help you locate and possibly correct problems which prevent normal operation of the printer. When any fault condition exists, the printer automatically goes off-line and cannot be put on-line again until the fault is corrected.

Error No. 11: Out of Paper

This error number indicates that the printer is out of paper. The paper-out condition is detected by the absence of paper in print column 15. When paper-out is detected, the printer finishes printing the current page, advances to Top of Form, and goes off-line until paper is reloaded. This error is cleared when either the ON LINE or SET TOP OF FORM key is depressed following paper reloading (the platen must be closed). No data is lost when paper-out occurs.
Refer to Section 2.5 for paper loading instructions.

Error No. 12: Platen Open

This error number indicates that the platen is open (platen lever has not been returned to horizontal position).

Error No. 13: Paper Jam

This error number indicates that paper is not passing normally through the tractors. After the paper jam is corrected, press the SET T.O.F. key, align the new Top of Form with the ribbon shield, and press the ENTER key. This procedure clears the error from the display and gets the printer ready so that it can be placed on-line and normal operation resumed.

Errors No. 14 - FF: Non-Operator Correctable

These error numbers indicate problems which should be referred to your HP service representative.

While in the **TEST** mode, any test error will cause a flashing test error number to be displayed. Errors 14 through 19 and 80 through FF can occur during normal print operations. Error numbers between 20 and 69 occur when the printer has failed its TEST routine. Consult Chapter 4 of this manual for more information concerning printer errors and what to do about them.

3.9 Optimizing Print Quality

There are two basic areas of the printer that have major impact on print quality:

- Forms Thickness adjustment.
- Ribbon condition and positioning.

Forms Thickness Adjustment

The forms thickness adjustment is used to vary the "print gap" (the distance between the print mechanism hammers and the platen). This adjustment is the main means of obtaining the best print quality. When forms thickness is poorly adjusted, print quality is adversely affected. Too large a print gap will cause "dot slalom" (jagged vertical lines) and, ultimately, print dropouts (some characters or parts of characters not printing at all). Too small a print gap will cause the ink to smudge. Extremely tight print gaps can also cause paper jams.

The procedure for adjusting print gap is described in detail in "Adjusting Forms Thickness" Section 2.5. The general idea is to use the Forms Thickness Adjustment knob to find the optimum print gap for the thickness of paper being used. This best adjustment will usually be as tight as possible without causing ink smudging.

Ribbon Path and Condition

The second most likely cause of print quality problems is the ribbon. Ribbon problems can arise from the condition of the ribbon, and the ribbon's positioning and path through the printer.

If the ribbon has been used extensively or has been stored improperly, the ink may not transfer well, causing print that is too light and not crisp and clean looking. The obvious solution is to replace the ribbon cartridge. Section 2.4 gives the procedure.

The ribbon might also have been improperly installed, or may have moved off the correct positioning. Check to see that the ribbon is **between** the metal ribbon shield and the print mechanism (not between the ribbon shield and the paper). You should also verify that the ribbon has no folds in it along its path, and that it is tight enough so that it does not move away from the print mechanism hammers.

Another possible ribbon problem can occur if the ribbon packs up too tightly inside the ribbon cartridge, not allowing it to move freely. To check for this condition, remove the cartridge (see Section 2.4) and try to turn the knurled knob located on the upper right side of the cartridge. If the knob will not easily turn in a clockwise direction, then the ribbon is too tight. The ribbon can usually be loosened by lightly tapping the end opposite the knob on a table top or other hard, horizontal surface.

CHAPTER 4
IN CASE OF DIFFICULTY

You should not attempt to perform any maintenance of this printer except routine operator maintenance and limited maintenance of the print mechanism. However, if the printer fails to function properly, there are some steps you can take before scheduling a service call:

- **Is an error number displayed?** The HP 2562C signals an error condition by flashing an error code number on the display. If a number is displayed, refer to the following:

  - Error numbers 11 through 13: These are operator correctable errors. Refer to "Fault Conditions" in Section 3.8.

  - Error numbers 14 through FF: These are non-operator correctable errors. Refer to Section 4.2 before calling the HP Service Representative.

- **No error number displayed?** If you are having difficulty with the printer and no error number is displayed, then refer to the next section, "General Problems."

4.1 General Problems

(no error number displayed)

Following are some printer difficulties that may not necessarily cause an error number to be displayed on the Operator Control Panel. Each problem description is followed by some suggestions for possible causes/solutions:

PRINTER WILL NOT POWER ON

Power cord is not plugged in. Power outlet current is off or dead. Printer's internal fuse is blown. Printer's MAIN POWER ON/OFF switch is not in the ON (1) position (refer to Section 2.2 of this manual).

PAPER DOES NOT ADVANCE

Paper is not properly loaded. Check tractors, paper alignment, and platen gap setting. Holes in paper are damaged. Paper is caught in the paper box. Paper folds do not match horizontal perforations. If several line feeds are attempted and paper does not advance, a paper jam error should occur (see section 3.8). Check the paper and remove the damaged sheets. Reload paper (see Section 2.5 of this manual).

PAPER TEARING OR SEPARATING OF MULTI-PART FORMS

Tension on paper is not correct. Check platen gap setting and tractors. Check paper for binding or dragging. Reload if necessary.

