



Administrator's Manual



6800 Series Printers

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1 *Introduction*

Printer Overview

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

TallyGenicom 6800 Series Cartridge Ribbon Printers (CRP)

TallyGenicom® is pleased to announce the TallyGenicom 6800™ Series Line Matrix printers, 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 6800™ 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, pedestal, or zero tear pedestal (ZTP) styles – best user access and forms handling flexibility
- Unsurpassed ease of use – larger graphics LCD simplifies operation and enhances productivity

Table 1 6800 Series Models and Configurations

Number Model	Configuration Number	Print Speed (Lines per Minute)
LMPPLS (Line Matrix Printer Pedestal Low Speed)	6805	500
	6805Z	500
	6810	1000
	6810Z	1000
LMPCLS (Line Matrix Printer Cabinet Low Speed)	6810Q	1000
LMPCHS (Line Matrix Printer Cabinet High Speed)	6815Q	1500
	6820Q	2000

Five printer configurations are available:

Cabinet (68XXQ)

- 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.
- Available in the following print speeds: 1000, 1500 and 2000 lpm models.

Pedestal (68XX)

- 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.
- Available in the following print speeds: 500 and 1000 lpm models.

Zero Tear Pedestal (68XXZ)

- 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 the following print speeds: 500 and 1000 lpm 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.

Protocols and Emulations

A protocol is a set of rules governing the exchange of information between the printer and its host computer. These rules consist of codes that manipulate and print data and allow for machine-to-machine communication. A printer and its host computer must use the same protocol. As used in this manual, protocol and emulation mean the same thing.

Most impact printers use single ASCII character codes to print text, numbers, and punctuation marks. Some characters, are defined as control codes. Control codes instruct the printer to perform specific functions, such as underlining text, printing subscripts, setting page margins, etc. The difference between most printer protocols is the characters used to create control codes and the ways in which these characters are formatted.

When the printer executes the character and control codes of a particular printer protocol, it is emulating that printer.

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 8 explains how to clean the printer, and printer supplies are listed in Appendix A.

Conventions in this Manual

Control panel keys and indicators are highlighted in **UPPERCASE BOLD PRINT**.

Example: Press the **CANCEL** 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 \triangle + ∇ ” means press the \triangle (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.
- *Integrated Network Interface Card User's Manual*
Information about network protocols, configuration, and network operation.
- *6800 Series Printers Emulations Applications Manual, Volume 1*
Defines printer emulations.
- *6800 Series Printers Fonts and Character Sets Applications Manual, Volume 3*
Defines printer fonts and character sets.
- *6800 Series Printers Graphics Languages Applications Manual, Volume 4*
Defines Code V, PGL, and MT660 IG printer graphics languages.

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 supply outlet that supplies 90 to 264 volts AC at its upper and lower limits. These limits take into account normal voltage sags and surges created on the nominal line voltage by other AC power loads associated with the AC distribution line. The printer automatically senses and adjusts itself to conform to the correct voltage range.

Primary circuit protection is provided by the AC source protection device. Consult an electrician if printer operation affects local electrical lines.

IMPORTANT Printer power should be supplied from a separate AC circuit protected at 20 amperes maximum for 100 - 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.)
- For pedestal models, DO NOT place the side of the printer (inlet and exit air vents) against a wall or other object. A minimum of 6 inch spacing is recommended.
- Has a standard power outlet that supplies 100-135 Volts AC or 178-240 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 2.

Table 2 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)
USB 2.0 Universal Serial Bus	5 meters (15 feet)
Twisted Pair / Type 3	300 meters (985 feet)
Ethernet 10/100Base-T	100 meters (328 feet)

