**Tally Genicom®**

# *TallyGenicom® 6600 Series Printers User's Manual*

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# User's Manual

*TallyGenicom® 6600 Series Printers*

**TallyGenicom®**

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# Table of Contents

# 1    *Introduction*

## Printer Overview

This chapter provides a general overview of your printer and the conventions used within this manual.

### TallyGenicom 6600 Cartridge Ribbon Printers (CRP) Series

TallyGenicom® is pleased to announce the new TallyGenicom 6600™ Series Line Matrix printers.  This is the latest generation product from a long heritage of high quality extending over 30 years.   TallyGenicom® is a global leader for design and manufacturing with the ability to deliver unsurpassed service and support.

The TallyGenicom 6600™ Line Matrix Printing Platform extends the series of technology innovations that cement TallyGenicom's reputation of world class printing. Line matrix printing is TallyGenicom's flagship technology, and it remains the workhorse solution for supply-chain and back-office printing applications because of its reliability, lower cost of ownership and flexibility of printing applications.

- Most reliable printer ever – Durability provides more up time and lower operating costs
- High capacity ribbon cartridge – Darker, easy to read images, last longer, and costs less to operate than other print technologies
- Integrated print management system – provides precise control over print quality, print costs, and job planning
- Cabinet or Pedestal styles – meets various user configurations and forms handling flexibility
- Unsurpassed ease of use – simplifies operation and enhances productivity

There are four printer configurations:

## Enclosed Cabinet (66XXQ)

- The enclosed cabinet models provide for near silent operation, making these printers perfectly suitable for use in the quietest of office environments.

- Provides the best paper handling for large print runs. All paper input and output is contained inside the cabinet and protected from bumping and contamination.

- Highly effective combination of moveable fences and chains allows for precise stacking all the way up to a full box of paper.

- For tougher forms that tend not to refold well, a SureStak power stacker option is available for the enclosed cabinet models.

- Available in four print speeds – 500 line per minute, 1000 line per minute, 1500 line per minute, and 2000 line per minute models.

## Pedestal (66XX)

- The pedestal model has a clamshell design that allows easy access to all controls, providing faster ribbon replacements and easier paper loading

- Oversized casters are standard, making movement easy.

- Versatility to configure the paper path for either top or rear exit.

- Using the top paper exit, this printer is ideal for short print runs and easy access to output

- Available in three print speeds – 500 line per minute, 1000 line per minute, and 1500 line per minute models.

## Quiet Pedestal (66XX)

- This printer configuration is the same as the above Pedestal configuration but with an enclosed input paper area with a front door, side panels, and bottom panel to seal the input paper path.

- Provides a reduction in accoustic noise.

## Zero Tear Pedestal (66XXZ)

- Special push tractor configuration enables printing from the very first to the very last line of a form and then tear-off with no forms lost.

- The elimination of wasted forms between jobs can yield significant savings.

- An ideal solution for supply-chain and back-office applications.

- Available in three print speeds – 500 line per minute, 1000 line per minute, and 1500 line per minute models.

# Consumable Monitoring With PrintNet Enterprise

The Integrated Print Management System works with PrintNet Enterprise (PNE). PNE allows a system administrator to remotely view the current consumable status of all printers. PNE can be configured to deliver alerts on all consumable warnings. When a ribbon reaches the low state, PNE notifies the system administrator remotely via an automated e-mail alert of the low condition. This allows corrective action to be taken before the ribbon reaches its end of life. If the ribbon is not changed, an alert will again be initiated once the ribbon reaches the 0% end point. Refer to your PrintNet Enterprise Remote Management Software manual for details.

# Taking Care Of Your Printer

Your printer will produce high quality print jobs if it is well taken care of. Periodic cleaning, handling the printer properly, and using the correct printer supplies such as ribbon and paper ensures optimum performance. Chapter 7 explains how to clean the printer, and printer supplies are listed in Appendix A.

# Conventions In This Manual

All uppercase print indicates control panel keys.
**Example:** Press the CLEAR key, then press the ONLINE key.

Quotation marks (" ") indicate messages on the Liquid Crystal Display (LCD).
**Example:** Press the ONLINE key. "OFFLINE" appears on the LCD.

The + (plus) symbol represents key combinations.
**Example:** "Press ▲ + ▼" means press the ▲ (UP) key and the ▼ (DOWN) key at the same time.

# Warnings And Special Information

Read and comply with all information highlighted under special headings:

WARNING **A warning notice calls attention to a condition that could harm you.**

CAUTION **A caution notice calls attention to a condition that could damage the printer.**

IMPORTANT **Information vital to proper operation of the printer.**

**NOTE:** A note gives you helpful tips about printer operation and maintenance.

# Related Documents

- *Quick Reference Guide* — Explains how to set up the printer for basic operation (load ribbon cartridge and media, and clear paper jams).
- *Maintenance Manual* — Explains how to maintain and repair the line matrix printer at the field service level of maintenance.
- *6600 Emulations Manual* — Provides host control codes and character sets for the ANSI emulation.
- *6600 Font/Char Sets Manual* — Information about and examples of the character sets available in line matrix printers.
- *Graphics Language Manual* — Provides information about PGL, Code V, and IG graphics languages.
- *Integrated Network Interface Card User's Manual* — Information about network protocols, configuration, and operation.

# Contact Information

## TallyGenicom Customer Support Center

**IMPORTANT** **Please have the following information available prior to calling the TallyGenicom Customer Support Center:**

- Model number
- Serial number (located on the back of the printer)
- Installed options (i.e., interface and host type if applicable to the problem)
- Help Menu printout (while offline press the MENU/ENTER key on the control panel to enter the menu. Press the Left Arrow key until the Help menu displays. Press the MENU/ENTER key.)
- Is the problem with a new install or an existing printer?
- Description of the problem (be specific)
- Good and bad samples that clearly show the problem (faxing or emailing of these samples may be required)

| | |
|---|---|
| Americas | (714) 368-2686 |
| Europe, Middle East, and Africa | (31) 24 6489 410 |
| Asia Pacific | (65) 6548 4114 |
| China | (86) 800-999-6836 |

http://www.tallygenicom.com/service/default.aspx

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| | |
|---|---|
| Americas | (800) 733-1900 |
| Europe, Middle East, and Africa | 33 (0) 1 46 25 19 07 |
| Asia Pacific | (65) 6548 4116 or (65) 6548 4182 |
| China | (86) 400-886-5598 |

http://www.tallygenicom.com/supplies/default.aspx

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NL-6600 Ad Wijchen
The Netherlands
Phone: (31) 24 6489489
Fax: (31) 24 6489499

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Changi South Industrial Estate
Singapore 486763
Phone: (65) 6542 0110
Fax: (65) 6546 1588

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22F, Eton Building East
No.555, Pudong Av.
Shanghai City, 200120, P R China
Phone: (86) 400 886 5598
Fax: (86-21) 5138 0564

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# 2    *Setting Up The Printer*

## Before You Begin

Read this chapter carefully before installing and operating the printer. The printer is easy to install. However, for your safety and to protect valuable equipment, perform all the procedures in this chapter in the order presented.

## Power Requirements

The printer must be connected to a power outlet that supplies 88 to 270 volts AC. The printer automatically senses and adjusts itself to conform to the correct voltage range.

Primary circuit protection is provided by the power switch, which is also a circuit breaker. Consult an electrician if printer operation affects local electrical lines.

**IMPORTANT**    **Printer power should be supplied from a separate AC circuit protected at 10 amperes for 100 - 120 volts or 5 amperes for 200 - 240 volts at 50 or 60 Hertz.**

## Select A Site

Select a printer site that meets all of the following requirements:

- Permits complete opening of the printer cover and doors.

- For cabinet models, allows at least three feet of clearance behind the printer. (This permits air to circulate freely around the printer and provides access to the paper stacking area.)

- Has a standard power outlet that supplies 88-135 Volts AC or 178-270 Volts AC power, at 47 to 63 Hz.

- Is relatively dust-free.

- Has a temperature range of 10° C to 40° C (50° F to 104° F) and a relative humidity from 15% to 90% non-condensing.

- Is located within the maximum allowable cable length to the host computer. This distance depends on the type of interface you plan to use, as shown in Table 1.

**Table 1. Maximum Interface Connection Cable Length**

| Interface Type | Maximum Cable Length |
|---|---|
| Centronics Parallel | 5 meters (15 feet) |
| IEEE 1284 Parallel | 10 meters (32 feet) |
| Serial RS-232 | 15 meters (50 feet) |
| Ethernet 10/100Base-T | 100 meters (328 feet) |

# Printer Dimensions
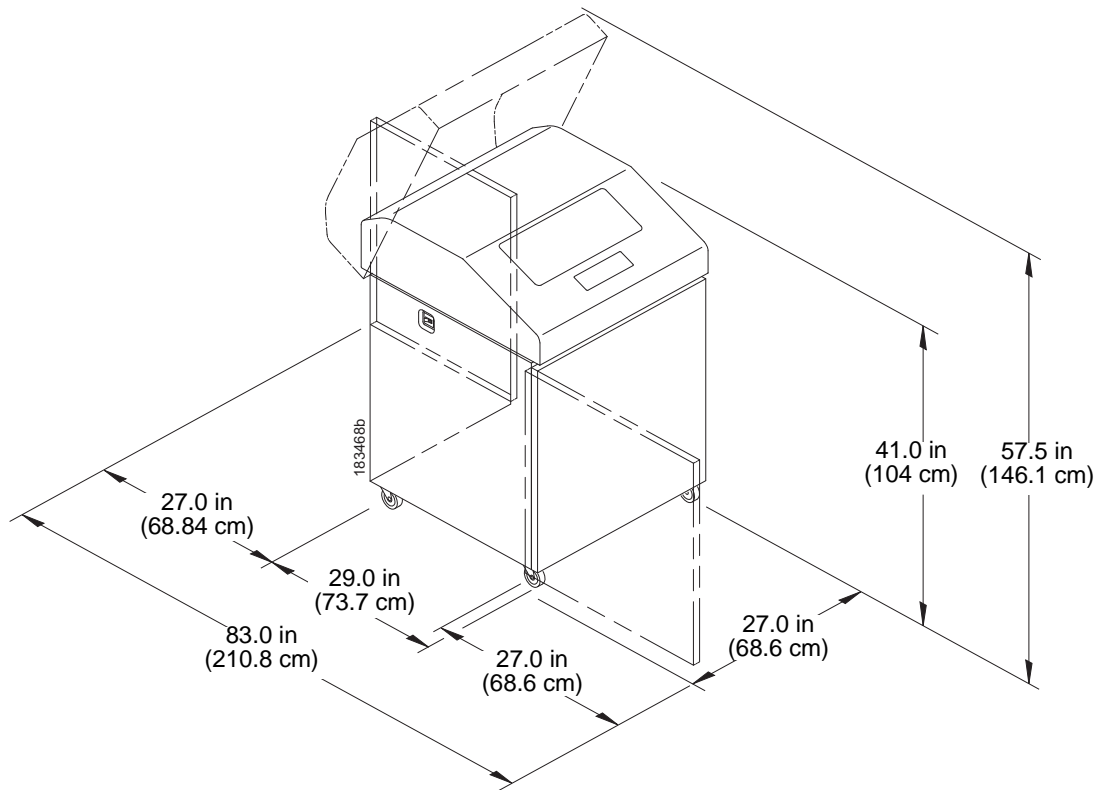


**Figure 1. Printer Dimensions - Cabinet Model**
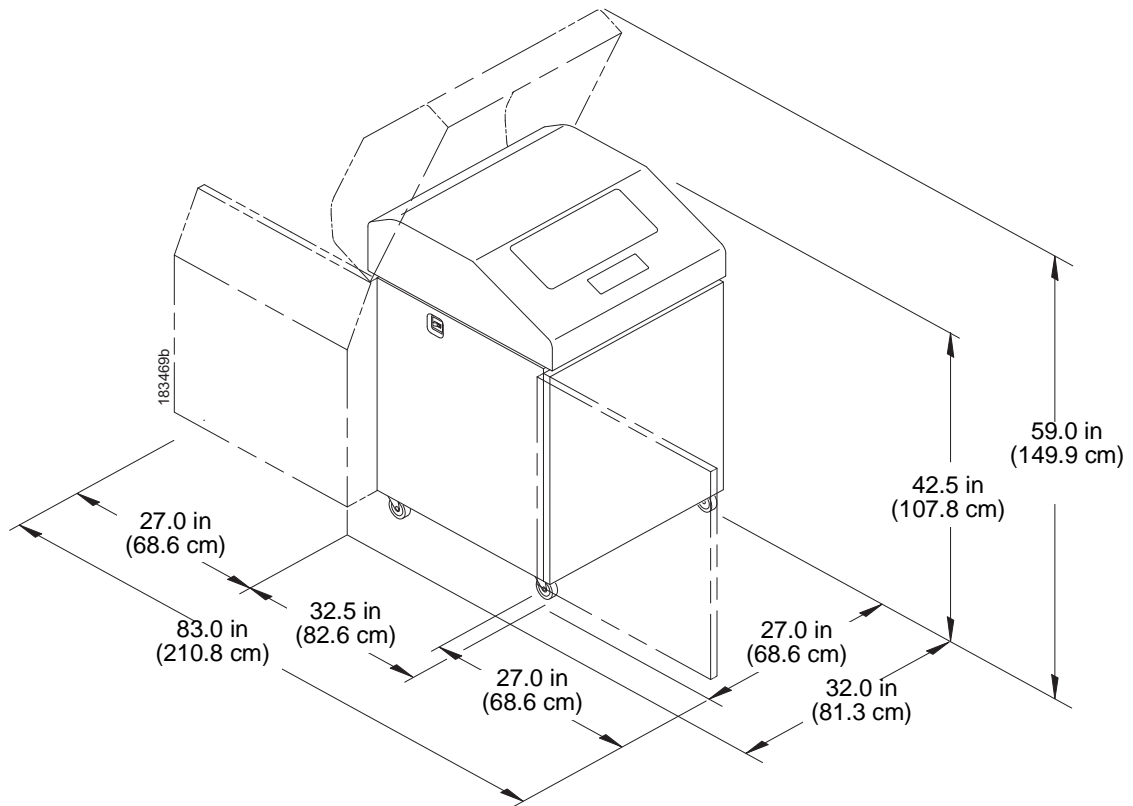
**Figure 2. Printer Dimensions - Cabinet Model with Paper Stacker**

27.0 in
(68.6 cm)

83.0 in
(210.8 cm)

32.5 in
(82.6 cm)

27.0 in
(68.6 cm)

27.0 in
(68.6 cm)

32.0 in
(81.3 cm)

42.5 in
(107.8 cm)

59.0 in
(149.9 cm)

183469b

25 in.
(63.5 cm)

10.5 in.
(26.67 cm.)

48.0 in.
(122 cm)

183882a

24.6 in.
(62.48 cm)

30 in.
(76.2 cm.)
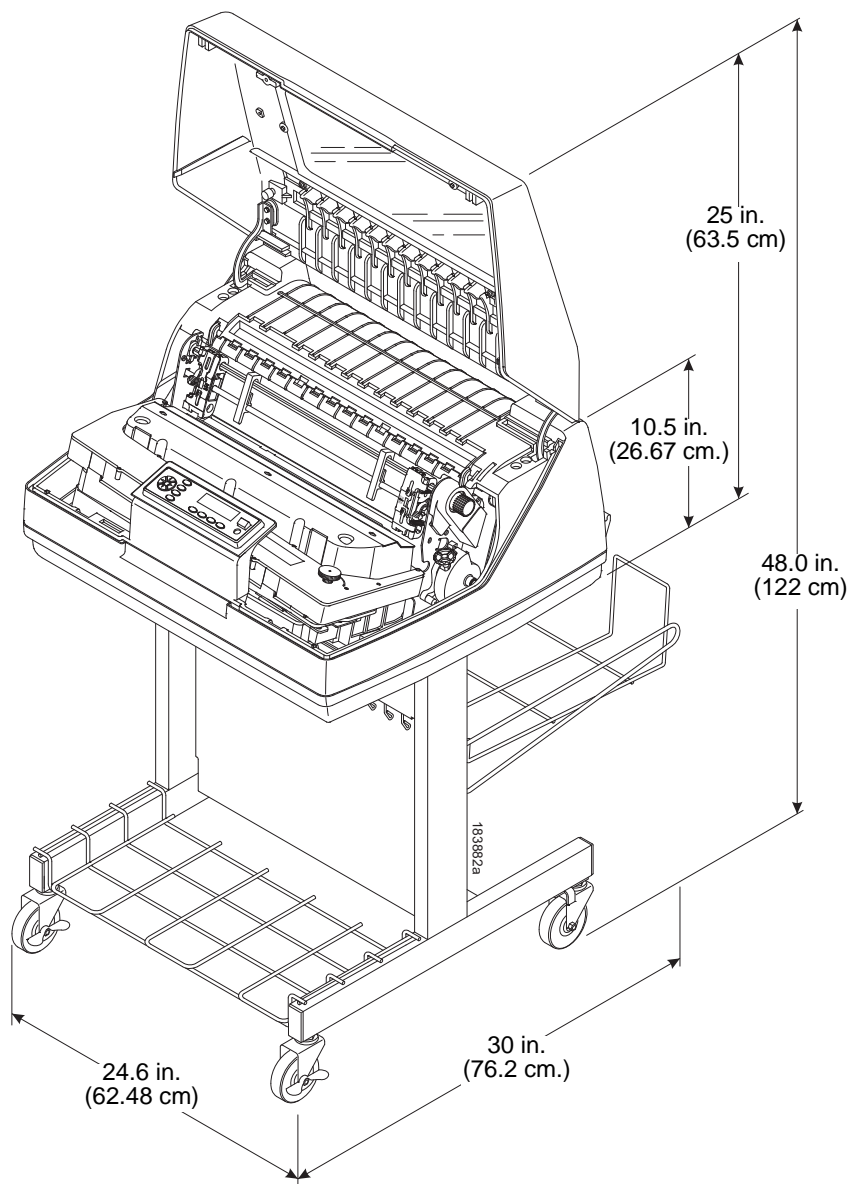
**Figure 3. Printer Dimensions - Pedestal Model**

25 in.
(63.5 cm)

10.5 in.
(26.67 cm.)

48.0 in.
(122 cm)

184317a

24.6 in.
(62.48 cm)

30 in.
(76.2 cm.)

34.1 in.
(86.6 cm.)
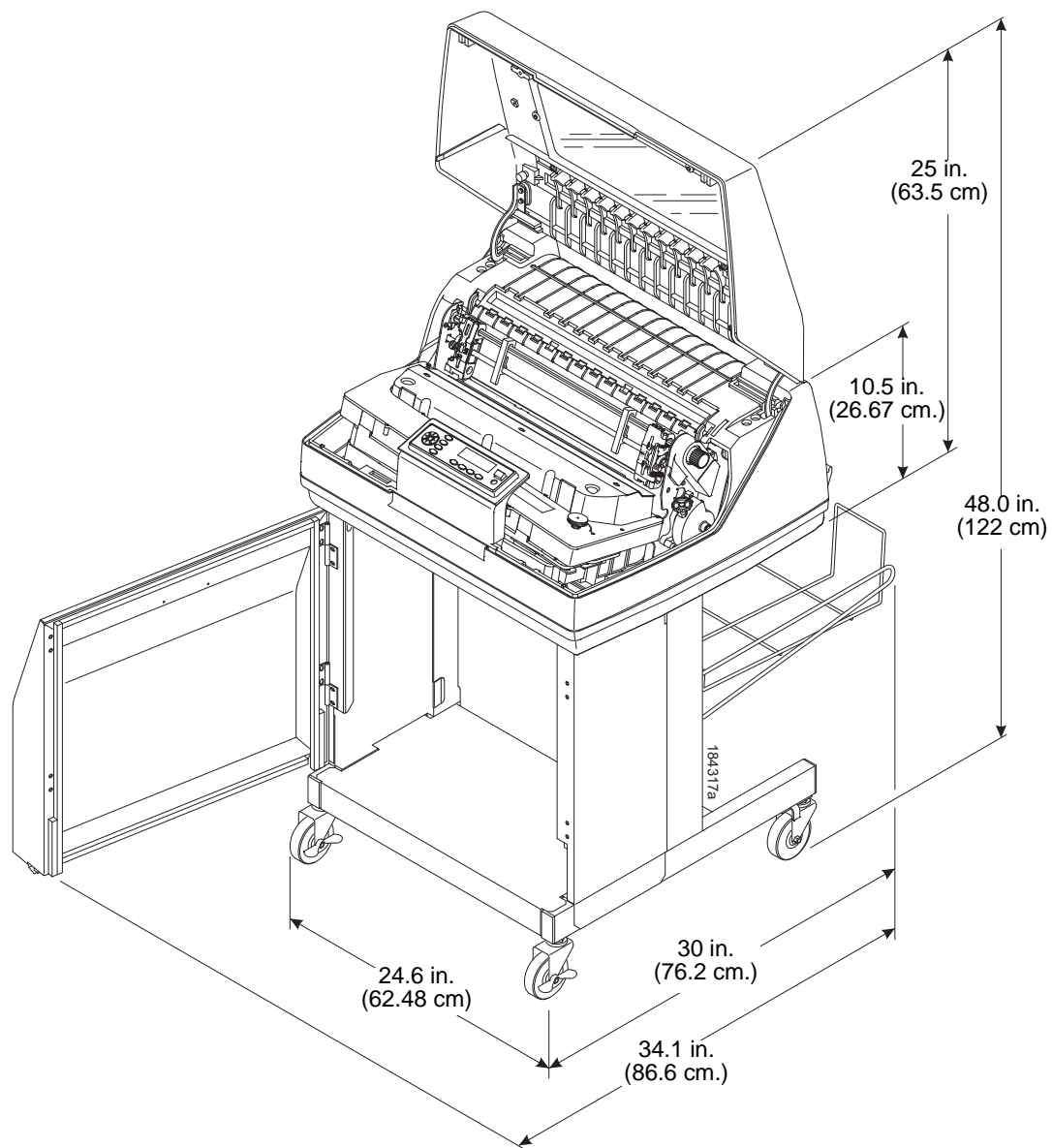
**Figure 4. Printer Dimensions - Quiet Pedestal Model**

# Printer Component Locations
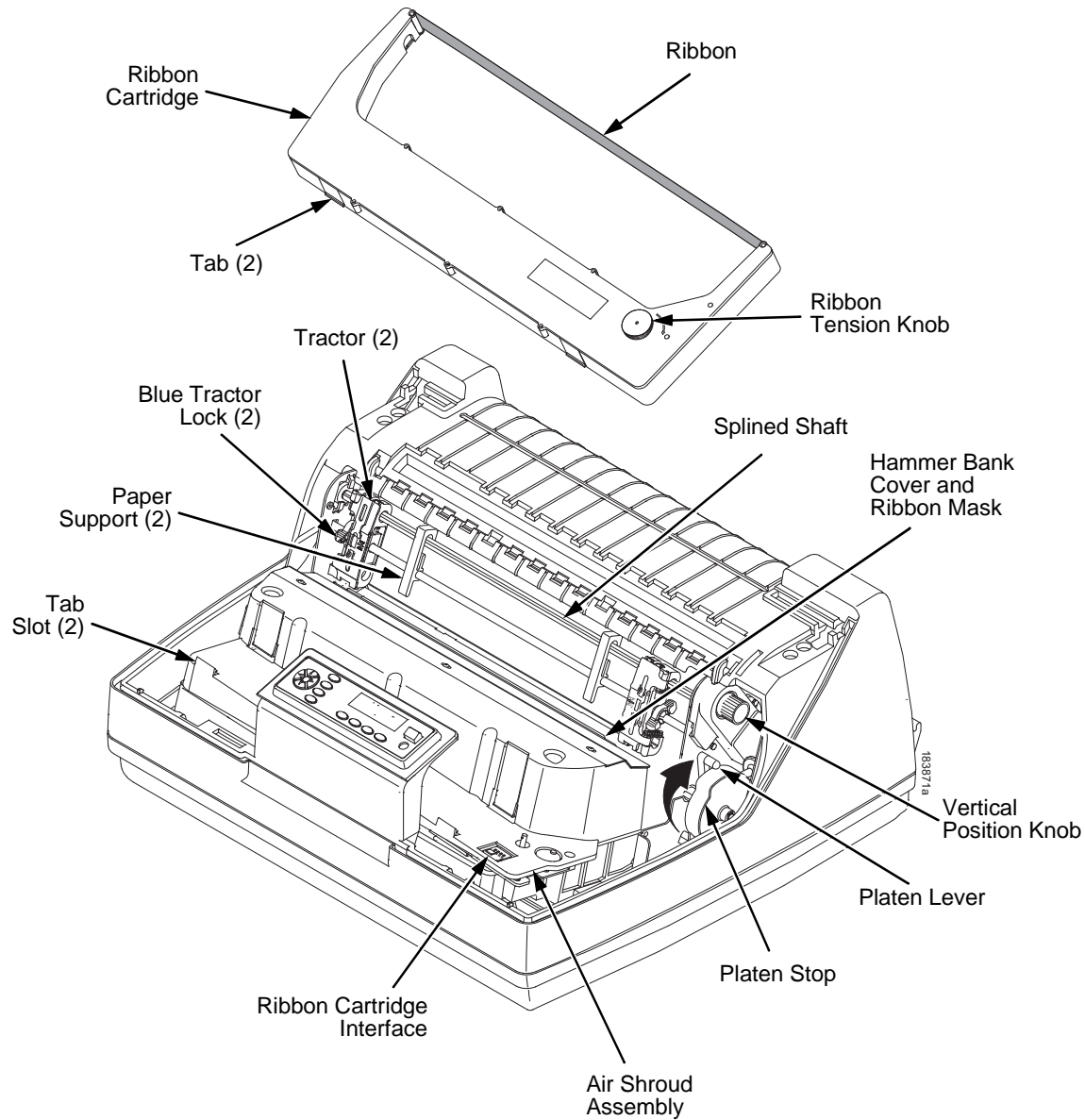


**Figure 5. Printer Component Locations**

# 3    *Operating The Printer*

## Powering On The Printer

When you power on the printer, it executes a self-test. The default power-up state is offline. When the self-test completes and the software has initialized successfully, the status indicator light is off, indicating the printer is offline. When the printer is online, the default emulation type you have installed appears in the upper-right corner of the display. The configuration name or ribbon life remaining is shown on the second line.

If there is a fault during the self-test, the status indicator flashes and a specific fault message appears on the display (such as "LOAD PAPER"). The alarm also sounds if it is configured to do so. See " LCD Message Troubleshooting Table" on page 123 for information on fault messages and solutions.

## Operating Modes

**Online.** In online mode, the printer can receive and print data sent from the host. Pressing the ONLINE key toggles the printer from online to offline mode. The status indicator is lit in online mode.

**Offline.** In offline mode, you can perform operator functions, such as loading paper and setting top-of-form. You can also move within the printer configuration menus. Pressing the ONLINE key toggles the printer from offline to online mode. The status indicator is off in offline mode.

**Fault.** In fault mode, a condition exists which must be cleared before printing can continue. The status indicator flashes, the alarm beeps (if configured to sound), and a descriptive fault message displays.

The current operating mode can be selected via control panel keys or can result from routine operations such as powering on the printer.

# The Control Panel

Figure 6 shows the keys, displays, and indicators as they appear on the control panel. The following section provides the descriptions, and functions of the control panel keys.

Key combinations are indicated with the plus (+) sign. For example, "Press △ + ▽" means to press the △ key and the ▽ key at the same time.



**Figure 6. Control Panel**

## Control Panel Keys

### ONLINE

Toggles the printer between online and offline modes.

### LF

Performs a line feed (LF - line feed). A single press of the LF key causes a line advance.

### FF

Performs a form feed paper advance (FF - form feed) . A single press of the FF key causes a form advance to the top of the next form.

## VIEW

When the printer is online or offline, pressing this key executes the view or eject function. A short press of the View key performs the view function. If the key is held down for more than one second, the eject function is performed.

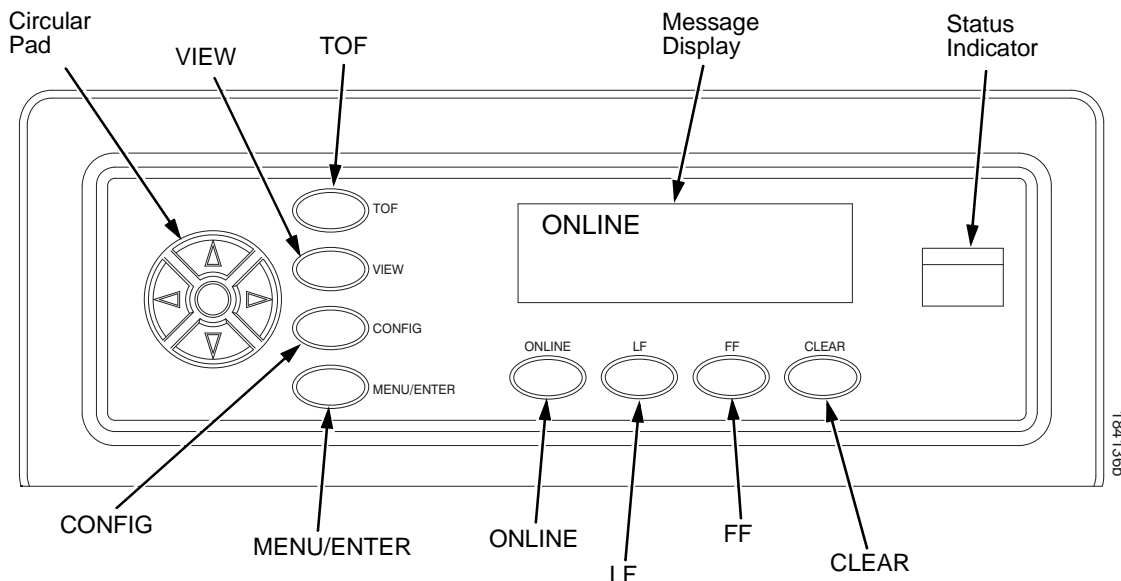If online with data in the printer buffer, the data prints and the key functions as described below.

If in a fault state, this key will be ignored.

- **View Function** — a short press of the VIEW key moves the last data printed to the tractor area for viewing. While in the view state, the message "Printer in View" displays, and pressing the UP or DOWN arrow keys moves the paper up or down in 1/72 inch increments. This is done to align the image within a pre-printed form, for example. Refer to the UP and DOWN key functions for additional details on the microstep feature. Pressing VIEW a second time moves the paper back to the adjusted print position.

- **Eject Function** — when the VIEW key is pressed for more than one second, the behavior will depend on the Quick Access Menu. If the Quick Access Menu is set to enable, the printer will move the last printed form as defined in the Eject Distance Menu. When the key is pressed again the paper will move forward to the next Top of Form. If the Quick Access Menu is set to disable, the Eject Key press will be ignored.

## CLEAR

In a fault state this key attempts to clear the fault. When the fault is cleared, the printer returns to the offline mode. In Menu mode, the CLEAR key takes the printer back to offline mode.

When the printer is in offline mode and no fault is present, this key allows entry into the Clear menu.

**Clear Menu**

- Clear Buffers - Clears all buffers. It also resets the application task to its initial state.

- Clear All Configs - Copies the Default Configuration settings into all saved configurations. Any parameters not listed on the Configuration Report, such as special characters downloaded from the host computer, are unaffected.

- Clear Current Config - Copies the Default Configuration setting into the current configuration. Any parameters not listed on the Configuration Report, such as special characters downloaded from the host computer, are unaffected.

- Clear Reset - The printer controller performs a hardware reset. This can be used in lieu of cycling power to the printer. As with cycling power, the Power-up Configuration is loaded as the Current Configuration.

**TOF**

Sets the top-of-form on the printer. This key is active only when the printer is offline. The paper moves down to the print position and aligns to the top-of-form. Refer to the *Quick Setup Guide* for complete instructions on how to set the top-of-form.

**NOTE:** Do not use this key if there is any data in the buffer.

**CONFIG**

In offline mode, this key allows for fast selection of any of the previously stored configurations. Pressing this key causes the printer to cycle through the following messages: Load Config., Factory Config, Load Config 1, Load Config 2, Load Config 3,...,Load Config 8. Press MENU/ENTER to load a config.

**MENU/ENTER**

While in offline mode, this key allows entry into the configuration menus. When navigating the configuration menus, MENU/ENTER selects the currently displayed option value as the active value. An asterisk (*) appears next to the active value on the display. MENU/ENTER is also used for starting and stopping printer tests.

**NOTE:** The MENU/ENTER key must be unlocked to function.
        See UP + DOWN, below.
        The MENU/ENTER key lock and unlock function can be configured to be a key combination other than ▲ + ▼.

**UP or DOWN ( ▲ or ▼ )**

Moves up or down between levels in the configuration menus and makes vertical forms adjustment. When offline and not in the configuration menus or after pressing VIEW, press ▲ or ▼ to adjust the paper up or down in 1/72 inch increments for fine vertical forms alignment. When the printer is in the configuration menus, press ▲ or ▼ to move through levels in the configuration menus.

**UP + DOWN ( ▲ + ▼ )**

Locks and unlocks the MENU/ENTER key.

**NOTE:** The MENU/ENTER key lock and unlock function can be configured to be a key combination other than ▲ + ▼.

**PREV or NEXT ( ◀ or ▶ )**

Moves between the options on the current level of configuration menu. In the configuration menu, press ◀ to scroll backward or press ▶ to scroll forward through the menu selections on the same level.

### Current Config/Ribbon Life Indicator

Depending on the panel display menu, the second line of the LCD displays the name of the current configuration or the life of the installed ribbon.

## Cancel A Print Job

The procedure to cancel a print job depends on the printer emulation and your application software. Contact your system administrator for additional information.

1. If the printer is online, press ONLINE to place the printer in offline mode.

2. From the host system, stop the print job.

3. Perform Clear Buffers. Press CLEAR key when CLEAR/Buffers displays, then press MENU/ENTER.

**NOTE:** If the print job is not stopped from the host system before performing Clear Buffers, the print job continues with data missing when the printer returns to online mode. Exercise caution to prevent unwanted data loss occurrences, as this function deletes unprinted data in the printer. This function is active only in offline mode; the purpose of this function is to eliminate the necessity of printing unwanted data when print jobs are canceled.

4. Set the top-of-form. Refer to the *Quick Reference Guide.*

# Operational Procedures

This section contains routine printer operating procedures on how to:

- reload paper
- unload paper.

## Reload Paper

Do this procedure when "LOAD PAPER" displays. (This message occurs when the last sheet of paper passes through the paper slot.) This procedure reloads paper without removing the last sheet of the old paper supply, while retaining the current top-of-form setting.

**Cabinet Model**

**Pedestal Model**

Paper Slot

Metal Paper Guide
(6620Q)

Front
Door

Wire
Guide (2)

Paper
Slot

**Quiet Pedestal Model**

Wire Guide (2)

Paper Slot

Front Door
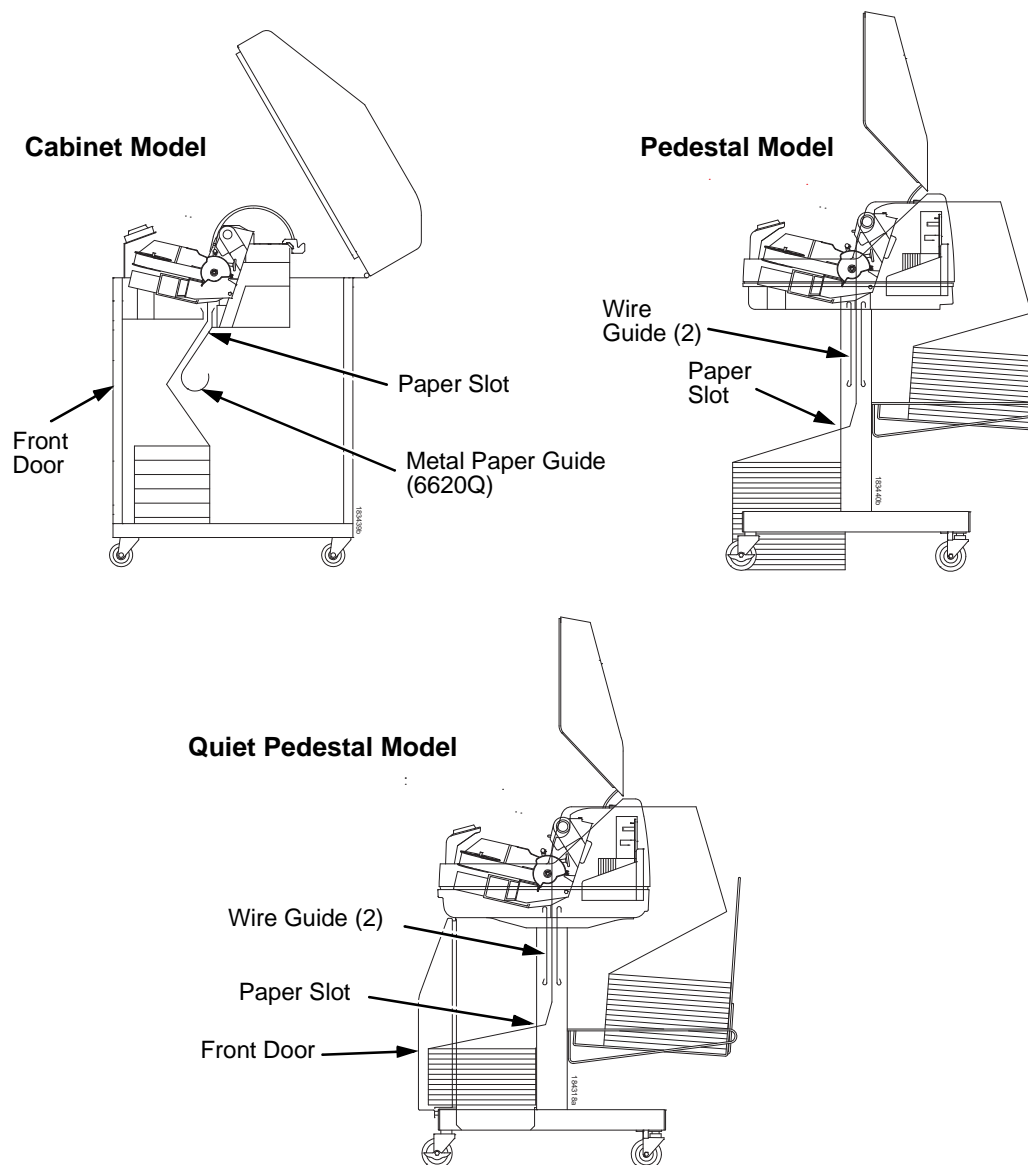
**Figure 7. Paper Slot Location**

1.  Raise the printer cover. Raise the platen lever as far as it will go. (See Figure 5 on page 20 for the location of the lever.)

**NOTE:** Do not open the tractor doors or remove the existing paper.

2.  For cabinet and quiet pedestal models, open the front door. Align the paper supply with the label on the floor. Ensure the paper pulls freely from the box.

3.  Feed the paper up through the paper slot (see Figure 7). It may be easier to feed one corner of the new paper up through the slot first. When this corner can be grasped from the top, rotate the paper back to the normal position.

**NOTE:** If you are using thick, multi-part forms and are unable to load the new paper over the existing paper, go to step 14.