PRINT QUALITY BECOMES ERRATIC, VERY LIGHT, OR SMUDGED

Check the Forms Thickness adjustment and ribbon tracking (see Section 3.9). Check to see that while unit is printing that the knob on the ribbon cartridge is spinning clock wise. If not spinning CW, refer to section 2.4, page 22 of this manual. Replace ribbon cartridge (see Section 2.4). If the forms thickness adjustment seems unable to make the print gap small enough, the platen lever may have been allowed to slam closed, changing the adjustment range. Refer this to a service representative.

WILL NOT PRINT	Check interface configuration. Ensure that the printer is on-line. If using the HP-IB interface, check to see that the proper address is selected.
STATUS CODE 2 IS DISPLAYED AFTER PAPER JAM HAS BEEN CLEARED OR POWER HAS BEEN RESTORED FOLLOWING POWER FAILURE	The printer is recovering your print job and readying itself to print at the point where the paper jammed. DO NOT DISTURB THE JOB! This process may take several minutes, depending on the size of the job and the current capacity of the computer. This condition is only true when using an HP-IB interface.
CHARACTER IMPRINTS ON PAPER, NO (OR LITTLE) INK IS TRANSFERRED	The ribbon has dropped below or risen above the hammers so that they are not hitting the ribbon over part of the page width. Adjust the platen one or two clicks wider and tighten the ribbon tension (remove ribbon and tighten the knurled knob).

NOTE

IF THE PROBLEM IS NOT REMEDIED BY THE ABOVE SUGGESTIONS, CONTACT YOUR HP SERVICE REPRESENTATIVE.

4.2 Printer Errors

Error numbers displayed on the HP 2562C range from 11 through FF. There are several categories of errors, as follows:

- Operator correctable errors - error numbers 11, 12 and 13.
- Run time errors - error numbers 14 - 19 and 80 - 91.
- Self-test errors - error numbers 20 - 69
- System protocol errors - error numbers C0 - CF*
- Formatter errors - error numbers F0 - FF*

*These alphanumeric (hexadecimal) error codes indicate possible system problems and should be referred to a service representative.

Operator Correctable Errors

These are error numbers 11, 12, and 13. They are somewhat "routine" situations (such as paper-out or platen open) and are easily fixed. See "Fault Conditions," Section 3.8, for a description of the probable causes and suggested operator response to these errors.

Run Time Errors

Run time errors can occur at any time when the printer is in normal operation (errors 11, 12 or 13 are not displayed). Run time errors are as follows:

Table 4-1. RUN-TIME ERRORS

14	Print mechanism problem
15	Graphics run-time fail
16	I/O run-time fail
17	Printer time out
19	Attempt to go on line
80	Power-On problem
81-82	Slave self-test select error
83	Internal firmware problem
86	Modem connect malfunction
90	I/O slave time-out
91	Graphics slave time-out

Run time errors should be referred to your HP Service Representative for assistance.

Before calling for service, you should record the error number and its associated "fail point" (see Section 4.3 for more information).

Self-test Failure

If a self-test routine fails, perform a reset (FORM FEED and LPI ADJUST keys pressed simultaneously - see Section 3-4) and try the test again. **If the test fails the second time, report the test error number and its associated "fail point"** (see Section 4.3) to your HP service representative.

Table 4-2. SELF TEST ERROR NUMBERS

NUMBER	FAILURE
* 20	Power-On
* 21	Static Encoder
* 22	Corebar Motor
* 28	Active Encoder
() 29	Configuration Print Out
() 30	Standard Ripple Print
() 31	Double Size Ripple Print
() 32	Compressed Ripple Print
() 33	High Density Ripple Print
() 34	Raster Graphics
() 36	Black Out Print
() 40	DGL ROM Test
* 41	Digital Test
* 42	Corebar Hammer Test
() 50	I/O Errors
() 60-66	Graphics Errors
() 80-83	Front Panel Operation Errors
* 84-86	Front Panel Operation Errors
() 90-91	Slave I/O Timeouts
* F_	Misc. Errors

* = HP 2562C & HP 2563B
() = HP 62C/63B/64B

4.3 Calling for Help

As previously mentioned, any printer error numbers 14 or greater should be reported to your HP service representative.

IMPORTANT: Before calling, (and before powering-off the printer), you should record the error number and its associated fail point. Give these numbers to your HP service representative when you call.

Finding the Fail Point

The "fail point" number is a subset of the error number, and helps the service representative further pinpoint the source of difficulty. If the printer fails the self-test two times in a row, or if a run-time error number is displayed, you should find the fail point number and record it before powering the printer off or calling your HP service representative. This will enable them to partially diagnose the problem on the phone.

IMPORTANT: To find the fail point number, simply press ENTER when the error number (14 or greater) is flashing on the display. The fail point number will then be displayed.

APPENDIX A
SPECIFICATIONS

Certification

The HP 2562C Line Printer is listed by Underwriters Laboratories, Inc. in the following categories with respective guide designations: Electronic Data Processing Equipment (EMRT) and Office Appliances and Business Equipment (QAOT).

The HP 2562C is certified to Canadian Standards Association (CSA) guidelines for data processing equipment.

This product was designed and tested to comply with IEC 380 and IEC 435. Additionally, this printer was designed to meet European Safety and RFI/EMC standards for Electronic Data Processing Equipment. This includes Germany's VDE 0871 Level B. Any questions concerning regulatory compliance should be directed to your local Hewlett-Packard Sales Office.