Printer Dimensions

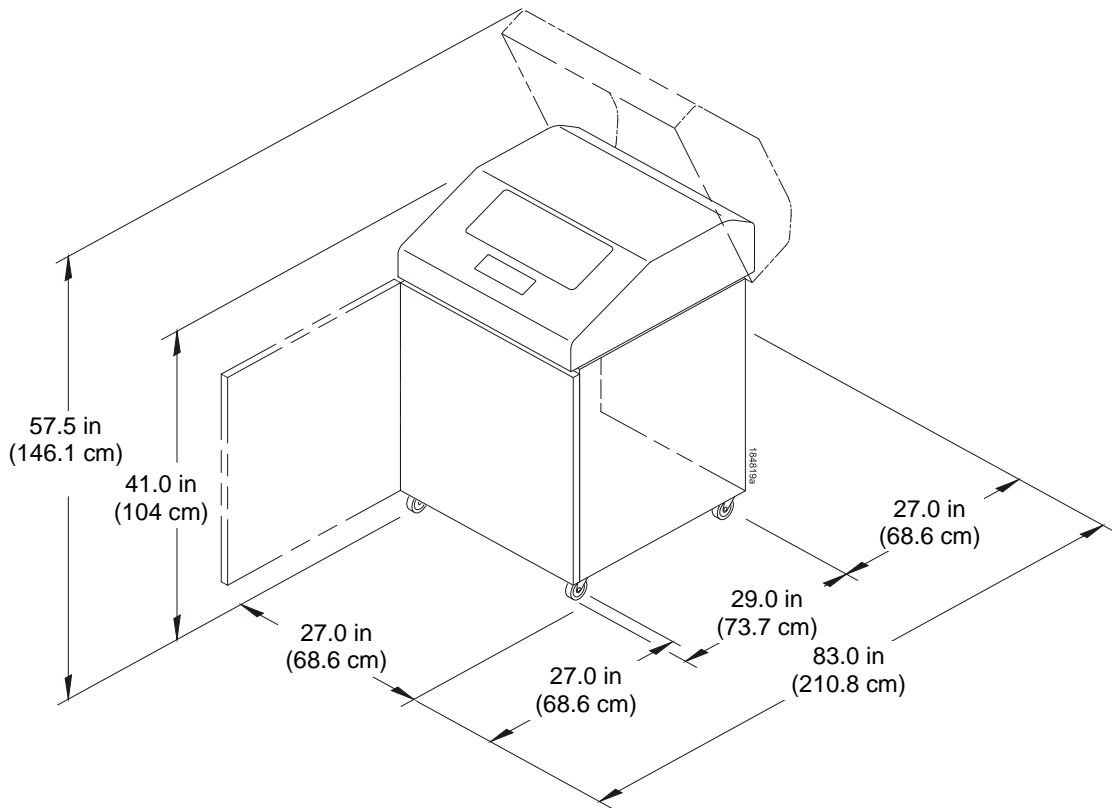


Figure 1 Cabinet Model

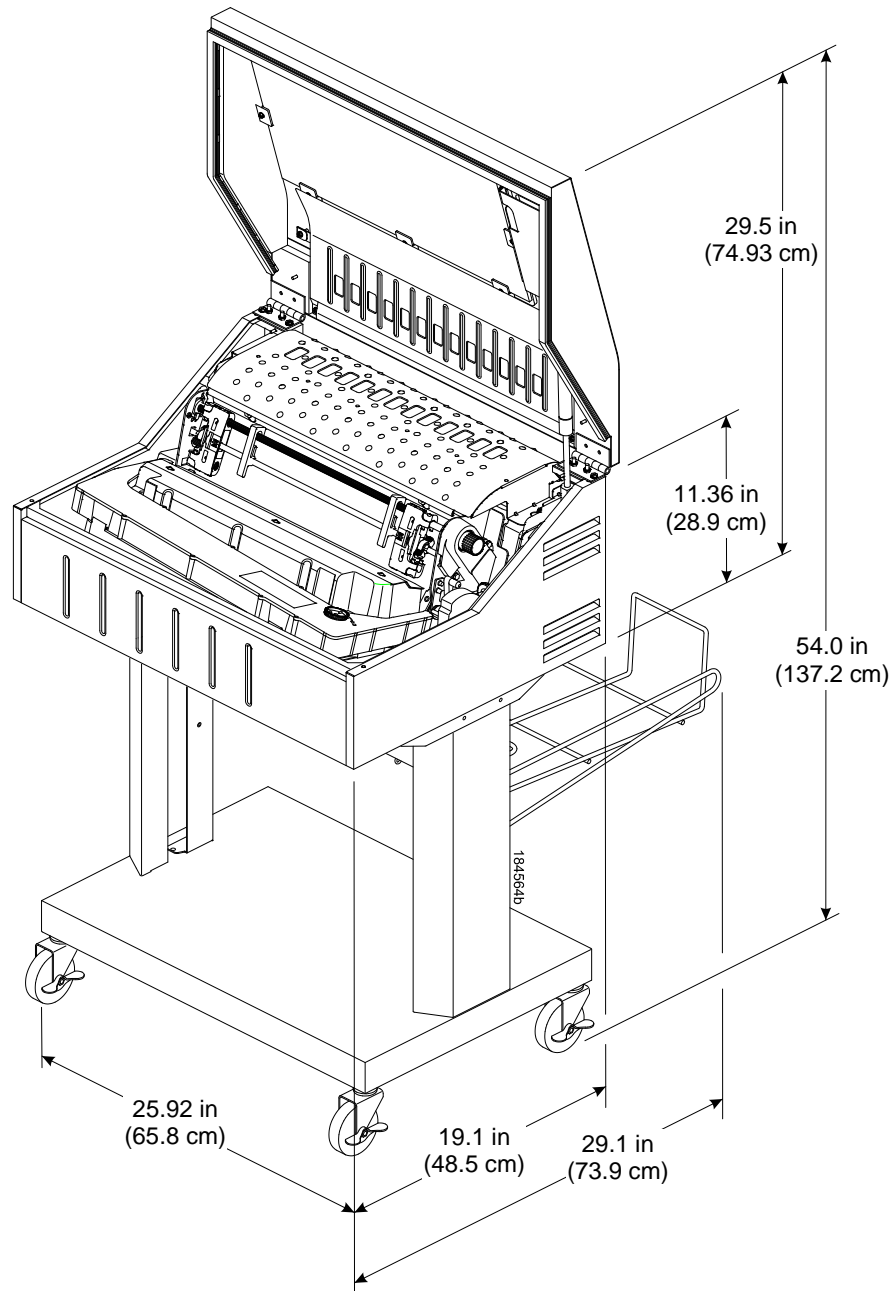


Figure 2 Pedestal Model

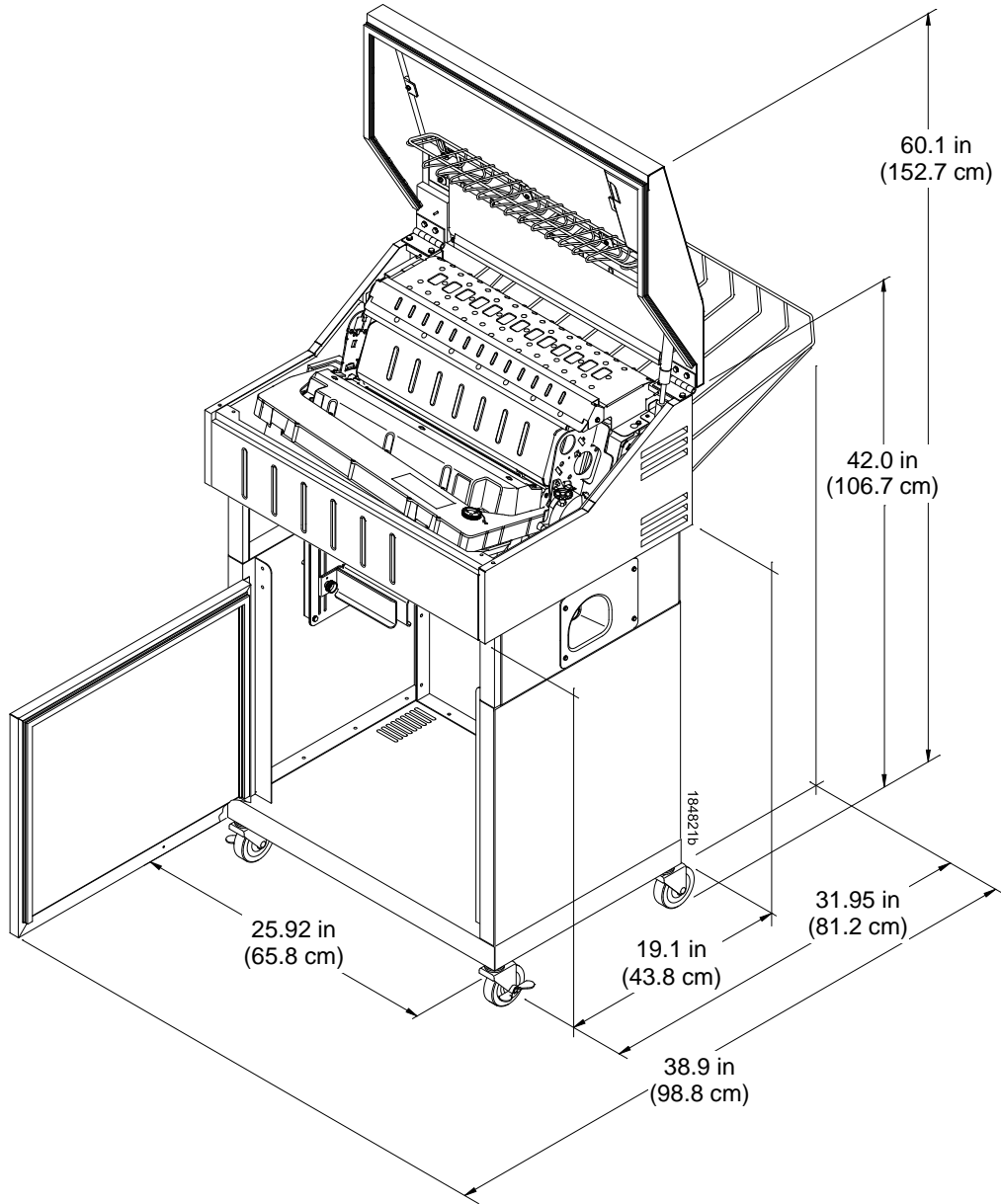


Figure 3 Zero Tear Pedestal Mode

Printer Component Locations

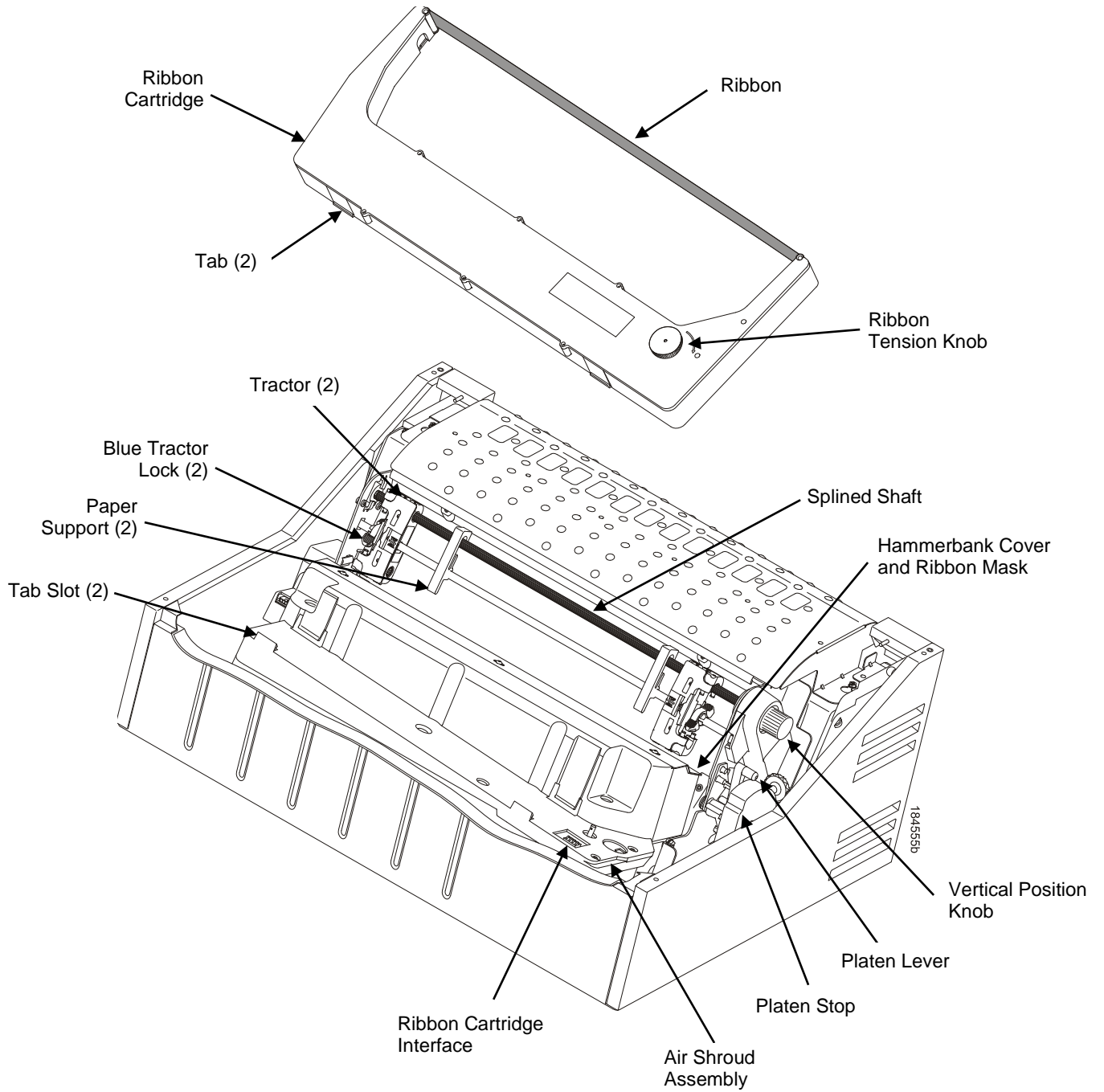


Figure 4 Printer Component Locations

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 LCD display. The configuration name or ribbon life remaining is shown on the bottom of the LCD display.

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 125 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. Pressing the **ONLINE** key toggles the printer from offline to online mode. The status indicator is off in offline mode.

Menu. In offline mode, pressing **ENTER** moves the printer into Menu mode. In this mode, you can navigate through all menus and change the printer configuration. To return to offline mode, press the **ONLINE** key.

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.

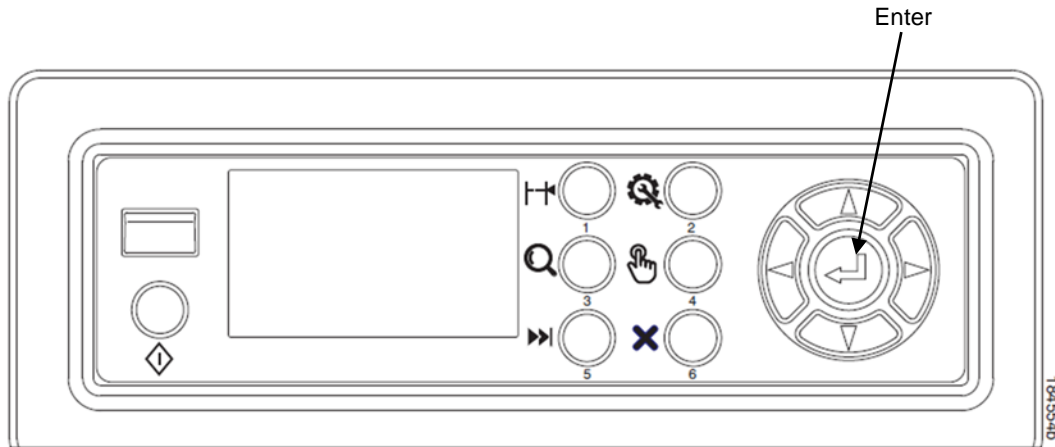
The current operating mode can be selected via control panel keys or can result from routine operations such as powering on the printer.

The Control Panel

Figure 5 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 \triangle + ∇ " means to press the \triangle key and the ∇ key at the same time.