4.  Hold the paper to prevent it from slipping down and through the paper slot.

New Paper                    Existing Paper
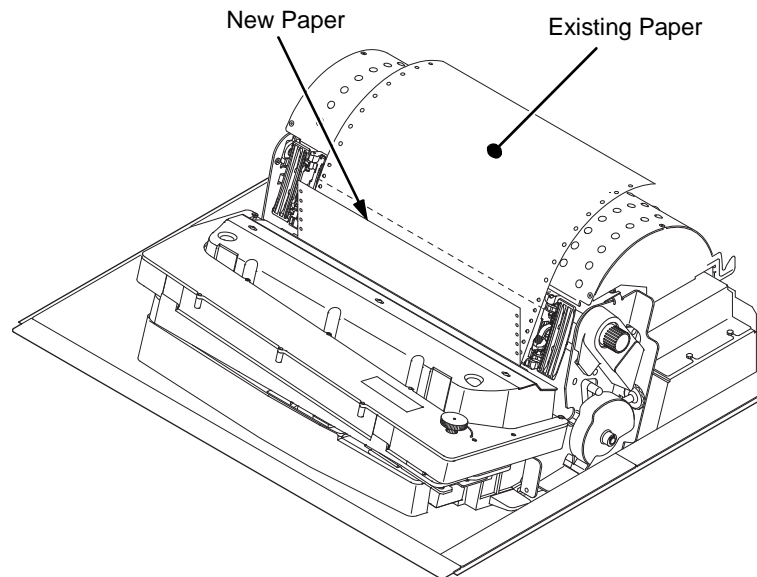


**Figure 8. Loading New Paper into the Printer**

5.  Pull the new paper above and behind the ribbon mask, but in front of the existing paper. See Figure 5 on page 20 for the ribbon mask location. If necessary, gently press the existing paper back.

6.  Align the top edge of the new paper with the top perforation of the existing paper.

7.  Load the new paper over the existing paper. Open and load the tractors one at a time to prevent the paper from slipping.

**NOTE:** Make sure that the top edge of the new paper lines up with the top horizontal perforation of the last page.

Vertical Position
Knob

Paper Thickness
Indicator

183445b

A

A

Platen
Stop

Platen Lever
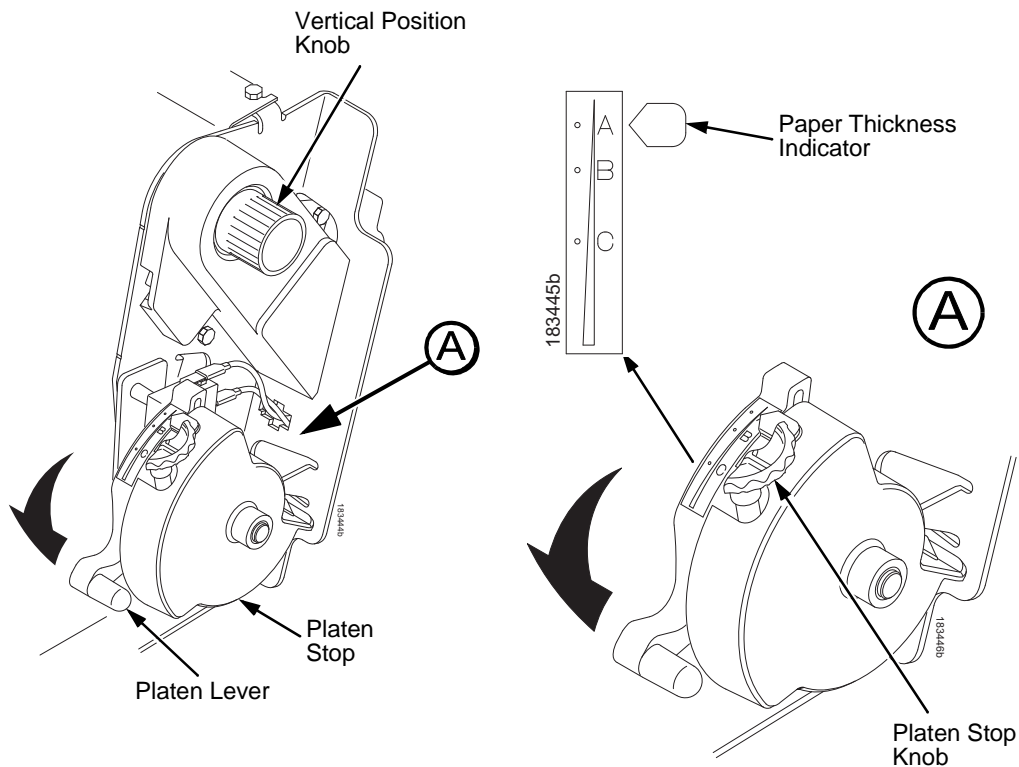
Platen Stop
Knob

**Figure 9. Setting the Platen Lever**

8. Turn the platen stop knob clockwise or counterclockwise to match the paper thickness. (The A-B-C scale corresponds approximately to 1-, 3-, and 6-part paper thickness).

**NOTE:** If you are using the same thickness of paper, there is no need to readjust.

9. Lower the platen lever until it stops.

10. Press the FF key several times to make sure the paper feeds properly beyond the tractors and over the lower paper guide. Feed sufficient paper to ensure the paper stacks correctly.

11. Press CLEAR to remove the "LOAD PAPER" fault message from the display.

12. Close the printer top cover. Close the cabinet front door.

13. Press ONLINE to place the printer in online mode and resume printing.

Paper Slot

Metal Paper Guide
(6620Q)

Wire
Guide (2)

Paper
Slot

**Cabinet Model**

**Pedestal Model**
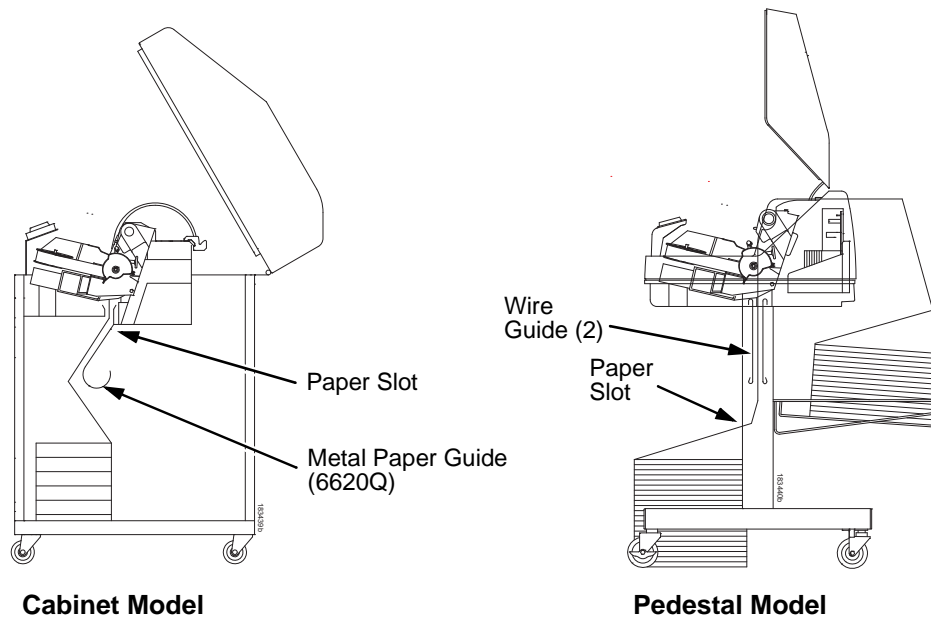
**Figure 10. Paper Slots on the Printers**

**NOTE:** Perform steps 14 to 31 only if you are unable to load the new paper over the existing paper.

14. Open both tractor doors.

15. Remove the old paper from the tractors. Allow the paper to fall into the paper supply area.

16. Feed the new paper up through the paper slot. Hold the paper to prevent it from slipping down through the paper slot.

Left Tractor Door

Paper

Left Tractor Lock

183441b
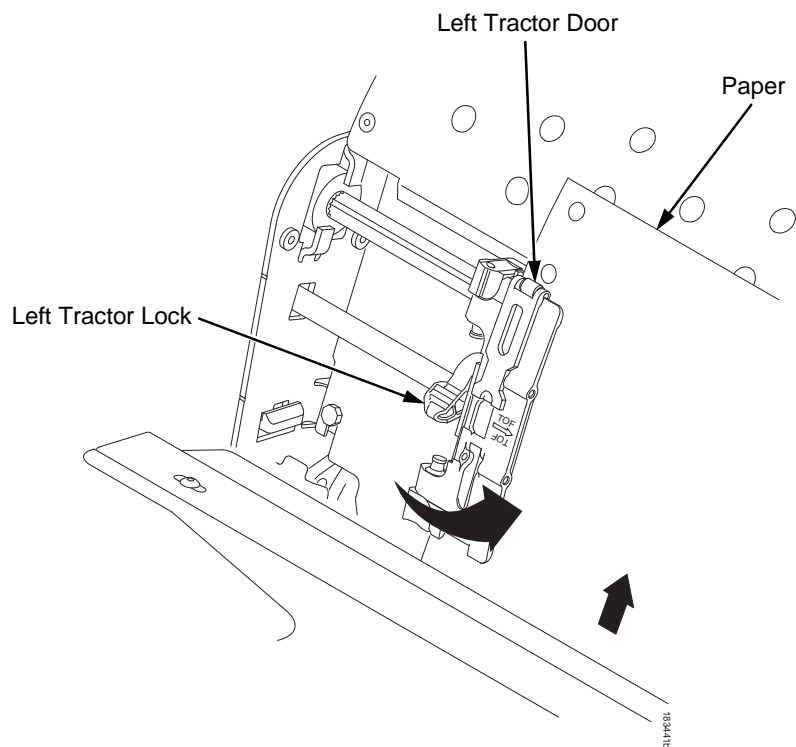
**Figure 11. Loading Paper on the Left Tractor**

17. Pull the paper above and behind the ribbon mask. See Figure 5 on page 20 for the ribbon mask location.

18. Load the paper on the left tractor.

19. Close the tractor door.
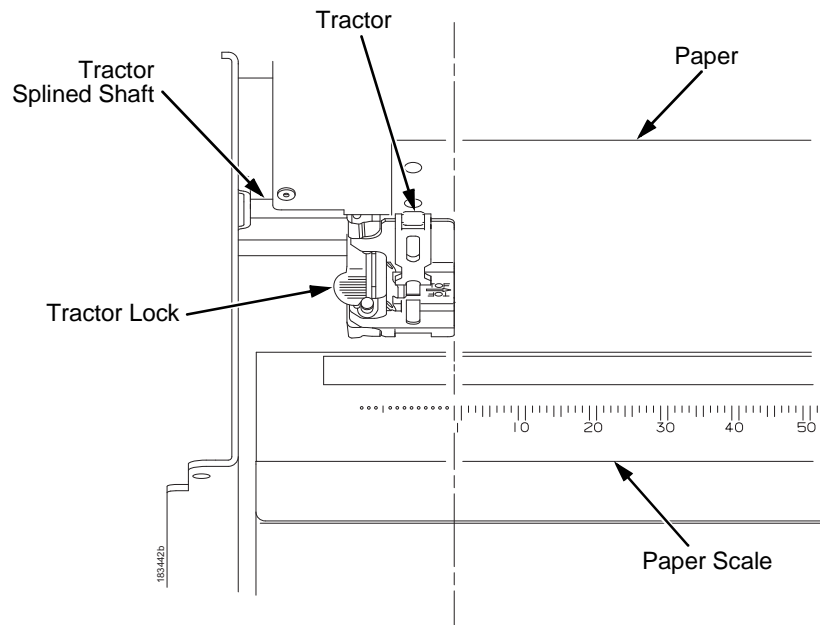
**Figure 12. Positioning the Left Tractor to Avoid Damage**

**CAUTION** **To avoid damage to the printer caused by printing on the platen, always position the left tractor unit directly to the left of the "1" mark on the paper scale.**

20. Normally, you should not need to adjust the position of the left tractor. If adjustment is necessary, unlock the left tractor by placing the tractor lock in the middle position. Slide the tractor until it is directly to the left of the number "1" on the paper scale and lock it. (You can also use the paper scale to count columns.)
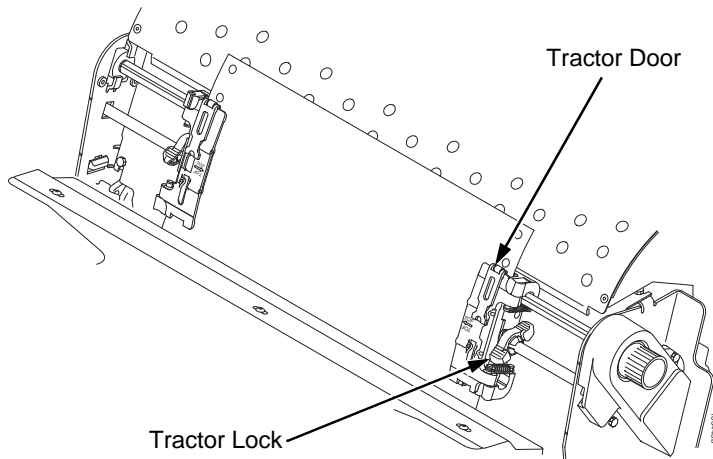
**Figure 13. Loading Paper onto the Sprockets**

21. Unlock the right tractor.

22. Load the paper onto the sprockets and close the tractor door.
    If necessary, slide the right tractor to remove paper slack or to adjust for various paper widths. Then, lock the tractor.
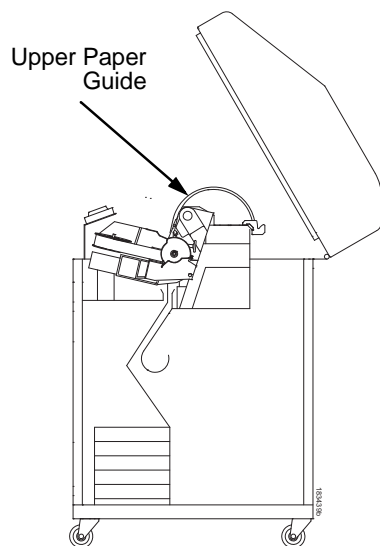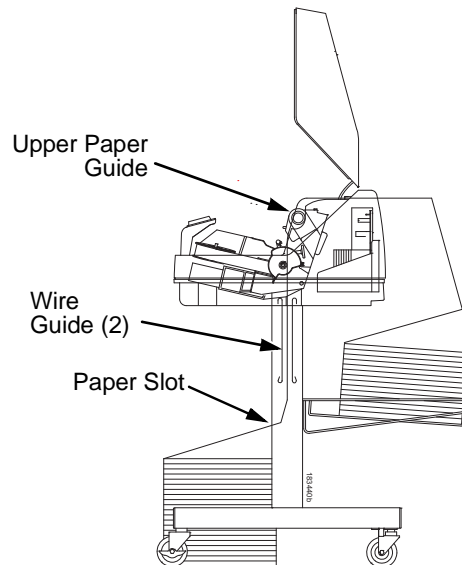


**Cabinet Model**                    **Pedestal Model**

**Figure 14. Using the Paper Guide to Orient the Paper**

23. **Pedestal models**:
    Using the vertical position knob to move the paper up, guide the paper over the upper paper guide and through the slot to the rear of the top cover. For pedestal models with the Quick Access Cover, refer to the *Quick Setup Guide* for paper exiting options.

24. Press the FF key several times to make sure the paper feeds properly beyond the tractors and over the lower paper guide. Feed sufficient paper to ensure the paper stacks correctly.

25. **Cabinet models**:
    Open the cabinet rear door. Make sure the paper is aligned with the label in the output area (inside the cabinet). Close the front and rear doors.
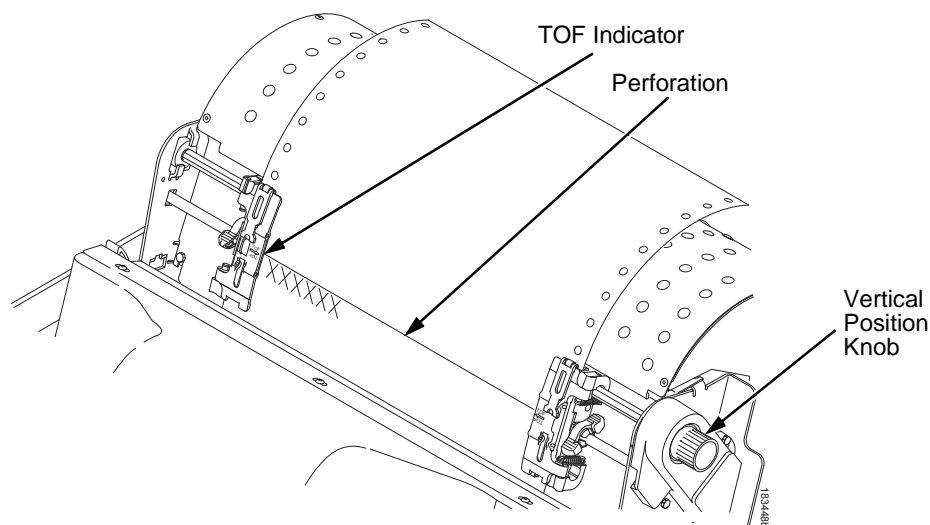


**Figure 15. Aligning the Perforation with the TOF Indicator**

26. Align the top of the first print line with the TOF indicator on the tractor by rotating the vertical position knob. For best print quality, it is recommended that the top-of-form be set at least one print line or more below the perforation.

**NOTE:** For exact positioning, perform a short press of the VIEW key to move the last data printed to the tractor area for viewing. While in View mode "Printer in View" displays. Press the Up or Down Arrow keys to move the paper vertically in small increments. Pressing the VIEW key a second time moves the paper back to the adjusted print position. The key works both online and offline provided that the printer is in View mode. (This procedure is applicable for both the cabinet and pedestal models.)

Vertical Position Knob

Paper Thickness Indicator

Platen Stop

Platen Lever
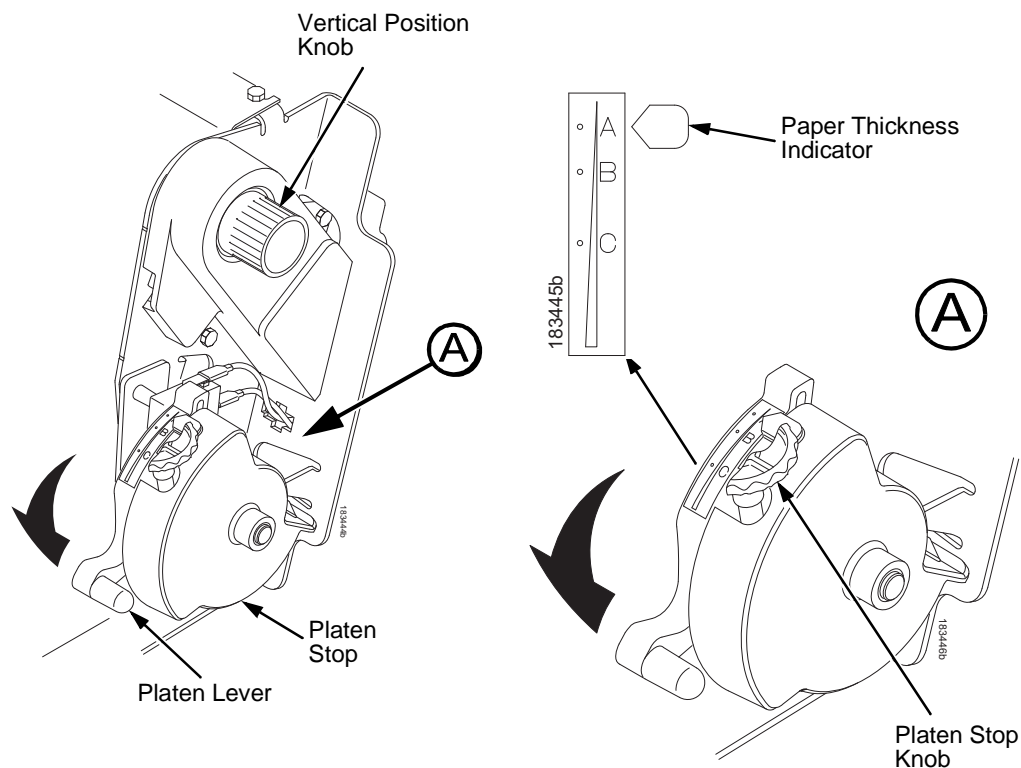
Platen Stop Knob

**Figure 16. Adjusting the Platen Lever**

27. Turn the platen stop knob clockwise or counterclockwise to match the paper thickness. (The A-B-C scale corresponds approximately to 1-, 3-, and 6-part paper thickness. Adjust until you have the desired print quality).

**NOTE:** The platen stop allows you to set an optimum and consistent thickness that is not affected when opening and closing the platen lever.

28. Lower the platen lever until it stops.

29. Press TOF. The top-of-form you have set moves down to the print position. If there is data in the buffer, the paper moves forward to the last print position on the next page.

30. Press CLEAR to clear any fault messages (such as "LOAD PAPER") from the LCD.

31. Press ONLINE and close the printer cover.

# Unload Paper

1.  Press ONLINE to place the printer in offline mode and open the printer cover.

2.  For cabinet models, open the cabinet rear door. For models with the power stacker installed, press the STACKER UP key on the rear control panel.



Paper

Perforation

183477b
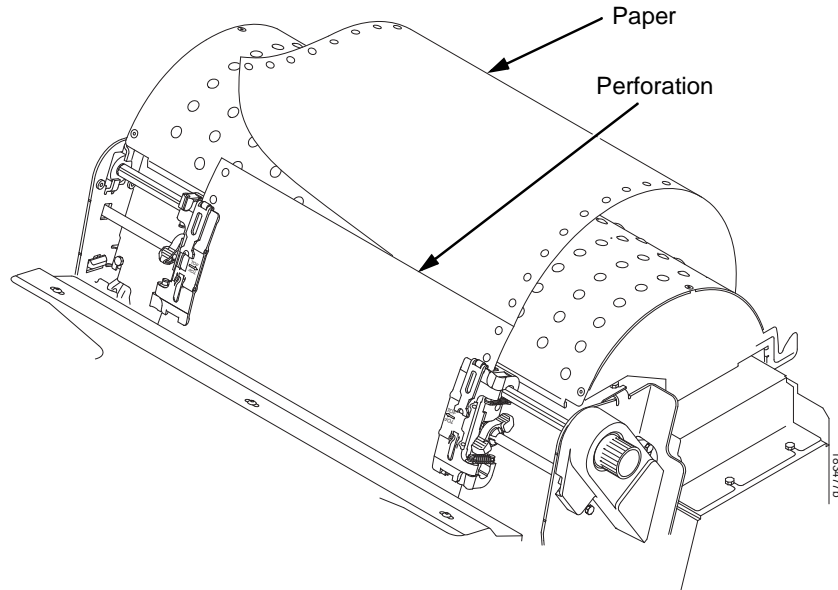
**Figure 17. Unloading the Paper from the Printer**

3.  Tear off the paper at the perforation.

4.  Allow the paper to fall to the back of the printer and into the paper stacking area.

5.  For pedestal models, remove the stacked paper from the paper tray.

Paper
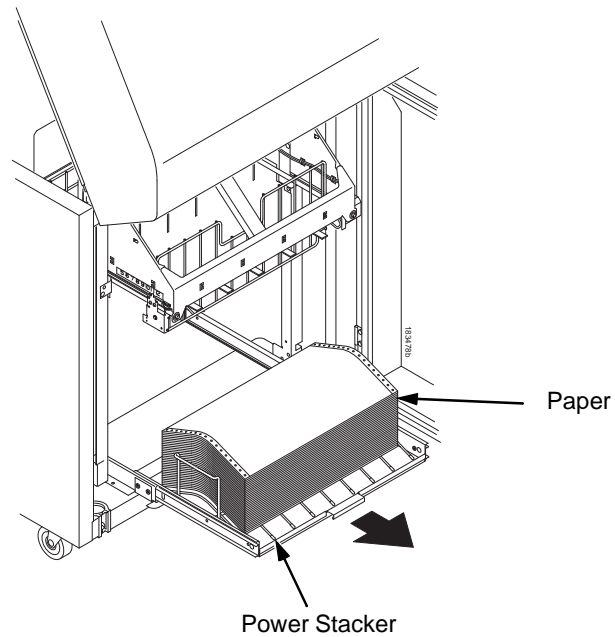
Power Stacker

**Figure 18. Removing Stacked Paper from the Printer**

6.  For cabinet models, remove the stacked paper from the rear cabinet floor. For cabinet models with the power stacker installed, remove the paper from the wire paper tent and press the STACKER DOWN key to lower the stacker mechanism.

7.  Close the cabinet rear door.

Tractor Door

Platen Lever

183904a
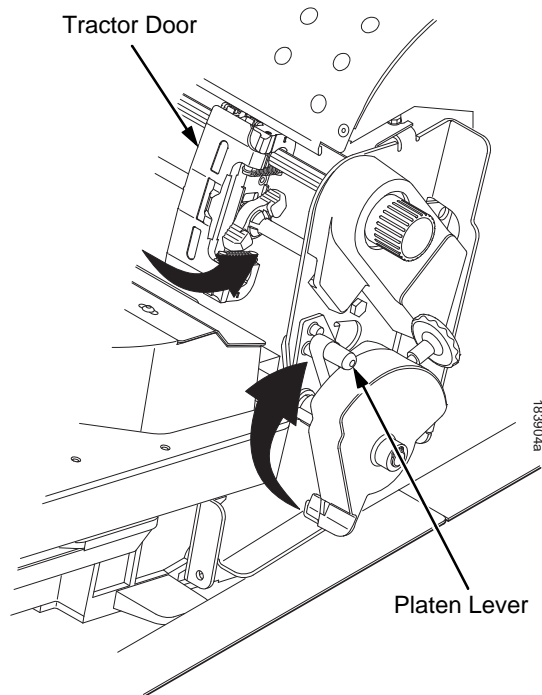
**Figure 19. Completely Removing the Paper**

8.  To completely remove the paper from the printer:

    a.  Raise the platen lever as far as it will go and open both tractor doors.

**CAUTION**    **Be careful when pulling any paper backward through the paper path, especially when using a label stock. If you are not careful, labels can detach and adhere to the printer within the paper path, where only an authorized service representative can remove them.**

    b.  Open the cabinet front door.

    c.  Gently pull the paper down through the paper slot. Allow the paper to fall into the paper supply area.

    d.  Remove the paper from the paper supply area.

# Integrated Print Management System

The 6600 CRP has a new feature that automatically monitors and communicates the status of the ribbon life to help the operator know when to change ribbons. Using an ink delivery system called the Cartridge Ribbon System (CRS), the printer can automatically detect when a new or used ribbon is loaded, and all ribbon properties. The ribbon is contained in a plastic box (the cartridge) and feeds only in one direction. The CRS contains an interface board that allows communication between the printer and the cartridge. Using the CRS, the 6600 automatically detects when a new or used ribbon is installed and determines the ribbon's length, ink color, and expected yield. The ribbon life, starting from 100% when new and decreasing to 0% when depleted, can be displayed on the control panel if configured by the Panel Display Menu. See Figure 6 on page 22.

When the ribbon life reaches 2%, a warning message "RIBBON UNDER 2%/ Change RBN soon" appears on the control panel display. The control panel status indicator lamp flashes. The printer will continue printing in this condition until the ribbon life reaches 0% at which time, printing will stop. The ribbon may be changed at any time while the printer is in the "RBN END POINT/ Change Ribbon" condition without losing data in the printer's buffer. If a new ribbon is loaded, the system automatically detects the change, clears the condition when the platen is closed, and restarts the life at 100%. If a partially used ribbon is loaded, the system continues the life at the percentage indicated for the used ribbon.

You may also resume printing for approximately two more minutes without changing the ribbon by pressing the ONLINE key twice. This may be done as many times as needed to complete the job in progress.

Ribbon usage information is calculated by maintaining a count of impressions (dots) that is stored on the ribbon cartridge and updated periodically so that the cartridge can be used on a different printer with the information intact. This allows the system administrator to have precise control over print quality and consumable costs. The accurate presentation of available ribbon life allows for efficient planning of print jobs. For example, if the displayed ribbon life were low, you can install a new ribbon before printing a large print job.

## Output Darkness

By default the system is configured to meet most user requirements. However, some applications require that the output remains darker than the nominal set point while some applications are less critical and could tolerate a lighter final image. The system can easily adjust to this variability. A setting under the QUICK SETUP or FORMS menu is available that allows the user to adjust the final output. The range is as follows:

Normal (Default)
Darker +1 through +6
Lighter -1 through -10

The ribbon life indicator always cycles between 100% and 0%, but if a darker setting is selected, zero will be reached more quickly. If a lighter setting is selected, the system will extend the amount of printing it takes to reach zero.

## Loading a Used Ribbon Cartridge

You can take the ribbon cartridge off the printer and reload it at a later time. The ribbon life gauge automatically updates to reflect the correct remaining capacity.

**NOTE:** Since the ribbon usage information is stored on the ribbon cartridge, you can reload a partially used cartridge onto a different printer.

## Lighter Or Darker Print

The ribbon life value as determined by the Integrated Print Management System is factory set so that the image quality at the end of the ribbon life is as good as it was when the ribbon was new. You may adjust the ribbon end point for a lighter or darker image as required for your printing needs. See Ribbon End Point on page 57.

# Changing Ribbon Cartridge

Before changing the ribbon cartridge, determine whether at the end of ribbon life, you want to make the print lighter (extend the ribbon life) or darker (shorten the ribbon life). If you want to make the print lighter or darker, go to "Ribbon End Point" on page 57 and follow the procedures for adjusting the image density. If you are satisfied with the print darkness, continue with the following steps.

**NOTE:** Ribbon cartridge instructions and illustrations shown in the following section are for the pedestal model. Follow the same procedures for the cabinet model.



Blue Tractor Door (2)
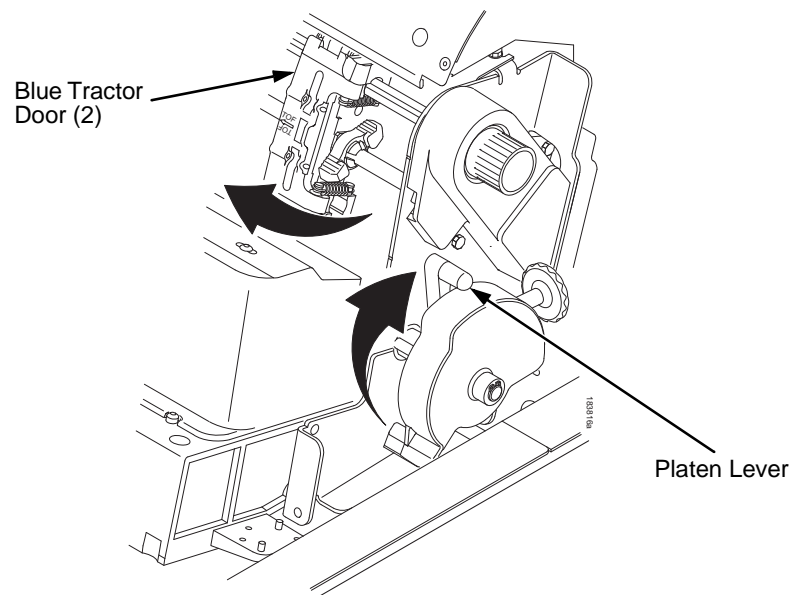
Platen Lever

**Figure 20. Preparing to Load the Ribbon**

1. Open the printer cover.
2. Raise the platen lever as far as it will go.
3. Ensure the tractor doors are closed.
4. Remove the old ribbon cartridge and discard properly.
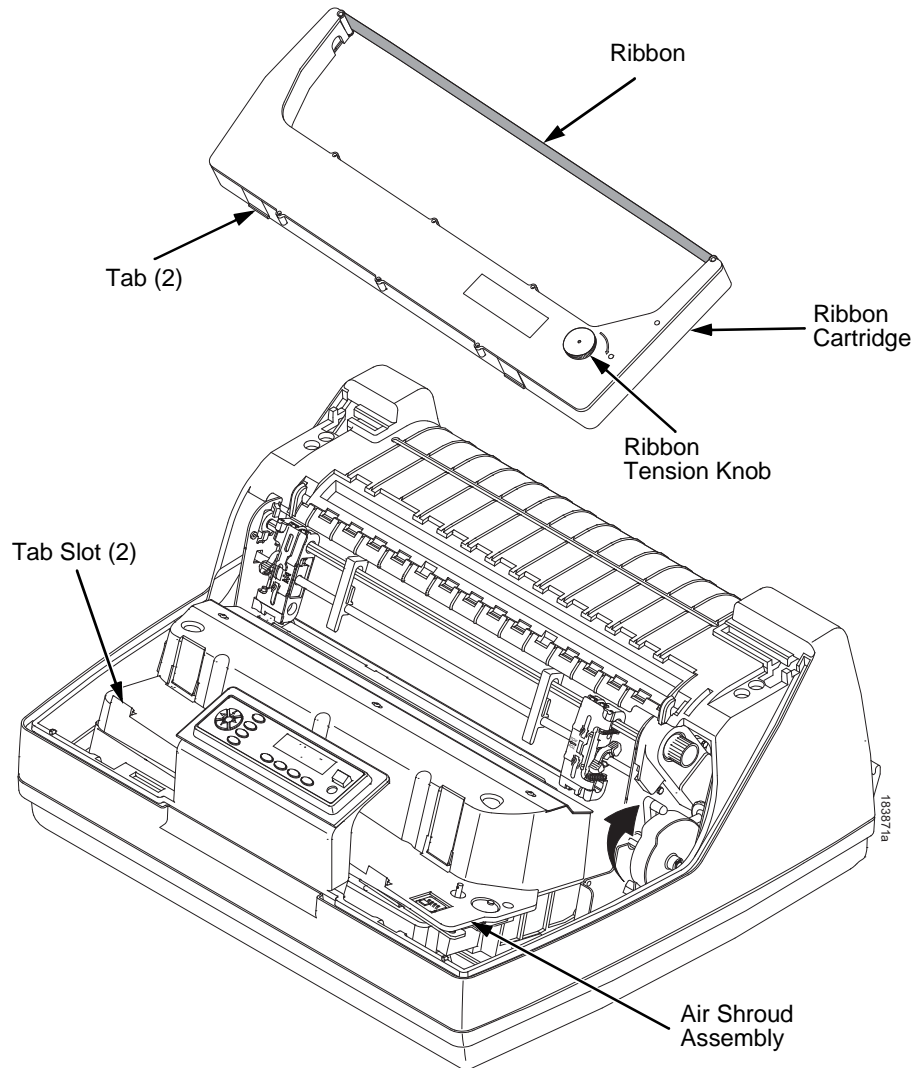
**Figure 21. Installing the Ribbon Cartridge**

5. Remove the ribbon slack on the new ribbon cartridge by turning the ribbon tension knob clockwise.

**CAUTION** **Do not turn the ribbon tension knob counterclockwise. This could damage the ribbon cartridge.**

6. Hold the cartridge at an angle, so that the rear side nearest you is lower than the side with the ribbon. Find the two tabs on the outside of the cartridge and place them into the corresponding slots on the air shroud assembly (see Figure 21).

Ribbon Cartridge

A

Ribbon Mask

Hammerbank Cover

Ribbon

A

Ribbon Tension Knob
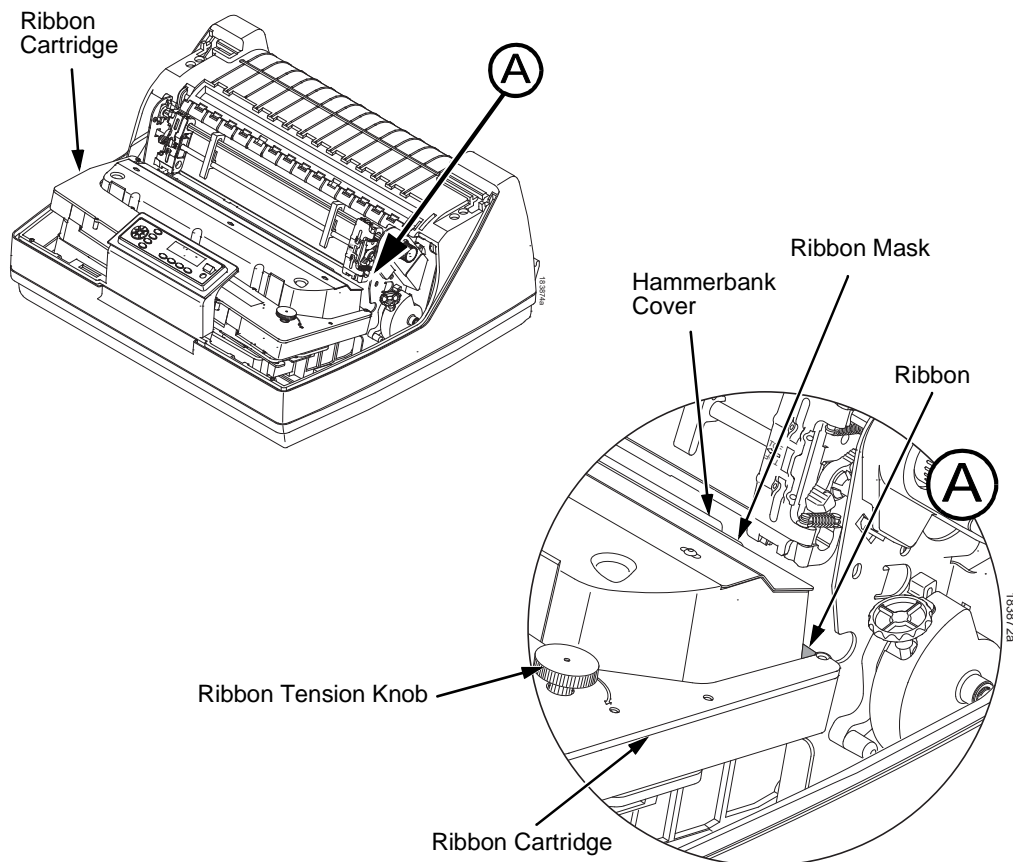
Ribbon Cartridge

**Figure 22. The Ribbon Cartridge Snapped in Place**

7.  Rock the cartridge downward, making sure that the ribbon goes between the guide and the mask (see Figure 22). You will feel it snap into place.

**CAUTION** **Make sure that the ribbon does not twist or fold over.**

8.  Turn the ribbon tension knob clockwise a few times to make sure the ribbon tracks correctly in the ribbon path.

9.  Close the platen lever.

10. Close the printer top cover.

11. Press the CLEAR key then the ONLINE key to return the printer to operation.

# 4  *Configuration Menus*

## Configuration Overview

To print data, the printer must respond correctly to signals and commands received from the host computer. Configuration is the process of matching the printer's operating characteristics to those of the host computer and to specific tasks, such as printing labels or printing on different sizes of paper. The characteristics which define the printer's response to signals and commands received from the host computer are called configuration parameters.

You can configure the printer using the configuration menus and the control panel or by sending control codes in the data stream from a host computer attached to the printer. This chapter provides an introduction to configuring the printer and includes the configuration menus available (depending on which emulation you have installed in the printer).

**IMPORTANT**  **Configuration directly affects printer operation. Do not change the configuration of your printer until you are thoroughly familiar with the procedures in this chapter.**

### Changing Parameter Settings

You may change a printer parameter setting, such as line spacing or forms length, either by pressing keys on the control panel or by sending emulation control codes in the data stream from a host attached to the printer. The control panel allows you to configure the printer's resident set of configuration menus. An example procedure for using the control panel to change parameter settings begins on page 45.

When control codes are sent from a host attached to the printer, they override control panel settings. For example, if you set the line spacing to 6 lpi with the control panel, and application software later changes this to 8 lpi with a control code, the control code overrides the control panel setting.

## Saving Parameter Settings

The parameter settings that you have changed can be permanently stored in the printer's memory as a configuration. See "Auto Save Configuration" on page 47. and "Saving Your New Configuration" on page 47.

You may also save your new configurations using the PTX_SETUP command host control code. See Appendix E, page 177.

## Default And Custom Configurations

A configuration consists of a group of parameter settings, such as line spacing, forms length, etc. Your printer provides a fixed default configuration and allows you to define several custom configurations for use with particular print jobs. The factory default configuration can be loaded, but it cannot be altered.