Hiermit wird bescheinigt, daß das Gerät HP 2562C in Übereinstimmung mit den Bestimmungen der Postverfügung 1046/84 funkenstortöist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Uberprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Wird das Gerät innerhalb einer Analage zusammen mit arderen Geräten betrieban, so muß bei Inanspruchnahme der "Allgemeinen (Betriebs-)Genehmigung" nach der DBP-Verfügung 1046/48 die gesamte Anlage der Grenzwertklasse B nach DIN/VDE 0871/6.78 und den Auflagen nach ¶ 2 der DBP-Verfügung 1046/1984 entsprechen.

Physical Specifications
(HP 2562C Desktop)

Width: 60 cm (23.6 in)
Depth: 45.5 cm (17.9 in)
Height: 27.4 cm (10.75 in)
Weight: 34 kg (75 pounds)

The printer needs adequate clearance on all sides to allow free air circulation for cooling (minimum = 6 inches).

Electrical Characteristics

INPUT (VAC)	FREQUENCY (Hz)
100 (+5%, -10%)	50/60 (+10%, -5%)
120 (+5%, -10%)	50/60 (+10%, -5%)
220 (+5%, -10%)	50/60 (+10%, -5%)
240 (+5%, -10%)	50/60 (+10%, -5%)

- **Power Cable Length:** Two metres (approximately 6.5 feet)

- **Power Consumption:**

2562C
80 W non-printing
230 W printing (typical)
600 W printing (maximum)

Environmental Specifications:

- **Temperature:**

Operating (printer and ribbon): 10 to 50 degrees C (50 to 122 degrees F)
Storage (printer): -40 to 75 degrees C (-40 to 167 degrees F)
Survival (power-on): -20 to 69 degrees C (-4 to 149 degrees F)
Storage (ribbon): 10 to 50 degrees C (50 to 122 degrees F)

- **Relative Humidity (printer):**

Non-operating -- 5% to 95% non-condensing
Operating -- 30% to 80% (recommended)

- **Audible Noise:**

Standard configuration - 64 dBA

(All sound measurements calculated using ISO/DIS 7779 measurement standard for average sound pressure at 1 meter from source.)

Performance Specifications:

Table A-1. PRINT SPEED AND MATRIX SIZES (HP 2562C ONLY)

TYPE OF PRINTING	PRINT SPEED	PITCH	MATRIX SIZE
Normal (upper case)	300 lpm	10 cpi	5/13 x 7
Normal (lower case)	233 lpm	10 cpi	5/13 x 9
High Density (upper case)	150 lpm	10 cpi	7/19 x 14
High Density (lower case)	117 lpm	10 cpi	7/19 x 18
Compressed (upper case)	300 lpm	13.3 cpi	4/10 x 7
Compressed (lower case)	233 lpm	13.3 cpi	4/10 x 9
Draft (upper case)	420 lpm***	10 cpi	4/13 x 5
Draft (lower case)	340 lpm***	10 cpi	4/13 x 6
Compressed (lower case)	233 lpm	12 cpi	4/10 x 9
Double size (upper case)	140 lpm	5 cpi	10/26 x 14
Double size (lower case)	113 lpm	5 cpi	10/26 x 18
Bar Codes	14.5 ipm	-	-
Raster Graphics	29/14.5ipm**	-	70 x 72 dpi
"	7.2 ipm only	-	140 x 144 dpi

**Fast/slow graphics modes ***110 Character per line

NOTE: Print speed may vary with application and configuration. The printer regulates speed to keep internal temperatures at safe levels. This may affect throughput in warmer operating environments.

- **Dot Size:** 0.011 inch

- **Dot Density:**

  Draft: 210 dots/inch horizontal 72 dots/inch vertical
  Normal: 210 dots/inch horizontal 72 dots/inc vertical
  High: 210 dots/inch horizontal 144 dots/inch vertical
  Compressed: 12, 15 cpi = 180 dots/inch horizontal
  13.3, 16.7 cpi = 200 dots/inch horizontal
  72 dots/inch vertical
  Graphics: 60 or 70 dots/inch horizontal (low)
  120 or 140 dots/inch horizontal (high)
  72 or 144 dots/inch vertical
  Bar Codes: 110 dots/inch horizontal
  144 dots/inch vertical

- **Paper Slew Rate:** 15 inches/second

- **Multi-part Forms:** 1 - 6 (.025 inches maximum pack thickness)

- **Vertical Format Control:** 16 programmable channels

- **Ribbon Life:** 30 million draft characters for the standard ribbon (92158H)
  20 million normal density characters.

APPENDIX B
PAPER SPECIFICATIONS

This appendix provides specifications for selecting continuous form paper appropriate for use in the HP 2562C printer. These specifications are intended to ensure the highest quality and reliability of the printer and are not intended to recommend a specific brand of paper.

Printer Overview

The HP 2562C printer uses dot-matrix technology which allows a high degree of printing flexibility. The basis of the printing mechanism in this family of printers is a print bar containing 33 print hammers, or one print hammer for each four character (at 10 characters per inch). The print bar oscillates horizontally to allow dot placement in any of the allowable dot positions across the page. Dot-matrix technology provides the flexibility to adjust character formation, allowing multiple languages, line draw characters, special characters and graphics images to be printed.