Cabinet Model



Pedestal Model

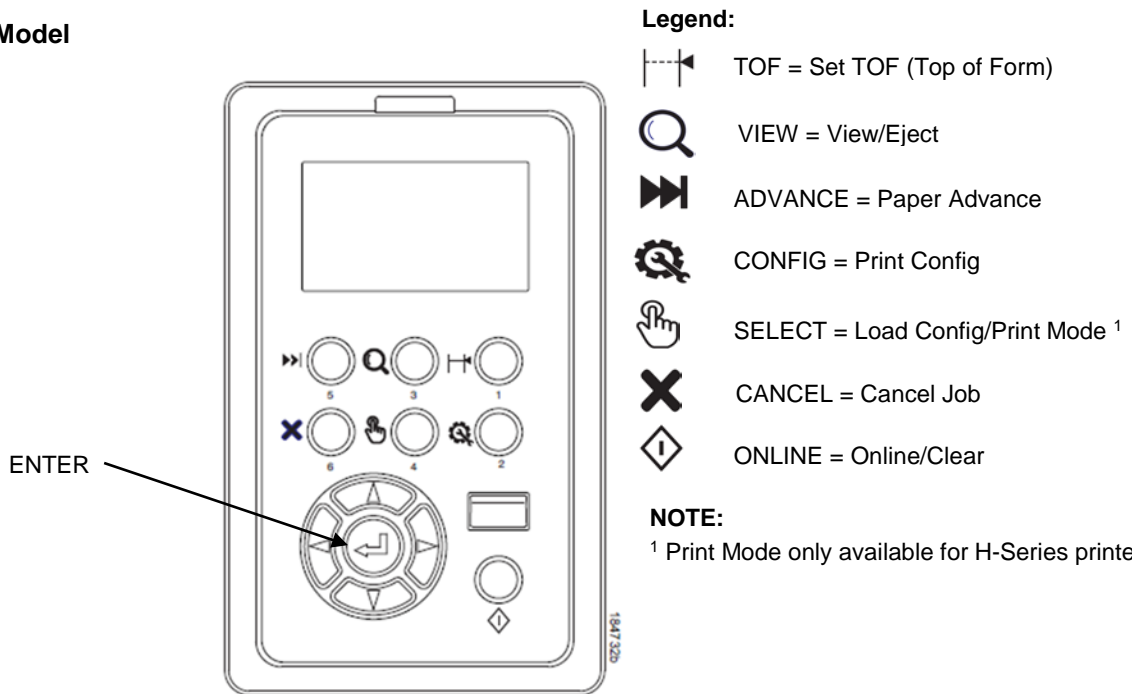


Figure 5 Control Panel

Control Panel Keys

ONLINE

Toggles the printer between online and offline modes. The key performs the following in Online, Offline, Fault, and Menu modes:

- **Online Mode** – sets the printer to Offline Mode.
- **Offline Mode** – sets the printer to Online Mode.
- **Fault Mode** – causes the printer to recheck the faults; if the faults are cleared, the printer toggles to Offline Mode. If the fault condition is not corrected before pressing the ONLINE key, the fault message reappears.
- **Menu Mode** – sets the printer to Offline Mode.

NOTE: When changing to Online Mode, if the user has changed menu items without saving the changes in a configuration, the user will be prompted to save the changes.

ADVANCE

Performs advance to top-of-form, as defined by the current active form length. The key works both online and offline.

- If online with data in the printer buffer, the data will print and then the paper will move to the next top-of-form.
- In the fault state, pressing ADVANCE will advance the paper. The first press moves to the top of the next available form. All subsequent presses advances one forms length as defined by the current active forms length.

VIEW

When the printer is online or offline, pressing this key executes the view or eject function, depending on whether the printer is a cabinet or a pedestal model.

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** — For cabinet and pedestal models, pressing the VIEW key for a short time (less than 1/2 second) moves the last data printed to the tractor area for viewing. While in the view state, the message "Printer in View" displays, 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** — For pedestal models only, if the View key is pressed for a long time (more than 1/2 second), the bottom of the last printed form will move to the tear bar position as set by the Tear Bar Dist menu. The message "READY TO TEAR/EJECT To Return" displays. While in this position, pressing the UP or DOWN arrow keys moves the paper up or down in 1/72 inch increments. Refer to the Up and Down key functions for additional details on the microstep feature. When the VIEW key is pressed a second time, the printer will move the paper either forward or backward to enable printing on the next available form.

CANCEL

In offline mode, this key cancels all data in the print buffer. The print buffer is cleared without printing any of the data and the current paper position moves to the next top-of-form. If this function is disabled, the CANCEL key will be ignored.

NOTE: Use of this key will cause loss of data.

TOF

Sets the top-of-form on the printer. This key is active only when the printer is offline and will not operate if the printer is in a fault condition. The paper moves down to the print position and aligns to the top-of-form. Refer to the *User's Setup Guide* for complete instructions on how to set the top-of-form.

CONFIG

In offline mode, CONFIG prints the current full configuration. This key requires a confirmation with the ENTER key; pressing any other key will exit from this function. See Config Menu on page 62 for an explanation of configuration menus.

SELECT

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 configuration load options: Factory, Cfg 1, Cfg 2, Cfg 3, ..., Cfg 8.

ENTER (↵)

When navigating the configuration menus, the Enter key (referenced by the symbol ↵) selects the currently displayed option value as the active value. An asterisk (*) appears next to the active value on the display. ENTER is also used for starting and stopping printer tests and generating a configuration printout.

NOTE: The ENTER key must be unlocked to execute the select function. See UP + DOWN, later in this section.

- In Offline mode, pressing the Enter key places the printer in Menu mode. This will bring up a set of icons to select.
- In Menu mode (at the icon menu level), pressing the Enter key moves down into the menu tree of the highlighted icon.
- Within a menu tree: if the highlighted menu contains submenus instead of a selectable parameter, pressing the Enter key will go into the submenu. If the highlighted menu is a display only menu, then pressing the Enter key performs no function. If the highlighted menu has selectable parameters, pressing the unlocked Enter key will select the displayed parameter. An asterisk (*) displays next to the selected parameter.
- If the highlighted menu is an executable menu, pressing the unlocked Enter key will cause the function associated with the executable menu to run. If the ENTER key is locked, pressing the Enter key for highlighted menus that are executable or contain selectable parameters will cause the message, THE ↵ KEY IS LOCKED, to display momentarily.

NOTE: Press the UP and Down keys at the same time to lock/unlock the ↵ key.

For special Network Address menus or String menus, pressing the Enter key will move down into a special multiple segment setting menu. Exit this menu by pressing Enter again to save changes or Cancel to exit without saving changes. This key is inactive in all other modes.

UP or DOWN (△ or ▽)

Moves up or down between levels in the configuration menus and makes vertical forms adjustment. In Offline mode 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 Menu mode, press △ or ▽ to move through levels in the configuration menus.

UP + DOWN (△ + ▽)

Locks and unlocks the ENTER key.

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.

PREV + NEXT (◀ + ▶)

When both keys are pressed simultaneously, the printer will reset to the power-up configuration and reset its internal state (in offline mode).

Ribbon Life Indicator

If the Panel Display menu is set to Ribbon Life, the bottom of the LCD displays the remaining life of the currently installed ribbon. The default settings for this feature should match the requirements for most applications; no special user setup is needed. If your particular application requires darker printing or can tolerate lighter printing, the ribbon end point can be adjusted as appropriate. See Ribbon on page 51.

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.

NOTE: If the print job is not stopped from the host system before pressing **CANCEL**, 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.

3. Press **CANCEL**.
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.

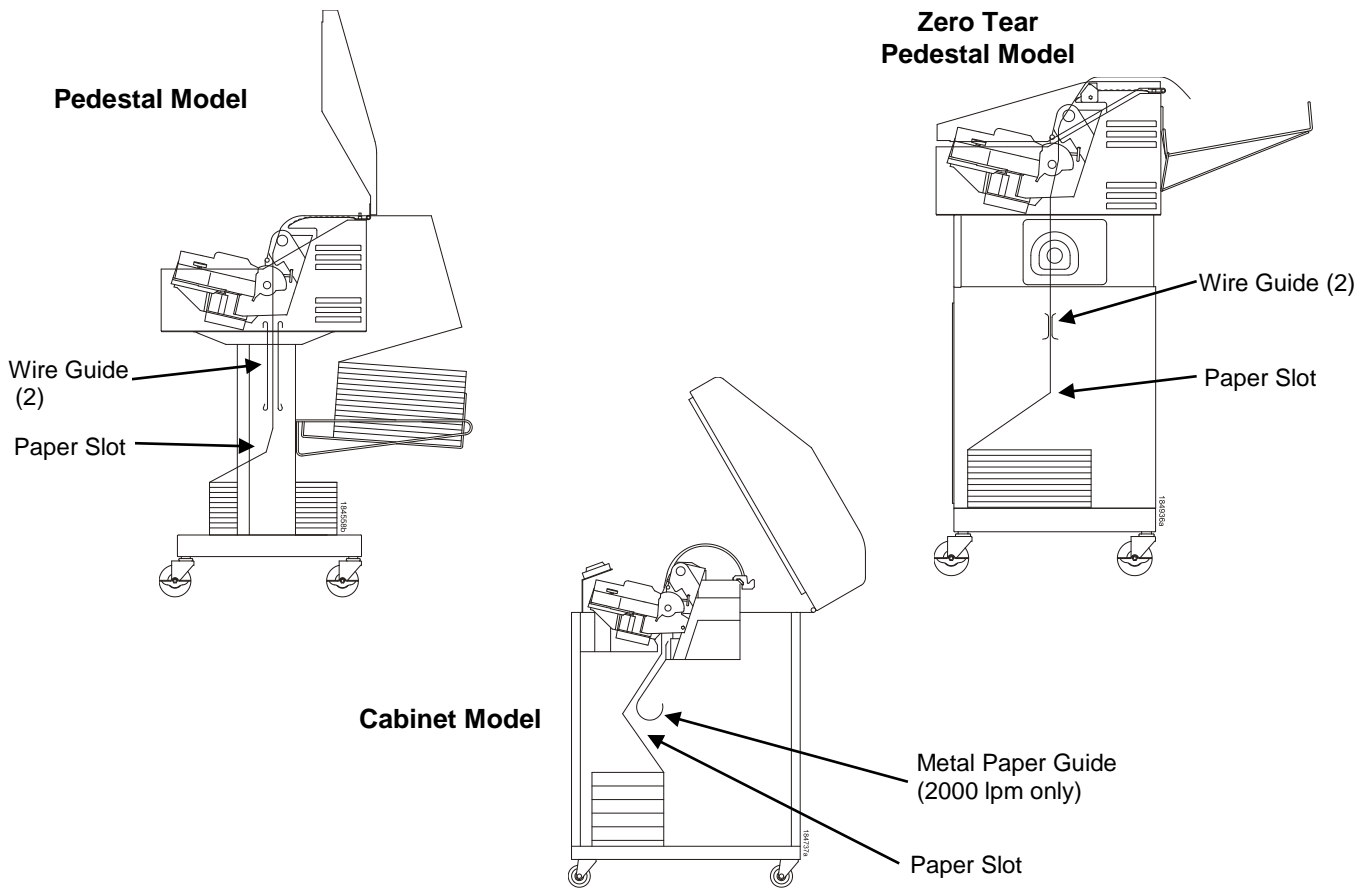


Figure 6 Paper Slot Location

1. Raise the printer cover. Raise the platen lever as far as it will go. (See Figure 4 on page 17 for the location of the lever.)