Eight configurations can be modified for unique print job requirements. The "Save Config." option allows you to save eight groups of parameter settings in memory as custom configurations numbered from 1 through 8. An explanation on how to save a set of parameter values as a custom configuration using the "Save Config." menu option begins on page 47.

## Navigating The Menus

To manipulate configurations review the following instructions about navigating through the menus.

You must be offline to move within the menus.

ONLINE

Press to toggle between ONLINE and OFFLINE. Menus are accessed with the printer offline.

MENU/ENTER

Press to enter MENU mode.

**OR**

Press to move up or down through the menu levels.

**OR**
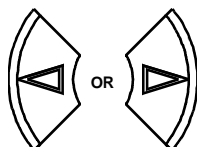
Press to scroll through the available choices on a chosen level.

MENU/ENTER        Press to confirm selection.
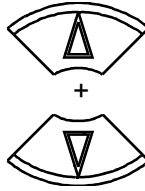
Press simultaneously to lock and unlock the ENTER key.
Lock or Unlock settings of the ENTER key at power is
defined in the Panel Lock Menu. The ENTER key is
+                 unlocked by default.

To experiment with navigating the menus, use the example on the next page
as a tutorial.

## Changing Parameters Example

```
┌──────────┐
│ OFFLINE  │                              * = Factory Default
└──────────┘
     │
┌──────────┐  ┌──────────┐
│  QUICK   │  │ OPERATOR │
│  SETUP   │  │   MENU   │
└──────────┘  └──────────┘
                   │
   ┌──────────┬──────────┬──────────┐
   │  FONT    │  FORMS   │   VFU    │
   └──────────┴──────────┴──────────┘
                   │
        ┌──────────┬──────────┬─ ... ─┬──────────────┐
        │  Length  │  Length  │       │ Unidirectional│
        │ (Lines)  │ (Inches) │       │              │
        └──────────┴──────────┴───────┴──────────────┘
         66*        11*                 Disable*
         (1-255)    (0.1-25.5)          Enable
```
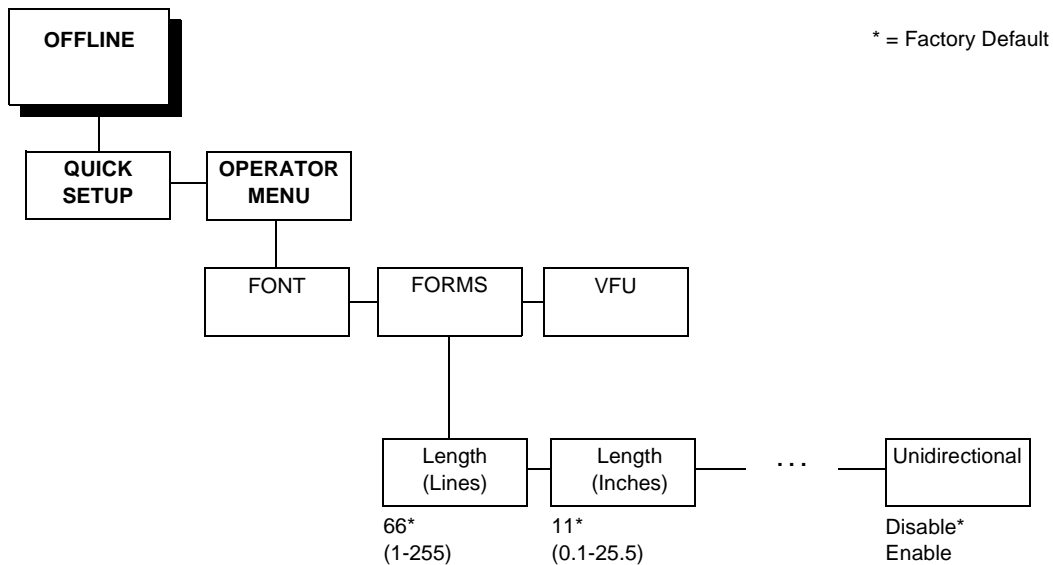
A configuration consists of several parameters. The default factory
configuration has a starting set of parameters. In the configuration menu
above, and in all the configuration menus in this chapter, the factory default
values are indicated by an asterisk (*).

Your print jobs may require parameter values which vary from the default
settings. This section provides an example procedure for changing individual
parameter values.

The following procedure shows how to change and save the setting for the
Form Length option from the default of 66 lines to 65 lines. Use these
guidelines to navigate the configuration menus and change other parameters.

| Step | Press | LCD | Notes |
|------|-------|-----|-------|
| 1. | Make sure the printer is on. | | |
| 2. | ONLINE | OFFLINE | |
| 3. | MENU/ENTER | OFFLINE<br>QUICK SETUP | Press to enter Menu mode. |
| 4. | ▷ UNTIL | OFFLINE<br>OPERATOR MENU | |
| 5. | ▽ | OPERATOR MENU<br>FONT | |
| 6. | ▷ UNTIL | OPERATOR MENU<br>FORMS | |
| 7. | ▽ | FORMS<br>Length (Lines) | |
| 8. | ▽ | Length (Lines)<br>66* | The * indicates this choice is active. |
| 9. | ◁ | Length (Lines)<br>65 | Press until the desired selection or value displays. |
| 10. | MENU/ENTER | Length (Lines)<br>65* | The * indicates this choice is active. |
| 11. | ONLINE | ENTER = Save<br>ONLINE = No Save | Press ENTER (step 12A) to automatically save configuration changes. Or press ONLINE (step 12B) to continue without saving. |
| 12A. | MENU/ENTER | Cfg = 1*<br>= Power-Up Cfg | Configuration changes have been saved as Configuration 1, and will be set as the Power-Up config. The printer will then be brought online. |

| Step | Press | LCD | Notes |
|------|-------|-----|-------|
| 12B. | ONLINE | ONLINE<br>CONFIG 1 | Places the printer online without permanently saving the configuration changes. |
| 13. | The printer is ready for operation. | | |

## Auto Save Configuration

After any changes are made to the configuration menu items, you will be prompted to save the changes to "Config #" when you place the printer online. "#" represents the next available unassigned configuration number. When prompted, press one of the following:

• **Enter**. Saves to Config 1 or the next available Config, and becomes the power-up config.

• **Online**. Changes will be implemented but saved only temporarily until deliberately saved as a new configuration or until you power off the printer. All changes will be lost when you power off the printer.

## Saving Your New Configuration

The Save Config. option allows you to save up to eight custom configurations to meet different print job requirements. Once you have changed all of the necessary parameters, you may save them as a numbered configuration (Example 1 on page 48) or a named configuration (Example 2 on page 50) that can be stored and loaded later for future use. If you do not save your configuration using the Auto Save, or this option, all of your parameter changes will be erased when you power off the printer.

Once you have saved a custom configuration using this option, it will not be lost if you power off the printer. You can load a configuration for a specific print job (see "Load Config." on page 83). You can also modify and resave it. You may want to print your configurations and store them in a safe place, such as inside the printer cabinet. If the Protect Configs. parameter is enabled and you try to resave an existing configuration, the new configuration will not be saved until the existing configuration has been deleted (see "Delete Config." on page 83).

**NOTE:** Once you change active emulations, any changes to the previously selected emulation will be gone unless they have been saved.

### Example 1

This example shows how to save a configuration as a numbered configuration, then later print it.

| Step | Press | LCD | Notes |
|------|-------|-----|-------|
| 1. | Make sure the printer is on. | | |
| 2. | ONLINE | OFFLINE | |
| 3. | MENU/ENTER | OFFLINE<br>QUICK SETUP | Press to enter Menu mode. |
| 4. | UNTIL | OFFLINE<br>CONFIG MENU | |
| 5. | | CONFIG MENU<br>PRINTER | |
| 6. | UNTIL | CONFIG. MENU<br>CONFIGURATIONS | |
| 7. | | CONFIGURATIONS<br>Save Config. | |
| 8. | | Save Config.<br>CONFIG 1* | |
| 9. | OR | Save Config.<br>CONFIG 2 | Cycle through the choices. |
| 10. | MENU/ENTER | Save Config.<br>CONFIG 2* | The * indicates this choice is active. |

**NOTE:** We recommend that you print the configuration. To print the configuration go to step 11. To skip this procedure and resume printer operation, go to step 19.

| Step | Press | LCD | Notes |
|---|---|---|---|
| 11. | | CONFIGURATIONS<br>Save Config. | |
| 12. | | CONFIG MENU<br>CONFIGURATIONS | |
| 13. | UNTIL | CONFIG MENU<br>PRINTER | |
| 14. | | PRINTER<br>Ser/Par Emul | |
| 15. | | PRINTER<br>Report | |
| 16. | | Report<br>Current Short* | |
| 17. | | Report<br>Current Full | |
| 18. | MENU/ENTER | Report<br>Current Full* | The selected configuration is printed. |
| 19. | ONLINE | ONLINE<br>CONFIG 1 | |
| 20. | | If you printed out the configuration, store it in a safe place. The printer is ready for operation. | |

### Example 2

This example shows how to save a configuration as a named configuration.

| Step | Press | LCD | Notes |
|------|-------|-----|-------|
| 1. | Make sure the printer is on. | | |
| 2. | ONLINE | OFFLINE | |
| 3. | MENU/ENTER | OFFLINE<br>QUICK SETUP | Press to enter MENU mode. |
| 4. | ▷ UNTIL | OFFLINE<br>CONFIG MENU | |
| 5. | ▽ | CONFIG MENU<br>PRINTER | |
| 6. | ▷ UNTIL | CONFIG MENU<br>CONFIGURATIONS | |
| 7. | ▽ | CONFIGURATIONS<br>Save Config. | |
| 8. | ▷ UNTIL | CONFIGURATIONS<br>Name Configs | |
| 9. | ▽ | Name Configs<br>CONFIG 1 | |
| 10. | ▷ UNTIL | Name Configs<br>CONFIG 2 | You will rename config 2. |
| 11. | ▽ | CONFIG 2<br>CONFIG 2* | The LCD flashes. |

| Step | Press | LCD | Notes |
|------|-------|-----|-------|
| 12. | △ UNTIL | CONFIG 2<br>TONFIG 2 | Cycle through the choices until "T" displays. |
| 13. | ▷ | CONFIG 2<br>T_NFIG 2 | Saves the first character. |
| 14. | △ UNTIL | CONFIG 2<br>TENFIG 2 | Cycle through the choices until "E" displays. |
| 15. | ▷ | CONFIG 2<br>TE_FIG 2 | Saves the second character. |
| 16. | △ UNTIL | CONFIG 2<br>TESFIG 2 | Cycle through the choices until "S" displays. |
| 17. | ▷ | CONFIG 2<br>TES_IG 2 | Saves the third character. |
| 18. | △ UNTIL | CONFIG 2<br>TESTIG 2 | Cycle through the choices until "T" displays. |
| 19. | ▷ | CONFIG 2<br>TEST_G 2 | Saves the fourth character. |
| 20. | △ UNTIL | CONFIG 2<br>TEST G 2 | Cycle through the choices until a blank space displays. |
| 21. | ▷ | CONFIG 2<br>TEST _2 | Saves the blank space. |
| 23. | MENU/ENTER | Name Configs<br>TEST 2 | The configuration is renamed TEST 2. |

| Step | Press | LCD | Notes |
|---|---|---|---|
| 24. | △ | CONFIGURATIONS<br>Name Config. | |
| 25. | ▷ UNTIL | CONFIGURATIONS<br>Save Config. | |
| 26. | ▽ | Save Config.<br>CONFIG 1* | |
| 27. | ▷ | Save Config.<br>TEST 2 | TEST 2 now appears as one of the configuration choices. |
| 28. | MENU/ENTER | Saving Configuration | |
| | | Save Config.<br>TEST 2* | Your configuration is saved as TEST 2. |
| 29. | ONLINE | ONLINE<br>CONFIG 1 | |

Now you have the saved configuration for later use if needed.

# 6600 CRP Main Menu
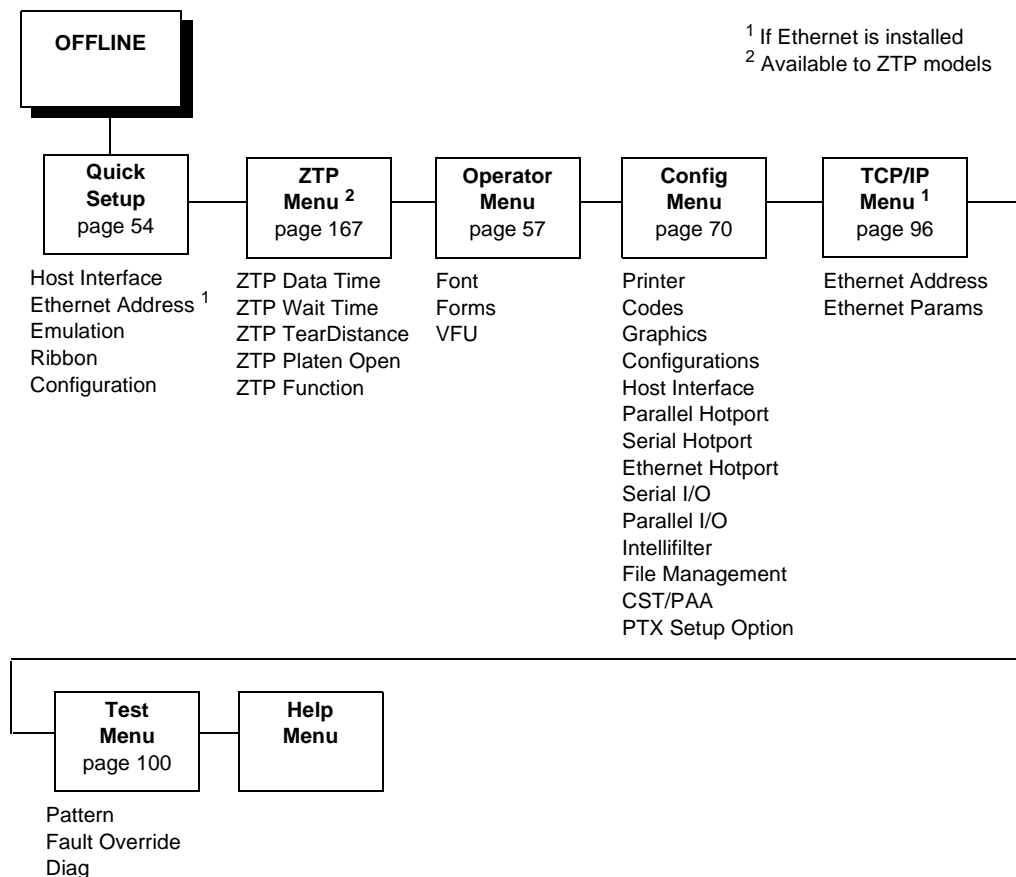


**Figure 23. 6600 CRP Main Menu Configuration**

Brief descriptions follow for the first-level configuration menu options:

- **Quick Setup** — These options allow quick access to the most frequently changed or inputted parameters during the installation of the printer.

- **ZTP Menu** — These options allow you to set parameters for zero tear pedestal printers.

- **Operator Menu** — This option allows you to set fonts, forms, and vertical format units (VFU) parameters.

- **Config Menu** — This option allows you to select from Printer, Codes, Graphics, I/O, Intellifilter, CST/PAA, and Ptx Setup options, as well as perform file and configuration management.

- **TCP/IP Menu** — This option allows you to select from Ethernet Address options and Ethernet Parameters options.

- **Test Menu** — This menu includes the diagnostic tests, system memory, software build part number, Feature File (if one exists), the shuttle type, and statistics of the printer.

- **Help Menu** — This selection allows printing of the Help Menu to view the current options and the range of options allowed for each setting.

# Quick Setup

* = Factory Default
[1] If Ethernet is installed

| Quick Setup (from page 53) |
|---|

| Host Interface | Ethernet Address [1] | Emulation | | Ribbon | Configuration |
|---|---|---|---|---|---|

Active Host
  Auto Switching*
  Centronics
  Serial
  IEEE 1284
  Ethernet [1]

IP Address
Subnet Mask
Gateway Address
MAC Address
DHCP

| Ser/Par Emul | CPI |
|---|---|
|   Tally ANSI | 10* |
|   Genicom ANSI | 12 |
|   P5000 | 13.33 |
|   P6000 | 15 |
|   P600 | 16.67 |
|   DEC LG01 | 17.14 |
|   HP2564C | 20 |
|   IBM Proprinter | 5 |
|   Epson FX-1180 | 6 |
|   MTPL | 6.67 |
| LAN Emul [1] | 7.5 |
|   Tally ANSI | 8.33 |
|   Genicom ANSI | 8.57 |
|   P5000 | LPI |
|   P6000 | 1.5 |
|   P600 | 2 |
|   DEC LG01 | 3 |
|   HP2564C | 4 |
|   IBM Proprinter | 5 |
|   Epson FX-1180 | 6* |
|   MTPL | 8 |
| Length (Lines) | 9 |
|   66* | 10 |
|   1-255 | 12 |
| Length (Inches) | |
|   11.0" * | |
|   0.1 - 25.5 | |

Ribbon End Point
  Darker +6
  Darker +5
  Darker +4
  Darker +3
  Darker +2
  Darker +1
  Normal*
  Lighter -1
  Lighter -2
  Lighter -3
  Lighter -4
  Lighter -5
  Lighter -6
  Lighter -7
  Lighter -8
  Lighter -9
  Lighter -10

Save
  CONFIG 1 to
  CONFIG 8
Power-up Config
  Factory*
  CONFIG 1 to
  CONFIG 8

## Host Interface

The Host Interface menu enables you to select and configure interfaces between the printer and your host computer. Options include:

- **Auto Switching** (default). See page 85.
- **Centronics**
- **Serial**
- **IEEE 1284**
- **Ethernet**

## Ethernet Address

- **IP Address**. A numeric address such as 123.45.61.23 which identifies a printer or server in a LAN or WAN.
- **Subnet Mask**. A binary value used to divide IP networks into smaller subnetworks or subnets. This mask is used to help determine whether IP packets need to be forwarded to other subnets.
- **Gateway Address**. A gateway address is the IP address of a hardware device (gateway) that translates data between two incompatible networks, which can include protocol translation.
- **MAC Address**. This menu item is the Manufacturer's Assigned Number, and is unique for each printer. It is read-only.
- **DHCP**. You can enable/disable the DHCP protocol using this option, but consult your administrator for the appropriate setting.

## Emulation

- **Ser/Par Emul**. This parameter allows you to define which set of printer control commands will be emulated for data received on the Serial and Parallel ports. The emulation settings are automatically saved in the Power-up Configuration. Tally ANSI is the default selection. This menu also enables you to define the form length, characters per inch (cpi) and lines per inch (lpi).

  When a new emulation setting is entered through the Printer Control Panel, emulation dependent parameters in the Current and Power-up configurations are changed to match the default settings for the elected emulation. The following table lists those parameters by emulation:

| Parameter | Tally ANSI | Genicom ANSI | P5000 | P6000 | P600 |
|---|---|---|---|---|---|
| Character Set | Latin 1 | Code Pg 437 | Code Pg 437 | Latin1 | Latin1 |
| OCR-A | ANSI | ANSI | ANSI | ANSI | ANSI |
| OCR-B | ANSI | ANSI | ANSI | ANSI | ANSI |
| Auto CR | OFF | ON | ON | ON | OFF |
| Line Wrap | OFF | ON | OFF | OFF | OFF |
| Wrap LF | OFF | ON | OFF | OFF | OFF |
| Code 7F | FILL | FILL | Space | Space | Space |
| VT Channel | 2 | 12 | N/A | 12 | 12 |
| Skip When | Before | Before | N/A | After | After |
| **Parameter** | **HP 2564C** | **DEC LG01** | **Epson FX-1180** | **IBM Proprinter** | **MTPL** |
| Character Set | Roman-8 | DEC Multi | Italic | Code Pg 437 | Code Pg 437 |
| OCR-A | ANSI | ANSI | ANSI | ANSI | ANSI |
| OCR-B | ANSI | DIN | ANSI | ANSI | ANSI |
| Auto CR | OFF | OFF | ON | ON | ON |
| Line Wrap | OFF | OFF | ON | ON | ON |
| Wrap LF | OFF | OFF | ON | ON | ON |
| Code 7F | FILL | FILL | Delete Char | Ignore | Delete Buffer |
| VT Channel | 12 | 12 | N/A | N/A | N/A |
| Skip When | After | After | N/A | N/A | N/A |

- **LAN Emul (LAN Interface only)**. Used to select the emulation attached to the Ethernet port when using the Ethernet interface. The possible selections are the same as the Ser/Par Emul option.

- **Length (Lines)**. To define the length of your form in lines, select a form length from 1 to 255. The default is 66 lines.

- **Length (Inches)**. To define the length of your form in inches, select a form length from 0.1 to 25.5 inches. The default is 11.0 inches.

- **CPI**. This parameter allows you to select characters per inch (CPI) settings. The possible selections are 5, 6, 6.67, 7.5, 8.33, 8.57, 10, 12, 13.33, 15, 16.67, 17.14, and 20. The default is 10 CPI.

- **LPI**. This parameter allows you to set the lines per inch (LPI). The possible selections are 1.5, 2, 3, 4, 5, 6, 8, 9, 10, and 12. The default setting is 6 LPI.

### Ribbon

*   **Ribbon End Point**. This parameter adjusts the point at which the system will declare the ribbon as being expended. The life count is from 100% to 0%, but if a darker setting is selected, 0% will be reached more quickly. If a lighter setting is selected, the system will extend the time it takes to reach 0%.

### Configuration

*   **Save Config**. This option allows you to save up to eight configurations to meet different print job requirements. This eliminates the need to change the parameter settings for each new job. The configurations are stored in memory and will not be lost if you turn off the printer. If the Protect Configs. parameter is enabled, the new configuration will not be saved unless the existing configuration has been deleted first. The factory default configuration cannot be changed. See "Saving Your New Configuration" on page 47 for details.

*   **Power-up Config**. This option allows you to specify which of the nine configurations (Factory or 1-8) will be the power-up configuration.

# ZTP MENU

# Operator Menu

```
              ┌──────────────┐
              │  Operator    │
              │    Menu      │                        * = Factory Default
              │(from page 53)│
              └──────────────┘
                     │
        ┌────────────┼────────────┐
    ┌───────┐    ┌───────┐    ┌───────┐
    │ Font  │    │ Forms │    │  VFU  │
    └───────┘    └───────┘    └───────┘
   (see page 58) (see page 63) (see page 69)
```
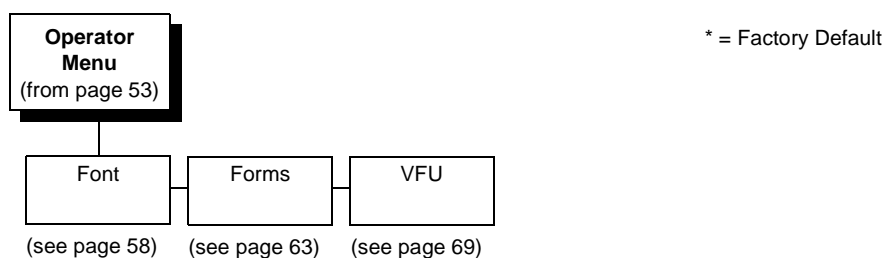
Following are explanations of each submenu and parameter.

## Font Submenu

This submenu contains parameters that control how print looks on a page and the display language. The Level 2 headings are as follows:

| FONT | | | | | |
|------|--|--|--|--|--|
| (from page 57) | | | | | |

\* = Factory Default

| Ser/Par Language | Ser/Par Character Set | Matrix | OCRA Density | Ser/Par Style | CPI |
|------------------|-----------------------|--------|-------------|---------------|-----|
| US* | Latin1 8859-1* | CDF* | Standard* | DP* | 10* |
| German | Latin2 8859-2 | Enhanced | Enhanced | Gothic | 12 |
| Norwegian/Dan | Latin9 8859-15 | | High | Courier | 13.33 |
| French | Cyrillic 8859-5 | | | OCR-A | 15 |
| UK | Greek 8859-7 | | | OCR-B | 16.67 |
| Spanish | Turkish 8859-9 | | | Download | 17.14 |
| Swedish/Finish | Code Page 437 | | | Draft | 20 |
| Italian | Code Page 850 | | | | 5 |
| Japanese | Code Page 851 | | | | 6 |
| Portuguese | Code Page 852 | | | | 6.67 |
| Canadian | Code Page 855 | | | | 7.5 |
| Hungarian | Code Page 857 | | | | 8.33 |
| Chinese | Code Page 863 | | | | 8.57 |
| French T6 | Code Page 866 | | | | |
| Swedish T6 | Code Page 869 | | | | |
| Italian T6 | Code Page 928 | | | | |
| Canadian Alt | Code Page 437G | | | | |
| Swedish Basic | Code Page 866B | | | | |
| French Withdrwn | Code Page 1250 | | | | |
| Nor/Dan T6 | Code Page 1251 | | | | |
| UK LG | Code Page 1252 | | | | |
| Dutch LG | Code Page 1253 | | | | |
| Finnish LG | Code Page 1254 | | | | |
| Swiss LG | DEC MultiNation | | | | |
| JIS Roman LG | DEC Turkish | | | | |
| Nor/Dan LG | Siemens Turkish | | | | |
| Swedish LG | DEC Technical | | | | |
| Turkish G | | | | | |
| Cro-ASCII | | | | | |
| Nor/Dan Epson | | | | | |
| French Epson | | | | | |
| UK Epson | | | | | |
| Spanish Epson | | | | | |
| Italian Epson | | | | | |
| Norwegian Epson | | | | | |
| Danish Epson | | | | | |
| Spanish 2 Epson | | | | | |
| Lat Amer Epson | | | | | |
| IRV | | | | | |

| Panel Language | OCR Standards | Zero | Compressed 8 |
|----------------|---------------|------|--------------|
| English* | A:ANSI B:ANSI* | Open* | Off* |
| German | A:DIN B:ANSI | Slashed | On |
| French | A:ANSI B:DIN | | |
| Italian | A:DIN B:DIN | | |
| Spanish | | | |
| Portuguese | | | |

| Bold Weight |
|-------------|
| Light* |
| Medium |
| Dark |

## Ser/Par Language

This option allows you to select the language used by emulations attached to the Parallel, Serial, and LAN ports. The language selection defines the character substitutions in Hex locations 23, 24, 40, 5B, 5C, 5D, 5E, 60, 7B, 7C, 7D, and 7E. The default is US.

Refer to the 6600 Applications Manual for details on character substitutions. The possible selections are:

| | | |
|---|---|---|
| IRV | US | German |
| Norwegian/Dan | French | UK |
| Spanish | Swedish/Finnish | Italian |
| Japanese | Portuguese | Canadian |
| Hungarian | Chinese | French T6 |
| Swedish T6 | Italian T6 | Canadian Alt |
| Swedish Basic | French Withdrwn | Nor/Dan T6 |
| UK LG | Dutch LG | Finnish LG |
| Swiss LG | JIS Roman LG | Nor/Dan LG |
| Swedish LG | Turkish LG | Cro-ASCII |
| Nor/Dan Epson | French Epson | UK Epson |
| Spanish Epson | Italian Epson | Norwegian Epson |
| Danish Epson | Spanish 2 Epson | Lat Amer Epson |

## Ser/Par Character Set

This option allows you to select a character set that occupies locations Hex 80 through FF used by emulations attached to the Parallel, Serial, and LAN ports. The default depends on the following:

| Emulations | Default Character Set |
|---|---|
| Tally ANSI, P600, P6000 | Latin 1 8859-1 |
| IBM Proprinter, MTPL, Genicom ANSI, P5000 | Code Page 437 |
| Epson FX-1180 | Italic |
| DEC LG | DEC MultiNation |
| HP 2564C | Roman-8 |

Refer to the 6600 Applications Manual for details on character sets. The possible selections are:

| Latin1 8859-1 | Latin2 8859-2 | Latin9 8859-15 |
|---|---|---|
| Cyrillic 8859-5 | Greek 8859-7 | turkish 8859-9 |
| Code Page 437 | Code Page 850 | Code Page 851 |
| Code Page 852 | Code Page 855 | Code Page 857 |
| Code Page 863 | Code Page 866 | Code Page 869 |
| Code Page 928 | Code Page 437G | Code Page 866B |
| Code Page 1250 | Code Page 1251 | Code Page 1252 |
| Code Page 1253 | Code Page 1254 | DEC MultiNation |
| DEC Turkish | Siemens Turkish | DEC Technical |
| DEC Supplemental | Greek Supplemental | Turkish Supplemental |
| Mazovia | Kamenicky | Roman-8 |
| Katakana ISO 13 | Line Draw | Italic |

## Matrix

There are two font modes available on your printer:

- **Enhanced**. Includes Draft and Data Processing, Near Letter Quality (Gothic and Courier), and Optical Character Recognition Fonts (OCR-A and OCR-B).
- **Constant Density**. Includes Draft and Data Processing.

**NOTE:** The CPI selections are different for each mode.

When this parameter is set to Enhanced, characters printed at 12, 13.3, 15, and 17.14 will use a denser character matrix the default CDF matrix. If this parameter is set to CDF and a CDF font matrix is not available for the current Font Style and CPI, the Enhanced matrix will be selected.

**NOTE:** CPI Selection is limited in Constant Density Mode. See "Printer Specifications" on page 151 for a listing of the CPI selections available in Constant Density fonts. If you select a CPI value (via the Control Panel or an escape sequence from the host computer) that is not available in Constant Density Mode, the printer automatically switches to Enhanced Mode for printer output.

## OCRA Density

This parameter sets the density for the OCRA font. There are three options:

- **Standard** (default). Prints at 85 DPI vertical.

- **Enhanced**. This option causes the OCR-A font to print at 96 DPI vertical.

- **High**. This option causes the OCR-A font to print at 144 DPI vertical.

Standard and Enhanced print at the same speed, but the enhanced font is slightly shorter than the Standard. High prints at a slower speed.

## Ser/Par Style

This option allows you to select the font style for use by emulations attached to the Parallel, Serial, and LAN port. For emulations that support downloaded fonts, you can use this parameter to select the download font. The default is DP.

Style selections include:

Draft            (High-speed)

DP (default)   (Data Processing)

Gothic          (San Serif NLQ)

Courier         (Serif NLQ)

OCR-A          (Optical Character Recognition)

OCR-B          (Optical Character Recognition)

Download      (Selects the downloaded font)

## CPI

This parameter allows you to select characters per inch (CPI) settings. The possible selections are 5, 6, 6.67, 7.5, 8.33, 8.57, 10, 12, 13.33, 15, 16.67, 17.14, and 20. The default is 10 CPI.

## Panel Language

This option allows you to set up the printer to display messages on the Control Panel in a particular language. Printed reports also display in your chosen language. Possible selections are English (default), German, French, Italian, Spanish, and Portuguese.

## OCR Standards

This parameter defines the combination of ANSI and DIN standards to be used for the OCR A and OCR B character sets. The default value depends on the emulation. The possible selections are:

- **A:ANSI B:ANSI** (default). This means ANSI OCR-A and ANSI OCR-B.

- **A:DIN B:ANSI**. This means DIN OCR-A and ANSI OCR-B.

- **A:ANSI B:DIN**. This means ANSI OCR-A and DIN OCR-B.

- **A:DIN B:DIN**. This means DIN OCR-A and DIN OCR-B.

### Zero

As an aid in distinguishing zeros from the uppercase letter O, you can choose to have your zeros slashed (Ø). Default is open (non-slashed) zeros.

### Compressed 8

Use this option for higher lines per inch settings to decrease the space between the dot-rows of the printed characters. This increases the vertical spacing between each printed line, which increases readability without changing the current LPI settings. Compressed 8 functions at 8 LPI and above (at any CPI). Setting this parameter to ON causes all characters printed at 8, 9,10, or 12 LPI to be compressed vertically. The default is Off.

### Bold Weight

Use this option to adjust the boldness of bold text characters. The option is only applicable when the Font Matrix is set to CDF, or the Font CPI is set to 10 CPI, or the Font Ser/Par Style is set to OCR-A. The default is Light.

- **Light** (default). Prints a thin bold character. This weight is ideal for all CPI's and provides an increase in print speed over the Medium weight.

- **Medium**. Prints a normal bold text character. Although selecting this weight reduces print speed, it provides the best boldness appearance.

- **Dark**. Prints a thick bold character. This weight is best for 10 and 12 CPI characters and provides an increase in print speed over the Medium weight.

# Forms Submenu

This submenu is used for setting form specifics. The Level 2 headings are as follows:

| FORMS<br>(from page 57) | | | | | |
|---|---|---|---|---|---|

* = Factory Default
[1] If installed
[2] 2000 lpm printer only

| Length<br>(Lines) | Length<br>(Inches) | LPI | Top Margin | Bottom Margin | Left<br>Margin |
|---|---|---|---|---|---|
| 66*<br>1-255 | 11.0" *<br>0.1-25.5 | 1.5<br>2<br>3<br>4<br>5<br>6*<br>8<br>9<br>10<br>12 | 0*<br>0-255 | 66*<br>0-255 | 1*<br>1-272 |

| Right<br>Margin | Horz<br>Adjust | Vert<br>Adjust | Quick<br>Access | Eject<br>Distance | Fast<br>Slew |
|---|---|---|---|---|---|
| 136*<br>1-272 | 0*<br>±45 | 0*<br>±108 | Disable*<br>Enable | 7.46*<br>4.5-10.5 | Enable*<br>Disable<br>Stack [2] |

| Ribbon End<br>Point | RBN Low<br>Warn @ | RBN Low<br>Action | RBN End<br>Action | Perf Skip | Power Save<br>Time |
|---|---|---|---|---|---|
| Darker +6<br>Darker +5<br>Darker +4<br>Darker +3<br>Darker +2<br>Darker +1<br>Normal*<br>Lighter -1<br>Lighter -2<br>Lighter -3<br>Lighter -4<br>Lighter -5<br>Lighter -6<br>Lighter -7<br>Lighter -8<br>Lighter -9<br>Lighter -10 | Under 2%<br>Under 5%<br>Under 10%<br>Under 20%<br>Under 30% | Warn & Continue*<br>Warn & Pause | Ignore RBN End<br>Stop At RBN End* | Disable*<br>Enable | 15 minutes*<br>(1 min - 240 min)<br>Instant<br>(5 sec - 30 sec) |

| Unidirectional | Power<br>Stacker [1] | Auto<br>Elevator [1] |
|---|---|---|
| Disable*<br>Enable | Enable*<br>Disable | Enable*<br>Disable |

### Length (Lines)

To define the length of your form in lines, select a form length from 1 to 255. The default option is 66.

### Length (Inches)

To define the length of your form in inches, select a form length from 0.1 to 25.5 inches. The default is 11.0 inches.

### LPI

This allows you to set the lines per inch. Possible selections are 1.5, 2, 3, 4, 5, 6, 8, 9, 10, and 12. The default is 6 LPI.

### Top Margin

This parameter dictates where the first print line is located on the page. The Top Margin location is measured in lines from the current Top-of-Form location. The range is 0 to 255, with the default at 0.

### Bottom Margin

This parameter allows you to set the bottom margin. The Bottom Margin is measured in lines from the current Top-of-Form location. The range is 0 to 255, with the default at 66.

**NOTE:** The Bottom Margin and Top Margin selections are translated into a physical location on the page. Subsequent changes in LPI affect this location. If the new location does not exactly correspond with a line position, no asterisk is shown as a "current setting" indicator.

For example:

The initial Bottom Margin selection is line 60 and the current LPI is 6. The Bottom Margin location would be 10 inches from the Top-of-Form location. If the LPI is changed to 10 LPI, the selection for Bottom Margin would change to line 100.

### Left Margin

You can place the left margin at any column number across the page, using selections 1 to 272. The range of selections for this parameter depends on the CPI setting. Column 1 is the Default. The left margin must be less than or equal to the right margin.

## Right Margin

You can place the right margin at any column number across the page. Similar to the Left Margin parameter, the range of this value depends on the CPI. Column 136 is the Default selection. The right margin must be greater than or equal to the left margin.

**NOTE:** If a margin setting is a column number that is greater than the maximum allowable for the current CPI, the printer will default to the last valid setting.

The current value of the right and left margins reflects a physical location on the form, and therefore, changes when the CPI setting changes. If the physical location of the right or left margin does not exactly correspond with a line position after changing the CPI (characters per inch) setting, there will be no current setting indicator (asterisk).

## Horz Adjust

The print position on the form may be adjusted horizontally in increments of 1/30 an inch. The default option is 0.

## Vert Adjust

The print position on the form may be adjusted vertically in increments of 1/72 an inch. The default option is 0.

## Quick Access

This option provides a way for the printer to position printed forms for quick tear-off access. When Quick Access is enabled, the paper is moved to the tear position by holding down the VIEW key for one second for Eject. The Eject mode may be exited by holding down the VIEW key for one second. (This typically results in a blank form separating the next-to-print form from the previously printed form.) Placing the printer back online while in the Eject mode will automatically move to the next available form, and printing will resume as soon as data is received. The default option for the Quick Access parameter is Disabled. The distance that the paper is ejected is set with the Eject Distance parameter (below).

## Eject Distance

The Eject Distance parameter allows you to select the distance at which the paper ejects during a Quick Access operation. The units are in tenths of an inch, from 4.5 to 10.5. The default is 7.46 inches.

## Fast Slew

Slew refers to the high speed paper motion that occurs whenever the printer moves paper more than one line. If your forms are thin or fragile in which output stacking is a problem, you can decrease the printer's slew speed by setting this parameter to Disabled. The default setting is Enabled.
The 2000 lpm printer also has a stack selection which aids in paper stacking and is faster than the parameter setting for Disable.

## Ribbon End Point

This parameter adjusts the point at which the system will declare the ribbon as being expended. The life count will always be from 100% to 0%, but if a darker setting is selected, 0% will be reached more quickly. If a lighter setting is selected, the system will extend the time it takes to reach 0%. The range of values are as follows:

- **Normal** (default)
- **Darker +1 through Darker +6**
- **Lighter -1 through Lighter -10**

**NOTE:** This value can be adjusted at any time; the display will automatically adjust to show the correct percentage relative to the new end point.

## RBN Low Warn @

This option allows the user to select the Ribbon Life value, at which point the printer will declare a ribbon low condition and display the "RIBBON UNDER XX% / Change RBN Soon" warning message. The default is Under 2%. See "RBN Low Action" below for details of how the printer behaves once a ribbon low condition is reached.

The values are Under 2% (default), Under 5%, Under 10%, Under 20%, and Under 30%.

## RBN Low Action

This menu determines how the printer behaves once a ribbon low condition is reached.

- **Warn & Continue** (default). Once a ribbon low condition is reached the printer beeps and displays the "RIBBON UNDER XX% / Change RBN Soon" warning message. Printing will continue without interruption. The warning message can be cleared by pressing the CLEAR key, however the message will reappear in two minutes. This action will continue until a ribbon out (ribbon life reaches 0%) condition occurs.

- **Warn & Pause**. This setting is similar to the Warn & Continue selection with one exception. When a ribbon low condition is reached, the printer will still display the "RIBBON UNDER XX%/Change RBN Soon" warning message; however, the printer will stop printing. This is meant to get the user's attention. To resume printing, the user must press the CLEAR key.

**NOTE:** Printing will only stop on the first occurrence of a ribbon low condition. Once the user clears the warning message, subsequent warnings will display the warning message, but printing will continue.

## RBN End Action

This menu allows the user to override the normal ribbon low warning and ribbon out conditions.

- **Stop At RBN End** (default). When this factory default option is selected, the printer displays a warning message when a ribbon low condition is reached, and displays a ribbon out fault when ribbon life reaches 0%.