Dot-Matrix vs. Full-Font Printers

A major difference between dot-matrix printers and full-font printers is the print gap, or the distance between the print hammer in its retracted position and the platen. While the hammers of full-font printers fire only once to form an entire character, the hammer of a dot-matrix printer fires an average of 13 times and as many as 26 times to form a standard-density character. The high-repetition rates that dot-matrix hammers operate at in order to print at speeds comparable to full-font printers requires operation at a significantly smaller print gap. Figure B-1 gives a comparison of typical dot-matrix and full-font print gaps.

For most standard paper and multi-part forms, the smaller print gap of dot-matrix printers does not present any problems. However, some specialty forms may cause unacceptable paper jam rates and/or print smearing even though they perform satisfactorily in full font printers. This paper specification explains the restrictions that apply to forms for the HP 2562C.

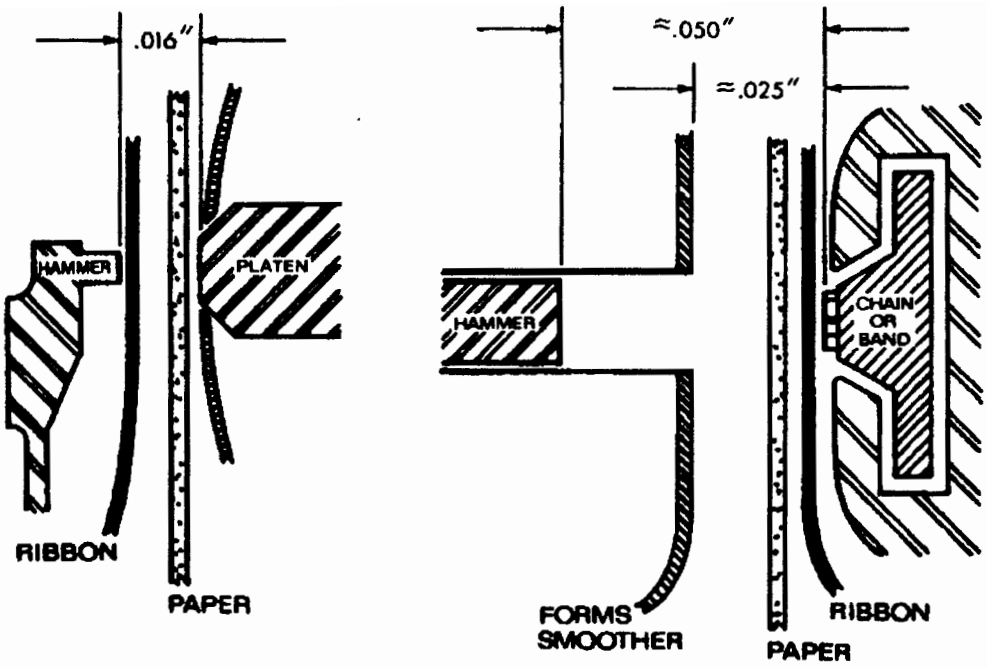


Figure B-1. Dot-Matrix and Full-Font Print Gap Comparison
(Typical Print Gap for Single-Part Form)

General Paper Requirements

The printer uses continuous fan-fold edge-perforated paper varying in width from 3.0 to 16.75 inches. Although the printer accepts paper as wide as 16.75 inches, the farthest right it can print is 14.75 inches. It will handle paper weights in the range of 15 to 100 pound. In many cases the printer will print successfully on paper lighter than 15 pound but the paper should be tested (prior to purchase) for satisfactory feeding and stacking ability. Multi-part forms up to six parts may be used, with a maximum pack thickness of 0.024 inches.

If paper is to be used in humidity extremes (greater than 80% or less than 20%) it should first be tested. Paper to be used at high humidity should be tested for satisfactory feeding and handling. Paper to be used at low humidity should be tested to determine if static buildup must be eliminated for proper stacking.

In general, any special application paper, such as multi-part forms, labels, etc. should be tested in the printer prior to purchase.

Paper Specifications

This section describes the paper specifications which must be met to ensure optimum performance of the printer.

Hewlett-Packard conforms to ANSI standard X3.96-1983, "American National Forms Information Systems for Continuous Business Forms," and ISO Recommendation No. 2784, which cover common form widths and depths, standards for sprocket feed holes and margins, as well as other basic tolerances.

All measurements should be made at 22.8 +/- 2.8 degrees C (73 degrees +/- 5 degrees F) and 50% +/- 5% relative humidity.

Standard Forms Specifications

The Hewlett-Packard 2562C printer was found to perform adequately with forms that meet the following specifications:

- **Paper Sizes:**

Maximum form width	16.75 in. (42.4 cm) edge-to-edge
Minimum form width	3.0 in. (7.62 cm) edge-to-edge
Maximum left margin	0-1.6 in. (0-4 cm)
Maximum right margin	2 or more inches (5 or more cm)
Maximum printing width	13.2 in. (33.53 cm)
Maximum form length	16.0 in. (40.64 cm)
Minimum form length	2.0 in. (5.08 cm)

- **Paper Weights:**

Single Part	15# to 100#
Multipart*	6 total copies maximum
	12# (46gm/sq meter) bond max per part at 6 parts
	8# (30gm/sq meter) carbon maximum
	Maximum pack thickness 0.024 in. (.61mm)

* Since there are no industry standards for Multipart forms, please refer to the paragraph entitled "Speciality Forms Specifications" to ensure proper forms selection for use in the printer.

Standard line printer paper purchased from Hewlett-Packard meets the above specifications and will perform well in the printer. Many other papers purchased from other sources will also provide satisfactory results. For forms other than single-part or simple carbon-type multipart forms, refer to the next paragraph, "Speciality Forms Specifications."