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

2. **Cabinet models:** open the front door and align the paper supply with the label on the floor.

Pedestal models: place the paper supply on the floor of the printer, centered under the paper slot.

Zero Tear Pedestal models: open the front door and place the paper supply inside the printer, on the floor of the cabinet.

3. Ensure the paper pulls freely.
4. Feed the paper up through the paper slot (see Figure 6). 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 15.

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

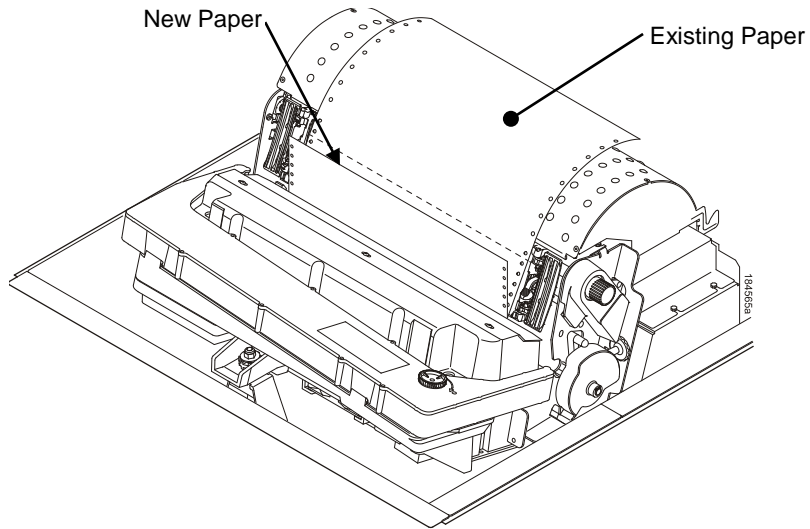


Figure 7 Loading New Paper into the Printer

6. Pull the new paper above and behind the ribbon mask, but in front of the existing paper. See Figure 4 on page 17 for the ribbon mask location. If necessary, gently press the existing paper back.
7. Align the top edge of the new paper with the top perforation of the existing paper.
8. 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.

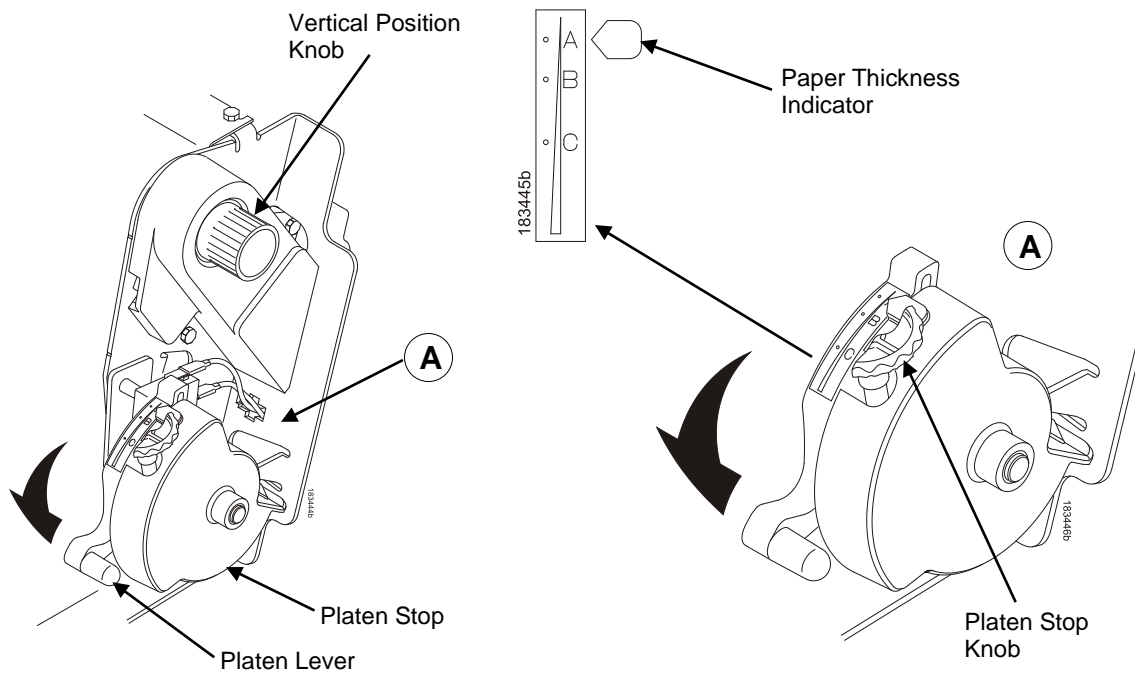


Figure 8 Setting the Platen Lever

- 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.

- Lower the platen lever until it stops.
- Press **ONLINE** to remove the “LOAD PAPER” fault message from the display.
- Press **ADVANCE** 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.
- Close the printer top cover. Close the cabinet front door.
- Press **ONLINE** to place the printer in online mode and resume printing.

NOTE: Perform steps 15 to 31 only if you are unable to load the new paper over the existing paper.

- Open both tractor doors.
- Remove the old paper from the tractors. Allow the paper to fall into the paper supply area.
- Feed the new paper up through the paper slot. Hold the paper to prevent it from slipping down through the paper slot (see Figure 6 on page 24).

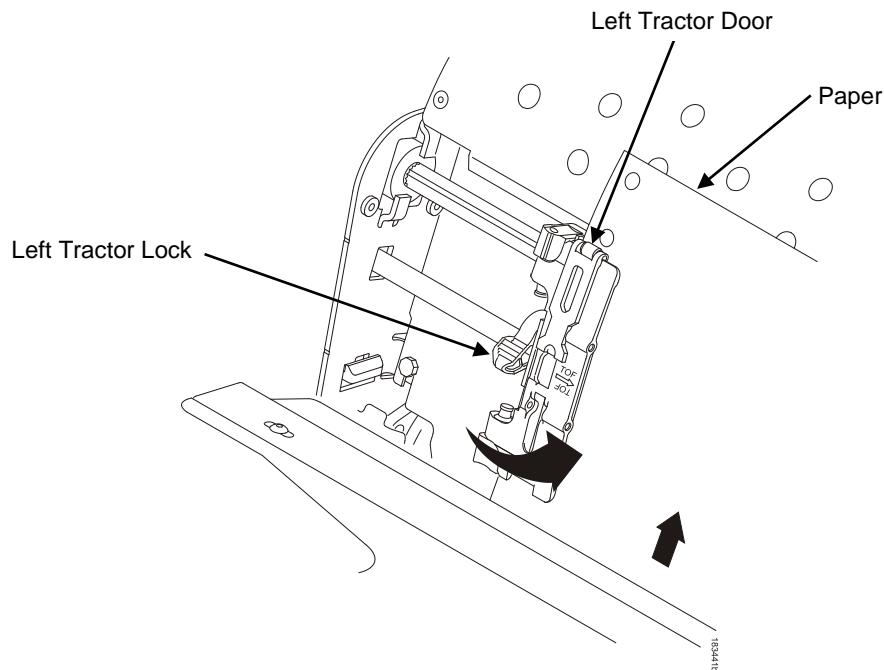


Figure 9 Loading Paper on the Left Tractor

- Pull the paper above and behind the ribbon mask. See Figure 4 on page 17 for the ribbon mask location.
- Load the paper on the left tractor.
- Close the tractor door.

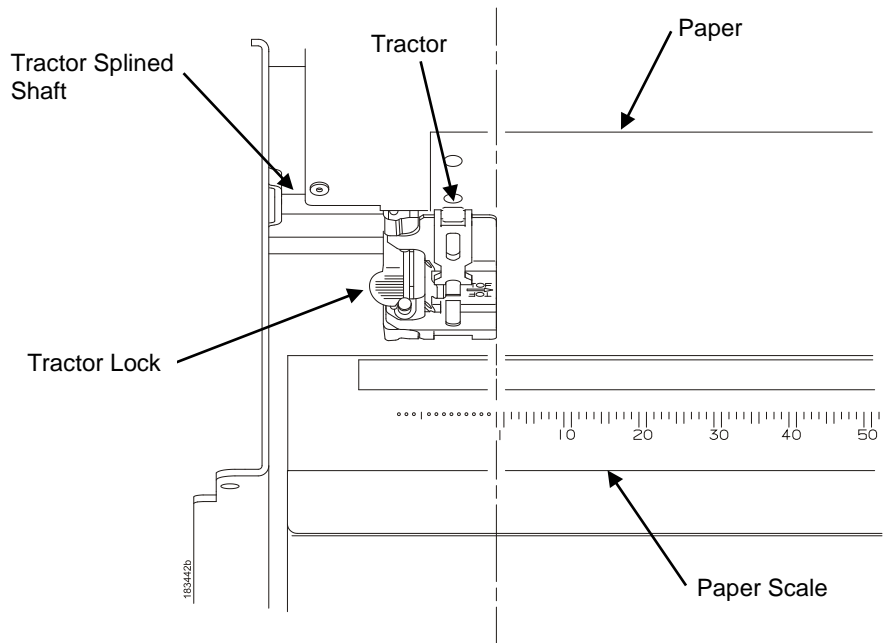


Figure 10 Positioning the Left Tractor to Avoid Damage

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.

21. 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.)