- **Ignore RBN End**. When this menu option is selected, it overrides the ribbon low and ribbon out conditions, i.e., no warning or fault messages are displayed and printing continues even after ribbon life reaches 0%. However, once the ribbon life reaches an excess wear condition as indicated by the fault message "EXCESS RBN WEAR / Install New RBN", printing will stop and the user must install a new ribbon before printing can resume.

**NOTE:** The excess ribbon wear is set below the "Lighter -10" Ribbon End Point setting.

## Perf. Skip

- **Disable** (default). The platen does not open at the perforation.

- **Enable**. This parameter enables the automatic perforation skip feature that causes the platen to automatically open between the last line printed on the current form and the first line printed on the next form. This feature is useful when using heavy forms that have a large perforation "tent" that can get hung up in the print station.

**NOTE:** When enabled, the printer throughput is reduced due to the time required to automatically open and close the platen.

## Power Saver Time

The time interval you specify for this parameter sets the amount of idle time before the printer goes into Power Saver mode. When Instant is chosen, the printer goes into Power Saver mode as soon as it is able to stop the shuttle properly. The time allotted to perform this function depends upon the shuttle timeout value which can be set in the menu.

**NOTE:** Power Saver mode will not be shown on the control panel even though the function still exists. Sending a print job to the printer will turn off Power Saver mode.

## Unidirectional

The Unidirectional feature affects both print quality and printing speed. By setting this feature, you can configure the printer to print in both directions of the shuttle sweep (bidirectional), or to print in one direction only (unidirectional).

- **Disable** (default). The printer will print all data in both directions of the shuttle sweep (bidirectional printing). This choice produces higher printing speed.

- **Enable**. The printer will print all data in only one direction of the shuttle sweep (unidirectional printing). Although enabling this feature reduces print speed, it enhances the vertical alignment of dots and produces cleaner, sharper barcodes and text.

## Power Stacker

This parameter allows you to enable or disable the power paper stacker (provided this option is installed).

## Auto Elevator

This parameter exists only on printers with the power paper stacker installed. The power stacker has a sensor which detects paper movement and raises the stacker as the printed paper stack grows. If the printer has been printing for three minutes continually and the sensor has not detected any growth in the paper stack, the stacker raises itself 1/4 inch automatically.

- **Enable** (default). The automatic elevator on the power stacker operates normally.

- **Disable**. The stacker does not raise automatically every three minutes and is entirely dependent on the sensor. Disable is used with extremely high-quality print jobs that take a long time to print.

# Vertical Format Units (VFU) Submenu

This submenu is used for setting VFU specifics. The Level 2 headings are as follows:

* = Factory Default

```
┌──────────────┐
│    VFU       │
│              │
│ (from page 57)│
└──────────────┘
        │
   ┌────────────┬────────────┐
┌──────┐   ┌──────┐   ┌──────┐
│ VFU  │   │  VT  │   │ Skip │
│Enable│   │Channel│  │ When │
└──────┘   └──────┘   └──────┘
Disable*    2*         Before*
Enable      1-12       After
            Unused
```
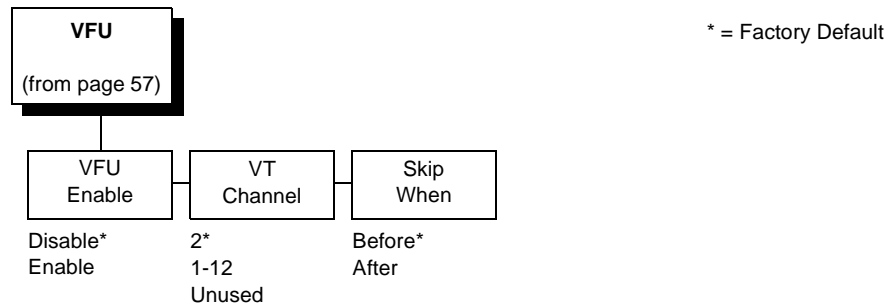
## VFU Enable

A Vertical Format Unit is a means for loading sets of vertical tabs. These vertical tabs define various parameters of a form. This parameter applies only to the emulations which make explicit use of the VFU channels.

*   **Disable** (default).
*   **Enable**. Causes the printer to use the last loaded EVFU instead of using the Form Length, Top Margin, and Bottom Margin settings. When an EVFU is loaded, this parameter is automatically set to Enabled.

## VT Channel (Vertical Tab Channel)

You can select which VFU Channel is designated as the Vertical Tab Channel. This parameter applies only to the emulations which make explicit use of the VFU channels. Selections are 1 - 12 and Unused. The default depends on the emulation as defined in the tables under the Emulation selection parameter, page 55.

## Skip When

This parameter applies only to the emulations which make explicit use of the VFU channels. This parameter designates where the Skip Length distance will begin, before or after the Bottom of Form channel. The Skip location is determined by using the designated Bottom-of-Form Channel in the downloaded VFU. The Skip When parameter only functions when the VFU Environment is enabled. The default depends on the emulation as defined in the table under the Emulation selection parameter.

# Config Menu

```
┌──────────────┐
│ **Config**   │                                        * = Factory Default
│ **Menu**     │
│ (from page 53)│
└──────────────┘
```

| Printer | Codes | Graphics | Configurations | Host Interface | Parallel Hotport | Serial Hotport |
|---------|-------|----------|----------------|----------------|------------------|----------------|
| (see below) | (see page 73) | (see page 78) | (see page 83) | (see page 85) | (see page 86) | (see page 86) |

| Ethernet Hotport [1] | Serial I/O | Parallel I/O | Intellifilter | File Management | CST/PAA | PTX Setup Option |
|----------------------|------------|--------------|---------------|-----------------|---------|------------------|
| (see page 86) | (see page 88) | (see page 92) | (see page 94) | (see page 95) | (Refer to the *PNE User's Manual*) | (see page 96) |

The following are explanations of each submenu and parameter.

## Printer Submenu
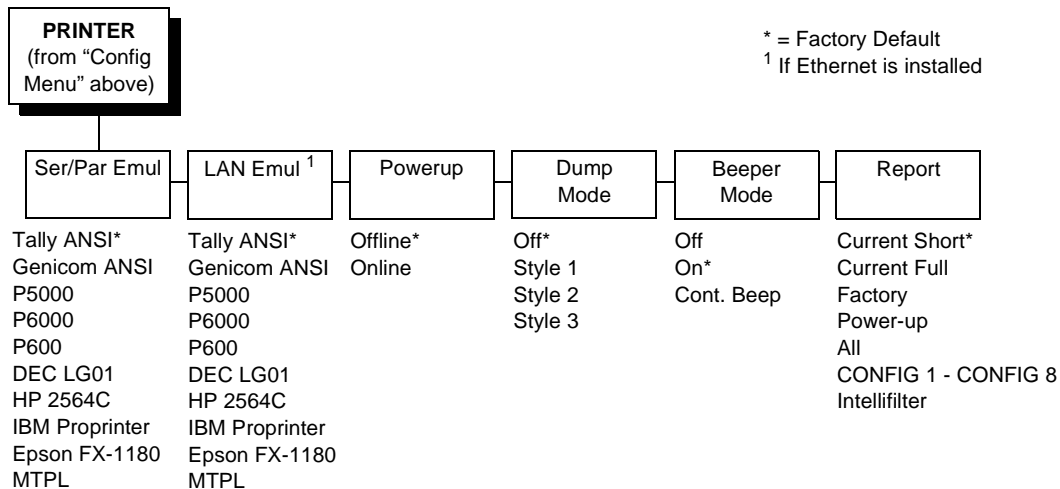
```
┌──────────────┐
│ **PRINTER**  │                                       * = Factory Default
│ (from "Config │                                      [1] If Ethernet is installed
│ Menu" above) │
└──────────────┘
```

| Ser/Par Emul | LAN Emul [1] | Powerup | Dump Mode | Beeper Mode | Report |
|--------------|--------------|---------|-----------|-------------|--------|
| Tally ANSI* | Tally ANSI* | Offline* | Off* | Off | Current Short* |
| Genicom ANSI | Genicom ANSI | Online | Style 1 | On* | Current Full |
| P5000 | P5000 | | Style 2 | Cont. Beep | Factory |
| P6000 | P6000 | | Style 3 | | Power-up |
| P600 | P600 | | | | All |
| DEC LG01 | DEC LG01 | | | | CONFIG 1 - CONFIG 8 |
| HP 2564C | HP 2564C | | | | Intellifilter |
| IBM Proprinter | IBM Proprinter | | | | |
| Epson FX-1180 | Epson FX-1180 | | | | |
| MTPL | MTPL | | | | |

## Ser/Par Emul

This parameter allows you to define which set of printer control commands will be emulated for data received on the Serial and Parallel ports. The emulation settings are automatically saved in the Powerup Configuration. Tally ANSI is the default selection.

When a new emulation setting is entered through the Printer Control Panel, emulation dependent parameters in the Current and Powerup configurations are changed to match the default settings for the elected emulation. The following table lists those parameters by emulation:

| Parameter | Tally ANSI | Genicom ANSI | P5000 | P6000 | P600 |
|---|---|---|---|---|---|
| Character Set | Latin1 | Code Pg 437 | Code Pg 437 | Latin1 | Latin1 |
| OCR-A | ANSI | ANSI | ANSI | ANSI | ANSI |
| OCR-B | ANSI | ANSI | ANSI | ANSI | ANSI |
| Auto CR | OFF | ON | ON | ON | OFF |
| Line Wrap | OFF | ON | OFF | OFF | OFF |
| Wrap LF | OFF | ON | OFF | OFF | OFF |
| Code 7F | FILL | FILL | Space | Space | Space |
| VT Channel | 2 | 12 | N/A | 12 | 12 |
| Skip When | Before | Before | N/A | After | After |
| Parameter | HP 2564C | DEC LG01 | Epson FX-1180 | IBM Proprinter | MTPL |
| Character Set | Roman-8 | DEC Multi | Italic | Code Pg 437 | Code Pg 437 |
| OCR-A | ANSI | ANSI | ANSI | ANSI | ANSI |
| OCR-B | ANSI | DIN | ANSI | ANSI | ANSI |
| Auto CR | OFF | OFF | ON | ON | ON |
| Line Wrap | OFF | OFF | ON | ON | ON |
| Wrap LF | OFF | OFF | ON | ON | ON |
| Code 7F | FILL | FILL | Delete Char | Ignore | Delete Buffer |
| VT Channel | 12 | 12 | N/A | N/A | N/A |
| Skip When | After | After | N/A | N/A | N/A |

### LAN Emul (LAN Interface only)

Used to select the emulation attached to the Ethernet port when using the Ethernet interface. Possible selections are the same as the Ser/Par Emul option (page 71).

### Powerup

This parameter sets the printer either Online or Offline when the power switch is turned on. This parameter setting is automatically saved to the Powerup Configuration when it is changed. The default is Offline.

### Dump Mode

Dump Mode is used to troubleshoot problems that may arise when processing data. It places the printer into a Hex Dump Mode. You can select three styles of printouts for use as debugging tools. The standard selections are:

- **OFF** (default). Dump Mode is disabled.

- **Style1**. Two column output. Text, spaces, and control codes are printed in hexadecimal code format in one column and ASCII equivalents in another column.

- **Style2**. Only control codes are printed in hexadecimal format. ASCII characters are printed as is and escape sequences force a new line.

- **Style3**. Control codes and spaces are printed in hexadecimal format. ASCII characters are printed as is and escape sequences force a new line.

### Beeper Mode

When a fault event occurs, the beeper will sound. There are three options:

- **Off**

- **On** (default). Each fault event causes the fault alert beeper to produce a few short-duration audio tones.

- **Cont. Beep**. A fault event causes periodic short-duration audio tones that cycle about once per second and persists until the operator clears the fault.

### Report

You can use this parameter to print or display a report.

- **Current Short** (default). This produces a brief printed report of the current printer Quick Setup configuration. The report contains a header which identifies the installed software and interface, and any options that are installed.

- **Current Full**. This produces a complete printed report of the current printer configuration. The report contains a header which identifies the installed software and interface, and any options that are installed.

- **Factory**. This produces a complete printed report of the factory (default) configuration. The report contains a header which identifies the installed software and interface, and any options that are installed.

- **Power up**. This produces a complete printed report of the power-up printer configuration. The report contains a header which identifies the installed software and interface, and any options that are installed.

- **All**. This produces a complete printed report of all saved printer configurations. Each report contains a header which identifies the installed software and interface, and any options that are installed.

- **1-8**. This produces a complete printed report of any of the saved printer configurations. Each report contains a header which identifies the installed software and interface, and any options that are installed.

- **Intellifilter**. Prints the currently downloaded Intellifilter.

## Codes Submenu

```
┌──────────────┐
│    CODES     │        * = Factory Default
│              │        1 If P5000 emulation is selected
│ (from page 70)│       2 If Genicom ANSI emulation is selected
└──────────────┘
```

| Auto LF | Auto CR | Line Wrap | Wrap Line Feed | Print on CR | Form Feed At TOF |
|---|---|---|---|---|---|
| Off* | On | On | On | Off* | Enable* |
| On | Off* | Off* | Off* | Double Strike | Disable |
| | | | | Bold | |

| ESC | Alt ESC | Upper Only | Code 7F | Print 80 to 9F Hex | Ignore Char |
|---|---|---|---|---|---|
| Enable* | Disable* | Disable* | Ignore | On* | Off* |
| Disable | Enable | Enable | Delete Char | Off | 0-255 |
| | | | Delete Buffer | | |
| | | | Space | | |
| | | | Fill* | | |

| Sub Char From | Sub Char To | PTX SFCC [1] | PTX ALS [1] | TOF Control | DC3 Operation |
|---|---|---|---|---|---|
| Off* | Off* | 1* | 8* | Enable* | Enable* |
| 1-255 | 1-255 | 0-255 | 10.3 | Disable | Disable |

| SISO OverszBar [2] | Barcod Top Pos [2] | Oversz Top Pos [2] |
|---|---|---|
| Disable* | Enable* | Enable* |
| Enable | Disable | Disable |

## Auto LF (Line Feed)

Auto LF causes the printer to perform a Line Feed each time it receives a Carriage Return Control Code. This parameter is available for host systems that cannot send a Line Feed Control Code.

Some computers automatically generate a Line Feed of their own at the right margin. If your system does this and if Auto LF is enabled, it will result in a double-space between lines of print. Consult your computer manual to determine whether this function should be turned off or on. Default is OFF.

## Auto CR (Carriage Return)

Auto CR allows the printer to perform a Carriage Return (moves print location to the left margin) when it receives either a Line Feed or Vertical Tab Control Code. The default value depends on the emulation (see Emulate under the Config Menu, Printer category, page 70).

## Line Wrap

If the printer gets to the right margin without receiving a paper movement command, the Line Wrap Parameter dictates how the rest of the data will be treated. If Line Wrap is OFF, the excess characters are lost. If Line Wrap is ON, printer response is determined by the Wrap Line Feed parameter (see below).

If Line Wrap is ON and Wrap LF is OFF, the printer performs a Carriage Return only and overprinting can result.

If Line Wrap is ON and Wrap LF is ON, the printer performs a Carriage Return plus a Line Feed and excess characters are printed on a new line at the left margin.

The default value is dependent on the emulation (see Emulate under the Config Menu, Printer category, page 70).

## Wrap Line Feed

This parameter works in conjunction with the Line Wrap parameter, above. The default value depends on the emulation (see Emulate under the Config Menu, Printer category, page 70).

## Print on CR

This parameter is intended for use by customers whose applications embolden characters by using a CR-only method to selectively reprint all or parts of a line.

- **Off** (default). Ignores bolding, print as regular text.
- **Double Strike**. Prints a line, then backups to reprint (bold by overstriking).
- **Bold**. Prints line once, bold portions are printed with enhanced "bold" style.

For example, the application may embolden the word "bold" in the following sentence by sending:

This is bold<CR>    bold<CR><LF>

"Double Strike" corresponds to the previous POCR=ON setting. With "Double Strike" selected, bolding is accomplished by re-striking the characters at the same dot positions. This requires a one line backup after printing each <CR> pass; some applications use many passes to print a single bolded line, so printing throughput may be reduced accordingly.

With "Bold" selected, bolding is accomplished by rendering the bolded characters twice, one with a small offset to create a "shadow" effect. The resulting print is thicker and thus appears darker. This is the same technique used with the "bold" character attribute selected via emulation escape sequences.

## Form Feed at TOF

This parameter dictates how the printer will respond to a Form Feed Control Code received from the host computer when it is already at a top-of-form location.

*   **Enable** (default). The printer performs the requested form feed and advances to the next top-of-form.

*   **Disable**. The printer ignores the Form Feed Control Code sent from the host.

## ESC

This parameter is valid only in the Tally ANSI and LG01 emulations. When set to Disabled, the ESC control character is ignored. The default is Enable.

## Alt ESC (Alternate Escape)

This parameter is only valid in the Tally ANSI and LG01 emulations. When set to Enabled, a "^" (carat) character in column 1 (left margin) followed by a CR or a CR LF can be used in place of the ESC control code. The default is Disable. ESC (see above) must also be Enabled for this to work.

## Upper Only

This parameter allows you to set up your printer to print in uppercase characters only from the active Character Set. When this parameter is enabled, the lower-case characters in Hex positions 61 through 7A are overwritten by the uppercase characters in positions 41 through 5A. The default is Disable.

## Code 7F

This parameter allows you to dictate how the printer will react when it receives a Hexadecimal code 7F. The default value depends on the emulation. (See the Emulation Parameter, page 54.).

- **Ignore**. The code is ignored.
- **Delete Char** (default). The previous character is deleted.
- **Delete Buffer**. The previous characters on the current print line are deleted.
- **Space**. A Space character is substituted.
- **Fill**. A Fill character is substituted.

## Print 80 to 9F Hex

This parameter defines whether locations 80 through 9F Hex are to be treated as control characters or printable characters. The function of the control characters in this area depends on the emulation. The selections are ON (printable characters) or OFF (control characters). The default value depends on the emulation.

## Ignore Char

This parameter allows you to select a character that will be ignored in the incoming data stream. This parameter functions in all emulations and nondownloadable print modes. It does not function in plot mode, font download, or VFU download. Selections are 0-255, referring to the decimal value of any 8-bit character, or OFF. Default is OFF.

## Sub Char From

This parameter allows you to select a character that will be replaced by the character designated by the Sub Char To parameter. This parameter functions in all emulations and non-downloadable print modes. It does not function in plot mode, font download, or VFU download. Default is OFF.

## Sub Char To

This parameter allows you to select the character that will replace the character designated by the Sub Char From Parameter. This parameter functions in all emulations and non-downloadable print modes. It does not function in plot mode, font download, or VFU download. Default is OFF.

## PTX SFCC

Defines the Special Function Control Character used by the Printronix P5000 emulation. The decimal value of the ASCII character code is entered. The default value is 1 (SOH).

## PTX ALS

Defines the single line Alternate Line Spacing used by the ACK (Hex 06) command in the Printronix P5000 emulation. The possible selections are 8 or 10.3 which define the line density. The default value is 8.

**NOTE:** The PTX SFCC and PTX ALS options will only appear if the Printronix P5000 emulation is selected with the Ser/Par Emul control panel option.

## TOF Control
## (Available when Genicom ANSI emulation is selected)

When a new form is defined, the top-of-form position is left unchanged if this parameter is set to Enable (the default). When a new form is defined, and this parameter is set to Disable, the top-of-form position is reset to the top margin of that form.

## DC3 Operation
## (Available when Genicom ANSI emulation is selected)

This parameter allows DC1 - DC3 operation. When set to Enable (the default), the printer can be selected and deselected using DC1 and DC3 control codes. The printer select/deselect operation is not in effect when set to Disable.

## SISO OverszBar
## (Available when Genicom ANSI emulation is selected)

This parameter allows SI-SO operation for barcodes and oversize characters. When set to Disable (the default), barcode and oversize character modes do not need to be activated with SO and deactivated with SI. When set to Enable, barcode and oversize character modes will be activated and deactivated using the SO and SI control codes.

## Barcod Top Pos
## (Available when Genicom ANSI emulation is selected)

When set to Enable (the default), the paper position is reset to the top of the bar code after printing. When set to Disable, the paper position is left at the end of the bar code after printing.
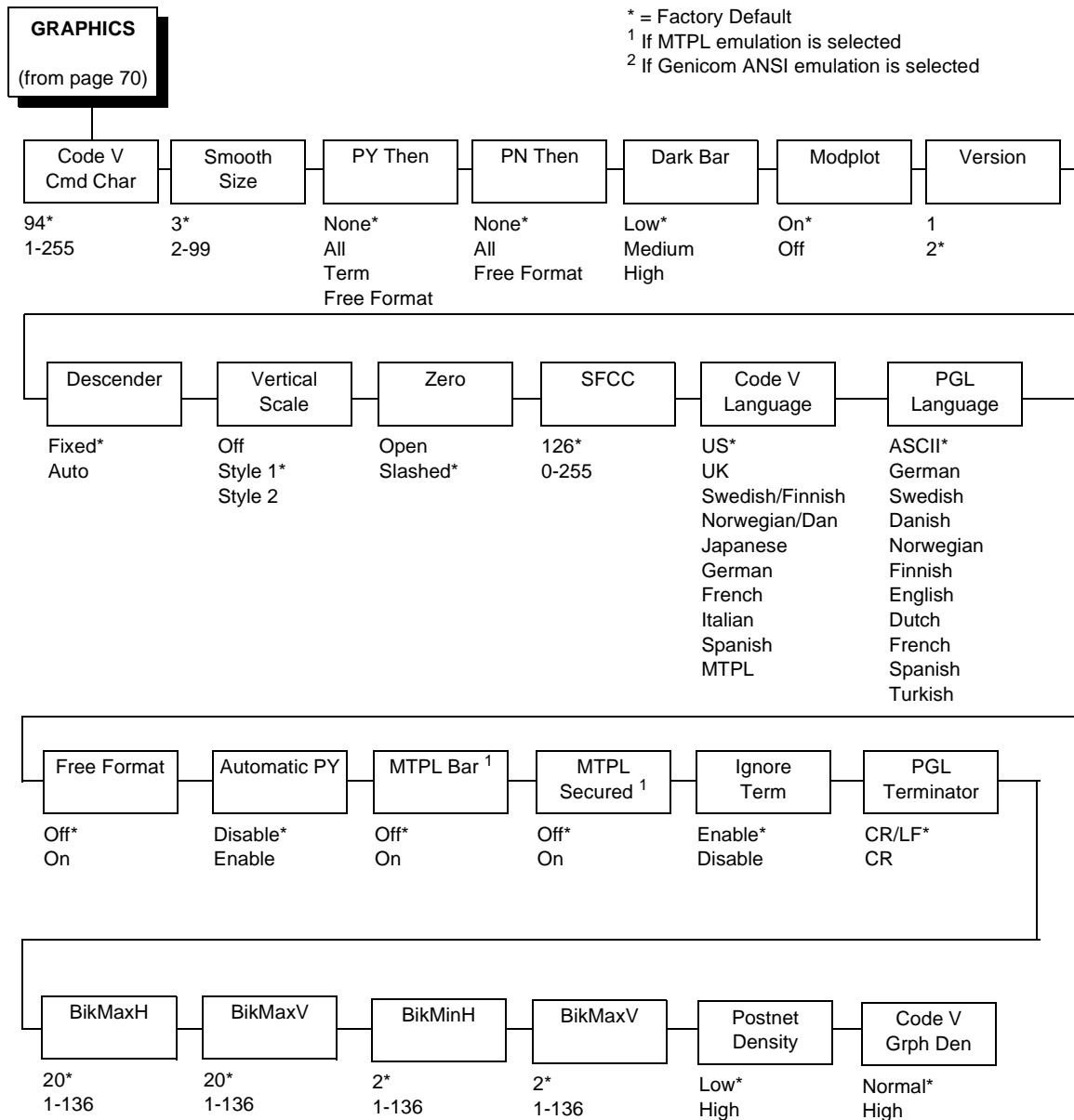
## Oversz Top Pos
## (Available when Genicom ANSI emulation is selected)

The paper position will be reset to the top of the oversize characters after printing when this parameter is set to Enable (default). When set to Disable, the paper position is left at the end of the oversize characters after printing.

## Graphics Submenu

This submenu allows you to configure certain aspects of the Graphic Processing Options on your printer. The Level 2 headings are as follows:

**GRAPHICS**

(from page 70)

* = Factory Default
[1] If MTPL emulation is selected
[2] If Genicom ANSI emulation is selected

| Code V Cmd Char | Smooth Size | PY Then | PN Then | Dark Bar | Modplot | Version |
|---|---|---|---|---|---|---|
| 94*<br>1-255 | 3*<br>2-99 | None*<br>All<br>Term<br>Free Format | None*<br>All<br>Free Format | Low*<br>Medium<br>High | On*<br>Off | 1<br>2* |

| Descender | Vertical Scale | Zero | SFCC | Code V Language | PGL Language |
|---|---|---|---|---|---|
| Fixed*<br>Auto | Off<br>Style 1*<br>Style 2 | Open<br>Slashed* | 126*<br>0-255 | US*<br>UK<br>Swedish/Finnish<br>Norwegian/Dan<br>Japanese<br>German<br>French<br>Italian<br>Spanish<br>MTPL | ASCII*<br>German<br>Swedish<br>Danish<br>Norwegian<br>Finnish<br>English<br>Dutch<br>French<br>Spanish<br>Turkish |

| Free Format | Automatic PY | MTPL Bar [1] | MTPL Secured [1] | Ignore Term | PGL Terminator |
|---|---|---|---|---|---|
| Off*<br>On | Disable*<br>Enable | Off*<br>On | Off*<br>On | Enable*<br>Disable | CR/LF*<br>CR |

| BikMaxH | BikMaxV | BikMinH | BikMaxV | Postnet Density | Code V Grph Den |
|---|---|---|---|---|---|
| 20*<br>1-136 | 20*<br>1-136 | 2*<br>1-136 | 2*<br>1-136 | Low*<br>High | Normal*<br>High |

## Code V Cmd Char

This parameter allows you to change the CVCC. The Default for this parameter is the ASCII caret ( ^ , Decimal 94, HEX 5E) character.

## Smooth Size

This parameter controls the size at which block characters are smoothed. The default is 3, which means that size 3 block characters will be smoothed, but size 2 block characters will not. This parameter is used by Code V and PGL.

## PY Then

This parameter defines printer response to characters following the ^PY Command on the same line.

- **None** (default). All data, plus the line terminator are ignored.
- **All**. All data is executed.
- **Term**. All but the terminator is ignored.
- **Free Format**. Depends on the state for Free Format Mode.

## PN Then

This command defines printer response to characters following the ^PN Command on the same line.

- **None** (default). All data, plus the line terminator are ignored.
- **All**. All data is executed.
- **Free Format**. Depends on the state for Free Format Mode.

**NOTE:** For PY Then and PN Then, even though Code V documentation states that all other data on the line is ignored, some Code V installations do not follow this rule.

## Dark Bar

This parameter allows you to set the base dot density at which bar codes will print. Default is Low.

All barcodes will print at the selected density unless the user program requests a higher density. When the user program requests a higher density, the printer will switch to the next higher density than the base density. The following table shows the density selections and how they change when the printer receives a program request for a higher density:

| DarkBar Selection | Normal Mode | Dark Mode |
|---|---|---|
| Low (Default) | 60 x 72 | 60 (120) x 144 |
| Medium | 60 (120) x 144 | 120 x 144 |
| High | 120 x 144 | 120 x 144 |

## Modplot

This parameter eliminates the need to send an Align to Line Boundary Command (Tally ANSI) or an extra Line Feed (LF) Control Code (Printronix) when exiting Plot Mode. Whenever you are using Plot Mode in these emulations, set this parameter to ON to avoid graphic and text alignment problems. Modplot ON is the default selection. In addition to Code V and PGL graphics, this parameter also applies to Tally ANSI and Printronix style graphics. It does not apply to text following Epson or Proprinter graphics.

On

Line 1: Character Data

Line 2: Plot Data

Line 3: Character Data

Off

Line 1: Character Data

Line 2: Plot Data
Line 3: Character Data

## Version

This parameter controls the version of Code V the printer emulates. Version 2 is the default selection.

## Descender

This parameter controls insertion of the character descender gap between print lines.

- **Fixed** (default). The descender gap is always inserted after the line whenever Descender Mode is ON regardless of whether descenders are present or not.

- **Auto**. The descender gap is only inserted after lines containing characters with descenders.

## Vertical Scale

This parameter determines whether vertical block characters will be scaled to the same dimensions as horizontal block characters.

- **Style1** (default). Adds intercharacter gap after the character has been rotated.

- **Style2**. Does not add gap.

- **Off**. Vertical block characters will be compressed vertically due to the higher vertical density (72 DPI vs. 60 DPI).

## Zero

As an aid in distinguishing zeros from the uppercase letter O you can choose to have your zeros slashed (Ø). Slashed is the default selection. This parameter is used by Code V and PGL.

## SFCC

This parameter allows you to change the Special Function Command Character. The Default for this parameter is the ASCII tilde ( ~, Decimal 126, HEX 7E ) character. Options are 1-255 (Decimal designators for ASCII characters).

## Code V Language

This parameter allows you to select the language character set that will be used for text output in Code V Graphics Mode. The default is US. The available selections are:

| US | UK | Swedish/Finnish |
|---|---|---|
| Norwegian/Dan | Japanese | German |
| French | Italian | Spanish |

## PGL Language

This parameter allows you to select the language character set that will be used for text output in Printronix Graphics Mode. The default is ASCII. The available selections are:

| ASCII | German | Swedish |
|---|---|---|
| Danish | Norwegian | Finnish |
| English | Dutch | French |
| Spanish | Italian | Turkish |

## Free Format

This parameter turns on Free Format Mode in Code V graphics whenever a ^PY is encountered. Free Format Mode will remain active until a ^PN or ^O (Free Format Mode Off) command is received. The default is Off.

## Automatic PY

If Automatic PY is Enabled, the printer is automatically in Code V graphics mode, and a ^PY command is not needed in the file being sent to the printer to begin Code V graphics. The default is Disabled.

### MTPL Bar

Setting this parameter will print out barcodes for MTPL. Otherwise, the sequences will be printed as text only. The selections are ON and OFF, with the default being OFF. This parameter only affects the MTPL emulation.

### MTPL Secured

In secured mode (ON), normal text characters can be printed to the right or left of barcodes. In unsecured mode (OFF), it is not possible to print more than one line with normal characters in the bar code line. The default is OFF. This parameter only affects the MTPL emulation.

### Ignore Term

Determines whether or not a line feed following the CR terminator, an SFOFF, or an IGOFF command will cause a line feed to occur. There are two options: Enable (usually the default) and Disable (the default for Genicom ANSI).

- **Disable**. A LF following the CR terminator, SFOFF, or IGOFF command will execute.

Example:    ~SFOFF<cr><lf>
            ~IGOFF<cr><lf>

- **Enable**. A LF following the CR terminator in the above example will not execute.

### PGL Terminator

Determines whether or not a CR-LF terminator for PGL commands will cause a line feed to occur.

- **CR**. Allows line feeds which follow the carriage return to be executed.

    Example:    ~EXECUTE;TEST<cr><lf>
                <cr><lf>
                ~NORMAL<cr><lf>

The above example would execute three line feeds following the job TEST.

- **CR-LF** (default). Will not execute line feeds following a carriage return. In the above example, the LFs would not execute.

### BlkMaxH, BlkMaxV, BlkMinH, BlkMinV

These four parameters provide the ability to create block characters using FreeType fonts. However, the user may find that very small FreeType characters are not legible, and very large FreeType characters may print too slowly. These four allow the user to select the minimum and maximum horizontal and vertical size of block characters that will be generated using the FreeType characters.

### Postnet Density

Determines whether POSTNET bar codes are printed in Low Density (72 DPI) or High Density (144 DPI). Low Density is the default setting. POSTNET bar codes printed in High Density wil print at half the speed of Low Density.

### Code V Grph Den

This parameter allows for graphic items in Code V to be printed in either single density (Normal) or double density (High). The default is Normal.

## Configurations Submenu

Your printer can save up to eight personalized configurations, so you don't have to recreate configurations you use frequently. In addition, each configuration you save can be tagged with a label of up to 15 characters. The Level 2 headings are as follows:
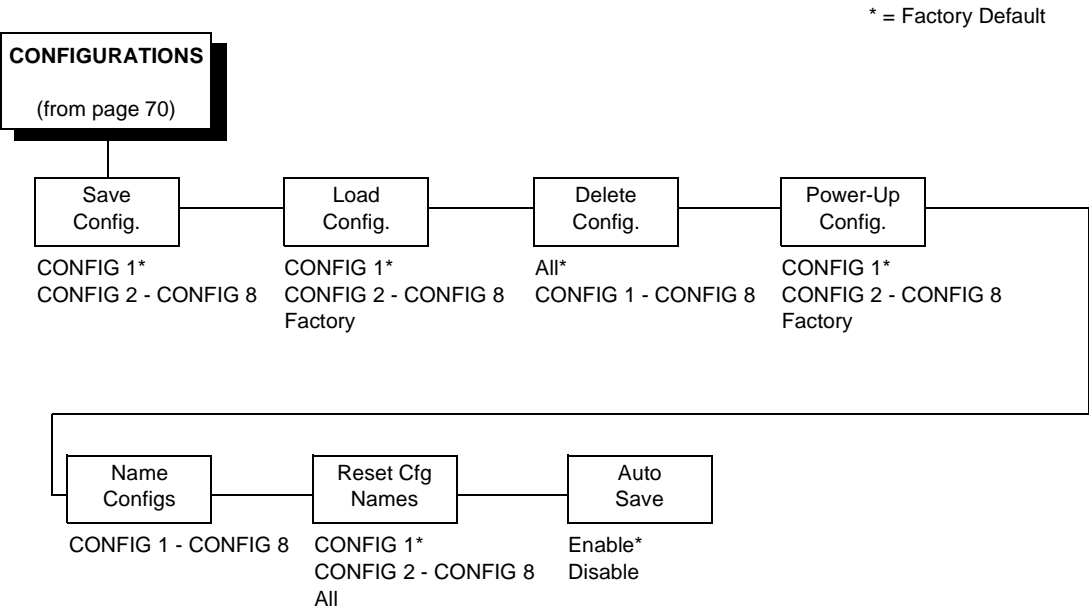
* = Factory Default

```
┌─────────────────────┐
│ CONFIGURATIONS      │
│                     │
│ (from page 70)      │
└─────────────────────┘
        │
   ┌──────────┬──────────────┬──────────────┬──────────────┐
┌────────┐ ┌────────┐   ┌────────┐   ┌──────────┐
│  Save  │ │  Load  │   │ Delete │   │ Power-Up │
│ Config.│ │ Config.│   │ Config.│   │  Config. │
└────────┘ └────────┘   └────────┘   └──────────┘
```

| Save Config. | Load Config. | Delete Config. | Power-Up Config. |
|---|---|---|---|
| CONFIG 1* | CONFIG 1* | All* | CONFIG 1* |
| CONFIG 2 - CONFIG 8 | CONFIG 2 - CONFIG 8 | CONFIG 1 - CONFIG 8 | CONFIG 2 - CONFIG 8 |
|  | Factory |  | Factory |

| Name Configs | Reset Cfg Names | Auto Save |
|---|---|---|
| CONFIG 1 - CONFIG 8 | CONFIG 1* | Enable* |
|  | CONFIG 2 - CONFIG 8 | Disable |
|  | All |  |

### Save Config.

This option allows you to save up to eight configurations to meet different print job requirements. This eliminates the need to change the parameter settings for each new job. The configurations are stored in memory and will not be lost if you turn off the printer. The factory default configuration cannot be changed. See "Saving Your New Configuration" on page 47 for details.

### Load Config.

The printer can store numerous configurations in memory. This parameter allows you to select and load a specific configuration.

### Delete Config.

You can delete one or all of your eight customized configurations. The factory default configuration cannot be deleted.

## Power-Up Config.

You can specify which of the nine configurations (Factory or CONFIG 1 - CONFIG 8) will be the power-up configuration.

## Name Configs

You may specify a 15-character name which can be used to refer to a configuration. The name you enter for a configuration will be used in the Load Config., Save Config., Print Config., Delete Config., and Power-Up Config. menus. The name can only be cleared by using the Reset Cfg Names menu.

When you move into the Name Configs. menu, the top line of the display shows the current configuration name. The second line of the display is initially the same as the top line. You can modify the second line of the display without affecting the top line until the ENTER key is pressed, which sets the modified name.

Press the UP or DOWN ( ▲ or ▼ ) keys to cycle through the values available for that character at the cursor location. Press the NEXT (▶) key to move to the next character to be modified. Press the PREV key (◀) to go back to a character you have already modified. Continue until you have entered the name you want to give to this configuration, then press ENTER to save. The name you entered will now represent this configuration on the printer's front panel. To exit this menu without saving, press any key other than the ENTER key. The configuration name will revert to the last saved value.

## Reset Cfg Names

You can reset specific configuration names back to the default value of the configuration number.

## Auto Save

- **Enable** (default). When a change has been made to a Config. menu, this option automatically prompts the user to save or not save the change to a Config #.

  If you are currently in the Factory Config. menus and make a change, pressing Enter saves to Config 1 or the next available Config. and becomes the Power-Up Config. If the Current Config is Config 1 and a menu change is made, pressing Enter will save the change to Config 1.

- **Disable**. The printer will not prompt you to save any changes made.

# Host Interface Submenu

```
┌─────────────┐
│    HOST     │
│  INTERFACE  │
│(from page 70)│
└─────────────┘
      │
┌─────────────┐
│   Active    │
│    Host     │
└─────────────┘

Auto Switching*
Centronics
Serial
IEEE 1284
Ethernet [1]
```

* = Factory Default
[1] If Ethernet is installed

The Host Interface Submenu enables you to select one of many types of interfaces between the printer and your host computer. The currently selected interface is indicated with an asterisk on the control panel message display. Each interface has its own submenu with a set of interface parameters which can be configured.

## Auto Switching

Auto Switching gives the printer the ability to handle multiple data streams sequentially. With Auto Switching, the printer can service hosts attached to the serial, parallel, and Ethernet ports as if they were the only interface connected.

For example, if the host computer sends one print job to the RS-232 serial port and a separate print job to the IEEE 1284 parallel port, the printer's Auto Switching is able to handle both jobs, in the order they were received. The user does not have to reconfigure the selected interface between jobs.

Auto Switching gives the printer the ability to handle multiple data streams sequentially. With Auto Switching, the printer can service hosts attached to the serial, parallel, and Ethernet ports as if they were the only interface connected.

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## Parallel/Serial/Ethernet Hotport Submenu

```
┌─────────────┐                                    * = Factory Default
│   CONFIG    │                                    ¹ If Ethernet is installed
│    MENU     │
│(from page 70)│
└─────────────┘
```

| Parallel Hotport | Serial Hotport | Ethernet Hotport [1] |
|---|---|---|
| Port Type | Port Type | Timeout |
|   Centronics* |   RS 232* |   30 sec* |
|   IEEE 1284 |   Disable |   (10-60) |
|   Disable | Trickle Time | Switch Out On |
| Auto Trickle |   1/4 sec* |   Data Timeout* |
|   Disable* |   1/2 sec |   Session Close |
|   Enable |   1 sec | |
| Trickle Time |   2 sec | |
|   1/4 sec* |   4 sec | |
|   1/2 sec |   8 sec | |
|   1 sec |   16 sec | |
|   2 sec |   Off | |
|   4 sec | Timeout | |
|   8 sec |   30 sec* | |
|   16 sec |   (10-60) | |
|   Off | Report Status | |
| Timeout |   Disable* | |
|   30 sec* |   Enable | |
|   (10-60) | | |
| Report Status | | |
|   Disable* | | |
|   Enable | | |

### Port Type

Select the types of parallel and/or serial interfaces which are connected to the printer. For example, if your printer is attached to one host with a Centronics connection and a second host with an RS-232 serial connection, you would select Centronics under the Parallel Hotport menu, and RS-232 under the Serial Hotport menu.