Specialty Forms Specifications

Due to the variations in manufacturing processes, quality, and composition of forms, Hewlett-Packard cannot guarantee satisfactory performance with all paper and forms. This section of paper specifications is intended to familiarize and alert the user to some of the characteristics of specialty forms which may cause unsatisfactory performance of the printer. **This paper specification is NOT intended as a substitute for actual testing.**

NOTE

All specialty forms, including special single-part paper, multipart forms, forms with glue strips, carbonless forms, card stock, and labels should be tested for satisfactory feeding, registration, and print quality prior to purchase.

Form Thickness Uniformity

Because of the small print gap in dot-matrix printers, they are less tolerant of form thickness variations than are full-font printers. Sometimes these thickness variations can be caused by defects such as bubbles or wrinkles. Other times they are due to varying paper composition or the number of parts within the form.

Nominal differences in thickness and compressibility make it impossible to specify allowable thickness variations exactly. The following cases are intended to serve as a guide, but all forms with thickness variations must be tested for satisfactory performance.

Case 1: Form Defect.

In order to avoid hammer dragging, the overall thickness of a form plus any defects should be no more than as shown in Figure B-2 (.015+T/2) inch.

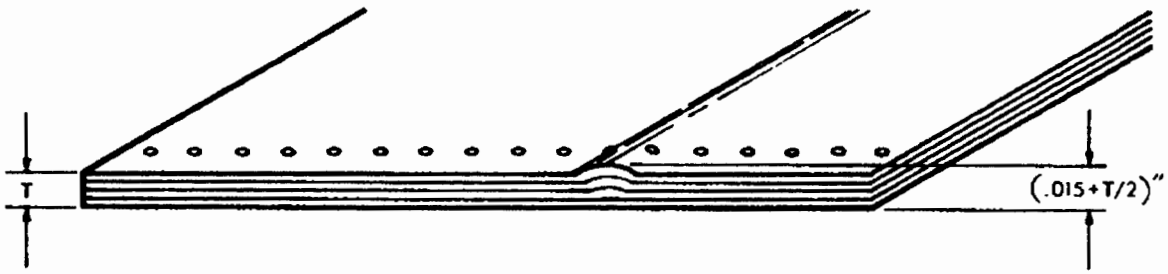


Figure B-2. Maximum Height of Form Defects

Case 2: Varying Thickness Forms: Printing on All Areas.

In order to ensure satisfactory print quality on all areas of the form, the difference in thickness between the thickest and thinnest section of the form should be no more than .008 inch (as shown in Figure B-3). The print gap should be adjusted to optimize print quality on all thicknesses of the form. Since dot-matrix printing is optimized when printing at one gap size, print quality can in some cases be compromised when printing on forms of varying thickness. This is especially true on the copy sheets of multi-part forms. When printing on forms of varying thickness, the maximum depth of depression defects on the thick part of the form is also .008 inch.

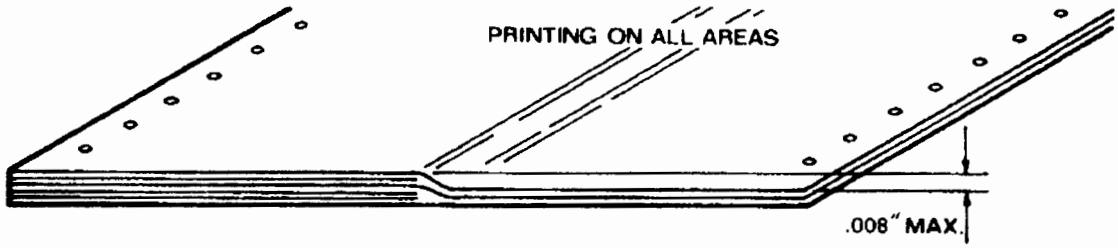


Figure B-3. Maximum Thickness Variation for All Areas of a Special Form

Case 3: Varying Thickness Forms: Printing on Thin Area.

In order to avoid smearing on the thickest area of the form when printing on the thin area only, the difference in thickness between the thinnest area and the thickest should be no more than as shown in Figure B-4 (.015-T/2) inch. For forms with larger variations in thickness, the print gap may be opened beyond the optimum gap to reduce smearing, but print quality on the thinner areas will degrade accordingly.

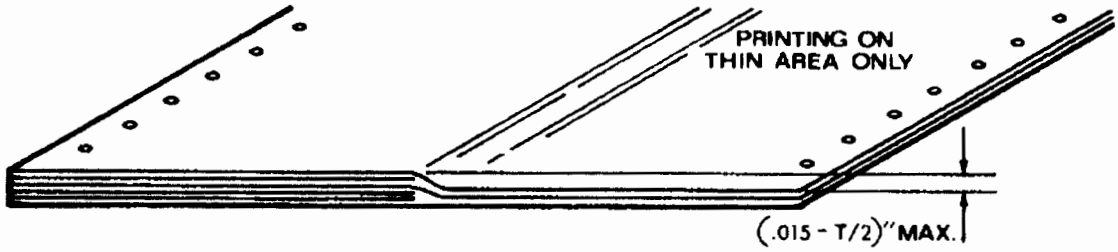


Figure B-4. Maximum Thickness Variation for the Thin Areas of a Special Form

Case 4: Varying Thickness Forms: Printing on Thickest Areas.