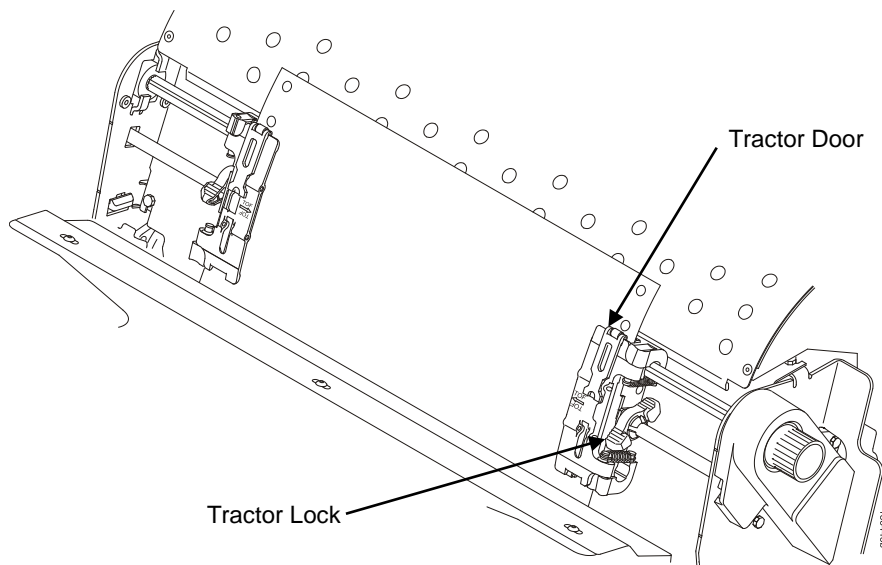


Figure 11 Loading Paper onto the Sprockets

22. Unlock the right tractor.
23. 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.

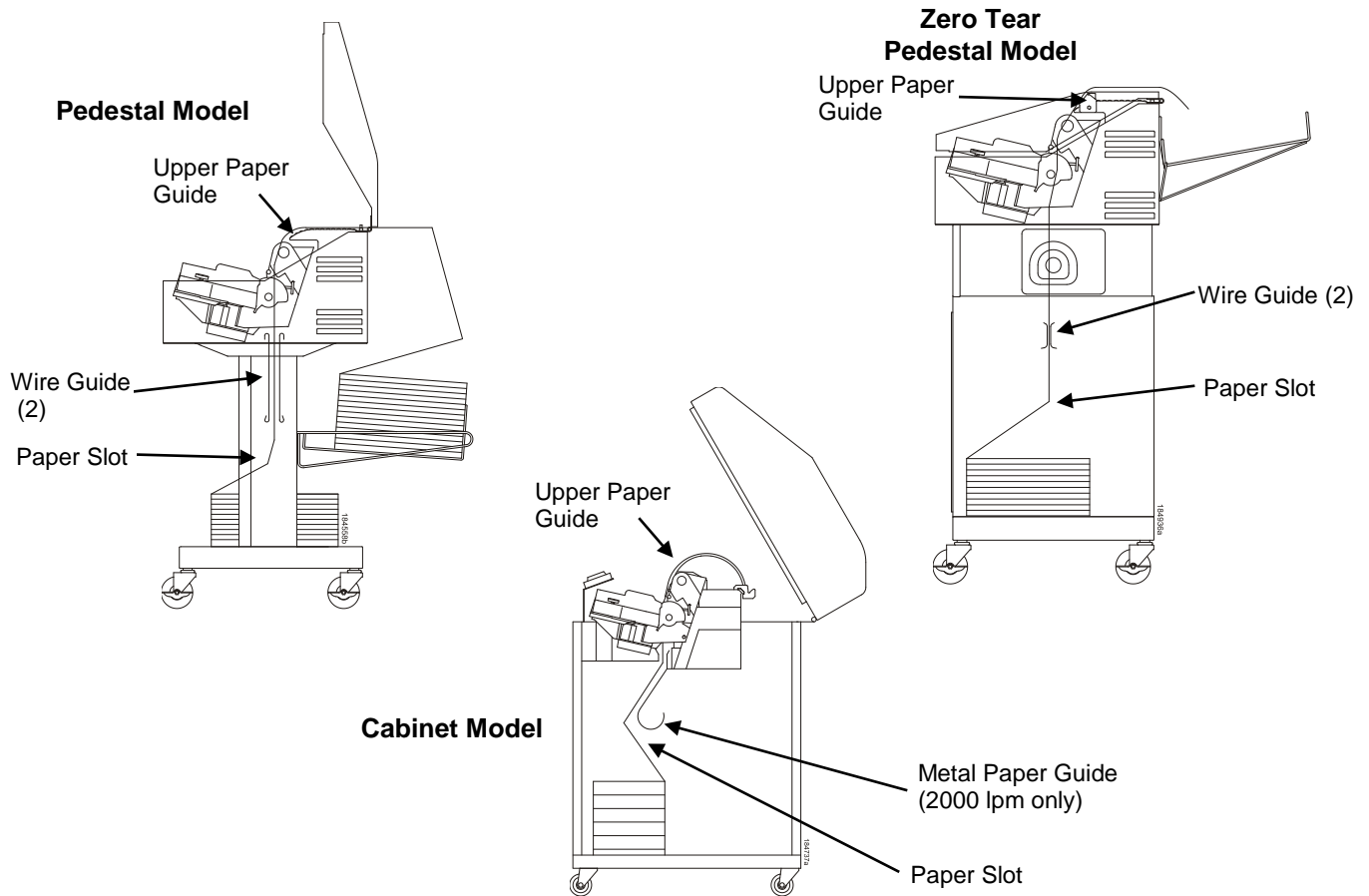


Figure 12 Using the Paper Guide to Orient the Paper

24. Press **ADVANCE** 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.

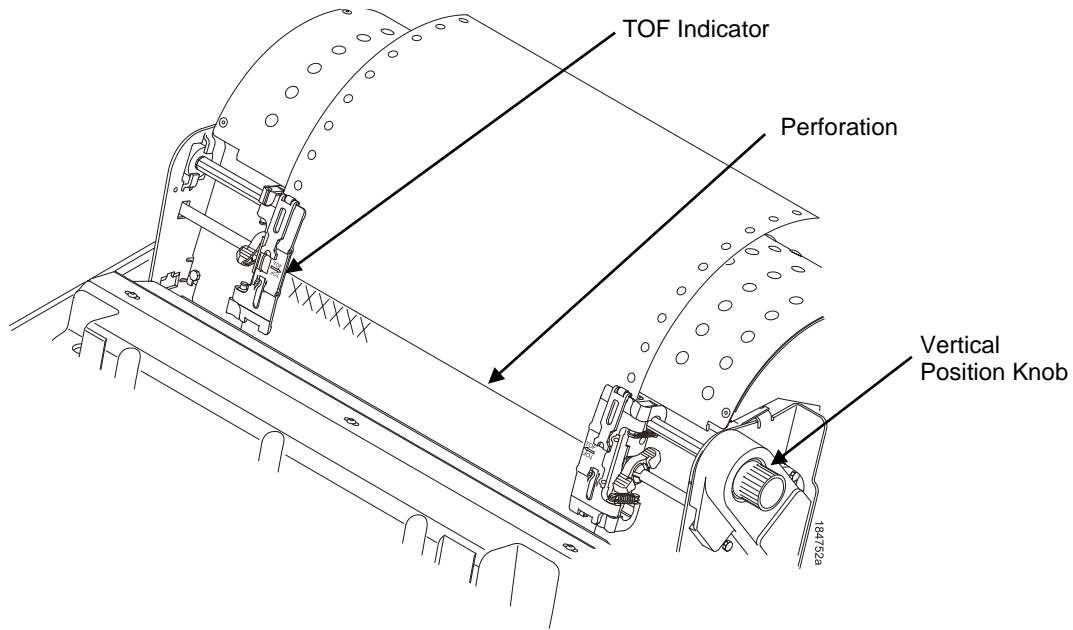


Figure 13 Aligning the Perforation with the TOF Indicator

26. Align the top of the first print line with 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.)

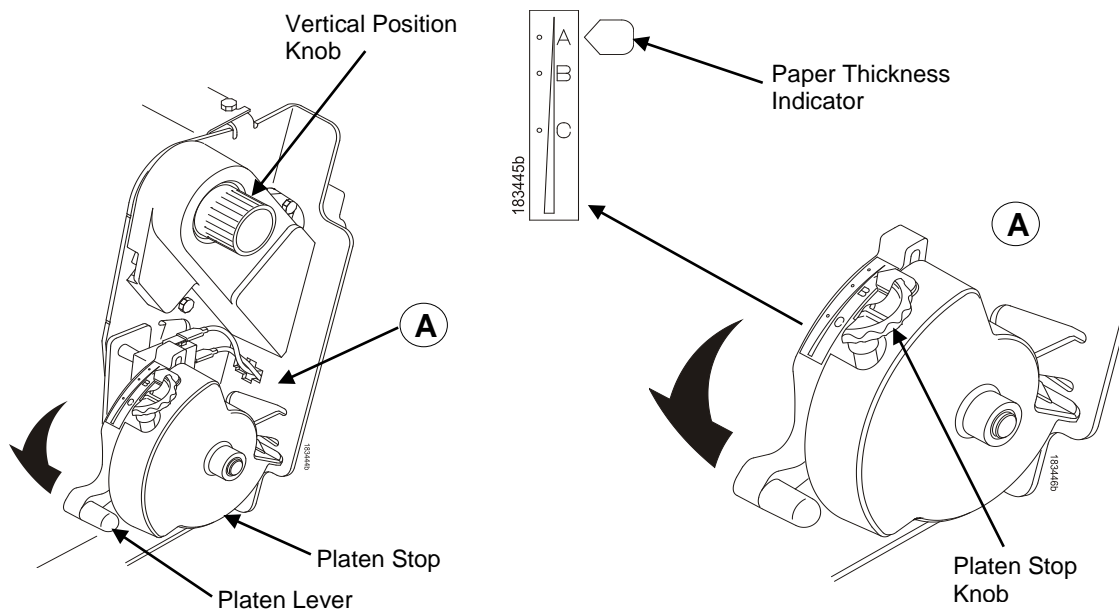


Figure 14 Adjusting the Platen Lever

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 **ONLINE** to clear any fault messages (such as “LOAD PAPER”) from the LCD.
30. 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.
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.