### Auto Trickle

Auto Trickle is used to prevent a host computer from timing out because the parallel interface was busy for too long.  When Auto Trickle is enabled and the printer's buffers are almost full, the printer will begin to trickle data in (at the rate set in the Trickle Time menu) until the buffers start to empty.

## Trickle Time

When the printer is printing data from a host and a second job is received by the printer from a different host, Trickle Time prevents the second host from timing out while it is waiting for its data to be printed. To support this feature, the port has to be able to accept data from the host and store it for future use.

For example, if the printer is printing a job from the serial port, and then receives a second print job from the parallel port, the data from the parallel port will "trickle" bit by bit into the printer buffer to prevent a timeout error from being sent back to the host connected to the parallel port.

The selected value is the time that the printer waits before getting the next byte of data from the host. The Trickle Time value should be less than the host time out value, but not too much shorter or else the printer fills up its buffer too fast.

## Timeout

This is the value used by the printer to time out from the current port and check the other selected port types for data to print. When the printer has not received data from the host after a certain period of time, it needs to timeout in order to service the other ports.

## Report Status

- **Disable** (default). When a fault occurs on the printer, only the active port reports the fault to the host.

- **Enable**. The port will report any fault even when it is not the current active port.

## Switch Out On

- **Data Timeout** (default). Allows Autoswitching when no data has been received for the selected Time Out period.

- **Session Close**. Allows Autoswitching only when the Network Socket is closed. If the Ethernet option is not installed the Network Socket is always reported as closed and this menu option is ignored.

## Serial I/O Submenu

* = Factory Default

```
┌─────────────────┐
│   Serial I/O    │
│                 │
│  (from page 70) │
└─────────────────┘
```

| Baud | Data Bits | Stop Bits | Parity | 8th Bit | Protocol |
|------|-----------|-----------|--------|---------|----------|
| 600 | 8 Bits* | 1 Bits* | None* | Data* | Ready/Busy* |
| 1200 | 7 Bits | 2 Bits | Odd | Unused | Xon/Xoff |
| 2400 | | | Even | | Enq/Ack |
| 4800 | | | | | Etx/Ack |
| 9600* | | | | | Etx/Ack/Nak |
| 19200 | | | | | Ack/Nak |
| 38400 | | | | | Xon/off/Etx/Ack |
| 57600 | | | | | Xon/off/Enq/Ack |
| 115200 | | | | | |

| Status Enquiry | DTR Function | DTR Polarity | Busy Polarity | RTS Function | Robust Xon |
|----------------|--------------|--------------|---------------|--------------|------------|
| OFF* | Busy* | Active Low* | Active Low* | Busy* | OFF* |
| ON | Offline | Active High | Active High | High | ON |
| | Power | | | | |

| Buffer Size in K | Unsolicit Rpt. |
|------------------|----------------|
| 16K* | No* |
| 1K to 16K | Small |
| | Big |

### Baud

Sets the baud rate of the serial interface in the printer. Baud rate is the speed at which serial data is transferred between the host computer and the printer. The choices for the RS-232 interface are 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 Baud. The default is 9600 Baud.

### Data Bits

Sets the length of the serial data word. The length of the data word can be set to 7 or 8 bits, and must match the corresponding data bits setting in the host computer. The default is 8 bits.

## Stop Bits

Sets the number of stop bits in the serial data word. Either one or two stop bits can be selected. The setting must match the corresponding stop bit setting in the host computer. The default is one stop bit.

## Parity

Set for odd parity, even parity, or no parity. The setting must match the corresponding parity setting in the host computer. The default is no parity.

## 8th Bit

If 8 bits per byte is selected under Data Bits above, use this parameter to determine how the 8th bit is to be used. If this bit is to be ignored, set the parameter to Unused. If the bit is to be used, set the parameter to Data. Data is the default, used for 8-bit characters.

## Protocol

The printer and host computer must establish common signals, understood by both units, for indicating when to send new data and when to stop sending data.

The eight protocols are:

- **Ready/Busy** (default)
- **Xon/Xoff**

The six Block Mode protocols:

- **Enq/Ack** (Enquiry/Acknowledge)
- **Etx/Ack** (End of Text/Acknowledge )
- **Etx/Ack/Nak** (End of Text/Acknowledge/Neg. Acknowledge )
- **Ack/Nak** (Acknowledge/Negative Acknowledge )
- **Xon/off/Etx/Ack** (XON/XOFF/End of Text/Acknowledge )
- **Xon/off/Enq/Ack** (XON/XOFF/Enquiry/Acknowledge)

## Status Enquiry

When this parameter is enabled, the host may send an enquiry packet to the printer requesting status. The printer will send back a 1 byte packet denoting the status of the printer. If this option is set to OFF (the default), no packet will be sent back. The Status Enquiry feature may be enabled in conjunction with any other protocol. When enabled and the host sends an ENQ character, the printer responds by sending a printer status byte. The status byte is designed to be a printable code and is the only printable code the printer can transmit.

The bit pattern is as follows:

**Table 2. Status Enquiry Bit Pattern**

| Bit | Meaning/Value |
|-----|---------------|
| 7 | Parity if 7 bit data and parity enabled (MSB) |
| 6 | Always a 1 |
| 5 | 1 if Data Overrun |
| 4 | Always a 0 |
| 3 | 1 if Parity Error |
| 2 | 1 if Paper System Error or Platen Open |
| 1 | 1 if Offline |
| 0 | 1 If Busy (fault or buffer full) (LSB) |

The Status Enquiry feature is slightly different when the current emulation is the HP2564C. Instead of responding to the ENQ character, the printer will respond to the ESC ? DC1 sequence. The bit pattern of the status response is as follows:

**Table 3. Status Enquiry Response Bit Pattern**

| Bit | Meaning/Value |
|-----|---------------|
| 7 | Parity if 7 bit data and parity enabled (MSB) |
| 6 | Always a 0 |
| 5 | Always a 1 |
| 4 | Always a 1 |
| 3 | 0 if Parity Error, Data Overrun, or Buffer Overflow |
| 2 | 1 if Offline |
| 1 | 1 if Busy (fault or buffer full) |
| 0 | 1 if Paper System Error or Platen Open (LSB) |

## DTR Function

This parameter allows the user to change the operation of the Data Terminal Ready (DTR) line on the printer interface. The DTR line is used to indicate printer status to the host computer.

- **Busy** (default). In this mode the DTR line is used to signal the host to stop sending data because the printer buffer is 85% full. However, some cabling systems require the DTR Line of the printer to be configured differently. This cabling scheme can interfere with printer transmission or host reception of the Xoff signal when using the Xon/Xoff Serial Protocol. This situation can result in Buffer Overflow and Data Overrun situations and loss of data.

- **Offline**. When this option is active, the DTR Line is used to signal only that the printer is Online or Offline. Unlike the Busy option, the Offline option will not interfere with operation of the Xon/Xoff Communication Protocol.

- **Power**. When this option is active, the DTR Line is used to signal the host that the printer is powered up. This DTR Selection will not interfere with host reception of the Xoff/Xon Serial Protocol, because unlike the Busy selection, the DTR Signal is not toggled at the same time as the Xoff Signal. When using this option, the DTR Polarity parameter must be set to Actv Hi.

## DTR Polarity

This parameter is used to set the DTR Signal polarity. Active Low is the default.

## Busy Polarity

This parameter allows you to control the polarity of the Busy Signal. Active Low is the default.

## RTS Function

The RTS line of the serial interface has been used to indicate Busy in addition to the DTR line. This option allows the RTS line to either be continuously High or to function as Busy (default).

## Robust Xon

This parameter behaves the same as a normal Xon/Xoff protocol, except that with this parameter enabled, the Xon code will be sent every 5 seconds when the printer is ready to accept data. OFF is the default.

## Buffer Size in K

This option configures the amount of memory allocated for the serial port buffer. You may specify between 1 and 16 Kbytes, in 1-Kbyte increments.

The default is 16K.

## Unsolicit Rpt

This option enables or disables Printer Device Status Reports to be sent to the host when a reportable status or error condition has occurred.

- **No** (default). Disables all unsolicited status reports from the printer.
- **Small**. Enables brief unsolicited status reports and sends an extended status report to the host.
- **Big**. Enables extended, unsolicited status reports and sends an extended status report to the host.

## Parallel I/O Submenu

* = Factory Default
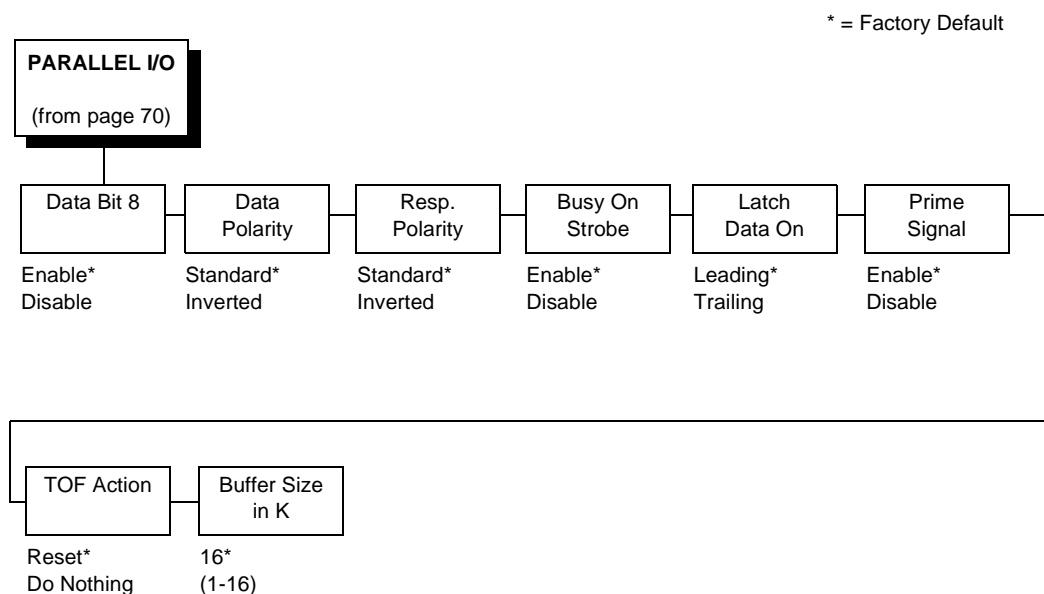


### Data Bit 8

- **Enable** (default). Allows access to the extended ASCII character set.
- **Disable**. The printer interprets bit 8 of each incoming data character as a zero, regardless of its actual setting.

### Data Polarity

The Data Polarity parameter must be set to match the data polarity of your host computer.

- **Standard** (default). Does not expect the host computer to invert the data.
- **Inverted**. Expects the data received on the data lines from the host computer to be inverted. Ones become zeros, and vice versa.

### Resp. Polarity

The Resp. Polarity parameter must be set to match the response polarity of your host computer.

• **Standard** (default). Does not invert the response signal.

• **Inverted**. Inverts the response signal sent to the host computer.

### Busy On Strobe

• **Enable** (default). Asserts a busy signal after each character is received.

• **Disable**. Asserts a busy signal only when the print buffers are full.

### Latch Data On

Specifies whether the data is read on the leading or trailing edge of the data strobe signal. The default is leading.

### Prime Signal

• **Enable** (default). The parallel port will perform a warm start (reboot) if the host asserts the prime signal.

• **Disable**. The parallel port will not perform a warm start (reboot) if the host asserts the prime signal.

### TOF Action

• **Reset** (default). A form feed is performed before a warm start when the prime signal is asserted from the host. This setting is used only if the prime signal parameter is enabled.

• **Do Nothing**. Nothing occurs before a warm start when the prime signal is asserted from the host.

### Buffer Size in K

Configures the amount of memory allocated for the Centronics parallel port buffer. You can specify between 1 and 16 Kbytes, in 1-Kbyte increments.

The default is 16K.

## Intellifilter Submenu

```
┌─────────────────┐
│  Intellifilter  │
│                 │
│ (from page 70)  │
└─────────────────┘
```

| Serial | Parallel | LAN | File Management |
|--------|----------|-----|-----------------|
| Disable* | Disable* | Disable* | Download |
| Enable | Enable | Enable | Delete |
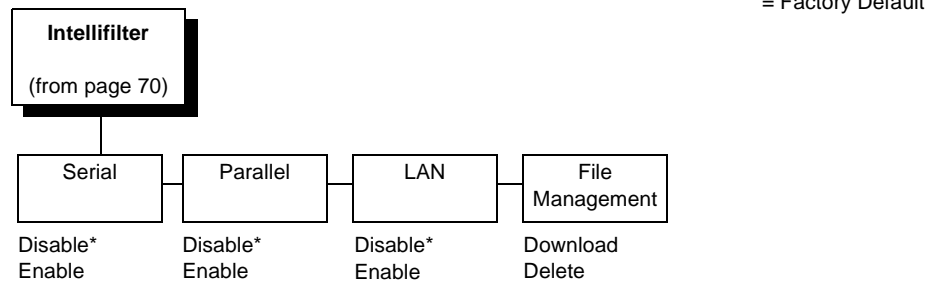
Intellifilter is a programmable feature, standard on TallyGenicom line printers. Without having to touch a well-working host system, Intellifilter permits users to free their systems from hard coded dependence on a specific printer that is no longer maintainable, or able to meet the demands of the application.

### Serial, Parallel, LAN

• **Disable** (default). The Intellifilter will be Disabled on the respective port.

• **Enable**. The Intellifilter will be Enabled on the respective port.

### File Management

• **Download**. This selection will place the printer in the IntelliFilter download mode.

• **Delete**. This selection will delete the currently downloaded IntelliFilter.

# File Management Submenu

* = Factory Default

```
┌─────────────┐
│    File     │
│ Management  │
│(from page 70)│
└─────────────┘
      │
┌──────────┬──────────┬──────────┬──────────┬──────────┬──────────┐
│ Overwrite│ View File│  Delete  │  Flash   │ Optimize │  Print   │
│  Files   │   List   │  Files   │  Avail.  │ & Reboot │ File List│
└──────────┴──────────┴──────────┴──────────┴──────────┴──────────┘
```
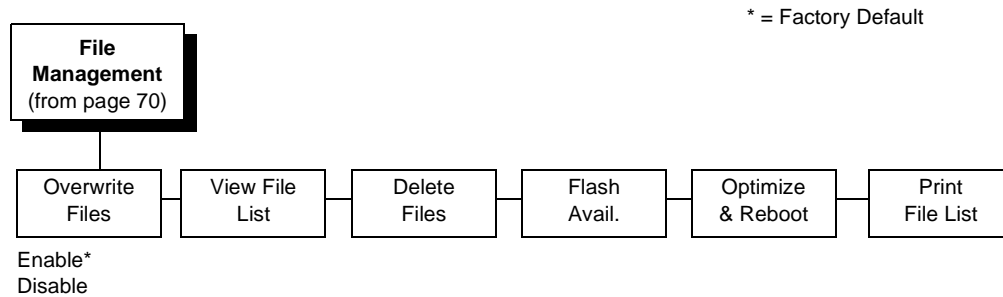
Enable*
Disable

## Overwrite Files

- **Enable** (default). Allows files to be overwritten.

- **Disable**. Prevents files from being overwritten by disabling the overwrite function.

## View File List

Displays the list of files in the file system. Pressing the DOWN key displays the file size.

## Delete Files

Displays the list of files in the file system. Pressing the ENTER key deletes the file displayed on the front panel.

## Flash Avail

The amount of flash available for the user to save or download files into flash.

## Optimize&Reboot

Reclaims flash space from deleted flash files. After pressing ENTER, wait for the printer to reboot.

**NOTE:** When the Optimize&Reboot option is executed, the message, "Optimizing Flash Files" does not display before printer rebooting takes place.

**IMPORTANT** **Do not turn the printer off until it has completely rebooted and is either back online or offline.**

## Print File List

Prints a summary of the files stored in flash memory and several statistics on File System usage.

## CST/PAA Submenu

Refer to the *PrintNet Enterprise Suite User's Manual*.

## PTX Setup Option Submenu

* = Factory Default

```
┌─────────────────┐
│   PTX Setup     │
│    Option       │
│ (from page 70)  │
└─────────────────┘
        │
   ┌────┴─────┐
┌──────────┐  ┌──────────┐
│  Setup   │──│  Setup SFCC │
│  Parse   │  │          │
└──────────┘  └──────────┘

Enable*       21h*
Ignore        (1-FF hex)
Disable
```
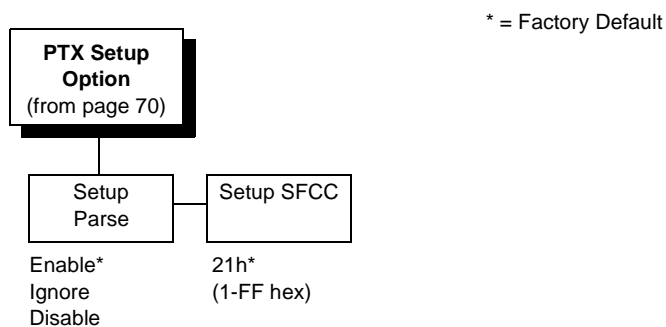
Selects the Special Function Control Code for the PTX_SETUP command and functions. See Appendix E on page 177 for PTX_SETUP commands.

### Setup Parse

Disables or enables the PTX_SETUP command.

### Setup SFCC

Allows you to choose the hex value of the ASCII character you wish to use as the SFCC for the PTX_SETUP command. Valid hex values are 01-FF. The default value is hex 21, which corresponds to the "!" character.

# TCP/IP Menu

[1] If Ethernet is installed

```
┌─────────────────┐
│    TCP/IP       │
│    Menu [1]     │
│ (from page 53)  │
└─────────────────┘
        │
   ┌────┴─────┐
┌──────────┐  ┌──────────┐
│ ETHERNET │──│ ETHERNET │
│ ADDRESS  │  │  PARAMS  │
└──────────┘  └──────────┘

(See page 97)  (See page 98)
```

# ETHERNET ADDRESS

```
┌─────────────┐                                    * = Factory Default
│  ETHERNET   │
│  ADDRESS    │
│(from page 96)│
└─────────────┘
       │
   ┌───────┬───────────┬───────────┬───────────┬─────────┐
┌──────────┐ ┌────────┐ ┌────────┐ ┌────────┐ ┌────────┐
│IP Address│ │ Subnet │ │Gateway │ │  MAC   │ │ DHCP   │
│          │ │  Mask  │ │Address │ │Address │ │        │
└──────────┘ └────────┘ └────────┘ └────────┘ └────────┘
xxx.xxx.xxx.xxx xxx.xxx.xxx.xxx xxx.xxx.xxx.xxx hhhhhhhhhhhh Disable*
                                                             Enable
```

## IP Address

A numeric address such as 123.45.61.23 which identifies a printer or server in a LAN or WAN.

## Subnet Mask

A binary value used to divide IP networks into smaller subnetworks or subnets. This mask is used to help determine whether IP packets need to be forwarded to other subnets.

## Gateway Address

A gateway address is the IP address of a hardware device (gateway) that translates data between two incompatible networks, which can include protocol translation.

## MAC Address

This menu item is the Manufacturer's Assigned Number, and is unique for each printer. It is read-only.

## DHCP

You can enable/disable the DHCP protocol using this option, but consult your administrator for the appropriate setting.

The options include:

• **Disable** (default)

• **Enable**

For information on assigning the IP Address, Gateway Address, Subnet Mask, and MAC Address, refer to the *Integrated Network Interface Card User's Manual*.

## ETHERNET PARAMS

```
ETHERNET
PARAMS
(from page 96)
```
                                                          * = Factory Default

| NetBIOS Protocol | ASCII Data Port | Keep Alive Timer | Ethernet Speed | Job Control |
|---|---|---|---|---|
| Enable* Disable | 9100* 1023 - 65535 | 3 Minutes* 2 - 10 Minutes | Auto Select* 10 Half Duplex 10 Full Duplex 100 Half Duplex 100 Full Duplex | Standard* Enhanced Fast Standard Off |
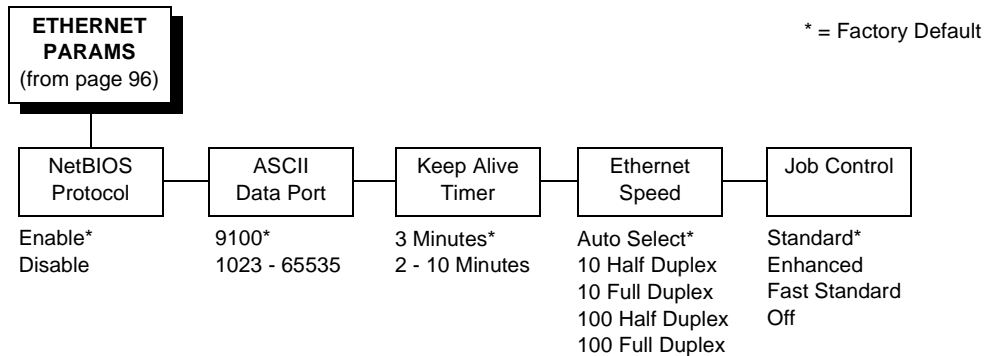
The ETHERNET PARAMS menu helps your printer communicate on a network.

### NetBIOS Protocol

This option determines whether the NetBIOS protocol will be available. The selections are as indicated below:

- **Enable** (default). Makes the NetBIOS protocol available with the ethernet installed.

- **Disable**. Makes the NetBIOS protocol unavailable during printer operation.

### ASCII Data Port

This option sets the port number for ASCII print jobs. The data port number needs to match your host system setting.

- **9100** (default)

- **1023 - 65535**

### Keep Alive Timer

This is the time that the Keep Alive Timer will run. With the Keep Alive Timer on, the tcp connection will stay connected even after the print job has terminated.

- **3 Minutes** (default)

- **2 - 10 Minutes**

## Ethernet Speed

This menu option only appears if a 10/100Base-T network interface card (NIC) is installed. The Ethernet Speed menu allows compatibility with different systems and networks. The factory default is Auto Select.

- **Auto Select**. (default) This setting tells the 10/100Base-T NIC to perform an auto detection scheme and configure itself to be 10 Half Duplex, 10 Full Duplex, 100 Half Duplex, or 100 Full Duplex.

- **10 Half Duplex**. Tells the 10/100Base-T NIC to communicate at 10 Megabits per second using half duplex.

- **10 Full Duplex**. Tells the 10/100Base-T NIC to communicate at 10 Megabits per second using full duplex.

- **100 Half Duplex**. Tells the 10/100Base-T NIC to communicate at 100 Megabits per second using half duplex.

- **100 Full Duplex**. Tells the 10/100Base-T NIC to communicate at 100 Megabits per second using full duplex.

## Job Control

The job control mode has three options:

- **Standard** (default). The NIC waits for the printer to finish receiving the current job before sending another job. The status line shows "done" when the job is completely received by the NIC. This is the default.

- **Enhanced**. The NIC waits for the printer to finish receiving the current job before sending another job. The status line shows "done" when the job is fully printed.

- **Fast Standard**. The EOJ (End of Job) packet is acknowledged immediately. Use this selection if the job is timed out due to a delay in the acknowlededgement of the EOJ packet because of the amount of data being printed.

- **Off**. No job synchonization between the NIC and the printer.

# Test Menu

* = Factory Default

**Test Menu**
(from page 53)

Pattern — Fault Override — Diag

Fault Override:
Paper Motion — Shuttle Off

Enable*
Disable

5 Seconds*
1 to 60 Seconds

Diag:
Panel Lock — Panel Display

Off*
On

Configuration*
Ribbon Life

Pattern:
Printer Tests — Test Width — Paper Out Dots — System Memory — Print Statistics

Printer Tests:
Shift Recycle*
All E's
E's + TOF
All H's
All Underlines
All Black
Shuttle Slow
Shuttle Fast
Shuttle Only
Phase Printer
Paperout Adj.
Burnin Test
Print Error Log
Clear Error Log
Ethernet Test
Acoustics
Dice 5
Checker
Weld Patch Log
All Characters

Test Width:
Full Width*
80 col.

Paper Out Dots:
40 dots*
(4-76)

System Memory:
32 Megabytes

Print Statistics:
On: x.x Hrs.
Print: x.x Hrs
Print Strokes:
  xxxxx
Print Lines:
  xxxxx
11 inch Pages:
  xxx
Poweron Pages

# Pattern Submenu

The Pattern Submenu has a series of printer self-tests which have predefined patterns used to test the basic printer functions.

## Printer Tests

These tests are used to check the print quality and operation of the printer.

**NOTE:** Your authorized service representative will typically run the tests. They are described in more detail in the *Maintenance Manual*.

- **Shift Recycle**. A sliding alphanumeric pattern which identifies missing or malformed characters, improper vertical alignment, or vertical compression.

- **All E's**. A pattern of all uppercase E's which identifies missing characters, misplaced dots, smeared characters, improper phasing problems, or light/dark character variations.

- **E's + TOF**. A pattern of all E's followed by a form feed to the next page top-of-form, which identifies paper motion or feeding problems.

- **All H's**. A pattern of all uppercase H's used to detect missing characters, misplaced dots, smeared characters, or improper phasing.

- **All Underlines**. An underline pattern useful for identifying hammer bank misalignment.

- **All Black**. A condition where all dot positions are printed, creating a solid black band.

- **Shuttle Slow**. Verifies proper operation by exercising shuttle and ribbon motion at low speed.

- **Shuttle Fast**. Verifies proper operation by exercising shuttle and ribbon motion at fast speed.

- **Shuttle Only**. Exercises only the shuttle at fast speed.

- **Phase Printer**. Checks for wavy print. The initial phase value is set in the factory. Run the test and check the quality. (The phase value prints on the left margin.) If the print looks too wavy, change the Phase Value parameter while the test is running. While the phase printer test runs, press the DOWN key. To change the value, press the PREV or NEXT key until the desired value displays and then press ENTER.

- **Paperout Adj.**. Verifies the current Paper Out Dots setting, which determines where the last line of text will print when there is a paper out condition. Setting this parameter correctly prevents printing on the platen.

- **Burnin Test**. Reserved for factory use.

- **Print Error Log**. Prints the current log of errors. Most non-routine faults (ribbon stall, voltage faults) are stored in the error log.

- **Clear Error Log**. Clears entries in the error log.

- **Ethernet Test**. Prints the Ethernet statistics stored on the Ethernet (if present).

- **Acoustics**. A particular test pattern that is used to measure acoustics.

- **Dice 5**. Pattern used to measure print density.
- **Prnt Ribbon Log**. Prints log of cartridge installed in the printer.
- **Checker**. For factory use. This pattern helps identify marginal printhead elements, quality of edge sharpness, and uneven print quality.
- **Weld Patch Log**. Prints the ribbon weld log.
- **All Characters**. Prints all characters from the available character sets.

### Test Width

Set this parameter to run the self-tests at full width or 80 columns.

### Paper Out Dots

**CAUTION**    **Only authorized service representatives should set this parameter.**

This parameter is used to adjust the paper out distance from the perforation; you can specify where the last line on the page will print when there is a paper out condition. Setting this parameter correctly prevents printing on the platen.

### System Memory

Displays the amount of RAM installed.

### Print Statistics

You can view various printer statistics and refer to them for preventive maintenance purposes. Printer statistics accumulate continuously; they do not reset when you turn off the printer. All of the printer statistics are set to zero at the factory after burn-in testing.

- **On**. The cumulative time in hours the printer has been powered on. The range is 0 to 30,000 hours.
- **Print**. The cumulative time in hours the printer has actually been printing. The range is 0 to 30,000 hours.
- **Print Strokes**. The cumulative number of back-and-forth shuttle strokes the printer has printed during normal printer operation. The range is 0 to 2,147,483,647 shuttle strokes.
- **Print Lines**. The cumulative number of lines the printer has printed. The range is 0 to 2,147,483,647 print lines.
- **11 inch Pages**. The cumulative number of pages the printer has printed. The range in print pages is 0 to 2,147,483,647 total inches of paper movement divided by 11.
- **Poweron Pages**. The number of 11 inch pages that have been printed since the current power on of the printer.

## Fault Override Submenu

This submenu deals with the configuration of fault information from the engine.

### Paper Motion

This parameter controls paper motion fault reporting status. This setting is saved in NVRAM so that it does not need to be set up on powerup each time.

### Shuttle Off

The amount of time the shuttle continues moving after no data is received. If your host is slow, setting the number to a higher value will prevent the printer from spending time shuttling up and down between data bursts.

## Diag Submenu

This submenu deals with the configuration of panel functionality defaults.

### Panel Lock

This parameter controls whether the Enter key is locked or unlocked at power-up.

- **Off** (default). The panel is unlocked upon power-up.
- **On**. The panel is locked upon power-up.

### Panel Display

This parameter controls the information displayed on the second line of the control panel display.

- **Configuration** (default). The active configuration name displays on the second display line.
- **Ribbon Life**. The Ribbon Life indicator displays on the second display line.

# 6600 CRP Clear Menu

```
         ┌──────────┐
         │  Clear   │
         │  Menu    │
         └──────────┘
              │
   ┌──────────┼────────────┬──────────────┐
┌──────┐  ┌──────────┐  ┌──────────┐  ┌──────────┐
│Buffers│ │All Configs│  │ Current  │  │  Reset   │
│      │  │          │  │  Config  │  │          │
└──────┘  └──────────┘  └──────────┘  └──────────┘
```
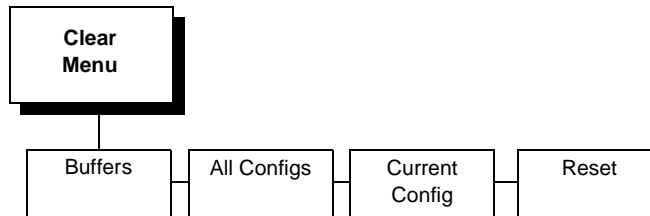
## Buffers

Clears all buffers. It also resets the application task to its initial state.

## All Configs

Copies the Factory Configuration settings into all saved configurations. Any parameters not listed on the Configuration Report, such as special characters downloaded from the host computer, are unaffected.

## Current Config

Copies the Factory Configuration settings into the current configuration. Any parameters not listed on the Configuration Report, such as special characters downloaded from the host computer, are unaffected.

## Reset

The printer controller performs a hardware reset. You may use this in lieu of cycling power to the printer. As with cycling power, the Powerup Configuration is loaded as the Current Configuration.

# 5   *Interfaces*

## Overview

This chapter describes the host interfaces provided with the printer. The printer interface is the point where the data line from the host computer plugs into the printer. The interface processes all communications signals and data to and from the host computer. Plus, with the Auto Switching feature, you can configure the printer to accept several interfaces at the same time (see "Auto Switching" on page 85).

**IMPORTANT**   **To comply with Electromagnetic Compatibility (EMC) regulatory requirements all electrical signal interface cables connected to this printer must be of a minimal quality level, be of the correct length, and be properly installed.**

**The RS-232 port and parallel port interface cables must meet the following specifications:**

- **The cable design must be double shielded with a copper braid over an aluminum mylar foil and not just a conductive foil spiral wrapped around a drain wire.**

- **The shield must terminate coaxially (360 degrees) to a metal connector housing and not be terminated by just a simple wire lead.**

- **The cable length, including connectors, must be 5 meters or less.**

- **The cable connector anchor screws must be securely seated into the printer receptor hardware.**

**For reference purposes only, two specific Centronics parallel port cables that have been tested and found to comply with these requirements are Belkin® part number F2A046-10 and Primelogic® part number PLU 2823224. Other electrically equivalent cables are acceptable.**

This chapter describes the interfaces provided with the printer.

**Standard Host Interfaces:**

- Centronics parallel
- IEEE 1284 parallel bidirectional
- High Speed Serial Port (RS-232)

**Optional Host Interfaces:**

- Ethernet 10/100BaseT

In addition to descriptions for the multi-line interfaces, this chapter also provides instructions for configuration of terminating resistors for the parallel interfaces.

# Centronics Parallel Interface

**Table 4. Centronics Interface Connector Pin Assignments**

| Input Signals | | Output Signals | | Miscellaneous | |
|---|---|---|---|---|---|
| **Signal** | **Pin** | **Signal** | **Pin** | **Signal** | **Pin** |
| DATA LINE 1<br>  Return | 2<br>20 | ACKNOWLEDGE<br>  Return | 10<br>28 | CHASSIS GROUND | 17 |
| DATA LINE 2<br>  Return | 3<br>21 | ONLINE<br>  Return | 13<br>28 | GROUND | 30 |
| DATA LINE 3<br>  Return | 4<br>22 | FAULT<br>  Return | 32<br>29 | Spares | 14 |
| DATA LINE 4<br>  Return | 5<br>23 | PAPER EMPTY<br>  Return | 12<br>28 | No Connection | 34,35,<br>36 |
| DATA LINE 5<br>  Return | 6<br>24 | BUSY<br>  Return | 11<br>29 | +5 Volts | 18 |
| DATA LINE 6<br>  Return | 7<br>25 | | | | |
| DATA LINE 7<br>  Return | 8<br>26 | | | | |
| DATA LINE 8<br>  Return | 9<br>27 | | | | |
| DATA STROBE<br>  Return | 1<br>19 | | | | |
| PAPER INSTRUCTION<br>  Return | 15<br>29 | | | | |
| PRIME<br>  Return | 31<br>30 | | | | |

The length of the data cable from the host computer to the printer must not exceed 15 feet (5 meters).

# Centronics Parallel Interface Signals

**Data Lines 1 through 8.** Provides eight standard or inverted levels from the host that specify character data, plot data, or a control code. Data Line 8 allows access to the extended ASCII character set. You may enable or disable this line via the Data Bit 8 parameter on the Centronics submenu.

**Data Strobe.** Carries a low true, 100 ns minimum pulse from the host that clocks data into the printer.

**Acknowledge.** A low true pulse from the printer indicating the character or function code has been received and the printer is ready for the next data transfer.

**Online.** A high true level from the printer to indicate the printer is ready for data transfer and the ON LINE key on the control panel has been activated. When the printer is in online mode, it may accept data from the host.

**Paper Empty (PE).** A high true level from the printer to indicate the printer is in a paper empty or paper jam fault.

**Busy.** A high true level from the printer to indicate the printer cannot receive data.

**Prime.** A high true level from the host to indicate the printer should perform a warm start (printer is reset to the power-up configuration values).

**Paper Instruction (PI).** Carries a CVFU signal from the host with the same timing and polarity as the data line.

**Fault.** A low true level from the printer indicates a printer fault.

# IEEE 1284 Parallel Interface

The 1284 supports three operating modes, which are determined by negotiation between the printer and the host.

## Compatibility Mode

This mode provides compatibility with Centronics-like host I/O (see Table 5). Data is transferred from the host to the printer in 8-bit bytes over the data lines.

Compatibility Mode can be combined with Nibble and Byte Modes to provide bidirectional communication.

## Nibble Mode

Eight bits equals one byte. When a byte of data is sent to the printer, the eight bits are sent over eight data lines.

Some devices cannot send data over their eight data lines. To bypass this, the 1284 permits data to be sent as half a byte over four status lines. (Half a byte equals one nibble.) Two sequential four-bit nibbles are sent over the lines.

Data is transferred from printer to host in four-bit nibbles over the status lines, and the host controls the transmission.

## Byte Mode

The printer and host send data to each other along eight data lines (one bit per line).

If bidirectional communication is supported by the printer and the host, the host will take control of the data transfer.

# Signals

Table 5 lists each of the signals associated with the corresponding pins on the 1284 interface. Descriptions of the signals follow.

**Table 5. 1284 Signals**

| Pin | Source of Data | Type of Mode | | |
|-----|----------------|--------------|--------|------|
| | | Compatible | Nibble | Byte |
| 1 | Host | nStrobe | HostClk | Host/Clk |
| 2 | Host/Printer | Data 1 (LSB) | | |
| 3 | Host/Printer | Data 2 | | |
| 4 | Host/Printer | Data 3 | | |
| 5 | Host/Printer | Data 4 | | |
| 6 | Host/Printer | Data 5 | | |
| 7 | Host/Printer | Data 6 | | |
| 8 | Host/Printer | Data 7 | | |
| 9 | Host/Printer | Data 8 (MSB) | | |
| 10 | Printer | nAck | PtrClk | PtrClk |
| 11 | Printer | Busy | PtrBusy | PtrBusy |
| 12 | Printer | PError | AckDataReq | AckDataReq |
| 13 | Printer | Select | Xflag | Xflag |
| 14 | Host | nAutoFd | Host Busy | HostAck |
| 15 | | Not Defined | | |
| 16 | | Logic Grid | | |
| 17 | | Chassis Grid | | |
| 18 | Printer | Peripheral Logic High | | |
| 19 | | Signal Ground (nStrobe) | | |
| 20 | | Signal Ground (Data 1) | | |
| 21 | | Signal Ground (Data 2) | | |
| 22 | | Signal Ground (Data 3) | | |
| 23 | | Signal Ground (Data 4) | | |
| 24 | | Signal Ground (Data 5) | | |
| 25 | | Signal Ground (Data 6) | | |

**Table 5. 1284 Signals (continued)**

| Pin | Source of Data | Type of Mode | | |
|-----|----------------|------------|--------|------|
| | | **Compatible** | **Nibble** | **Byte** |
| 26 | | Signal Ground (Data 7) | | |
| 27 | | Signal Ground (Data 8) | | |
| 28 | | Signal Ground (PError, Select, nAck) | | |
| 29 | | Signal Ground (Busy, nFault) | | |
| 30 | | Signal Ground (nAutoFd, nSelectIn, nInit) | | |
| 31 | Host | nInit | | |
| 32 | Printer | NFault | nDataAvail | aDataAvail |
| 33 | | Not Defined | | |
| 34 | | Not Defined | | |
| 35 | | Not Defined | | |
| 36 | Host | nSelectIn | 1284 Active | 1284 Active |

**NOTE:** The length of the data cable from the host computer to the printer should not exceed 32 feet (10 meters).

**Host Clock / nWrite.** Driven by host. Data transferred from host to printer. When printer sends data, two types are available. If Nibble mode, signal is set high. If Byte mode, signal is set low.

**Data 1 through Data 8.** These pins are host-driven in Compatibility mode and bidirectional in Byte mode. They are not used in Nibble mode. Data 1 is the least significant bit; Data 8 is the most significant bit.

**Printer Clock / Peripheral Clock / Interrup.** Driven by the printer. A signal from the printer indicating the character or function code has been received and the printer is ready for the next data transfer.

**Printer Busy / Peripheral Acknowledge / nWait.** Driven by the printer. Indicates the printer cannot receive data. (Data bits 4 and 8 in Nibble mode.)

**Acknowledge Data Request / nAcknowledge Reverse.** Driven by the printer. Indicates the printer is in a fault condition. (Data bits 3 and 7 in Nibble mode.)

**Xflag.** Driven by the printer. A high true level indicating the printer is ready for data transfer and the printer is on line. (Data bits 2 and 6 in Nibble mode.)

**Host Busy / Host Acknowledge / NDStrobe.** Driven by the host. Activates auto-line feed mode.

**Peripheral Logic High.** Driven by the printer. When the line is high, the printer indicates all of its signals are in a valid state. When the line is low, the printer indicates its power is off or its signals are in an invalid state.

**nReverse Request.** Driven by the host. Resets the interface and forces a return to Compatibility mode idle phase.

**nData Available / nPeripheral Request.** Driven by the printer. Indicates the printer has encountered an error. (Data bits 1 and 5 in Nibble mode.)

**1284 Active / nAStrobe.** Driven by the host. A peripheral device is selected.

**Host Logic High**—Driven by the host. When set to high, the host indicates all of its signals are in a valid state. When set to low, the host indicates its power is off or its signals are in an invalid state.