In this case, as long as the thickest area of a form does not exceed the specifications listed (see "Paper Weights" page B-3), there is no lower limit to the thickness of the thinnest area as long as it is sufficient to support the form as it is fed through the printer.

Perforation Projection

The perforation projection (perforation tent) is measured by laying the form on a flat surface as shown in Figure B-5. Perforation projections exceeding the value shown (.015+T/2) inch can result in excessive smearing at the perforations and/or an unacceptable jam rate. This is because the perforations may snag on the hammers as they are slewed through the print area. Opening the print gap will reduce smearing or jamming, but it may also degrade print quality.

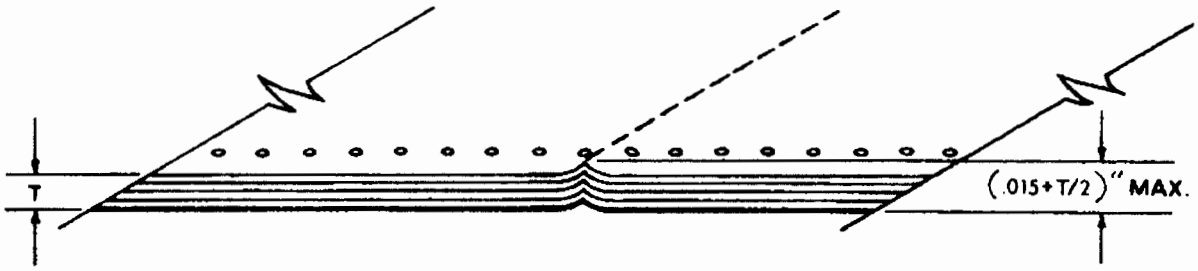


Figure B-5. Maximum Allowable Form Perforation Projection

Other Special Forms

Forms with windows, cutouts, flaps, or attached cards, and other specialized forms may jam excessively in the printer. The only way to ensure satisfactory performance of these forms is to test them thoroughly before purchase.

Labels

Most standard labels work well in the printer as long as they meet the specifications outlined in the section "Standard Forms Specifications." Due to variations in the label products offered, however, all labels should be tested for satisfactory performance before purchase.

Conclusion

Since it is impossible to test all possible form types available for use in the printer, Hewlett-Packard recommends that paper conform to the specifications outlined in this document for optimum printer performance.

Once again, this paper specification is NOT intended as a substitute for actual testing. ALL SPECIALTY FORMS, INCLUDING SPECIAL SINGLE-PART PAPER, MULTIPART FORMS, FORMS WITH GLUE STRIPS, CARBONLESS FORMS, CARD STOCK, AND LABELS SHOULD BE TESTED FOR SATISFACTORY FEEDING, REGISTRATION, AND PRINT QUALITY PRIOR TO PURCHASE. For the best results in selecting standard or specialty forms, consult a forms vendor who can ensure conformance to these specifications and can recommend cost-effective purchases.

Paper Storage and Handling

Since the performance of the printer is dependent on the condition of the paper used, the following recommendation for packaging, handling and storing are included in this document.

Packaging

To avoid damage during handling, top and bottom fillers should be used in continuous paper cartons to hold the stack firmly in place. Because the physical condition of the paper affects printer reliability, proper packaging ensures that the paper remains flat and is not damaged along the edges.

Storage

Do not store cartons directly on the floor, and do not stack more than six high. Each carton should be set upright squarely on the one underneath. Placing additional weight on top of the stack of cartons can damage the paper.

Environmental Considerations

Since performance is affected by environmental conditions, paper should be protected from temperature and humidity extremes (as listed in the next section).

Preconditioning Forms

Paper should be stored in an environment similar to the printer's controlled environment for 48 hours prior to use. This conditioning allows moisture content in the paper to stabilize. The HP 2562C Printers are intended for operation in a controlled environment. This environment consists of temperatures 50 to 104 degrees F (10 to 40 degrees C) with a relative humidity of 30% to 80% non-condensing. For best results, however, the cartons should be stored and used at 70 degrees +/- 5 degrees F (21.1 degrees +/- 2.8 degrees C), with a relative humidity of 45% +/- 5%.

In the event the printer is in an environment subject to extremes of relative humidity or temperature, it may be necessary to store the forms in a controlled environment and withdraw them on an as-needed basis.

Shipping

When paper is shipped through different environments, the entire stack of cartons on the pallet should be plastic wrapped. When shipping across bodies of water, individual cartons should be wrapped as well.

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CONTROL BOARD            2834      PRINT TIME: 000000 HOURS   ON TIME: 000000 HOURS
LINEAR ENCODER           2648
HP-IB INTERFACE          2338      HP-IB DEVICE ADDRESS = 7, CIPER PROTOCOL

10.0 CPI--SPARSE DENSITY
 18                                 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~

10.0 CPI--STANDARD DENSITY
  0 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
    ÀÁÈÉÊËÌÍÎÏÑÒÓÔÕÖÙÚÛÜÝßàáâãäåæçèéêëìíîïñòóôõöùúûüýÿ¡¿£¤¥§ƒ¢
                        ISOS: FRENCH=48, GERMAN=49, SWEDISH/FINNISH=50, DANISH/NORWEGIAN=51, SPANISH=52, BRITISH=53.
 16 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
 17 ÀÁÈÉÊËÌÍÎÏÑÒÓÔÕÖÙÚÛÜÝßàáâãäåæçèéêëìíîïñòóôõöùúûüýÿ¡¿£¤¥§ƒ¢
 22 [illegible]
 23 [illegible]