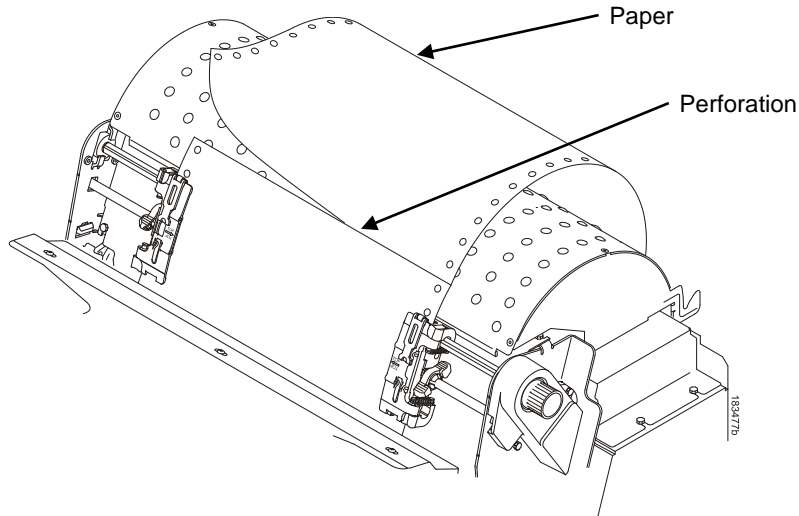


Figure 15 Unloading the Paper from the Printer

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.
6. For cabinet models, remove the stacked paper from the rear cabinet floor.
7. Close the cabinet rear door.

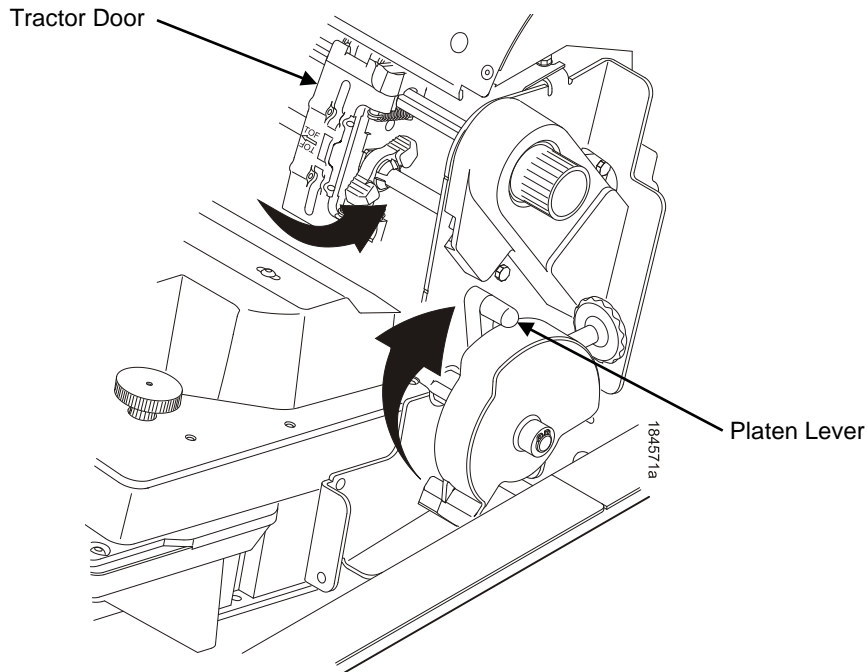


Figure 16 Completely Removing the Paper

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 6800 CRP has a 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 6800 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 5 on page 20.

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 "CARTRIDGE AT END POINT/Change Cart" 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 51.

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 51 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.

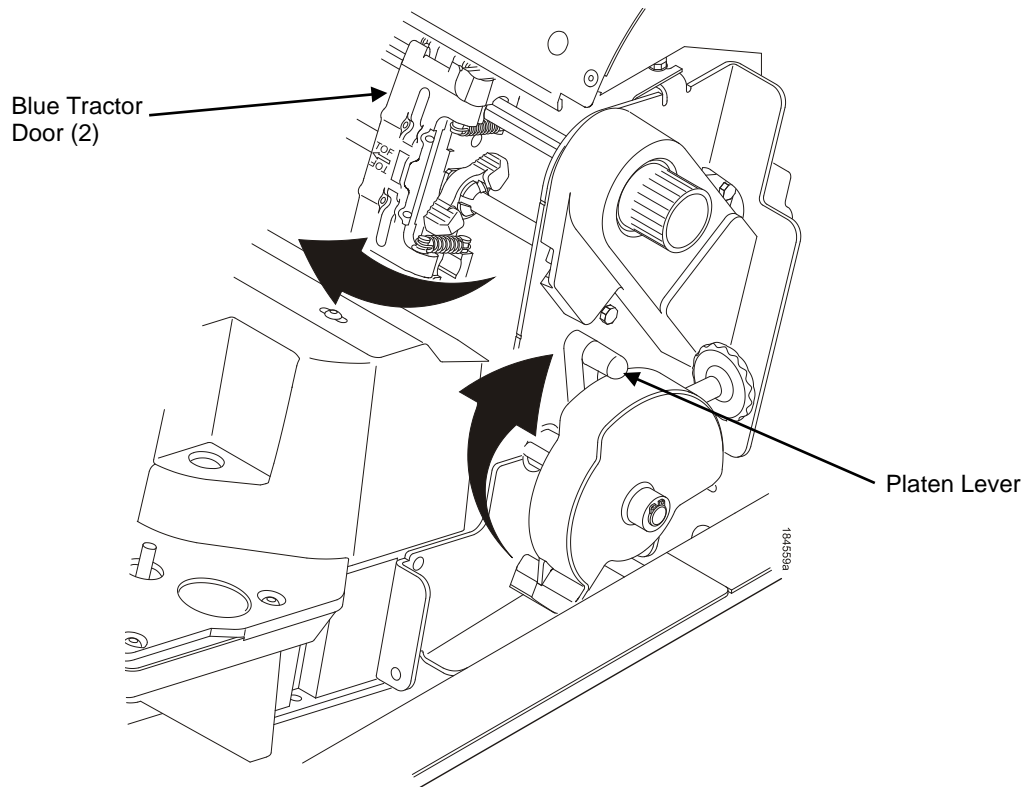


Figure 17 Preparing to Load the Ribbon

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.

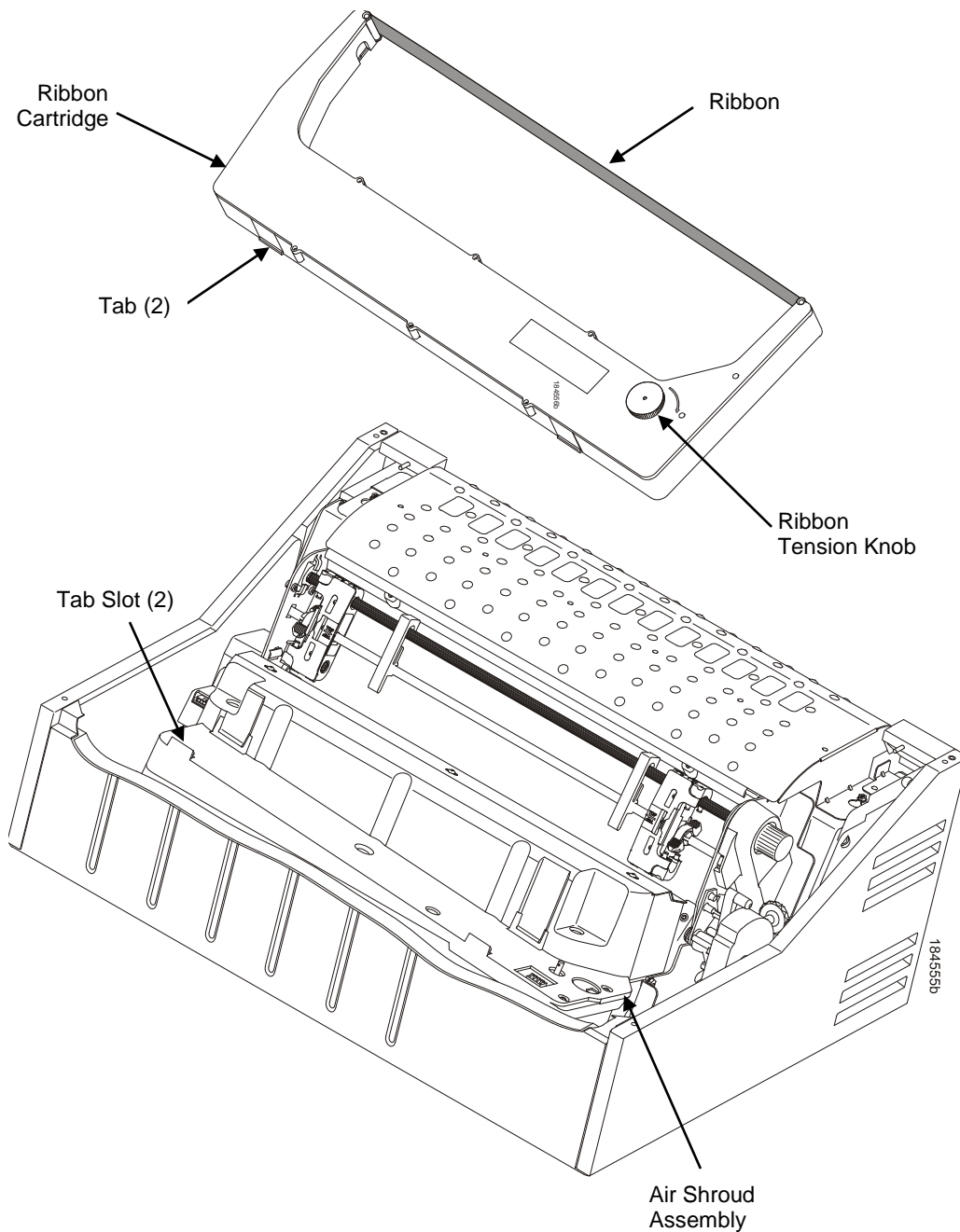


Figure 18 Installing the Ribbon Cartridge

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 18).