**nInit** —Resets init interface from the host.

# Terminating Resistor Configurations

## V6 Controller Board

For parallel interface configurations, the printer is equipped with 470 Ohm and and 1K Ohm terminating reistors on the controller board. These are suitable for most applications. See Figure 24.

If the standard terminating resistor pack is not compatible with the particular interface driver requirements of the host computer, other RP1 and RP2 values may be required. 220 Ohm and 330 Ohm alternate terminating resistors are provided with the printer. If you install the 220 Ohm resistor, you must also install the 330 Ohm resistor. Possible terminating resistor combinations are shown below.

| Configuration | RP1 | RP2 |
|---|---|---|
| Factory Default | 470 Ohm | 1K Ohm |
| Alternate | 220 Ohm | 330 Ohm |

RP1 and RP2
Default: 470/1K Ohm
Alt: 220/330 Ohm
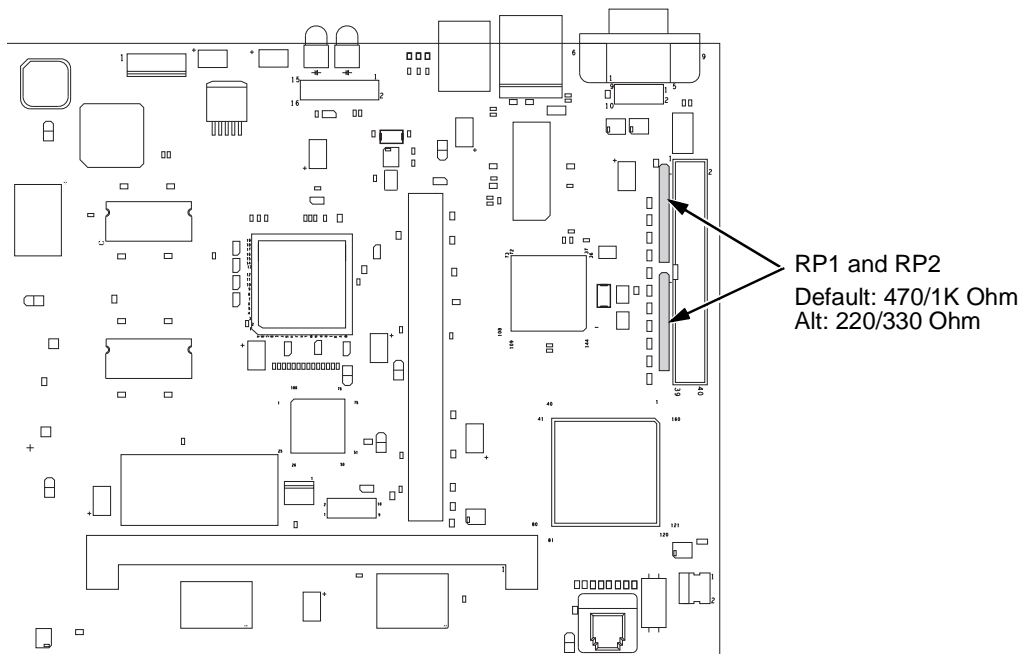
**Figure 24. Terminating Resistors, V6 Controller Board**

## Removal And Installation

The procedure for removing and installing terminating resistors is provided in your *Maintenance Manual.*

**CAUTION**     **This is an involved maintenance procedure. To avoid damage to the equipment, only a trained technician should perform this procedure.**

# RS-232 Serial Interface

**NOTE:** The RS-232 serial interface circuit characteristics are compatible with the Electronic Industry Association Specifications EIA-232-E and EIA-422-B.

The RS-232 serial interface enables the printer to operate with bit serial devices that are compatible with an RS-232 controller. The input serial data transfer rate (in baud) is selectable from the printer's control panel. Baud rates of 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, and 115200 baud rates are available.

The length of the data cable from the host computer to the printer must not exceed 50 feet (15 meters) for RS-232.

# RS-232

**Table 6. Standard 500, 1000, 1500, and 2000 lpm Models
RS-232 Serial Interface Connector Pin Assignments**

| Input Signals | | Output Signals | | Miscellaneous | |
|---|---|---|---|---|---|
| **Signal** | **Pin** | **Signal** | **Pin** | **Signal** | **Pin** |
| Receive Data (RD) | 3 | Transmit Status & Control Data (TD) | 2 | Chassis Ground | 1 |
| Clear To Send (CTS) | 5 | Request To Send (RTS) | 4 | Signal Ground | 7 |
| Data Set Ready (DSR) | 6 | Data Terminal Ready (DTR) | 20 | | |
| Data Carrier Detect (DCD) | 8 | | | | |

**Table 7. RS-232 Serial Interface Connector Pin Assignments**

| Input Signals | | Output Signals | | Miscellaneous | |
|---|---|---|---|---|---|
| **Signal** | **Pin** | **Signal** | **Pin** | **Signal** | **Pin** |
| Receive Data (RD) | 2 | Transmit Status & Control Data (TD) | 3 | Chassis/Signal Ground | 5 |
| Clear To Send (CTS) | 8 | Request To Send (RTS) | 7 | | |
| Data Set Ready (DSR) | 6 | Data Terminal Ready (DTR) | 4 | | |
| Data Carrier Detect (DCD) | 1 | | | | |

**Receive Data (RD).** Serial data stream to the printer.

**Transmit Data (TD).** Serial data stream from the printer for transmitting status and control information to the host. Subject to protocol selection.

**Request To Send (RTS).** Control signal from the printer. Subject to configuration.

**Clear To Send (CTS).** Status signal to the printer indicating the host is ready to receive data/status signals from the printer.

**Data Set Ready (DSR).** Status signal to the printer indicating the host is in a ready condition.

**Data Carrier Detect (DCD).** Status signal to the printer. The ON condition is required for the printer to receive data.

**Data Terminal Ready (DTR).** Control signal from the printer. Subject to configuration.

# 6 *Reprogramming the Security Key*

## Reprogramming The Security Key

The security key on the PSA3 controller board can be reprogrammed with a Software Program Exchange (SPX) module. The SPX is an intelligent module that plugs into the debug port on the back of printers equipped with the PSA3 "Hurricane" controller board. The SPX is used only once; it automatically overwrites itself after successfully reprogramming a security key. This allows the end user or a service technician to enable features such as new emulations without having to remove covers and install a new security key on the controller board.

The SPX is used at power-up only and is not left in the printer during normal operation. Because it is a single-use disposable item the user is not required to return it to the vendor or manufacturer.

### How To Program The Security Key

1. Power off the printer.

2. On cabinet models, open the rear door. On pedestal models, refer to Figure 25 to locate the debug port at the rear of the printer.

3. Insert the SPX into the debug port as shown.
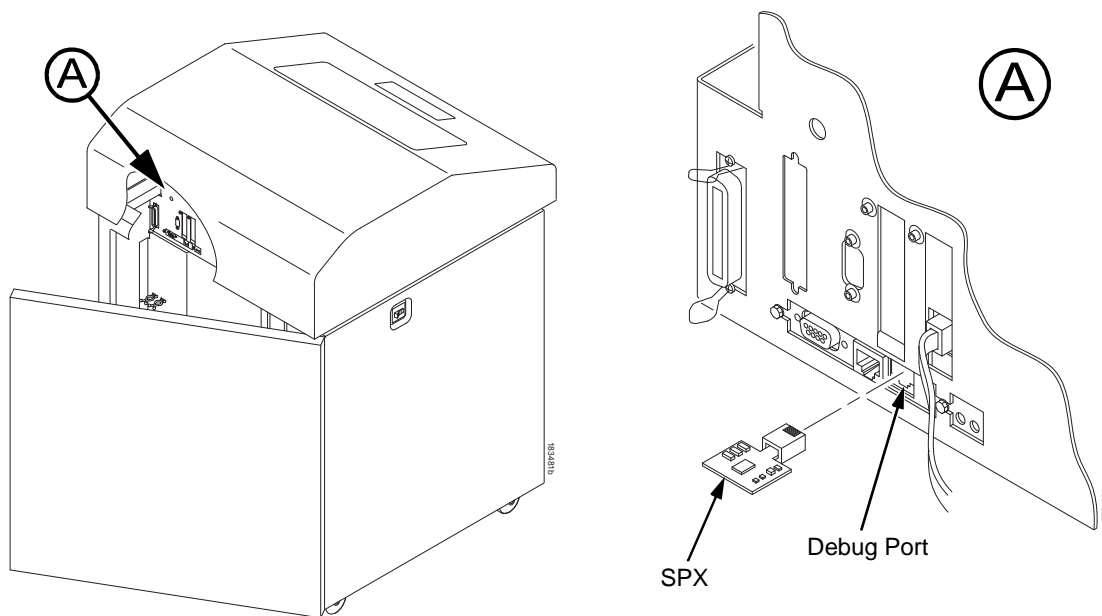
**Figure 25. Inserting The SPX into the Debug Port**

4. Power on the printer. The printer will begin its boot-up sequence.

5. When the printer detects a valid SPX, the control panel displays: "NEW
   SPX DETECTED
   PRESS ENTER"

**NOTE:** If an error message displays, find the message in the Message List in
   Chapter 7 and follow the troubleshooting instructions.

6. Press the **MENU/ENTER** key to activate the reprogramming sequence.
   The display will read:
   "PROGRAMMING. PLEASE WAIT."

7. When the security key is reprogrammed, the display will read:
   "REMOVE USED SPX
   THEN PRESS ENTER"

8. Remove the SPX from the debug port at the rear of the printer.

9. Press the **MENU/ENTER** key. The printer will reboot itself and you may
   resume normal printing.

10. You may need to download a new program file to use the new feature.

11. You may need to set additional menu parameters for any new features
    that have been added or enabled.

# 7 *Troubleshooting*

## Cleaning Requirements

Clean the printer every six months or after every 1000 hours of operation, whichever occurs first. If the printer is located in a dusty area or is used for heavy duty printing, clean it more often.

**WARNING**     **Disconnect the power source before cleaning the printer.**

**Vor dem Säubern des Druckers ist die Netzverbindung zu unterbrechen.**

**Débranchez l'alimentation avant de nettoyer l'imprimante.**

**Desconecte la fuente de energía antes de limpiar la impresora.**

**Staccare la fonte di energia prima della pulitura della stampante.**

### Exterior Cleaning

Clean the outside of the cabinet with a soft, lint-free cloth and mild detergent soap. (Dishwashing liquid works well.) Do not use abrasive powders or chemical solvents. Clean the windows with plain water or mild window cleaner. Always apply the cleaning solution to the cloth; never pour cleaning solution directly onto the printer.

## Interior Cleaning

Over time, particles of paper and ink accumulate inside the printer. This is normal. Paper dust and ink build-up must be periodically removed to avoid degraded print quality. Most paper dust accumulates around the ends of the platen and ribbon path.
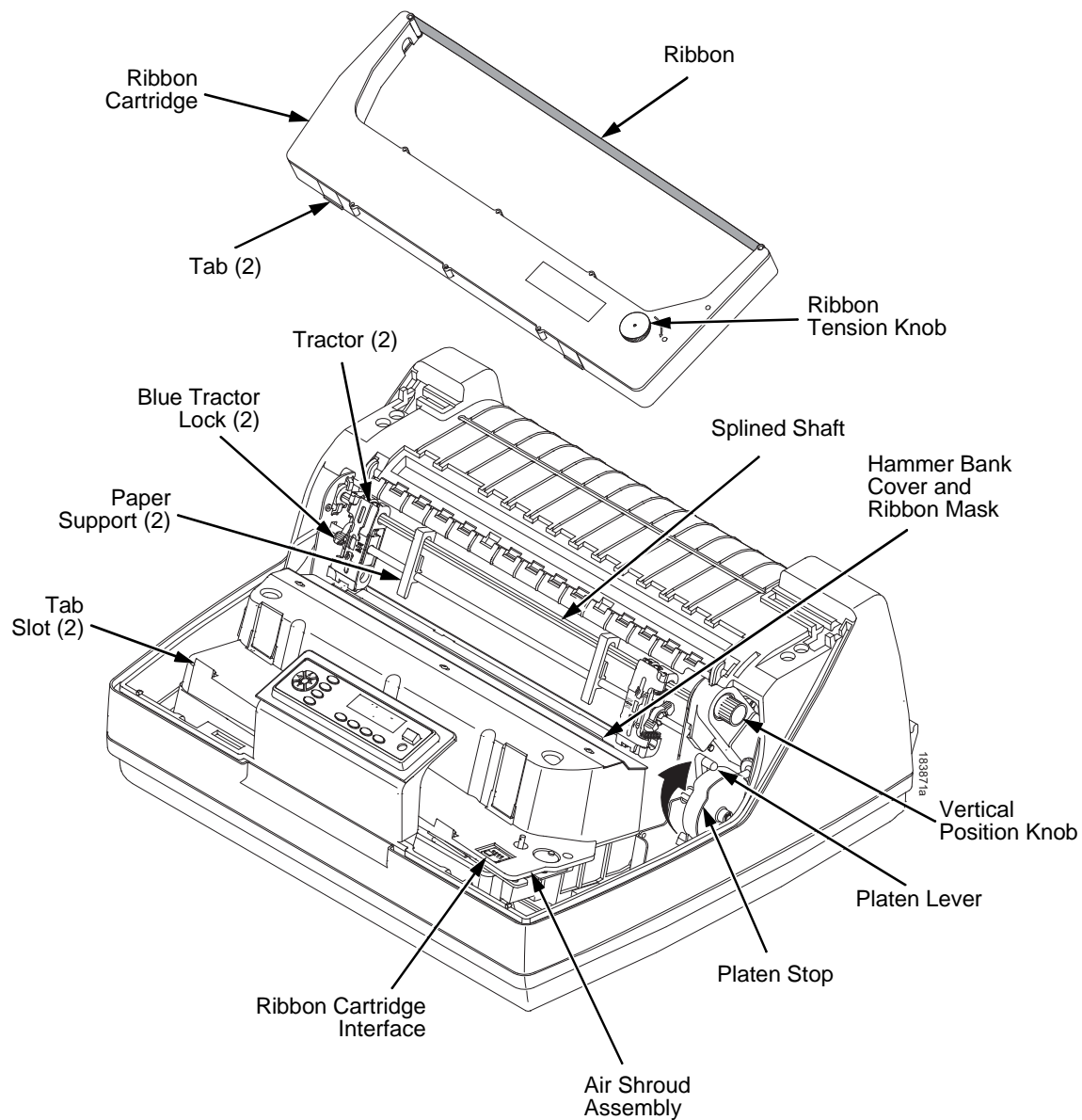


**Figure 26. Interior Printer Components**

To clean the interior of the printer perform the following steps.

1. Power off the printer and unplug the printer power cord.

2. Open the printer cover.

3. Fully raise the platen lever.

4. Unload the paper.

5. Remove the ribbon catridge.

6. Lift the ribbon out of the ribbon path.

7. Brush the paper dust and ribbon lint off the tractors, shuttle cover assembly, and base casting with a soft-bristled, non-metallic brush (such as a toothbrush). Vacuum up the residue.

**CAUTION** **Vacuum carefully around the hammer bank and surrounding area to avoid damage. To avoid corrosion damage, use only alcohol when cleaning the printer mechanical elements. Solutions used to clean mechanical elements must contain no water.**

8. Wipe the splined shaft with a soft cloth.

9. Check the ribbon mask and hammer bank cover for bits of torn paper or ribbon lint.

10. Remove dust and ink from the platen using a soft cloth lightly moistened with anhydrous alcohol. (The platen is the thick silver bar behind the hammer bank cover that rotates when the platen lever is rotated.)

**CAUTION** **When cleaning the platen, be very careful not to get any alcohol in the hammer bank, because alcohol will cause severe damage to the hammer bank. Only a trained service technician should clean the shuttle assembly.**

11. Brush and vacuum the accumulated dust or residue inside the lower cabinet.

12. Wipe the lower cabinet interior with a clean, lint-free cloth dampened (not wet) with water and mild detergent or window cleaning solution. Dry the lower cabinet interior by wiping it down with a clean, lint-free cloth.

13. Install the ribbon and load paper.

# Diagnosing Problems

This section is designed to help you fix problems which may arise with normal printer operation.

## Bar Code Verification

The most important consideration when printing a bar code is to ensure that the bar code will be scanned properly. Incorporating a bar code quality procedure in the printing process is the best way to ensure that bar codes are being printed correctly. A properly implemented verification procedure will increase overall bar code quality, reduce waste from misprinted bar codes, and achieve high first-time read rates. A high first-time read rate is an increasingly important factor in newer, more efficient systems where manually entered data is not acceptable as a backup function. Verification also minimizes the costs of returned products due to poor reading or unaccountable bar codes.

RJS designs and manufactures the world's most complete line of bar code verification products, including their portable Inspector and Laser Inspector models, On-Line Inspector and AutoScan II series. For more information on RJS bar code verifiers, visit their web site at **www.printronix.com/rjs**.

# Printing A Hex Dump

A hex code printout (or hex dump) is a translation of all host interface data to its hexadecimal equivalent, listing all ASCII character data received from the host computer with their corresponding two-digit hexadecimal codes. Hex dumps are used to troubleshoot printer data reception problems.

Printable characters print as the assigned symbol; nonprintable characters are indicated by a period (.).

Figure 27 shows an example of a hex dump.

```
 !"#$%&'()*+,-./  20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F
0123456789:;<=>?  30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F
@ABCDEFGHIJKLMNO  40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D 4E 4F
PQRSTUVWXYZ[\]^_  50 51 52 53 54 55 56 57 58 59 5A 5B 5C 5D 5E 5F
`abcdefghijklmno  60 61 62 63 64 65 66 67 68 69 6A 6B 6C 6D 6E 6F
pqrstuvwxyz{|}~   70 71 72 73 74 75 76 77 78 79 7A 7B 7C 7D 7E 20
 !"#$%&'()*+,-./0 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F 30
123456789:;<=>?@  31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40
ABCDEFGH..!"#$%&  41 42 43 44 45 46 47 48 0D 0A 21 22 23 24 25 26
'()*+,-./0123456  27 28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34 35 36
789:;<=>?@ABCDEF  37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43 44 45 46
GHIJKLMNOPQRSTUV  47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54 55 56
WXYZ[\]^_`abcdef  57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63 64 65 66
ghijklmnopqrstuv  67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74 75 76
wxyz{|}~ !"#$%&'  77 78 79 7A 7B 7C 7D 7E 20 21 22 23 24 25 26 27
()*+,-./01234567  28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34 35 36 37
89:;<=>?@ABCDEFG  38 39 3A 3B 3C 3D 3E 3F 40 41 42 43 44 45 46 47
HI..!"#$%&'()*+,- 48 49 0D 0A 22 23 24 25 26 27 28 29 2A 2B 2C 2D
./0123456789:;<=  2E 2F 30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D
>?@ABCDEFGHIJKLM  3E 3F 40 41 42 43 44 45 46 47 48 49 4A 4B 4C 4D
NOPQRSTUVWXYZ[\]  4E 4F 50 51 52 53 54 55 56 57 58 59 5A 5B 5C 5D
^_`abcdefghijklm  5E 5F 60 61 62 63 64 65 66 67 68 69 6A 6B 6C 6D
nopqrstuvwxyz{|}  6E 6F 70 71 72 73 74 75 76 77 78 79 7A 7B 7C 7D
~ !"#$%&'()*+,-.  7E 20 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E
/0123456789:;<=>  2F 30 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E
?@ABCDEFGHIJ..#$  3F 40 41 42 43 44 45 46 47 48 49 4A 0D 0A 23 24
%&'()*+,-./01234  25 26 27 28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34
56789:;<=>?@ABCD  35 36 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43 44
EFGHIJKLMNOPQRST  45 46 47 48 49 4A 4B 4C 4D 4E 4F 50 51 52 53 54
UVWXYZ[\]^_`abcd  55 56 57 58 59 5A 5B 5C 5D 5E 5F 60 61 62 63 64
efghijklmnopqrst  65 66 67 68 69 6A 6B 6C 6D 6E 6F 70 71 72 73 74
uvwxyz{|}~ !"#$%  75 76 77 78 79 7A 7B 7C 7D 7E 20 21 22 23 24 25
&'()*+,-./012345  26 27 28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34 35
6789:;<=>?@ABCDE  36 37 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43 44 45
FGHIJK..$%&'()*+  46 47 48 49 4A 4B 0D 0A 24 25 26 27 28 29 2A 2B
,-./0123456789:; 2C 2D 2E 2F 30 31 32 33 34 35 36 37 38 39 3A 3B
<=>?@ABCDEFGHIJK  3C 3D 3E 3F 40 41 42 43 44 45 46 47 48 49 4A 4B
LMNOPQRSTUVWXYZ[  4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 5A 5B
\]^_`abcdefghijk  5C 5D 5E 5F 60 61 62 63 64 65 66 67 68 69 6A 6B
lmnopqrstuvwxyz{  6C 6D 6E 6F 70 71 72 73 74 75 76 77 78 79 7A 7B
|}~ !"#$%&'()*+,  7C 7D 7E 20 21 22 23 24 25 26 27 28 29 2A 2B 2C
```

**Figure 27. Hex Dump Sample**

## Fault Messages

If a fault condition occurs in the printer, the status indicator on the control panel flashes on and off, and the message display indicates the specific fault. Fault messages are summarized in Table 8.

Displayed faults fall into one of two categories:

- Operator correctable
- Field service required

For the operator-correctable faults, follow the suggested solution in Table 8. After correcting the displayed fault, press the CLEAR key to clear the error message and status indicator and resume printing. If the fault message reappears, contact your authorized service representative.

**NOTE:** The *Maintenance Manual* provides more detailed information and procedures for resolving fault conditions. However, many of the procedures described there must be performed only by your authorized service representative.

### Fault Messages Requiring Field Service Attention

If a fault is not correctable by the operator, the fault message is followed by an asterisk (*). This usually indicates that an authorized service representative is needed. You may try two steps to clear the fault before calling your authorized service representative:

1. Set the printer power switch to O (Off), wait 15 seconds, then turn the printer on again. Run your print job again. If the message does not appear, it was a false indication and no further attention is required.

2. If the message reappears, press the CLEAR key. If the message disappears, it was a false indication and no further attention is required. If the message reappears, call your authorized service representative.

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| 48V CIRCUIT*<br>See User Manual | No | Either the power supply is not generating a proper 48 Volts or the controller board is not detecting a 48 Volt output from the power supply board. | Contact your authorized service representative.[1] |
| 48V PWR FAIL* | No | Internal power failure. | Contact your authorized service representative.[1] |
| A TO D OVERRUN* | No | Analog to Digital Overrun. The analog-to-digital converter overflowed. | Contact your authorized service representative.[1] |
| ACCESS NULL PTR* | No | Access Null Pointer: The processor tried to access a pointer that contains nothing (null). | Contact your authorized service representative.[1] |
| B00 STATUS: SDRAM DETECTION 166MHZ | No | Status message: the printer has begun its boot-up routines and is checking for the presence of SDRAM. | No action required. |
| B01 STATUS: 8245 SDRAM TEST 32MB | No | Status message: printer boot-up routines are testing SDRAM. | No action required. |
| B10 ERROR: NO DRAM DETECTED* | No | SDRAM DIMM may not be properly installed. Boot-up routines did not detect the presence of the SDRAM DIMM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B11 ERROR: RAM TEST FAILED* | No | SDRAM failed the boot initialization test. SDRAM DIMM may not be properly installed. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B12 ERROR: PROGRAM MISSING* | Yes | The printer does not see a program in flash memory. | There is no program in printer memory. Download an emulation. |
| B13 ERROR: NOT COMPATIBLE* | No | Attempting to download a program that is not compatible with the printer. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| B19 ERROR: DC RETURNED* | No | The message indicates an incorrectly assembled and tested machine. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B20 STATUS :00% DOWNLOAD MODE | No | Status message informing the operator that software is being downloaded. Percentage figure indicates approximate amount loaded into the printer. | No action is required. |
| B21 STATUS: PRINTER RESET | No | Status message informing the operator that the printer is undergoing a system reset. | No action is required. |
| B22 ERROR: DECOMPRESS SIZE* | No | FLASH memory has not passed boot initialization tests. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B23 ERROR: DECOMPRESS CKSUM* | No | FLASH memory has not passed boot initialization tests. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B30 STATUS: INITIALIZING... | N/A | Status message: the printer is running its initialization routines after startup and successful memory tests. | No action is required. |
| B35 STATUS: WAITING FOR EC STATUS | N/A | Status message: the DC on the controller board is waiting for communication with the EC. If this message does not clear witin a few seconds there is an electrical or electronic problem on the controller board. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B40 ERROR: SDRAM EEPROM CKSUM BAD* | No | Flash memory has not passed boot initialization tests. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B41 ERROR: DIM MEMORY NOT SDRAM* | No | The DRAM DIMM installed on the controller board is not Synchronous DRAM (SDRAM). | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| B42 ERROR: SDRAM ROWS NOT ALLOWED* | No | Printer boot initialization tests detect incorrect SDRAM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B43 ERROR: SDRAM TOO MANY BANKS* | No | Printer boot initialization tests detect incorrect SDRAM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B44 ERROR: SDRAM NOT 64 BITS WIDE* | No | Printer boot initialization tests detect incorrect SDRAM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B45 ERROR: SDRAM IS WRONG VOLTAGE* | No | Printer boot initialization tests detect incorrect SDRAM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B46 ERROR: SDRAM HAS MIXED SIZES* | No | Printer boot initialization tests detect incorrect SDRAM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B47 ERROR: SDRAM LARGER THAN 256M* | No | Printer boot initialization tests detect incorrect SDRAM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B49 ERROR: SDRAM # LOGICAL BANKS* | No | Printer boot initialization tests detect incorrect SDRAM. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B50 ERROR: SDRAM LOGIC COMB BANKS* | No | SDRAM DIMM is not compatible with the computer. SDRAM DIMM may not be properly installed. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B50 STATUS: XX% CLEAR FLASH | No | Emulation software sucessfully loaded in RAM. Old program being deleted from flash memory. | No action is required. |
| B51 STATUS: XX% LOADING... | No | Status message: printer boot-up routines are loading printer system software into flash memory and SDRAM. | No action required. |
| B53 ERROR: 12C NO ARBITRATION | No | There is a problem on the $I^2C$ bus which allows the SDRAM DIMM to communicate with the GPIO or CT interface. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| B54 ERROR: SDA LINE STUCK LOW | No | The SDRAM or a PCI card is shorting out the serial data bus on the controller board. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |
| B55 STATUS: SEND PROGRAM TO EC | No | EC program downloaded and being programed in EC. | No action is required. |
| BUFFER OVERRUN | Yes | The print buffer has overflowed on a serial interface. The printed output may contain random * (asterisk) characters. Make a configuration printout. | Verify that the printer matches the host serial interface configuration settings for Data Protocol, Baud Rate, Data Bits, Stop Bits, Parity, Data Terminal Ready, and Request to Send. Set printer serial interface parameters to match those of the host. |
| CLEAR PAPER JAM | Yes | No paper motion. | Clear jam and reload paper. If this message recurs, contact your authorized service representative.[1] |
| CLEARING PROGRAM FROM FLASH | No | Status message: emulation software successfully loaded into printer RAM and the checksum matched. The old program is now being deleted from flash memory. | No action is required. |
| CLOSE PLATEN | Yes | The platen lever is open. | Close the platen lever. |
| COIL HOT | No | One or more hammer coils are overheating. | Contact your authorized service representative.[1] |
| CRTG COMM ERR See User Manual | No | The hardware cannot communicate properly with the cartridge. | 1. Make sure the ribbon cartridge is seated properly. 2. Remove and replace the ribbon cartridge if necessary. 3. Contact your authorized service representative.[1] |
| CRTG MISSING Install new RBN | Yes | The ribbon cartridge is missing or installed improperly. | 1. Make sure a ribbon cartridge is installed in the printer. 2. Make sure the ribbon cartridge is seated properly. 3. Remove and replace the cartridge if necessary. 4. Contact your authorized customer service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| CRTG NOT SETx Re-install RBN | Yes | The ribbon cartridge is not properly positioned. | 1. Make sure a ribbon cartridge is installed in the printer.<br>2. Make sure the ribbon cartridge is seated properly.<br>3. Remove and replace the cartridge if necessary.<br>4. Contact your authorized customer service representative.[1] |
| CTL VOLT FAIL* | No | Controller Voltage Failure. 15 V failure on the controller board. | Contact your authorized service representative.[1] |
| D50 Status %XX Clearing Flash | No | Status message: The printer is clearing its flash memory, where %XX represents the percentage completed. | No action is required. |
| D51 Status %XX Programming... | No | Status message: The printer is loading firmware, where %XX represents the percentage completed. | No action is required. |
| D55 Status: Send Program to EC | No | Status message: The printer is loading the engine controller program into the engine controller (EC). | No action is required. |
| DIAGNOSTIC PASSED | No | Status message: the printer passed its memory and hardware initialization tests. | No action is required. |
| DO NOT POWER OFF | No | Status message: The printer is performing an operation that must be completed before you can cycle power. | No action is required, but do not power off the printer until the operation is complete. |
| DP FIFO Busy* | Yes | There is a timing problem in the Engine Controller firmware. | 1. Cycle power. Run the print job again. If the message appears, download the emulation software again.<br>2. Cycle power. Run the print job again. If the message appears again, contact your authorized service representative.[1] |

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**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| DRVR CIR BAD* | No | Driver Circuit Bad. The hammer coil count test failed. | Contact your authorized service representative.[1] |
| E00 EXE @ ADDR0 See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E01A TYPE 0x40 See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E01B TYPE 0x60 See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E02 MACHINE CHK See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E03A DSI HASH L See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. <br> 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E03B DSI HASH S See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. <br> 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E03C DSI BAT PL See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. <br> 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E03D DSI BAT PS See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. <br> 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E03E DSI CXIWX See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. <br> 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E03F DSI CXOWX See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E03G DSI ECXIWX See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E03H DSI ECXOWX See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E04A ISI NO TRA See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E04B ISI DIRECT See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E04C ISI PROTEC See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E06 NOT ALIGNED See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E07 ILLEGAL INS See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E08 FLOATINGPNT See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E12 SYSTEM CALL See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E13 TRACE INT<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E16 ITRANS MISS<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E17 DLOAD MISS<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E18 DSTORE MISS<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E19 BREAKPOINT<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E20 SYS MANAGE See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E30 DEBUGGER See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E31A EVENT O BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E31B EVENT 1 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E31C EVENT 2 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software. 2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E31D EVENT 3 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E31E EVENT 4 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E31F EVENT 5 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E31G EVENT 6 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E31H EVENT 7 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E32A CND 0 BP<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E32B CND 1 BP<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E32C CND 2 BP<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E32D CND 3 BP<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E32E CND 4 BP<br>See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br><br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E32F CND 5 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E32G CND 6 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E32H CND 7 BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E33 WRITE BP See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| E34 TRACE CMPLT See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| E99 UNKNOWN INT See User Manual | Yes | An illegal or unsupported instruction was attempted in the application program. | 1. Cycle Power. Run the print job again. If the message appears, load the latest emulation software.<br>2. Cycle power. Run the print job again. If the message appears, record the display message and send it to your next higher support facility. |
| ERROR: CPLD NOT PROGRAMMED | No | The Complex Programmable Logic Device (CPLD) on the controller board is not programmed. The EC cannot read the version bits in the CPLD which tell the EC which configuration version is installed. | Contact your authorized service representative.[1] |
| ERROR: DC PROGRAM NOT VALID | Yes | The printer cannot find the data controller program or the validation checksum is corrupt. | Download the program again. If the message appears, contact your authorized service representative.[1] |
| ERROR: DRAM AT ADDRESS XXXXXXXX | Yes | The printer cannot find the engine controller program or the validation checksum is corrupt. | Download the program again. If the message appears, contact your authorized service representative.[1] |
| ERROR: EC PROGRAM NOT VALID | | The printer cannot find the engine controller program or the validation checksum is corrupt. | Download the program again. If the message occurs again, contact your authorized service representative.[1] |
| ERROR: EC STOPPED AT STATE XXXX | No | XXXX is a number from 0000 to 0010. The Engine Controller has stopped and is in the state identified by the number displayed. | Contact your authorized service representative.[1] |
| ERROR: FLASH DID NOT PROGRAM | Yes | The printer encountered an error trying to program flash memory. | Download the program again. If the message displays again, contact your authorized service representative.[1] |
| ERROR: FLASH NOT DETECTED | No | The printer could not find flash memory. | Contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| ERROR: LOCKED SN=nnnnnnnnnnnnnnn nnnnnn | No | nnnnnnnnnnnnnnnnnnnnnn n is the serial number of the printer's security key. The SPX serial number does not match the printer's serial number and cannot be used with the printer. | Contact your authorized service representative.[1] |
| ERROR: NO DRAM DETECTED | No | The printer could not find any DRAM. | Contact your authorized service representative.[1] |
| ERROR: NVRAM FAILURE | No | The non-volatile SRAM on the controller board has failed. | Contact your authorized service representative.[1] |
| ERROR OCCURRED FLUSHING QUEUES* | No | An interim message that displays while the printer discards host data it cannot use because a fault condition exists. | Wait for another message. When the asterisk (*) stops rotating, a different fault message will appear. Troubleshoot the final message. |
| ERROR: PROGRAM NEEDS MORE DRAM | No | The printer requires more DRAM to run the downloaded program. | Contact your authorized service representative.[1] |
| ERROR: PROGRAM NEEDS MORE FLASH | No | The printer requires more flash memory to run the downloaded program | Contact your authorized service representative.[1] |
| ERROR: PROGRAM NOT COMPATIBLE | Yes | The printer is not compatible with the downloaded program. | Use the correct emulation software options(s) for this printer model. |
| ERROR: PROGRAM NOT VALID | Yes | The printer does not see a program in flash memory. | There is no program in printer memory. Download the emulation. |
| ERROR: SECURITY KEY NOT DETECTED | No | The security key is not present or failed. | Contact your authorized service representative.[1] |
| ERROR: SHORT AT ADDRESS XXXX | No | Hardware failure in SDRAM or controller circuitry. | Contact your authorized service representative.[1] |
| ERROR: WRITING TO FLASH | No | Hardware or software fault in flash memory. | Contact your authorized service representative.[1] |
| ERROR: WRONG CHECKSUM | No | The printer received the complete program but the checksum did not match. The data may have been corrupted during downloading. | Contact your authorized service representative.[1] |