10.0 CPI--HIGH DENSITY
  4 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
    ÀÁÈÉÊËÌÍÎÏÑÒÓÔÕÖÙÚÛÜÝßàáâãäåæçèéêëìíîïñòóôõöùúûüýÿ¡¿£¤¥§ƒ¢
                        ISOS: FRENCH=72, GERMAN=73, SWEDISH/FINNISH=74, DANISH/NORWEGIAN=75, SPANISH=76, BRITISH=77.
 24 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
 25 ÀÁÈÉÊËÌÍÎÏÑÒÓÔÕÖÙÚÛÜÝßàáâãäåæçèéêëìíîïñòóôõöùúûüýÿ¡¿£¤¥§ƒ¢

13.3 CPI
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 20 !"#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
 21 ÀÁÈÉÊËÌÍÎÏÑÒÓÔÕÖÙÚÛÜÝßàáâãäåæçèéêëìíîïñòóôõöùúûüýÿ¡¿£¤¥§ƒ¢

*** BARCODES INSTALLED ***
  CODE 3 OF 9 (DEFAULT)  0123456789
```

```
  INDUSTRIAL 2 OF 5      0123456789
```

```
  INTERLEAVED 2 OF 5     0123456789
```

```
  UPCA       01234567890
```

```
  UPCE       01234500009
```

```
  EAN8       0123456
```

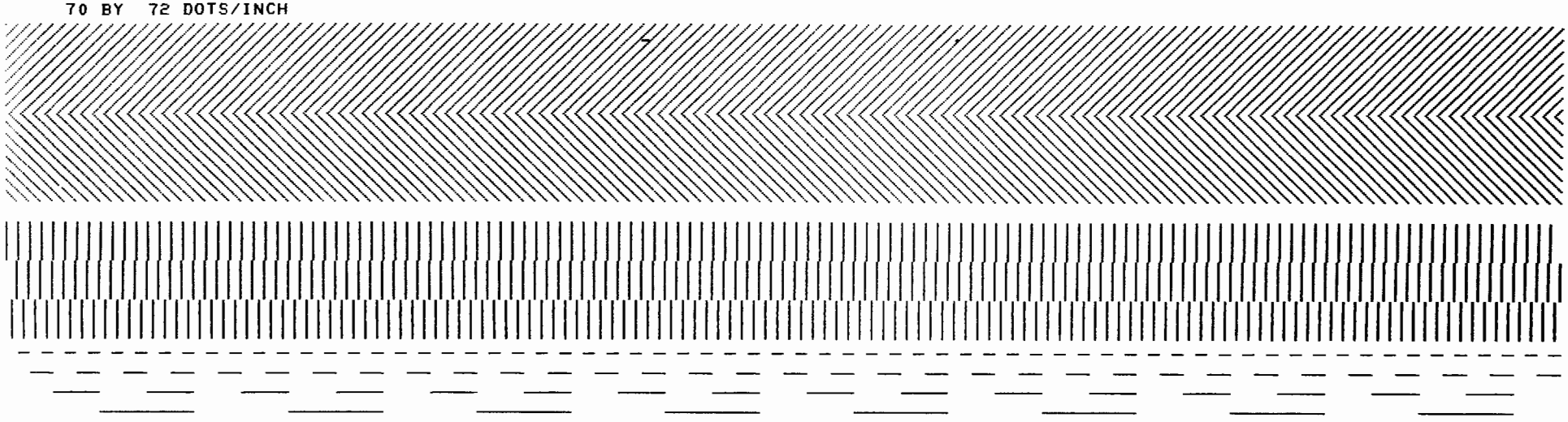
```
  EAN13      012345678901
```

HP2562C

NOTE

This is a scaled down replica of a self-test print-out
Actual contents on your printer may vary.

70 BY 72 DOTS/INCH



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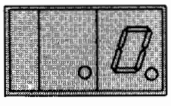
	PRESS	PRINTER DISPLAYS		PRINTER DISPLAYS		UNTIL PRINTER DISPLAYS	PRESS	
	ENTER	0 Current Status	Operation Complete					
	ENTER	0 Current Status	Operation Complete					
	ENTER	0 Current Status	Operation Complete					
e Printed, Returns us Mode		0 Current Status	Operation Complete					
ion te								
Flashes or Number t. If Error Call Service ative								
Flashes or Number t. If Error Call Service ative								
	ENTER	50 Test Status- Right Decimal Flashes.	Printer Should Perform Subtest And Return To Ready Status	0 Status Or Flashing Error Code	If Display Flashes Check Error Number And Repeat. If Error Repeats, Call Service Representative			
	ENTER	40 Test Status- Right Decimal Flashes.	If No Errors Occur Subtest Will Continue To Run Until Test Key Is Pressed.	0 Status Or Flashing Error Code	If Display Flashes Check Error Number And Repeat. If Error Repeats, Call Service Representative			
NFIG.		Δ 100 Current Parameter	CONFIG. Press To Exit Config. Mode	0 Current Status	Operation Complete			
NFIG.		Δ 0.0 Current Parameter	To Select Another Parameter, Press.		Or FINE ADJ.	o/o	ENTER	0 Curent Status Operation Complete

SUBTEST NUMBERS

Standard Self-test	0
Normal Ripple	1
Double-size Ripple	2
Compressed Ripple	3
High-density Ripple Opt.	4
Raster Graphics	5
High-density Raster Graphics	6
Printer Configuration Print-out	8



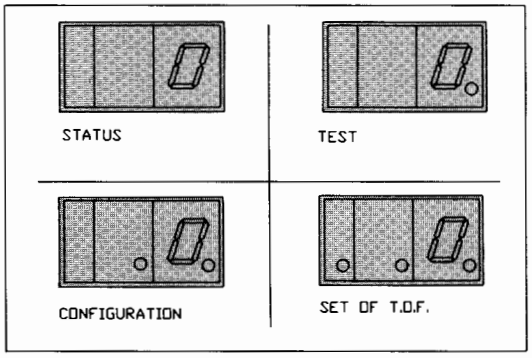
CONFIGURATION

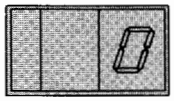
CONFIGURATION FUNCTION NUMBERS

☆ FUNCTIONS Δ PARAMETERS

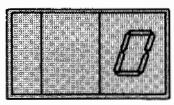
1 Select Primary Character Set	(0-95)
2 Select Secondary Character Set	(0-95)
7 Select Page Length Representation	(0,1)
20-29 Configure Interface	00-FF
50 Disconnect Modem	0,1
51 Graphics Speed	0,1
60 Perforation Skip	0,1
61 Display Functions	0,1
80 Enable/Disable Inline Converter	0,1