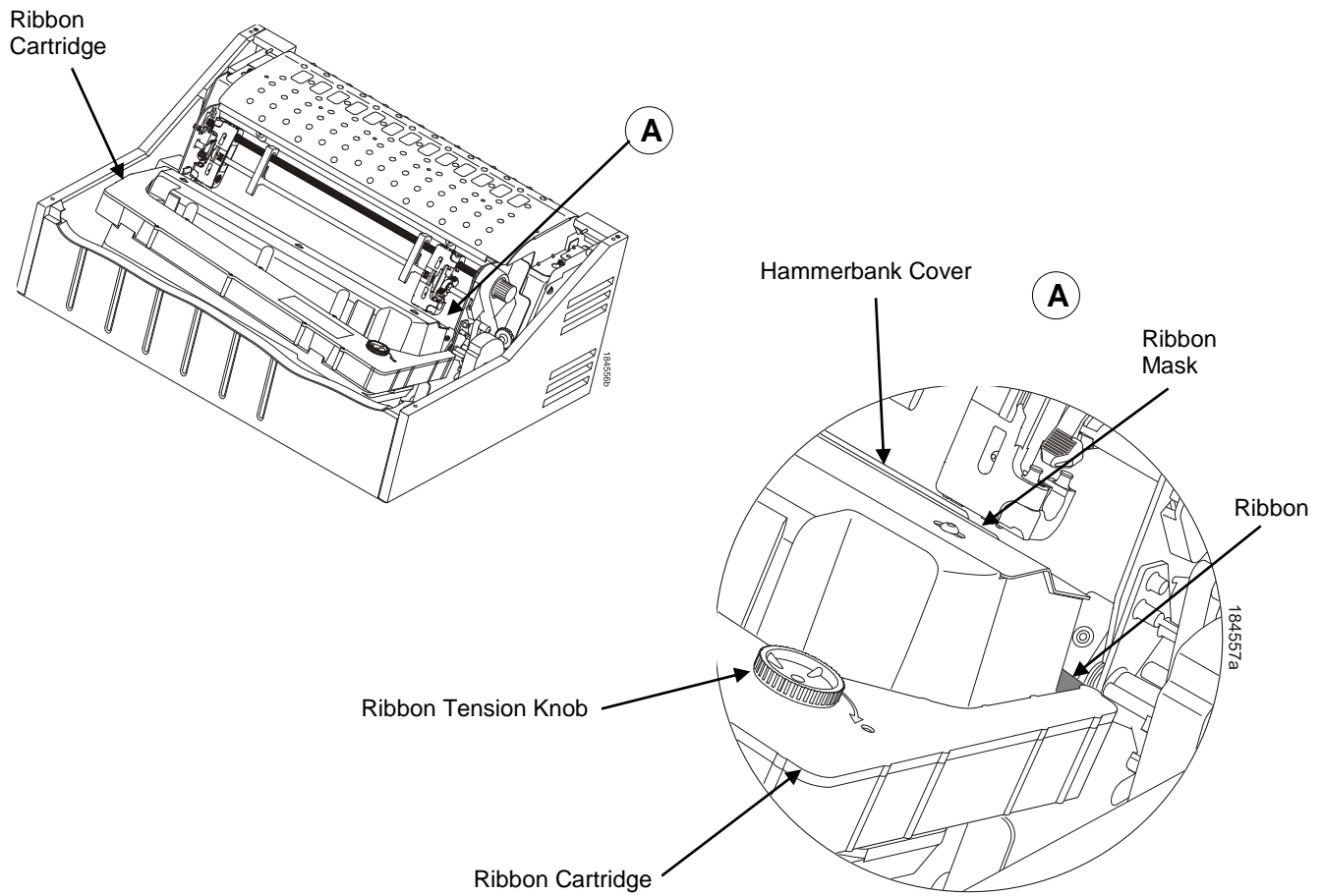


Figure 19 The Ribbon Cartridge Snapped in Place

7. Rock the cartridge downward, making sure that the ribbon goes between the guide and the mask (see Figure 19). 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 **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 40.

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 42. and Saving Your New Configuration on page 42.

You may also save your new configurations using the PTX_SETUP command host control code. See Appendix E on page 165.

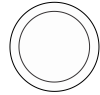
Default and Custom Configurations

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 42.

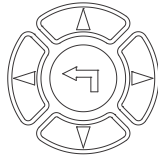
Navigating the Menu

To manipulate configurations review the following instructions about navigating through the menus. You must be offline to move within the menus.

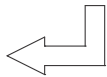


ONLINE

Press to toggle between ONLINE and OFFLINE. Press **ENTER** to enter Menu mode. Menus are accessed only in Menu mode.



Scroll up, down, left, or right through the icons to highlight the area of interest.



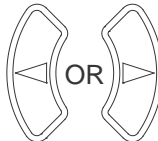
Press to enter the area of interest. This will take you into that section and list three menu selections, with the middle selection highlighted.



OR

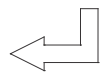


Press to move up or down through the menu selections. The highlighted menu is the active selection.

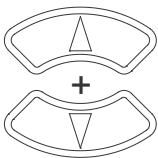


Press to scroll through the available choices for the highlighted menu. If the highlighted menu contains submenus, these buttons have no effect and the message “↵ for Submenu” will display.

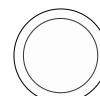
ENTER



Press to confirm selection. For normal menus, this will change or execute the menu. If the selection has submenus, the submenu will be entered.



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.



CANCEL

Press to return to the previous menu level.



Press to return to Offline mode. If changes were made, the user will be prompted to save or discard the configuration.

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

Top Level Menu Overview

When entering Menu mode, the user will see top level menu represented as icons as shown below. Use the navigation buttons up, down, right, and left to highlight the desired icon. As the user navigates, the name of the top level menu displays on the top line of the LCD.

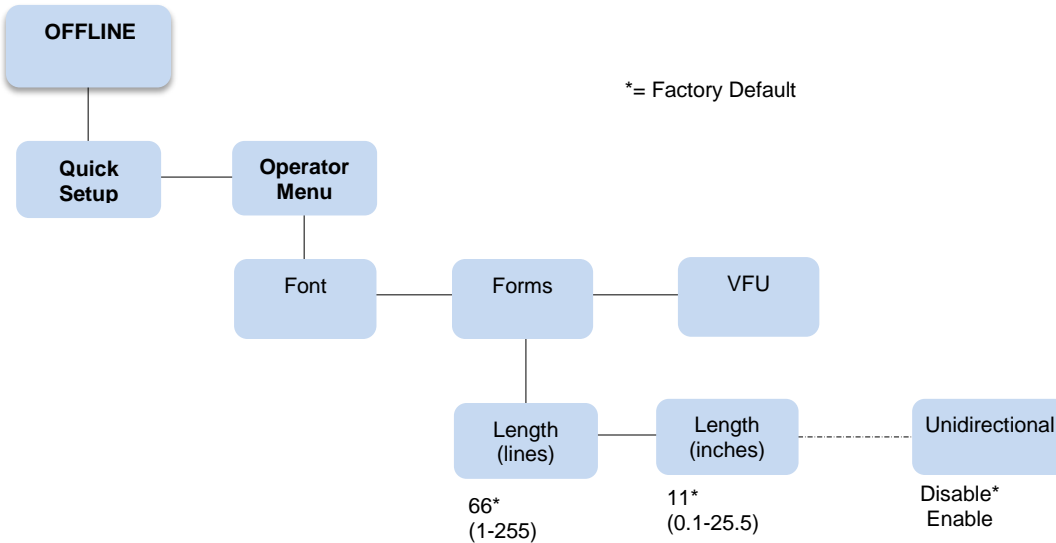


Table 3 provides brief descriptions of first level configuration menu options:

Table 3 Icon Level Menus

Menu Icon	Menu	Description
	Quick Setup	This menu allows quick access to the most frequently changed or entered parameters during printer installation.
	Operator Menu	This menu allows you to set fonts, forms, and vertical format units (VFU) parameters.
	Config Menu	This menu 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 menu allows you to select Ethernet Address and Ethernet Parameters options.
	Test Menu	This menu includes diagnostic tests, system memory, software build part number, Feature File (if available), shuttle type, and printer statistics.
	Help Menu	This menu allows printing of the Help Menu to view current options and the range of options allowed for each setting.


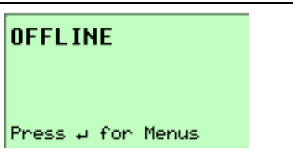




Changing Parameters Example


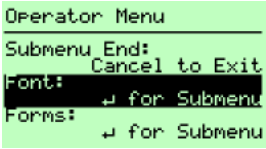

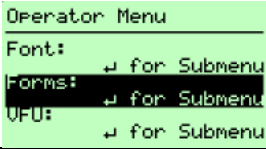

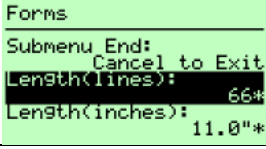
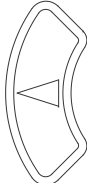
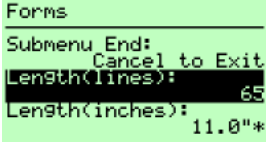

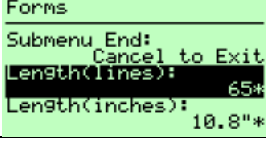

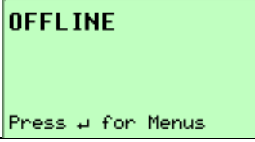

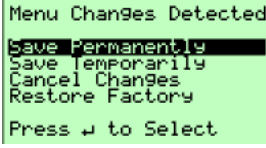

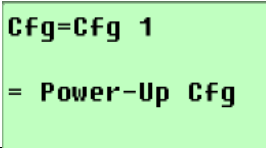
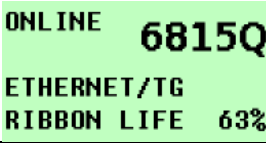


A configuration consists of several parameters. The default factory configuration has a starting set of parameters. In the configuration menu above, and in all the configuration menus in this chapter, the factory default values are indicated by an asterisk (*).