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**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| ERROR: WRONG OEM | No | The SPX inserted in the debug port is not intended for this model printer or this OEM. | Contact your authorized service representative.[1] |
| ERROR: WRONG PRINTER TYPE | No | The SPX inserted in the debug port is not intended for this model printer or this OEM. | Contact your authorized service representative.[1] |
| ETHERNET DETECTED | N/A | Status message indicating that the Network Interface Card has established connection. | No action is required. |
| ETHERNET INITIALIZING | No | Status message: the internal Network Interface Card is processing the boot procedure. (May occur with older versions of microcode.) | No action is required. |
| EXCESS RBN WEAR Install New RBN | Yes | Status message that displays when ribbon reaches end of life, whether the Integrated Print Management System is enabled or not. | Install a new ribbon. |
| EXHAUST FAN FLT (Cabinet model only) | Yes | Sensors cannot detect current in fan circuit. | Power off the printer and remove the paper path (see *Maintenance Manual)*. Check that the fan cable connector is connected. Check for obstruction of vents and fan airway, and remove any obstructions. Check for items beneath the printer blocking cabinet vents. Power back on the printer. If this message appears again, contact your authorized service representative.[1] |
| FIRMWARE ERROR* | No | Application software tried to perform an illegal printer function or damaged memory detected on the controller board. | Contact your authorized service representative.[1] |
| FM HEADER ERROR* | No | Frame Header Error. Application software has violated header parameters. | Contact your system administrator. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| FRAMING ERROR | Yes | The printed output may contain random ! (exclamation point) characters. | Make a configuation printout. Set printer serial interface parameters to match host configuration settings for Data Protocol, Baud Rate, Data Bits, Stop Bits, Parity, Data Terminal Ready, and Request to Send. |
| FREEFORM OFF | Yes | A control panel key is stuck in the down position. | Press the key again. |
| FREEFORM ON: OFF HOLD KEY @ PWRUP | No | This message appears if the freeform feature is enabled. This feature is for manufacturing use only and is never used by the customer or field maintenance personnel. | Contact your authorized service representative.[1] |
| GRF CHK ERROR PRESS STOP | Yes | Graphic Check Error: in the CT emulation over a twinax interface, the printer received a non-printable character. | Press CLEAR and then ON LINE. |
| H00: PCI SLOT ? See User Manual | No | The controller board is not communicating with a PCI card. This could indicate a bad PCI card, poor connection, or problem in the PCI bus. | Contact your authorized service representative.[1] |
| H01: PCI J12 See User Manual | No | The controller board is not communicating with the PCI card in PCI slot J12. This could indicate a bad PCI card, poor connection, or problem in the PCI bus. | Contact your authorized service representative.[1] |
| H02: PCI J13 See User Manual | No | The controller board is not communicating with the PCI card in PCI slot J13. This could indicate a bad PCI card, poor connection, or problem in the PCI bus. | Contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| <Online, etc...> Half Speed Mode | No | Status message: The controller samples the operating temperature of key components of the print mechanism. When higher than normal temperatures are sensed, the print speed is automatically reduced by 50% and the message sent the LCD. When the components cool down, the print speed returns to 100% and the message clears. | No action is required. If the message appears often, contact your authorized service representative.[1] |
| HAM. COIL OPEN* | No | Hammer Coil Open. Electrical malfunction of one or more hammer coils. | Contact your authorized service representative.[1] |
| HAMMER COIL BAD* #, #, #, ...etc | No | Hammer coil # failed current test at power up. | Contact your authorized service representative.[1] |
| HAMMER SHORT* See User Manual | No | Electrical malfunction of one or more hammer coils. | Contact your authorized service representative.[1] |
| HB NOT INSTALLD* | No | Hammer Bank Not Installed. Self-test routines do not detect hammer coils at printer start-up. | Contact your authorized service representative.[1] |
| HMR BANK FAN FLT | Yes | Sensors cannot detect current in fan circuit. | Check that fan cable is connected. Check for obstruction of vents and fan airway; remove any obstructions. Check for items beneath the printer blocking cabinet vents. Power back on the printer. If this message recurs, contact your authorized service representative.[1] |
| ILL EXT BUS ACC* | No | Illegal External Bus Access. Firmware error on the controller board. | Contact your authorized service representative.[1] |
| ILL INST ACCSS* | No | Illegal Instruction Accessed. Firmware error on the controller board. | Contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| ILLGL OPR ACCSS* | No | Illegal Operand Accessed. Firmware error on controller board. | Contact your authorized service representative.[1] |
| INCOMPAT E-NET Remove NIC | Yes | Incompatible network interface card (NIC) is installed. | Install a compatible NIC to the printer then reboot. If this message still appears, contact your authorized service representative.[1] |
| INTAKE FAN FAULT | Yes | Sensors cannot detect current in fan circuit. | Cycle power. If the message appears, press CLEAR. If the message does not clear, contact your authorized service representative.[1] |
| INTERRUPT UNUSED VECTOR 00 | No | The controller board receives an interrupt it does not understand. The problem can be created by electrical noise, by a software problem, or by a hardware problem. | Cycle power. If this message occurred once and never again, you can ignore it. If the message reappears or appears consistently, contact your authorized service representative.[1] |
| INVALID ACTIVATE | No | Printer detects a twinax protocol communication error. | Contact your authorized service representative.[1] |
| INVALID COMMAND | No | Printer detects a twinax protocol communication error and reports the error. | Contact your authorized service representative.[1] |
| LO DRV. SHORT * | No | Lower Driver Short. Circuit(s) on the hammer bank or in the hammer bank power cable shorted to ground. | Contact your authorized service representative.[1] |
| LOAD PAPER | Yes | Printer is out of paper. | Load paper and press CLEAR. |
| LOADING PROGRAM FROM PORT XX% | No | Status message: the new emulation program is loading into printer RAM. XX% indicates how much of the program has loaded. | No action is required. |
| LOADING PROGRAM INTO FLASH | No | The printer has deleted the previous program from flash memory and is loading the new program into flash memory. | No action is required. |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| NEW SPX DETECTED PRESS ENTER | No | The printer detects an SPX installed at the debug port and the SPX is valid for the printer. | Contact your authorized service representative.[1] |
| NON VOLATILE MEMORY FAILED | No | Large emulations reduce the amount of space available for saving configurations, which means that sometimes fewer than eight configurations can be saved. | Contact your authorized service representative.[1] |
| ON LINE | N/A | Printer state message: printer is online and in communication with host. | No action is required. |
| PAP BAD TABLE* | No | Paper Bad Table. The paper feed process on the controller board has a corrupted table. | Contact your authorized service representative.[1] |
| PAP BSY TOO LNG* | No | Paper Busy Too Long. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PAP FD DRVR CIR* See Manual | No | Paper Feed Driver Circuit. The paper feed driver circuit on the controller board is drawing too much current. | Contact your authorized service representative.[1] |
| PAP FIFO OVERFL* | No | Paper First In First Out Overflow. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PAP FIFO UNDRFL* | No | Paper First In First Out Underflow. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PAP ILLGL ST* | No | Paper Illegal State. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PAP INCMPL ENER* | No | Paper Incompletely Energized. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PAP INVLD CMD* | No | Paper Invalid Command. Firmware error on controller board. | Contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| PAP INVLD PARM* | No | Paper Invalid Parameter. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PAP NOT SCHED* | No | Paper Not Scheduled. The paper feed process is not scheduling on the controller board, and the printer cannot feed paper. | Contact your authorized service representative.[1] |
| PAP NT AT SPEED* | No | Paper Not At Speed. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PAP UNEXP INT* | No | Paper Unexpected Interrupt. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PARAMETER ERROR* | No | Illegal parameter value received in command code over a coax/twinax interface. | Contact your system administrator. |
| PARITY ERROR | Yes | The printed output may contain a random ? (question mark) characters. | Check your printer serial interface parameter settings; if necessary, adjust them so that they match the settings of the attached host. |
| PLAT INV CMD* | No | Platen Invalid Command. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PLAT INV PARM* | No | Platen Invalid Parameter. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PLAT INV STATE* | No | Platen Invalid State. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PLEASE WAIT... RESET IN PROGRESS | N/A | Status message: the printer finished loading the program into flash memory and is automatically resetting itself. | No action is required. |
| POWER SUPPLY HOT | Yes | Power supply sensors report high temperatures. | Check printer environment. If hot or dusty, relocate printer. Contact your authorized service representative if this occurs frequently.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| PRINTER HOT | Yes | This message indicates internal temperatures over 60° Celsius (140° Fahrenheit). | Check printer environment. If hot or dusty, relocate printer. Contact your authorized service representative if this occurs frequently.[1] |
| PRINTER UNDER REMOTE CONTROL | No | Status message: The printer is under the control of PrintNet Enterprise (PNE) remote management software. | No action is required. |
| PROTECTED INSTR* | No | Protected Instruction. Firmware error on controller board. | Contact your authorized service representative.[1] |
| PWR SUPP VOLT * | No | Power Supply Voltage. The power supply has failed. | Replace power supply board. |
| QUEUE OVERRUN | No | In CT twinax emulation, the print buffer has overflowed. | Contact your authorized service representative.[1] |
| RBN AT END POINT Change Ribbon | Yes | Integrated Print Management System software has determined that the ribbon is out of ink. | Install a new ribbon. |
| REGIONx MISMATCH Use Correct RBN | Yes | The incorrect cartridge type is being used for the printer. "X" indicates the region of the printer. | Install Region X ribbon cartridge in the printer.<br>**NOTE:** Specify the region of the printer when ordering ribbons. |
| REMOVE USED SPX THEN PRESS ENTER | No | Status message: An SPX is depleted because it has successfully reprogrammed the security key on the controller board. | Contact your authorized service representative.[1] |
| RESTORING BOOT CODE | No | Normal download initialization message. | No action is required. |
| RIB INVLD CMD* See User Manual | Yes | Ribbon Invalid Command. Firmware error on the controller board. | Cycle power. Run the print job again. If the message appears, download the emulation software again. If the message appears again, contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| RIBBON DRIVE | No | The controller board does not detect a ribbon drive motor. | Contact your authorized service representative.[1] |
| RIBBON STALL | Yes | The controller board does not detect ribbon movement. | Check the ribbon path for jams. Turn the Ribbon Tension Knob clockwise a few rotations. If necessary, install a new ribbon. |
| RIBBON UNDER 2% Change RBN Soon | Yes | Status message indicating the Integrated Print Management System is enabled and ribbon ink level is 2%. | Install a new ribbon. |
| RWP DOWNLOAD Please Wait | No | Status message indicating the software in the cartridge is being updated. The user must wait for the update to complete. | No action is required. |
| SECURITY VIOLATION* | No | Security code of PAL on controller board does not match code of firmware on the controller board. | Contact your authorized service representative.[1] |
| SECURITY KEY NOT DETECTED | No | The security key is not present or has failed. | Contact your authorized service representative.[1] |
| SENDING PROGRAM TO EC PROCESSOR | No | Status message: the printer is loading the engine controller program into the engine controller. | No action is required. |
| SF ERROR | No | Structured Field Error. Application software has violated structured data field parameters. | Not a printer problem. Have the system administrator correct applications data or configuration. |
| SHTL MISMATCH Use Correct RBN | Yes | This message displays when an Extended Life Ribbon is mounted on a 500 lpm printer. | Install Standard Life Ribbon. |
| SHUT DRVR CIR* See User Manual | No | The shuttle driver circuit on the controller board is drawing too much current. | Contact your authorized service representative.[1] |
| SHUTL INV CMD* | No | Shuttle Invalid Command. Firmware error on controller board. | Contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| SHUTL INV PARM* | No | Shuttle Invalid Parameter. Firmware error on controller board. | Contact your authorized service representative.[1] |
| SHUTL OVR SPEED* | No | The shuttle is oscillating too rapidly. | Contact your authorized service representative.[1] |
| SHUTTLE JAM | Yes | No shuttle movement or shuttle moving at the wrong speed. | Check for obstruction to shuttle, a twisted ribbon, or platen lever closed too tightly. If fault source is not apparent, contact your authorized service representative.[1] |
| SHUTTLE STALL | Yes | The shuttle is not moving. See "SHUTTLE JAM" on page 147. | Set the platen lever to match the thickness of paper, but not too tightly. Check and adjust the platen gap. Inspect the ribbon mask for deformation that snags and interferes with shuttle movement. If fault source is not apparent, contact your authorized service representative.[1] |
| SHUTTLE TYPE NOT SUPPORTED* | No | The shuttle type was not detected at power-up or the shuttle installed in the printer is not supported by the firmware. | Contact your authorized service representative.[1] |
| SOFTWARE ERROR* CYCLE POWER | No | Application software tried to perform illegal printer function, or damaged logic circuits found on controller board. | Contact your authorized service representative.[1] |
| SPX FOUND, ERROR: KEY NOT DETECTED | No | The controller board does not have a security key. | Contact your authorized service representative.[1] |
| SPX NOT NEEDED OPTIONS ENABLED | No | The user has attempted to use the SPX to turn on printer options that are already enabled. | Contact your authorized service representative.[1] |
| STACK OVERFLOW* | No | Firmware error on controller board. | Contact your authorized service representative.[1] |
| STACK UNDERFLOW* | No | Firmware error on the controller board. | Contact your authorized service representative.[1] |
| STACKER FAULT | Yes | Stacker is not functioning correctly. | Check for obstructions in the stacker area. If fault persists, contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| STACKER FULL | Yes | Status message: the power paper stacker is full of paper. | Unload the stacker. If fault persists, contact your authorized service representative.[1] |
| STACKER JAM | Yes | This message is triggered if there is paper inside the throat of the stacker elevator, but the elevator is not moving. | 1. Open the cabinet rear door and check for obstructions preventing elevator movement. Remove any obstructions.<br>2. Run the print job again. If the message appears again, contact your authorized service representative.[1] |
| TABLE MISMATCH DOWNLOAD AGAIN | No | Indicates that the software update has failed and should be reloaded. | Contact your authorized service representative.[1] |
| TCB CORRUPTED* | No | Task Control Block Corrupted. Firmware error on controller board. | Contact your authorized service representative.[1] |
| TCP PORT BUSY | Yes | Error message reported by the Printer Manager when ethernet interface option is installed. The network address given in the printer properties was reached, but the printer port is busy. | Refer to the *TallyGenicom 6600 Maintenance Manual*. |
| TIP MISMATCH Use Correct RBN | Yes | The incorrect cartridge type is being used for the printer. | Install the correct ribbon cartridge type in the printer. |
| UNDEF INTERRUPT* | No | Undefined Interrupt. Firmware error on controller board. | Contact your authorized service representative.[1] |
| UNDFNED OPCODE* | No | Undefined Opcode. Firmware error on controller board. | Contact your authorized service representative.[1] |
| UNKNOWN RBN1 Install New RBN | Yes | The sensor detects a bar code, but the ribbon model is not permitted on this printer. | Install a new ribbon. |
| UP DRV. SHORT* | No | Upper Driver Short. Hammer driver circuits on the boards shorted to ground. | Cycle power to see if the message clears, if not, contact your authorized service representative.[1] |

**Table 8. LCD Message Troubleshooting Table**

| Displayed Message | Can User Correct? | Explanation | Solution |
|---|---|---|---|
| WELD NOT DETECT See User Manual | No | The cartridge weld was not detected. | Contact your authorized service representative.[1] |
| WELD RESET ERROR See User Manual | No | The cartridge weld circuitry lost power. | Contact your authorized service representative.[1] |
| WELD SNSR MISSING See User Manual | Yes | The incorrect cartridge type is being used for the printer. | 1. Make sure that the correct ribbon cartridge type is installed in the printer.<br>2. Contact your authorized service representative.[1] |
| [1] Before contacting an authorized service representative, power off the printer, wait 15 seconds, then power it back on and rerun your print job. If the message reappears, press CLEAR. If the fault message still displays, then contact your authorized service representative. | | | |

# A  *Printer Specifications*

## Ribbon Cartridge Specifications

| P/N | Europe, Middle East, & Africa | North & South America excluding Brazil | Brazil & India |
|---|---|---|---|
| 255670 Extended Life ASCII | (-401) 4-Pack<br>(-101) 1-Pack | (-402) 4-Pack<br>(-102) 1-Pack | (-403) 4-Pack<br>(-103) 1-Pack |
| **NOTE:** Ribbon cartridge (P/N 255670) does not work with the 500 lpm printer. | | | |
| 255661 Standard Life ASCII | (-101) 1-Pack | (-102) 1-Pack | (-103) 1-Pack |

| P/N | Brazil | Note |
|---|---|---|
| 256110 Standard Life EC | (-104) 1-Pack | Works for all printer models. |
| 256112 Standard Life PC | (-404) 4-Pack<br>(-101) 1-Pack | Works for all printer models. |

| P/N | All Regions | Note |
|---|---|---|
| 255860 Security Ribbon | (-101) 1-Pack | Works for all printer models. |

# Paper Specifications

| | |
|---|---|
| Type: | Edge-perforated, fan-fold, 3 to 17 inches (7.62 to 43.18 cm) wide, 2 to 12 inches (5.08 to 30.48 cm) long. SureStak Power Stacker option works with forms 5 to 12 inches (12.7 to 30.48 cm) long and up to 16 inches (41 cm) wide without the paper tent or 15.5 inches (39.5 cm) wide with the paper tent installed. |
| Thickness: | Single-part: 15 to 100 pound (6.80 to 45.36 kg) stock; Multi-part: 1- to 6-part forms (maximum 12 lb [5.44 kg] ply of upper plies) |
| Sheet Thickness: | 0.025 inch (0.064 cm) maximum |
| Drive: | Adjustable tractors (6-pin engagement) |

# Labels

| | |
|---|---|
| On Backing: | One-part continuous perforated fanfold back form. Labels must be placed at least 1/6 inch (0.42 cm) from the fan-fold perforation. Backing adhesive must not be squeezed out during printing. |
| Sheet Size: | 3 to 17 inches (7.62 to 43.18 cm) wide, including the two standard perforated tractor feed strips. A maximum sheet length of 16 inches (40.64 cm) between top and bottom perforations. |

> **NOTE:** A 16 inch rear door is needed for the cabinet model. Power Paper Stacker option is 5 to 12 inches (12.7 to 30.48 cm) long.

| | |
|---|---|
| Thickness: | Not to exceed 0.025 inch (0.064 cm) (including backing sheet) |

# Printer Weight And Dimensions

| Cabinet Type | Dimensions | | | Weight | |
|---|---|---|---|---|---|
| | Height | Width | Depth | Unpacked | Packaged |
| Floor Cabinet | 42.5 inches | 27 inches | 29 inches* | 225 lbs. | 285 lbs.* |
| Pedestal | 35 inches | 26 inches | 21 inches | 105 lbs. | 115 lbs. |
| Enclosed Pedestal | 35 inches | 26 inches | 24.4 inches | 128 lbs. | 136 lbs. |

\* With a power stacker, the weight increases by 21 lbs. and the depth increases by 4.75 inches for a deeper rear door.

# Environmental Characteristics

**Temperature**:

| | |
|---|---|
| Operating: | 50° to 104° F (10° to 40° C) up to 5000 feet (1524 meters)<br>50° to 90° F (10° to 32° C) up to 8000 feet (2438 meters) |
| Storage: | -40° to 158° F (- 40° to 70° C) |

**Relative Humidity**

| | |
|---|---|
| Operating: | 15% to 80% (noncondensing) |
| Storage: | 15% to 90% (noncondensing) |

# Acoustic Noise Level

| Acoustic Noise Levels per ISO 9296 | Cabinet Models | Pedestal Models | Enclosed Pedestal Models |
|---|---|---|---|
| Printing | 50 dB (500 lpm/1000 lpm)<br>52 dB (1500 lpm)<br>55 dB (2000 lpm) | 65 dB<br>65 dB<br>NA | 58 dB (500 lpm)<br>60 dB (1000 lpm)<br>63 dB (1500 lpm) |
|  | 6.8 Bel | 8.0 Bel |  |
| Standby | 48 dB | 50 dB | 50 dB |
|  | 6.3 Bel | 6.5 Bel |  |

# Energy Star

The printers described in this *User's Manual* comply with the requirements of the ENERGY STAR® Office Equipment Program of the U.S. Environmental Protection Agency.

# Electrical Characteristics

|  | Voltage (+/-10%) | Freq (+/-10%) | Amps | Watts | BTU/Hr |
|---|---|---|---|---|---|
| **6605** | AC 100-120V | 50-60 Hz | 3A | 275W | 940 |
|  | AC 200-240V | 50-60 Hz | 1.5A | 275W | 940 |
| **6610** | AC 100-120V | 50-60 Hz | 3.5V | 300W | 1025 |
|  | AC 200-240V | 50-60 Hz | 1.6A | 300W | 1025 |
| **6615** | AC 100-120V | 50-60 Hz | 4.5A | 430W | 1469 |
|  | AC 200-240V | 50-60 Hz | 1.9A | 430W | 1469 |
| **6605Q** | AC 100-120V | 50-60 Hz | 3.5A | 350W | 1195 |
|  | AC 200-240V | 50-60 Hz | 1.6A | 350W | 1195 |
| **6610Q** | AC 100-120V | 50-60 Hz | 3.5A | 350W | 1195 |
|  | AC 200-240V | 50-60 Hz | 1.6A | 350S | 1195 |
| **6615Q** | AC 100-120V | 50-60 Hz | 5A | 460W | 1571 |
|  | AC 200-240V | 50-60 Hz | 2A | 460W | 1571 |
| **6620Q** | AC 100-120V | 50-60 Hz | 5.5A | 540W | 1844 |
|  | AC 200-240V | 50-60 Hz | 2.1A | 540W | 1844 |

The above values are calculated while printing 136 column, all upper case high speed "E's". The stand-by (Energy Saver mode) wattage is 28W (96 BTU/Hr) for all models.

# Interfaces

| Type: | Standard: | IEEE 1284 Parallel, Centronics Parallel, RS-232 serial |
|---|---|---|
|  | Optional: | Ethernet 10/100Base-T. |
| Logic Levels: |  | TTL/EIA®-232E/EIA-422B |
| Transfer Rates: |  | Up to 200 Kilobytes on parallel interface. Up to 115.2K baud on RS-232 serial interface. |

# Printing Rates

The printing speed of text is measured in lines per minute (lpm) and is a function of the selected font and the vertical dot density. Printing speed is independent of the number of characters configured in the character set repertoire. Print rates for lines containing attributes such as bold or emphasized printing, superscripts, subscripts, or elongated attributes will decrease to not less than half the rates of the font without such attributes. The exact print rate of lines containing these attributes depends on the specific print job, but software maximizes the throughput by dynamically determining which dot rows contain adjacent dots and must be printed in two strokes.

# B ASCII Character Set

**KEY**

The key shows the cell format: OCTAL equivalent (top, e.g. 33), DECIMAL equivalent (middle, e.g. 27), HEX equivalent (bottom, e.g. 1B), with the ASCII Character Name (e.g. ESC). Bits B7 B6 B5 across the top, bits B4 B3 B2 B1 down the side.

Each cell below lists the character followed by its OCTAL / DECIMAL / HEX equivalents.

| B4 B3 B2 B1 | ROW | Col 0 (000) | Col 1 (001) | Col 2 (010) | Col 3 (011) | Col 4 (100) | Col 5 (101) | Col 6 (110) | Col 7 (111) |
|---|---|---|---|---|---|---|---|---|---|
| 0 0 0 0 | 0 | NUL 0/0/0 | DLE 20/16/10 | SP 40/32/20 | 0 60/48/30 | @ 100/64/40 | P 120/80/50 | ` 140/96/60 | p 160/112/70 |
| 0 0 0 1 | 1 | SOH 1/1/1 | DC1 (XON) 21/17/11 | ! 41/33/21 | 1 61/49/31 | A 101/65/41 | Q 121/81/51 | a 141/97/61 | q 161/113/71 |
| 0 0 1 0 | 2 | STX 2/2/2 | DC2 22/18/12 | " 42/34/22 | 2 62/50/32 | B 102/66/42 | R 122/82/52 | b 142/98/62 | r 162/114/72 |
| 0 0 1 1 | 3 | ETX 3/3/3 | DC3 (XOFF) 23/19/13 | # 43/35/23 | 3 63/51/33 | C 103/67/43 | S 123/83/53 | c 143/99/63 | s 163/115/73 |
| 0 1 0 0 | 4 | EOT 4/4/4 | DC4 24/20/14 | $ 44/36/24 | 4 64/52/34 | D 104/68/44 | T 124/84/54 | d 144/100/64 | t 164/116/74 |
| 0 1 0 1 | 5 | ENQ 5/5/5 | NAK 25/21/15 | % 45/37/25 | 5 65/53/35 | E 105/69/45 | U 125/85/55 | e 145/101/65 | u 165/117/75 |
| 0 1 1 0 | 6 | ACK 6/6/6 | SYN 26/22/16 | & 46/38/26 | 6 66/54/36 | F 106/70/46 | V 126/86/56 | f 146/102/66 | v 166/118/76 |
| 0 1 1 1 | 7 | BEL 7/7/7 | ETB 27/23/17 | ' 47/39/27 | 7 67/55/37 | G 107/71/47 | W 127/87/57 | g 147/103/67 | w 167/119/77 |
| 1 0 0 0 | 8 | BS 10/8/8 | CAN 30/24/18 | ( 50/40/28 | 8 70/56/38 | H 110/72/48 | X 130/88/58 | h 150/104/68 | x 170/120/78 |
| 1 0 0 1 | 9 | HT 11/9/9 | EM 31/25/19 | ) 51/41/29 | 9 71/57/39 | I 111/73/49 | Y 131/89/59 | i 151/105/69 | y 171/121/79 |
| 1 0 1 0 | 10 | LF 12/10/0A | SUB 32/26/1A | * 52/42/2A | : 72/58/3A | J 112/74/4A | Z 132/90/5A | j 152/106/6A | z 172/122/7A |
| 1 0 1 1 | 11 | VT 13/11/0B | ESC 33/27/1B | + 53/43/2B | ; 73/59/3B | K 113/75/4B | [ 133/91/5B | k 153/107/6B | { 173/123/7B |
| 1 1 0 0 | 12 | FF 14/12/0C | FS 34/28/1C | , 54/44/2C | < 74/60/3C | L 114/76/4C | \ 134/92/5C | l 154/108/6C | \| 174/124/7C |
| 1 1 0 1 | 13 | CR 15/13/0D | GS 35/29/1D | - 55/45/2D | = 75/61/3D | M 115/77/4D | ] 135/93/5D | m 155/109/6D | } 175/125/7D |
| 1 1 1 0 | 14 | SO 16/14/0E | RS 36/30/1E | . 56/46/2E | > 76/62/3E | N 116/78/4E | ^ 136/94/5E | n 156/110/6E | ~ 176/126/7E |
| 1 1 1 1 | 15 | SI 17/15/0F | US 37/31/1F | / 57/47/2F | ? 77/63/3F | O 117/79/4F | _ 137/95/5F | o 157/111/6F | DEL 177/127/7F |

# C   *Zero Tear Printer*

## Overview

The 6600 Zero Tear (ZT) printer can print a form and present it for tear off without losing a form between print jobs. The printer automatically presents the current print line to the tear bar when it finishes printing and no data are being sent to the printer. When it receives more data from the host computer, the printer pulls the form down to the print station and resumes printing.

The ZT printer is available as a 500 lpm, 1000 lpm, 1500 lpm printer.

# Operation

## Position The Paper Input And Adjust The Paper Guides



Outer Paper
Guide Leaf (2)

Center Paper
Guide Leaf

Front Paper
Guide Leaf (3)
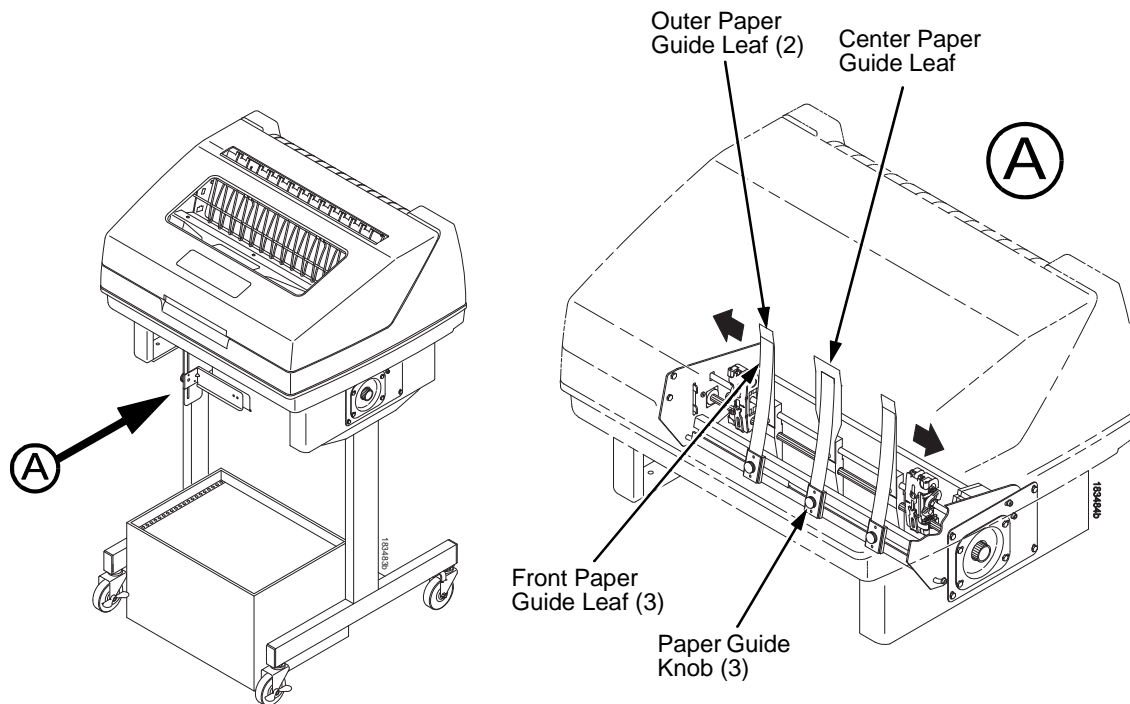
Paper Guide
Knob (3)

**Figure 28. Adjusting The Paper Guides**

**NOTE:** Ensure that the paper guides are not damaged.

1.  Remove the left paper guide knob and the left, front paper guide leaf. (See Figure 28.)

2.  Remove the right paper guide knob and the right, front paper guide leaf.

3.  Remove the center paper guide knob and the center, front paper guide leaf.
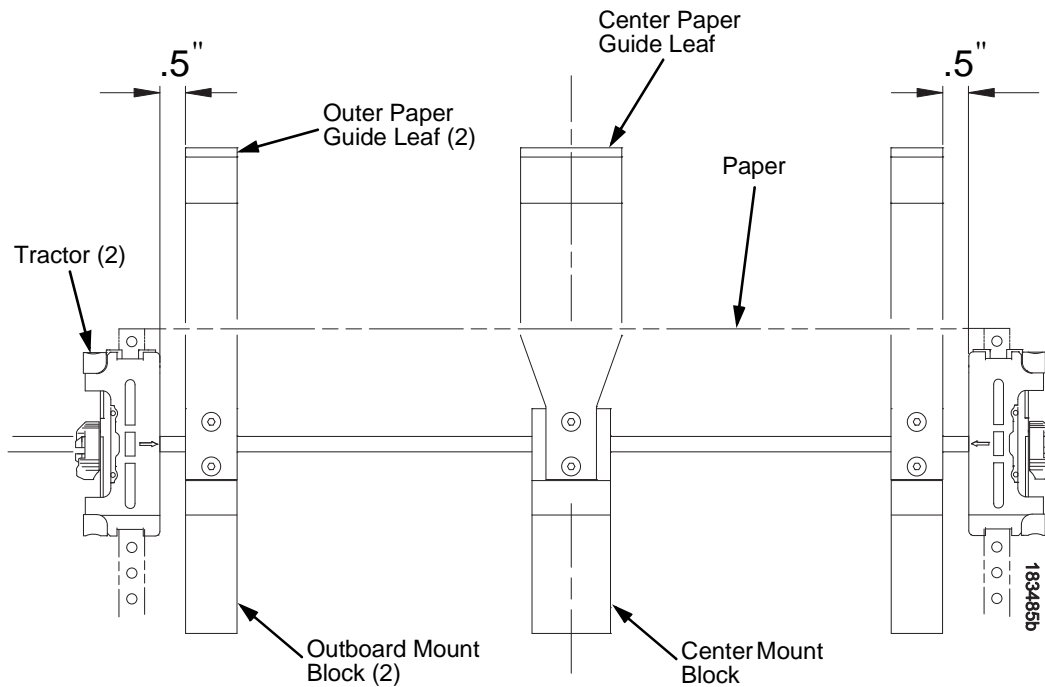
**Figure 29. Adjusting Paper Guide Leaves**

4.  Slide the left outboard mount block so that the left outer paper guide leaf is .5 inches from the left tractor. (See Figure 29).

5.  Slide the right outboard mount block so that the right outer paper guide leaf is .5 inches from the right tractor.

6.  Slide the center mount block so that the center paper guide leaf is centered between the left and right outer paper guide leaves.

7.  Install the paper guide knobs and front paper guide leaves. (See Figure 28.)

## Load Paper
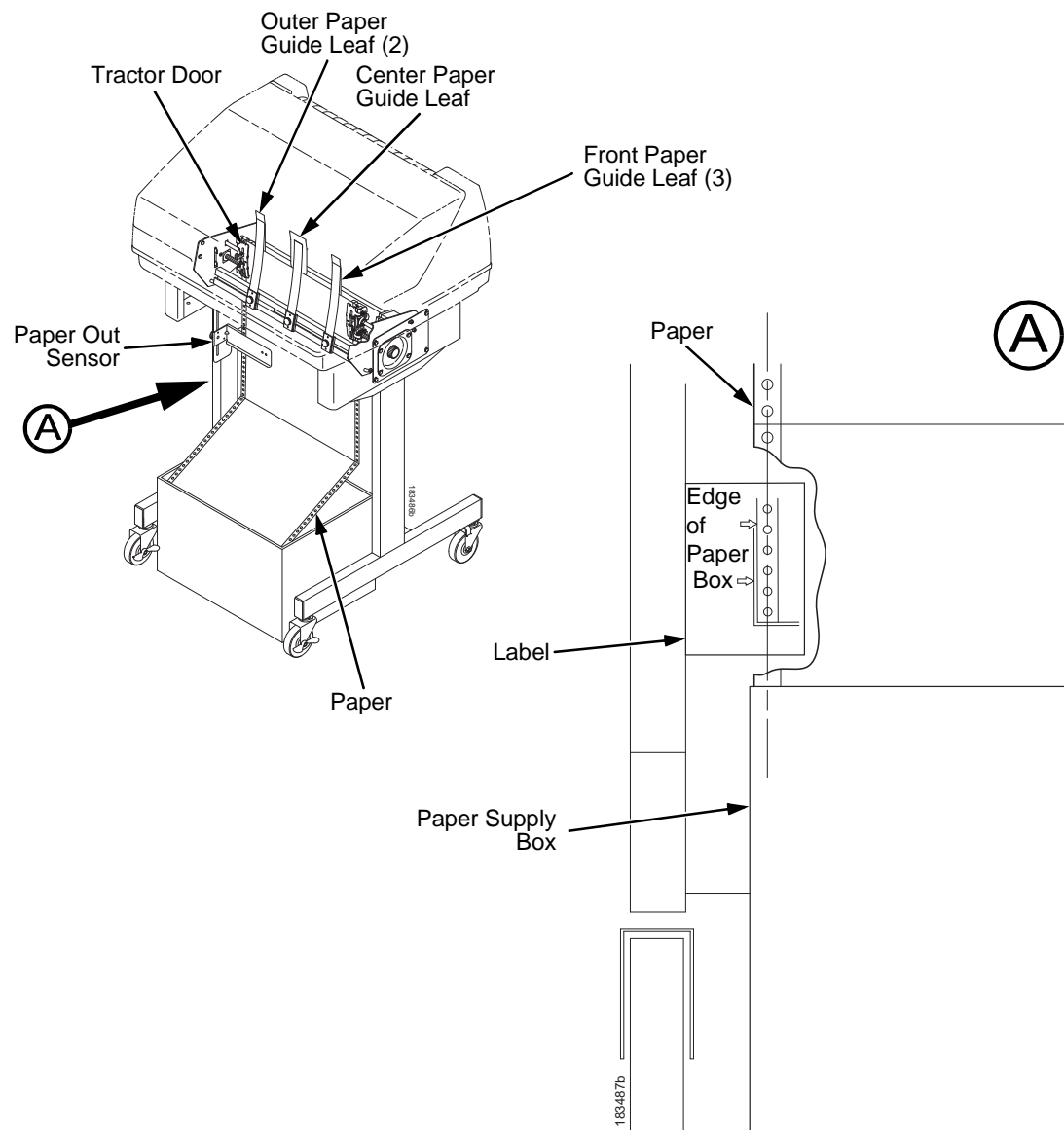


**Figure 30. Loading Paper Onto The Printer**

1. Align the paper supply box with the label on the bottom left side of the modesty panel. (See Figure 30 on page 162.)

2. Unlock and open the tractor doors and slide the paper from below, through the black paper out sensor slot on the left side, and up between all front and rear paper guides.

3. Load the paper on the left tractor sprockets and close the tractor door.

4. Load the paper onto the right tractor sprockets and close the tractor door.
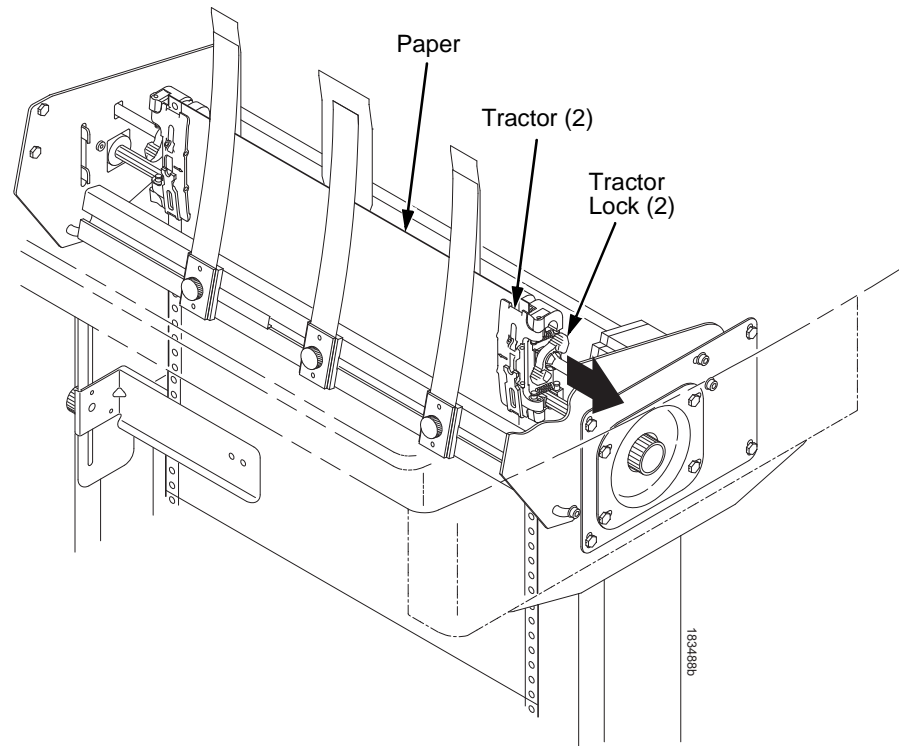
**Figure 31. Adjusting the Horizontal Paper Tension**

5. Adjust the paper web tightness by sliding the right tractor to remove slack or to adjust for various paper widths. (See Figure 31.)

6. Lock the tractors in position by pressing down on the tractor locks.
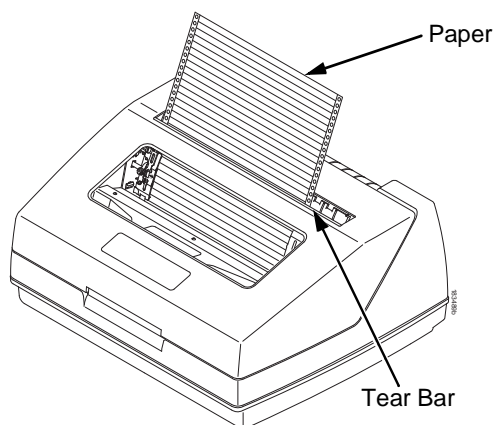


**Figure 32. Paper Exiting the Top of the Printer**

## Position The Paper Out Sensor
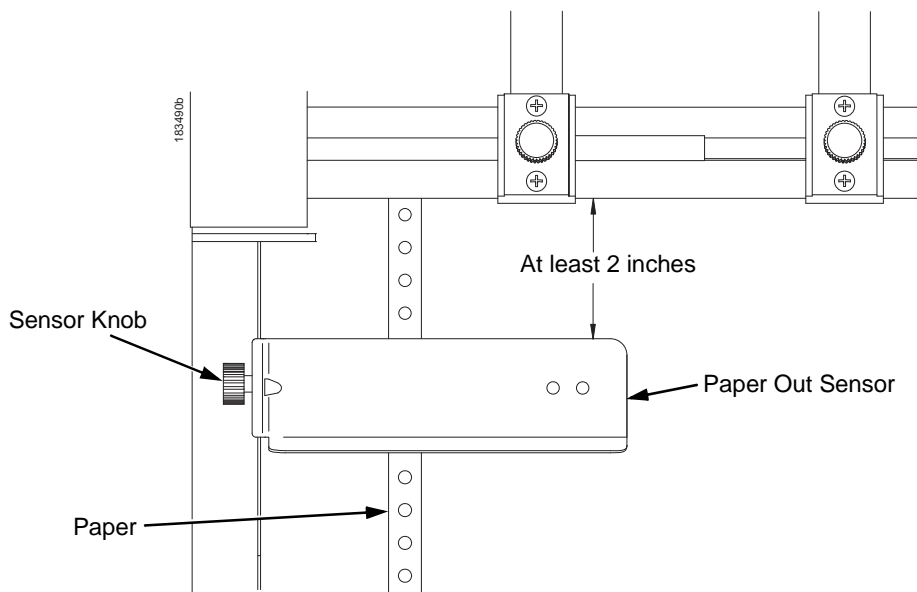


**Figure 33. The Paper Out Sensor**

The paper out sensor indicates when the printer runs out of paper. (The sensor does not work with black backed forms.) Unlike the standard pedestal printer, the ZT printer requires you to load the paper through the paper out sensor slot (Figure 30 and Figure 33). Correct positioning of the paper out sensor ensures that the last form the printer prints will be properly presented to the tear bar. To position the paper out sensor, do the following:

1. Position the paper properly at the tear bar (page 166).

2. Loosen the paper out sensor by turning the sensor knob counterclockwise.

3. Position the paper out sensor so that there are at least 2 inches between the bottom of the aluminum extrusion bar and the top of the paper out sensor.

**IMPORTANT**    **For optimal performance, 2 inches is recommended for 11 inch forms. For shorter forms, position the paper out sensor so that there are at least 2 inches between a perforation and the top of the paper out sensor.**

4. Tighten the paper out sensor by turning the sensor knobs clockwise.

5. Press **ONLINE**. When the first print job is sent to the printer, the paper is drawn into the printer, the top of form aligns with the print station, and the print job begins.

# Set The Tear Bar Distance

To set the tear bar distance, do the following steps:

1. Make sure the printer is offline.

2. Press **MENU/ENTER** key to enter the menu.

3. Press the right arrow → until "OFFLINE/ZTP Menu" displays.

4. Press the down arrow ↓. "ZTP Data Time" displays.

5. Press the right arrow → until "ZTP TearDistance" displays.

6. Press the down arrow ↓. "ZTP TearDistance/xx/144 Inch" displays.

7. Press the left arrow ← or right arrow → to decrease or increase the tear bar distance in increments of 1/144th of an inch.

8. Press **MENU/ENTER** to select the desired value. An asterisk appears next the selected value and a scale prints to indicate the tear bar distance in relation to the tear bar. For correct tear bar distance, the zero should align with the tear bar. See Figure 34.

**NOTE:** The Tear Distance value must be changed to print the scale.
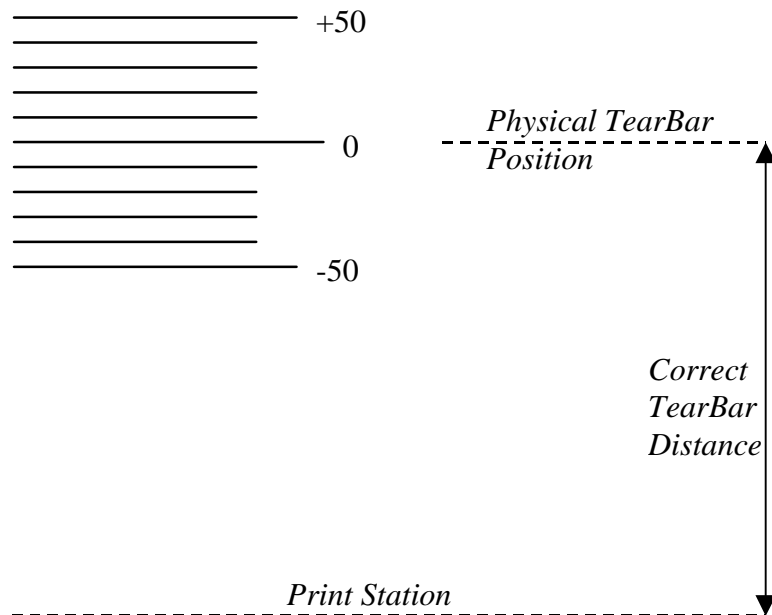


**Figure 34. Correct Tear Bar Distance**

**NOTE:** When a new ZTP Tear Bar Distance value is selected, the printer will lose the current print position until you reset the top of form to automatically save the new value.