81 Enable/Disable Printronix Linefeed Emulation	0,1
85-89 Configure Inline Converter	00-FF

DESIRED OPERATION ☆☆	PRESS	PRINTER DISPLAYS		PRESS		PRINTER DISPLAYS	
SET PAGE LENGTH (LINES PER PAGE)	PAGE L. ADJ.	66 (6 Lines Per Inch)	To Change Page Length	Or FINE ADJ.	Until	51 (6 lines Per Inch)	Then
SET PAGE LENGTH (IN INCHES)	PAGE L. ADJ.	11.0 Current Page Length setting	To Change Page Length	Or FINE ADJ.	Until	8.5 Desired Page Length Setting	Then
SET L.P.I. (LINES PER INCH)	L.P.I. ADJ.	.6. Current LPI Setting	To Change L.P.I.	Or FINE ADJ.	Until	.8. Desired Lpi Setting	Then
PRINT ONE LINE (TEST PATTERN)	TEST	0. Previous Function Number		PRINT 1 LINE	Hold Key Down To Repeat	7 Print 1 Line Status (Internal)	When Line Printed, Printer Returns To Status Mode
FILE DATA (MUST BE ON LINE)	PRINT 1 LINE	6 Print 1 Line Status (external)	When Line Prints, Display Turns To Ready Status.If No Data Is Avail.,		Hold Key Down To Repeat	0 Current Status	Operation Complete
SINGLE SELF-TEST	TEST	0. Test Status		ENTER Right Decimal Will Flash To Indicate Test Is Active	Printer Should Print Test Printout And Return To Ready Status If No Error Occurs.	0 Current Status	If Display Flashes Check Error Number And Repeat. If Error Repeats, Call Service Representative
CONTINUOUS SELF-TEST	TEST Press and hold down for 2 secs.	4. Test Mode Status	Release Test Key	ENTER To Begin Test	TEST Press Test To Stop	0 Status Or Flashing Error Code	If Display Flashes Check Error Number And Repeat. If Error Repeats, Call Service Representative
SINGLE SUBTEST	TEST	0. Previous Subtest Number	To Select Subtest Desired	Or FINE ADJ.	Until	1. Status Or Flashing Error Code	Then
CONTINUOUS SUBTEST	TEST Press and hold down for 2 secs. Release.	0. Previous Subtest Number	To Select Subtest Desired	Or FINE ADJ.	Until	2. Desired Subtest	Then
DISPLAY CONFIGURATION	CONFIG. and FINE ADJ. Hold keys down	☆ 1. Previous Function Number	To Select Another Function Number, Hold Config. Key Down And	Or FINE ADJ.	Until	☆ 4. Desired Function Number	Release CONFIG.
CHANGE CONFIGURATION	CONFIG. and FINE ADJ. Hold keys down	☆ 1. Previous Function Number	To Select Another Function Number, Hold Config. Key Down And	Or FINE ADJ.	Until	☆ 3. Desired Function Number	Release CONFIG.



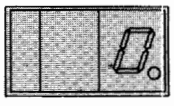


STATUS



ERROR CONDITION
11 Printer Out Of Paper
12 Platen Open
13 Paper Jam
14 Print Mechanism Problem
15 Graphics Run-time Fail
16 I/O Run-time Fail
17 Printer Time-out
19 Unable To Go On-line- - Remove CE Strap
20 + Test Or Run-time Error(See Operator's Manual)

STATUS CODES
0 Printer Ready(Also Modem Disconected)
1 Printer Ready(Modem Connected)
2 Silent Run
3 Undefined
4 Continous Self-test
5 Standard Self-test Non-continuous Subtest
6 Print 1 Line(Data)
7 Print 1 Line(Test Pattern)



TEST

SUBTES
Stand
Norm
Doubl
Compr
High-
Raste
High-
Printe

† Flashing Display Indicates Error Condition

☆☆ On Line Indicator Must Be Off To Perform Any Of These Operations