9. Reset the top of form using the procedure on page 166.

# Set The Top Of Form
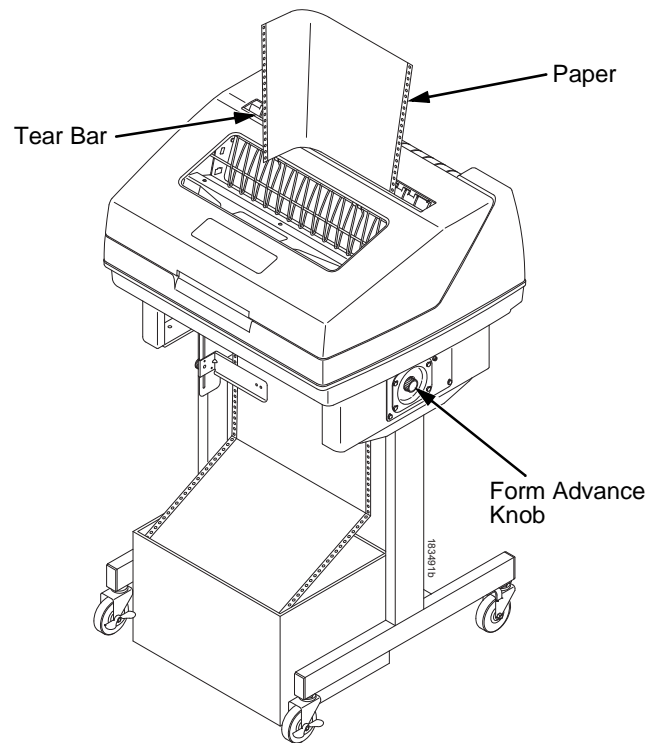


**Figure 35. Setting The Tear Off Position**

The ZT printer uses the tear bar as the reference point for setting the tear off position. To set the position of the forms perforation to the tear bar, use the **TOF** button as follows:

1. Make sure the paper guides are adjusted correctly and the paper is properly loaded.

2. Press the **TOF** button on the control panel. The printer display will read "Align at TearBar/Then Press TOF".

3. Use the form advance knob to move the top of the form to the tear off bar.

4. Position the perforation so it aligns with the tear off bar.

**NOTE:** This is easily done by advancing one complete sheet above the tear off bar and folding it over at the perforation.

5. Position the fold exactly at the tear bar.

6. Tear the sheet off to ensure proper positioning.

**NOTE:** If you do not want to lose a form, position the top of the form at the tear bar. Run a finger along the back of the form along the tear bar to ensure the perforation is presented at the tear off point.

7. Press the **TOF** button again. The printer display will read "Top Of Form Set/Press ONLINE". The printer will then be brought OFFLINE and the top of form will be set.

8. Press the **ONLINE** key to bring the printer online.

# ZTP Menu

The ZTP menu includes the ability to enable and disable features unique to the Zero Tear printer (ZTP), set the tear bar distance, set the auto present data time, and set the auto present wait time. This section defines these options.

* = Factory Default
[1] Available for Zero Tear Pedestal printers only.

```
      ┌─────────────┐
      │    ZTP      │
      │   Menu [1]  │
      │(from page 53)│
      └──────┬──────┘
             │
  ┌──────────┼──────────┬──────────┬──────────┐
┌──────┐  ┌──────┐  ┌──────────┐ ┌──────┐  ┌──────┐
│ ZTP  │  │ ZTP  │  │   ZTP    │ │ ZTP  │  │ ZTP  │
│ Data │  │ Wait │  │TearDistance│ │Platen│  │Function│
│ Time │  │ Time │  │          │ │ Open │  │      │
└──────┘  └──────┘  └──────────┘ └──────┘  └──────┘
```

.5 Sec*        2 Sec*         1060/144 Inch*   Enable*    Enable*
0.5 - 15 Sec   1 - 10 Sec                      Disable    Disable
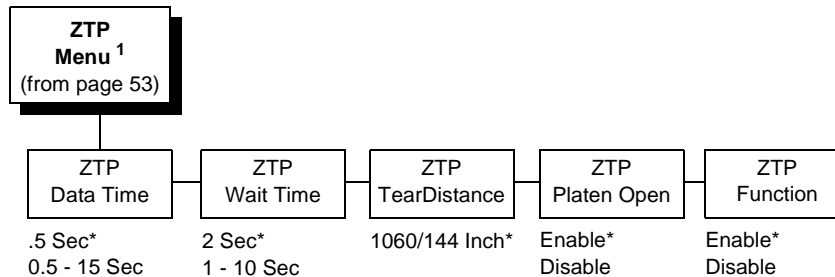
## ZTP Data Time

This option sets the pause time in the data stream that the ZTP requires before moving the form to the tear bar once a print job is completed. The values range from .5 to 15 seconds. The default is .5 seconds.

## ZTP Wait Time

This option sets the minimum amount of time that the form stays at the tear bar. This allows you time to remove the form before the form is retracted to print the next form. The adjustable values range from 1 to 10 seconds in increments of 1 second. The default value is 2 seconds.

## ZTP TearDistance

This option sets the tear off distance from the current print position to the tear bar. Adjustable values in increments of 1/144th of an inch range from 200 to 2880. The up and down arrows adjust the display value. When you press the **Enter** key, the selected value is stored and a scale is printed to indicate the current tear off position. The default value is 1060.

**NOTE:** When a new value is selected, the printer will lose the current print position. You must reset the top of form to automatically save the new value.

## ZTP Platen Open

This option allows the user to have the platen open whenever forms are reversed. Enabled is the default, used for most papers and labels. The feature can be disabled as required by some multi-part forms.

### ZTP Function

This option enables or disables all unique ZTP functions. The default is Enable.

**NOTE:** When the ZTP Function is enabled, the View and Eject keys are disabled and Slow Paper Slew is enabled.

# Performance Limitations

### Forms Type

The paper feed tractors on the ZT printer push the paper up through the print station instead of pulling it through, as in the standard pedestal printer. This limits the variety of forms the ZT printer can use. If the forms do not fall within the range specified in Table 9, dot compression and line separation may occur. The user should match the media to the application to ensure acceptable print quality. Also, because paper is pushed from below the print station, the last form in the tractors may not print fully or may not be presented to the printer exit for retrieval.

All paper used in the ZT printer requires standard half inch spaced tractor feed holes. Cut sheet and continuous friction fed paper is not supported. The forms specified in Table 9 can have no more than one form per page horizontally.

**Table 9. Forms Type**

| Description | Length | Width (edge to edge) |
|---|---|---|
| One to three part, continuous, with carbon, fan-folded, edge-perforated paper forms | 3 to 12 inches | 7 to 16.5 inches |
| One to four part, continuous, with carbon, fan-folded, edge-perforated paper forms | 3 to 12 inches | 7 to 12 inches |
| One to four part, continuous, carbonless, fan-folded, edge-perforated paper forms | 3 to 12 inches | 7 to 16.5 inches |
| One to six part, continuous, carbonless, fan-folded, edge-perforated paper forms | 3 to 12 inches | 7 to 12 inches |
| Forms with a paper weight of 20 to 100 pounds and a maximum thickness of 0.025 inches | 3 to 12 inches | 7 to 16.5 inches |
| Forms with a paper weight of 18 to 100 pounds and a maximum thickness of 0.025 inches | 3 to 12 inches | 7 to 12 inches |
| Forms with all approved types of interleaf edge attachment except those using metallic or other hard devices | | |

**NOTE:** If you use forms outside these limits, the print quality may not be optimum, the printer may lose top-of-form, or the frequency of paper jams will increase.

## Paper Jams

Printer jams can occur if you tear off the form incorrectly. If you experience two or more paper jams per box of forms, follow these guidelines to help reduce jams:

- Position the lower paper guides properly
- Align the paper web tightness properly
- Position the form perforation against the tear bar
- Time the tear, while the paper is not moving
- Direct the tear force toward the user and across the tear bar, not upward.

### To Clear Paper Jams

1. Raise the platen lever to open the platen.
2. Open the left and right tractor doors.
3. Pull the paper upward through the top of the printer.

**NOTE:**  DO NOT pull the paper downwards from the bottom. This could cause the paper guides to bend.

4. Reload the paper (see page 162).

# D SureStak™ Power Stacker

## Introduction

The SureStak Power Stacker is a factory-installed option that augments the paper feed system of cabinet model printers. It is designed to work with forms 5 to 12 inches long (12.7 to 30.5 cm) and up to 16 inches (41 cm) wide without the paper tent installed or up to 15.5 inches (39.5 cm) wide with the paper tent installed. (See Figure 36.) Using longer or shorter paper can cause error messages and unpredictable operation of the stacker.

Because most of the stacker assembly is inside the cabinet, you must remove the stacker from the printer to service it or replace most of its components.

## Stacker Operation

The power stacker mechanically directs the paper from the printer to the paper stack. It is mounted in the rear of the cabinet and has its own control panel. Its main components are shown in Figure 36.
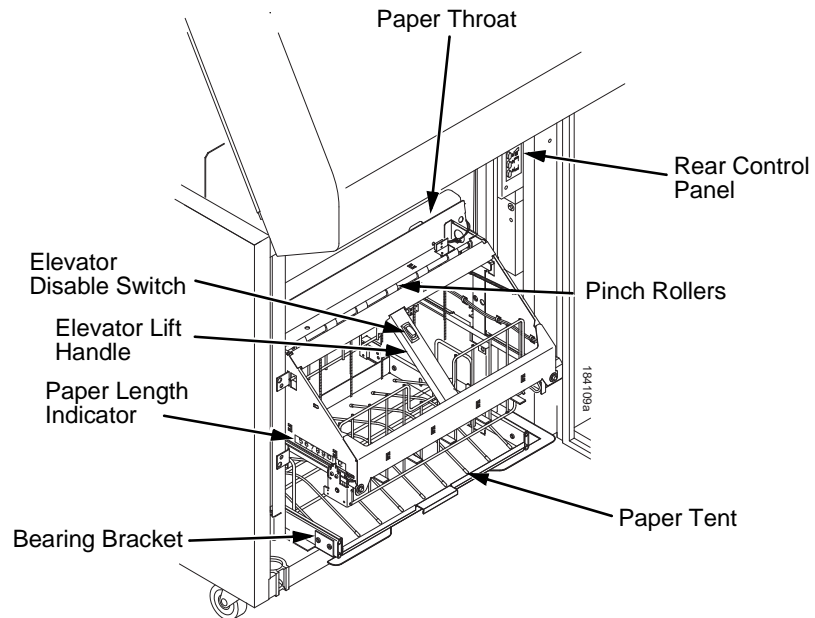


**Figure 36. Power Stacker Component Locations**

## Setting Up The Power Stacker

1.  Set the printer power switch to | (On).

2.  If necessary, press the **ONLINE** key on the front panel or rear control panel to take the printer offline. (Figure 37.)

3.  Press the **ELEVATOR UP** key and wait for the elevator assembly to reach the top of its travel. (Figure 37.)
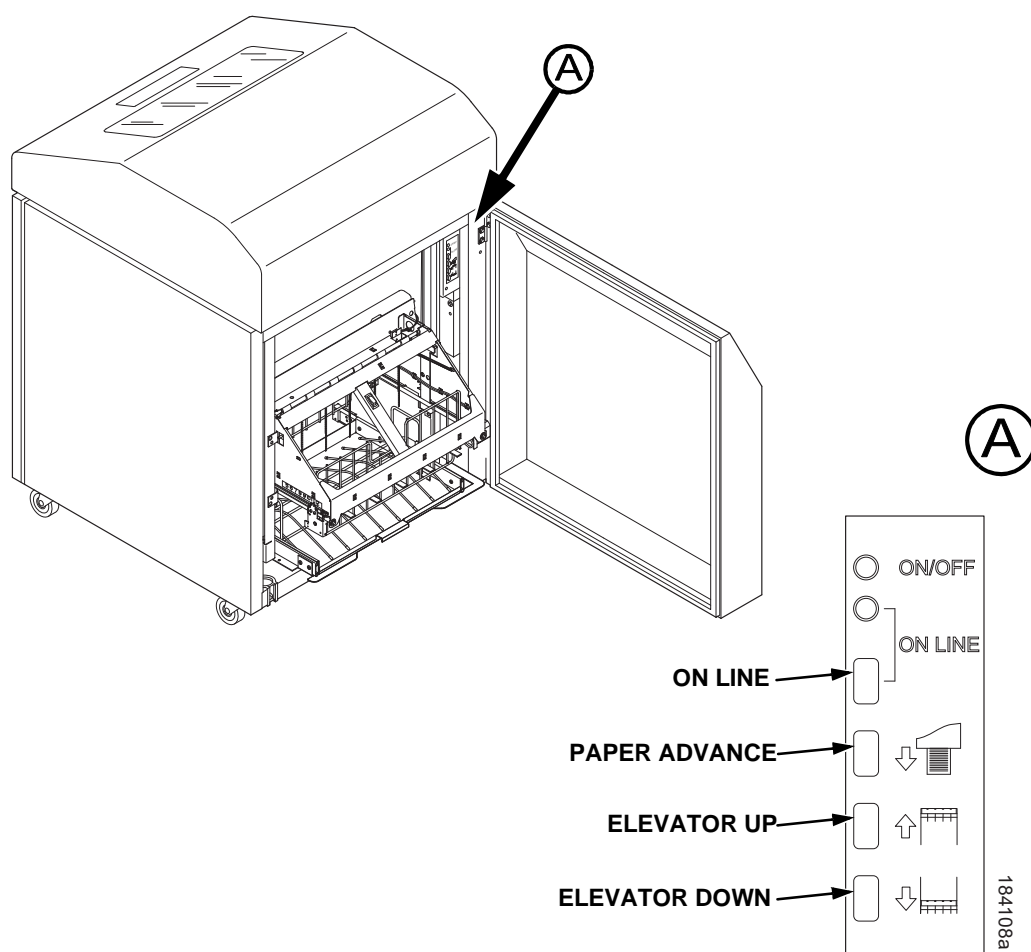


**Figure 37. The Rear Control Panel**

4.  If the paper you will use is not wider than 15.5 inches (39.5 cm) pull out the paper tray and install the wireform paper tent. (Figure 38.) If the paper is wider than 15.5 inches (39.5 cm) leave the paper tent out of the printer.



Paper Tent

Paper Tray



Note the positions of alignment tab and the paper fence.
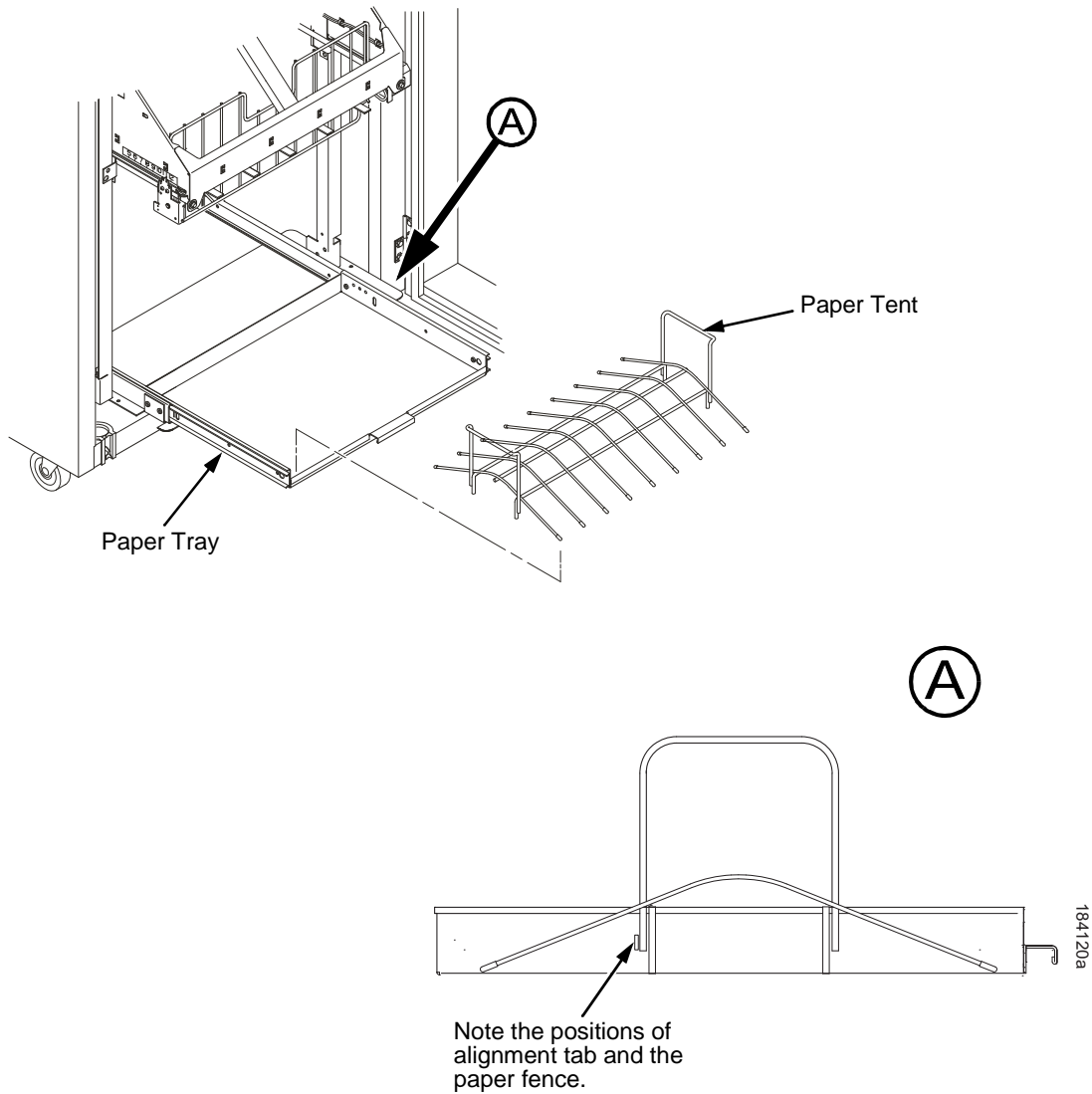
**Figure 38. The Paper Tent**

5.  Push or pull the paddle shaft toward the front or the rear of the printer to
    set the desired paper length. Align the indicator notch on the bearing
    bracket with the paper length indicator. The power stacker can handle
    paper or forms from 5 to 12 inches (12.7 to 30.5 cm) long. (Figure 39.)



Paddle Shaft

Paper Length Indicator

Bearing Bracket
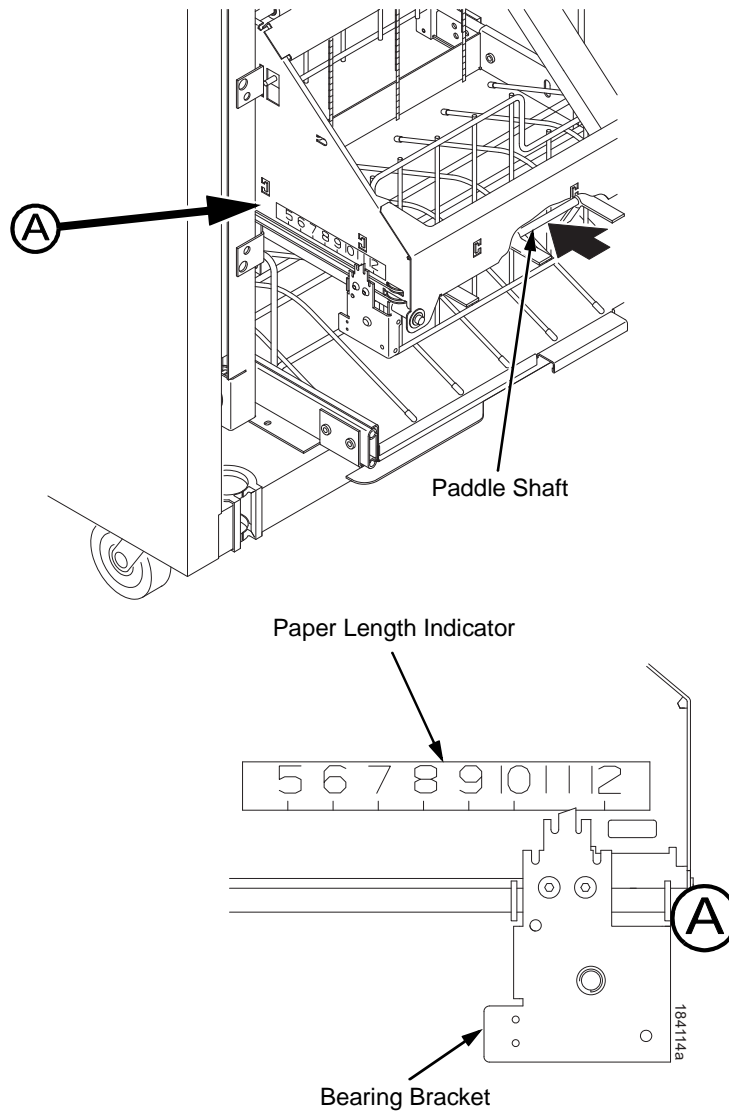
**Figure 39. The Paper Length Indicator**

## Loading And Starting The Power Stacker

1.  Press the **PAPER ADVANCE** key and hand feed the paper down into the paper throat of the stacker. Continue to advance the paper until it reaches the paper tent (if installed) and feed three to five extra sheets into the stacker. Make sure the paper passes through the paper throat of the stacker. (Figure 40.)

2.  Stack the extra pages on top of the wire paper tent (if installed), making sure the paper bends with the natural fold. (Figure 40.)

3.  Press the **ONLINE** key to put the printer in the online state. The stacker elevator will return to the correct position for printing.

4.  Check that the paper is still centered between the sides of the paper tent (if installed).

5.  Close the cabinet rear door.

6.  If necessary, set Top Of Form. (Refer to the *User's Manual*.)
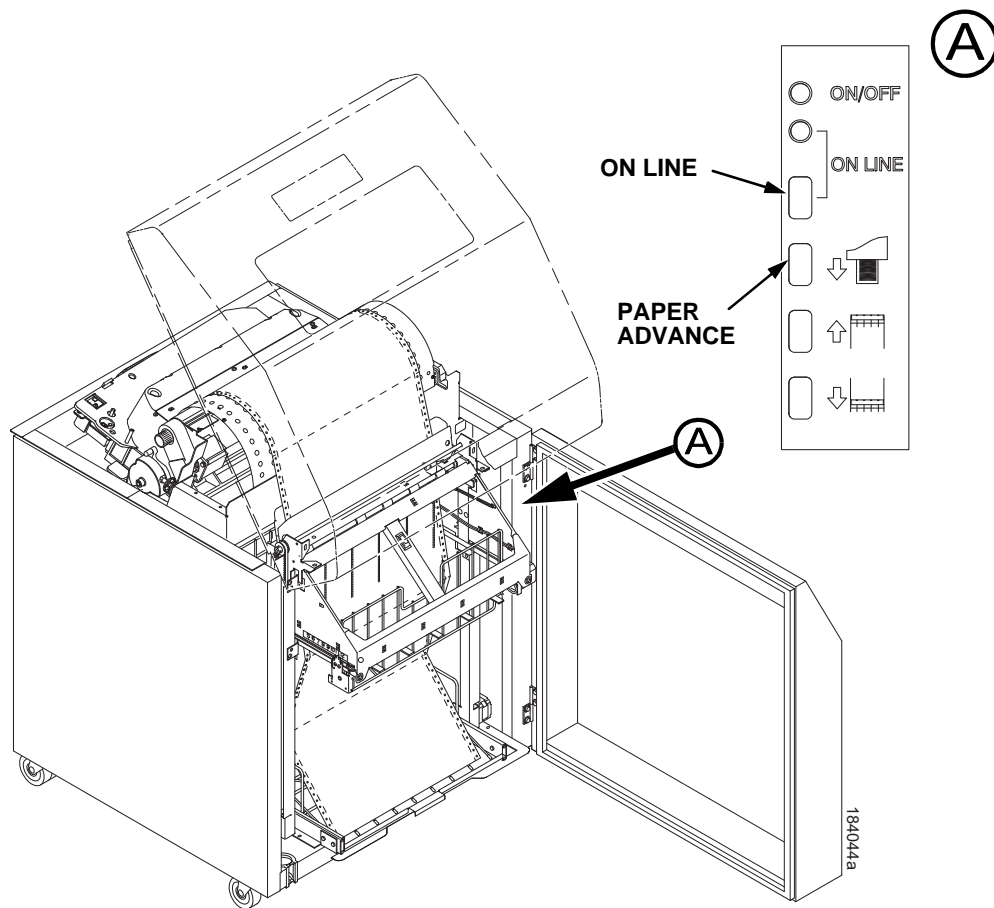


**Figure 40. Stacking Paper on the Wire Paper Tent**

# E    *PTX_SETUP Option*

## Overview

The PTX_SETUP commands are a superset of commands which allow the printer to perform several tasks by parsing commands either stored in flash or sent to the printer by the host. Commands range from printer configuration operations to file system operations.

This appendix describes the PTX_SETUP commands.

## The PTX_SETUP Commands

PTX_SETUP commands are designed for easy printer operation performance by allowing print operations to function without using the operator panel.

Some concepts to keep in mind are as follows:

1. PTX_SETUP commands are not emulation specific.

2. The PTX_SETUP command set is case sensitive; all PTX_SETUP commands are in upper case characters only.

3. The white space separating commands may be any number of spaces and tabs. This allows a PTX_SETUP file to be formatted for easier readability.

4. Any unknown command will terminate the PTX_SETUP processing. The offending command will be printed on paper.

5. PTX_SETUP command set allows for multiple parameters separated by commas, semicolons, spaces or tabs.

## Commands

This section provides a general description of how commands are formed.

Each emulation has modes in which the PTX_SETUP commands could get missed. For this reason, it is highly recommended that all PTX_SETUP commands be placed between print jobs, rather than attempting to imbed them within jobs. The PTX_END command shall be followed with a line terminator.

PTX_SETUP commands have the following format:

**(SFCC)PTX_SETUP**
*Command*–*Sub Command*;*Value*
**PTX_END**

For example, if the SFCC assigned to PTX_SETUP is the default value of the exclamation mark (!, hex 21), and you wanted to load configuration number 4 and capture all incoming data to a file named "BIN", you would use the following command:

!PTX_SETUP
CONFIG–LOAD;4 FILE_IO–CAPTURE;BIN
PTX_END

Table 10 lists all the command, sub-command, and parameter combinations and gives a brief description of the command.

**Table 10. PTX_SETUP Commands (Non-Platform Specific)**

| Command | Sub-Command | Parameter | Description |
|---------|-------------|-----------|-------------|
| CONFIG | LOAD | *Cfg* | *Cfg* can be 0-8. The PTX_SETUP will load configuration *Cfg*. If configuration *Cfg* was not previously saved, the operator panel will display an error message and the current configuration will be kept. |
| | SAVE | *Cfg* | *Cfg* must be 1-8. This command will save the current configuration as configuration *Cfg*. If *Cfg* is not in the range of 1-8, the command is ignored. |
| | SETMENU | *Value;Menu_tag* | *Menu_tag* is the name of the menu as defined in the menu file. *Value* is the value to which the menu is to be set. |
| | POWERUP | *Cfg* | Sets the power-up configuration to *Cfg* and loads Configuration *Cfg*. *Cfg* can be any value from 0-8, where 0 is the factory default. |
| | PRINT | *Cfg* | Print Configuration *Cfg*. *Cfg* can be a number 1-8, or one of four pre-defined configurations. The four non-numeric configurations are requested using the first character for the CURRENT, FACTORY, POWERUP, or ALL configuration(s). |
| | DELETE | *Cfg* | Deletes Configuration number *Cfg*. *Cfg* must be in the range of 1-8. |
| | UPLOAD | *Port;Cfg* | This command uploads the configuration stored in location *Cfg* to the port specified by *Port*. *Port* must either be 1284 or SERIAL. *Cfg* may be 1-8 or ALL. |
| | DOWNLOAD | *Cfg* | This command saves the configuration data that follows as configuration *Cfg*. *Cfg* must be 1-8 or END. |

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**Table 10. PTX_SETUP Commands (Non-Platform Specific) (continued)**

| Command | Sub-Command | Parameter | Description |
|---|---|---|---|
| CONFIG | OVERLAY | *Cfg* | This command overlays the configuration data that follows on existing configuration Cfg. Cfg must be 1-8 (or END). If Cfg does not exist then command is treated the same as DOWNLOAD. |
| | RESET | | Reboots the printer. |
| | GET_NAMES | *"Port"* | This command uploads the names of the configurations to the port specified by Port. Port must either be "1284" or "SERIAL". |
| | SET_NAME | *Cfg* | This command downloads a name for the configuration specified by *Cfg. Cfg* must be 1-8. |
| | CLEAR_NAMES | | This command resets all of the configuration names to their default values. |
| | MPI_SELECT | *MPI* | This command selects the active Management Protocol Interface (MPI). Currently there are two selections "UCP" and "PXML". |
| | PNE_PORT | *Port* | This command selects the port that the PNE will use to communicate to the printer.<br>The valid ports are:<br><br>• DISABLE<br><br>• HOST_SERIAL<br>If Host I/O is set to Auto Switching or Serial, the port defaults to Debug Serial.<br><br>• DEBUG_SERIAL<br><br>• ETHERNET |

**Table 10. PTX_SETUP Commands (Non-Platform Specific) (continued)**

| Command | Sub-Command | Parameter | Description |
|---|---|---|---|
| CONFIG | PANEL | *LOCK* | This command locks the operator out of the printer's configuration menu. |
| | | *UNLOCK* | This command unlocks the printer's configuration menu and allows the operator access to the menus. By default, the menu is unlocked. |
| | PNE_PORT_NUM | *Port Number* | This command sets the Port Number the PNE uses to communicate to the printer if the PNE Port was set to Ethernet. This command causes the printer to automatically reboot. |
| FILE_IO (DISK_IO) | CAPTURE | Filename | Captures all incoming data into a file named *Filename*. Receipt of a FILE_IO–CAPTURE command without the *Filename* parameter will force the file data to be written to flash, and will end the file capture. |
| | DRIVE | Letter | This command is parsed for backwards compatibility. However, since the flash file system is a single device, the drive letter will be ignored. |
| | PROPS | File;Prop | The PROPS command will set the file properties of a given file. The file properties are a four letter, case sensitive file descriptor. The properties field can be used to ensure that a file is used for its intended purpose. Once properties have been associated with a file, they can not be changed. |
| | DEL | Filename | The DEL command will mark a file as deleted. The space the file occupied will be freed the next time the printer is powered up. |

**Table 10. PTX_SETUP Commands (Non-Platform Specific) (continued)**

| Command | Sub-Command | Parameter | Description |
|---------|-------------|-----------|-------------|
| FILE_IO (DISK_IO) | RUNFILE | File;Prop | The RUNFILE command will open the file named *File* for printing. After the PTX_END command is processed, the contents of *File* will get printed before any more data is read from the host. If the *Prop* field is present, RUNFILE will verify that *Prop* matches the saved file properties. Any mismatch will cause the command to be ignored. |
| | UPLOAD | File;Port | Reads the file named *File* out of the flash file system and sends it to a host computer via the *Port* I/O port. *Port* is either 1284 (for reverse nibble or byte mode transfer using the parallel port), or SERIAL. NOTE: if the Ethernet option is installed, 1284 is used to upload across the network. |
| | MAXSIZE | Kb | For backwards compatibility. |
| | MINSIZE | Kb | For backwards compatibility. |
| OPTIMIZE | (none) | (none) | Causes the printer to optimize the Flash File System. The printer automatically reboots during this process. |
| PTX_END | (none) | (none) | Exits the PTX_SETUP. |
| ENGINE | EJECT | | Performs a page eject. |
| | LENGTH | *Value* | Sets the page length. |
| | WIDTH | *Value* | Sets the page width. |

## Summary of the CONFIG Command

The UPLOAD and DOWNLOAD command can be used for uploading and downloading complete printer configurations. If a customer needs to configure 50 printers identically, the customer needs only configure one printer and UPLOAD the configurations. The UPLOADed configurations may then be DOWNLOADed to other printers eliminating the necessity for the operator to configure each printer manually.

The UPLOAD command will always place a header and a footer into the uploaded data. This header will be the DOWNLOAD command followed by the configuration number. The footer will be the DOWNLOAD END command. The operator should be aware that the UPLOAD and DOWNLOAD commands use a secondary copy of the menu structure which does not affect the printer's active configuration. This allows the UPLOAD and DOWNLOAD commands to operate without affecting the printer's current configuration. If the operator intends to use one of the DOWNLOADed configurations, the operator should reboot the printer to ensure proper operation. This can be accomplished by adding the RESET command as the last command in your setup file. This is necessary because the printer caches the active configuration. Rebooting the printer ensures that the desired configuration is correctly read from Non-Volatile RAM.

**NOTE:** While an upload or download is in progress, the Front Panel will be unavailable.

The Configuration Save and Delete commands from the front panel can be blocked by using the Protect Configurations feature. This is intended to prevent someone from inadvertently reconfiguring a printer. The PTX_SETUP commands, however, will override the protect configurations feature. All PTX_SETUP commands will be honored regardless of the value of the Protect Configurations feature.

## Operation of the FILE_IO Command

When a file is opened for writing with the FILE_IO–CAPTURE;*filename* command, the system will allocate RAM for file control blocks and 1 Kbyte for data. If the file already exists on the Flash File System and the Overwrite Enable feature in the Flash File System menu is set to disable, a warning will be displayed on the front panel. After clearing the warning, the file data will be printed. To overwrite the existing file, set the Overwrite Files option to enable.

Due to the nature of writing to flash, any data intended to be stored permanently in flash must first be copied into RAM. As a result, the ability to manipulate files in the Flash File System is dependent upon the printer having sufficient RAM. None of the captured file data will be committed to flash until the entire file is loaded. The PTX_SETUP parser will interpret the command "FILE_IO–CAPTURE<lf>" as an end of file marker. Receipt of the command will cause all file data to be written to flash. The file system allocates RAM for temporary data storage in 1 Kbyte blocks. If at any time during the file download the printer runs out of RAM, a warning will be displayed on the front panel and as much of the file as possible will be saved in flash. To download larger files you may need to add additional RAM to the printer.

Three things can limit the ability to save a file: insufficient RAM, insufficient Flash, and lack of empty file system entries. Flash can only be written once before it needs to be "optimized". As a result, the maximum file size is limited to the largest unwritten block of Flash. If any of these problems occur, the printer will display an error message and will attempt to provide the operator with a description of what steps to take to correct the error. Normally, the solution will involve optimizing the Flash File System. This can be accomplished by selecting the Optimize & Reboot function in the Flash File System menu under File Management.

**NOTE:** After selecting the Optimize & Reboot function, do not turn off the printer's power until after the printer returns to the power-on state. Loss of power during the optimize process may corrupt the printer's program. If this occurs, first attempt to repeat the downloading process. If that fails, contact an authorized service representative.

# F  *Customer Support*

## TallyGenicom Customer Support Center

IMPORTANT | **Please have the following information available prior to calling the TallyGenicom Customer Support Center:**

- Model number
- Serial number (located on the back of the printer)
- Installed options (i.e., interface and host type if applicable to the problem)
- Help Menu printout (while offline press the MENU/ENTER key on the control panel to enter the menu. Press the Left Arrow key until the Help menu displays. Press the MENU/ENTER key).
- Is the problem with a new install or an existing printer?
- Description of the problem (be specific)
- Good and bad samples that clearly show the problem (faxing or emailing these samples may be required)

| Americas | (714) 368-2686 |
| Europe, Middle East, and Africa | (31) 24 6489 311 |
| Asia Pacific | (65) 6548 4114 |
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http://www.tallygenicom.com/service/default.aspx

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# Energy Star



The Environmental Protection Agency ENERGY STAR® Computers program is a partnership effort with manufacturers of data processing equipment to promote the introduction of energy-efficient personal computers, monitors, printers, fax machines, and copiers to help reduce air pollution and global warming caused by electricity generation.

TallyGenicom participates in this program by introducing printers that reduce power consumption when they are not being used. As an ENERGY STAR® Partner, TallyGenicom has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

**NOTE:** The ENERGY STAR® emblem does not represent EPA endorsement of any product or service.

# Communication Statements

## Federal Communications Commission (FCC) Statement

This equpment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Fules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. TallyGenicom is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Fules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

## European Union (EU) Conformity Statement

$C\epsilon$     Hereby, TallyGenicom declares that this product is in compliance with the essential requirements and other relevent provisions of Directive 1999/5/EC.

TallyGenicom cannot accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-TallyGenicom option cards.

This product has been tested and found to comply with the limits for Class A Information Technology Equipment according to European standard EN 55022. The limits for Class A equipment were derived for commercial and industrial environments to provide reasonable protection against interference with licensed communication devices.

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**WARNING**

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

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Properly shielded and grounded cables and connectors must be used in order to reduce the potential for causing interference to radio and TV communications and to other electrical or electronic equipment. TallyGenicom cannot accept responsibility for any interference caused by using other than recommended cables and connectors.

## Industry Canada Compliance Statement

This Class A digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe A conform á la norme NMB-003 du Canada.

## Statement of CISPR 22 Compliance

**Attention:** This is a Class A Product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

## Japanese VCCI Class A

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

## German Conformity Statement

### Handbuchtexte: FCC class A entspricht: EMVG Klasse A

Text Für alle in Deutschland vertriebenen EN 55022 Klasse A Geräte:

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 18. September 1998 (bzw. der EMC EG Richtlinie 89/336):

Dieses Gerät ist berechtigt in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen. Verantwortlich für die Konformitätserklärung nach Paragraph 5 des EMVG ist die:
Printronix GmbH
Goethering 56
D-63067 Offenbach Germany

Informationen in Hinsicht EMVG Paragraph 4 Abs. (1) 4:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse A.

EN 55022 Klasse A Geräte müssen mit folgendem Warnhinweis versehen werden: "Warnung: dies ist eine Einrichtung der Klasse A. Diese Einrichtung kann im Wohnbereich Funkstörungen verursachen; in diesem Fall kann vom Betreiber verlangt werden, angemessene Maßnahmen durchzuführen und dafür aufzukommen."

EN 55024 Hinweis:
Wird dieses Gerät in einer industriellen Umgebung betrieben (wie in EN 55024 festgelegt), dann kann es dabei eventuell gestört werden. In solch einem Fall ist der Abstand bzw. die Abschirmung zu der industriellen Störquelle zu öergrvßern.

Anmerkung:
Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den TallyGenicom Handbüchern angegeben, zu installieren und zu betreiben.

## China

**Declaration:**

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may need to perform practical actions.

声　明

此为 A 级产品，在生括环境中，
该产品可能会造成无线电干扰，
在这种情况下，可能需要用户对其
干扰采取切实可行的措施。

## Taiwan

**Warning:**

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user will be required to take adequate measures.

警告使用者：
這是甲類的資訊產品，在
居住的環境中使用時，可
能會造成射頻干擾，在這
種情況下，使用者會被要
求採取某些適當的對策。

**CAUTION:**

This product is equipped with a 3-wire power cord and plug for the user's safety. Use this power cord in conjunction with a properly grounded electrical outlet to avoid electrical shock.

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