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		
3.	ENTER 		Press to enter Menu mode.
4.	 UNTIL		

Step	Press	LCD	Notes
5.	ENTER 		
6.	 UNTIL		
7.	ENTER 		The * indicates this choice is active.
8.	 UNTIL		Press until the desired selection or value displays.
9.	ENTER 		The * indicates this choice is active.
10.	 ONLINE		Press ENTER to go back into the menus or press ONLINE again to go ONLINE.
11.	 ONLINE		Configuration changes were detected and you are prompted to save the configuration permanently or temporarily, to cancel changes, or restore the Factory Configuration.
12A.	ENTER 		Configuration changes have been saved as Configuration 1, and will be set as the Power-Up config. The printer will then be brought online.
12B.			Places the printer online after permanently saving the configuration changes as Config. 1.
13.	The printer is ready for operation		

Auto Save Configuration

If the user makes a menu change and attempts to place the printer online without saving the changes to a configuration, the following prompt displays:

```
Menu Changes Detected
Save Permanently
Save Temporarily
Cancel Changes
Restore Factory
Press ↵ to Select
```

The active option is highlighted. Use the Up and Down keys to scroll through the different options; the keys will loop at the top and bottom options. The ↵ (Enter) key selects the highlighted option. After performing the selected option, the printer will go to Online mode.

NOTE: Only the Up, Down, and Enter keys work at the Menu Changes Detected prompt.

- **Save Permanently** (factory default). This option causes the printer to save the configuration to the active configuration and make the active configuration the Power-Up default configuration. If the active configuration is the Factory Configuration, the printer will save the configuration to an open configuration and make that open configuration the Power-Up default configuration.

If no open configuration is available, the user must decide which configuration to overwrite. In this case the printer will display the Save Configuration menu, otherwise, the printer will go Online.

- **Save Temporarily.** Menu changes will be implemented, but will not be saved once the printer is powered off.
- **Cancel Changes.** This option causes the printer to reload the Active Configuration, then go Online.
- **Restore Factory.** This option will cause the printer to reload the Factory Configuration, then go Online.

NOTE: A printer fault during the Auto Save process causes the printer to Save Temporarily.

Saving Your New Configuration


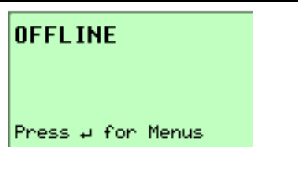

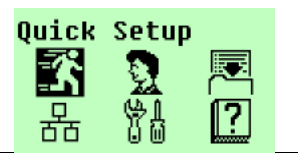



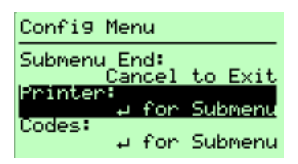

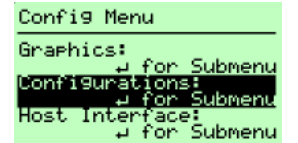

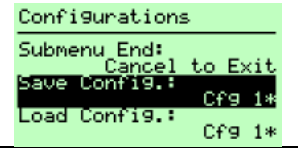
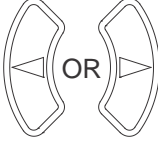
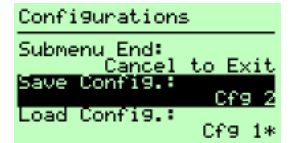

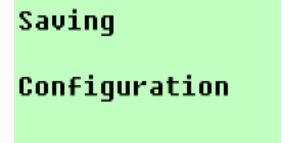
The Save Config. option allows you to save up to eight custom configurations to meet different print job requirements. Once you have changed all of the necessary parameters, you may save them as a numbered configuration (Example 1 on page 43) or a named configuration (Example 2 on page 45) that can be 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.




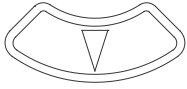
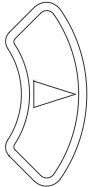


Once you have saved a custom configuration using this option, it will not be lost if you power off the printer. You can load a configuration for a specific print job (see Load Config. on page 74). You can also modify and resave it. You may want to print your configurations and store them in a safe place, 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 74).


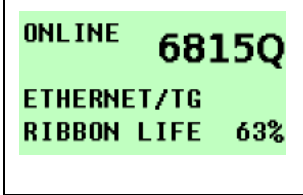
NOTE: Once you change active emulations, any changes to the previously selected emulation will be gone unless they have been saved.

Example 1

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


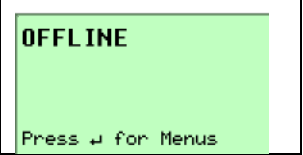





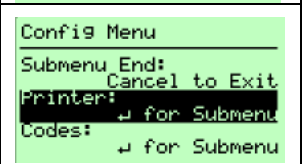

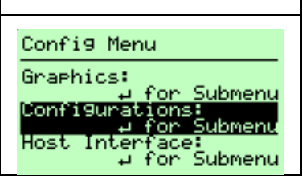

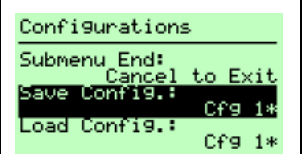
Step	Press	LCD	Notes
1.	Make sure the printer is on.		
2.	 ONLINE		
3.	ENTER 		Shows the top level icons.
4.	 UNTIL		
5.	ENTER 		
6.	 UNTIL		
7.	ENTER 		
8.			Cycle through the choices.
9A.	ENTER 		Configuration is in the process of being saved.





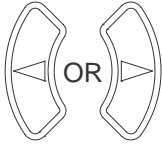
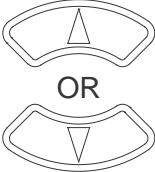



Step	Press	LCD	Notes
9B.		<pre> Configurations ----- Submenu_End: Cancel to Exit Save Conf19.: Cfg 2* Load Conf19.: Cfg 1* </pre>	The * indicates this choice is active.
NOTE:		We recommend that you print the configuration. To print the configuration go to Step 10. To skip this procedure and resume printer operation, go to Step 16.	
10.	 CANCEL	<pre> Config Menu ----- Graphics: ↓ for Submenu Configurations: ↓ for Submenu Host Interface: ↓ for Submenu </pre>	The Cancel Key will return back one level.
11.	UNTIL 	<pre> Config Menu ----- Submenu_End: Cancel to Exit Printer: ↓ for Submenu Codes: ↓ for Submenu </pre>	
12.	ENTER 	<pre> Printer ----- Submenu_End: Cancel to Exit Ser/Par Emul: Tally ANSI* Lan Emulation: Tally ANSI* </pre>	
13.	 UNTIL	<pre> Printer ----- Disp. Intensity: 2* Report: Current Short* Submenu_End: Cancel to Exit </pre>	
14.		<pre> Printer ----- Disp. Intensity: 2* Report: Current Full* Submenu_End: Cancel to Exit </pre>	
15.	ENTER 	<pre> Printer ----- Disp. Intensity: 2* Report: Current Full* Submenu_End: Cancel to Exit </pre>	The selected configuration is printed.
16.	 ONLINE	<pre> OFFLINE Press ↓ for Menus </pre>	Press ENTER to go back into the menus or press ONLINE again to go ONLINE.


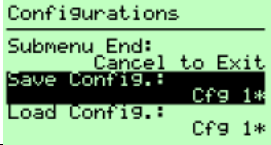

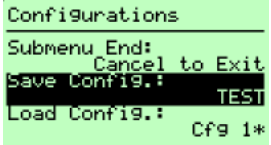

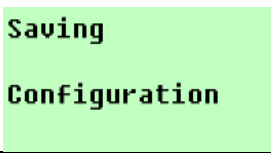
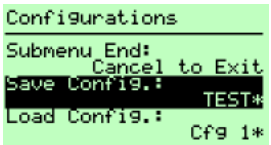

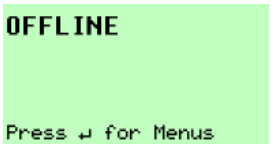

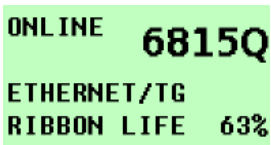
Step	Press	LCD	Notes
17.	 ONLINE		
18.			If you printed the configuration, store it in a safe place. The printer is ready for operation.

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		
3.	ENTER 		Shows the top level icons.
4.	 UNTIL		
5.	ENTER 		
6.	 UNTIL		
7.	ENTER 		

Step	Press	LCD	Notes
8.	 UNTIL	<pre>Configurations Power-Up Config.: Cfg 1* Name Configs: Reset Cfg Names: Cfg 1*</pre>	
9.	ENTER 	<pre>Name Configs Submenu End: Cancel to Exit Name Config 1: Name Config 2: Name Config 3:</pre>	
10.	 UNTIL	<pre>Name Configs Name Config 1: Name Config 2: Name Config 3:</pre>	You will rename config. 2.
11.	ENTER 	<pre>Name Config 2 Cfg 2 Cfg 2 Press * Keys to Edit to Save&Exit Cancel to Exit</pre>	The LCD flashes.
12.		<pre>Name Config 2 Cfg 2 <u>C</u>fg 2 Press * Keys to Edit to Save&Exit Cancel to Exit</pre>	Press the left or right key to choose the character that is highlighted.
13.		<pre>Name Config 2 Cfg 2 TEST<u>T</u> Press * Keys to Edit to Save&Exit Cancel to Exit</pre>	Press the up key to select the next character in the string. Press the down key to go back to the previous character and continue editing as necessary.
14.	ENTER 	<pre>Name Config 2 Cfg 2 TEST Press * Keys to Edit to Save&Exit Cancel to Exit</pre>	Configuration 2 is renamed TEST.
15.	 CANCEL	<pre>Name Configs Name Config 1: Name Config 2: Name Config 3:</pre>	Goes back up one level.
16.	 CANCEL	<pre>Configurations Power-Up Config.: Cfg 1* Name Configs: Reset Cfg Names: Cfg 1*</pre>	Goes back up another level.

Step	Press	LCD	Notes
17.	 UNTIL		
18.			TEST now appears as one of the configuration choices.
19A.	ENTER 		
19B.			Your configuration is saved as TEST.
20.	 ONLINE		Press ENTER to go back into the menus or press ONLINE again to go ONLINE.
21.	 ONLINE		

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

6800 CRP Main Menu

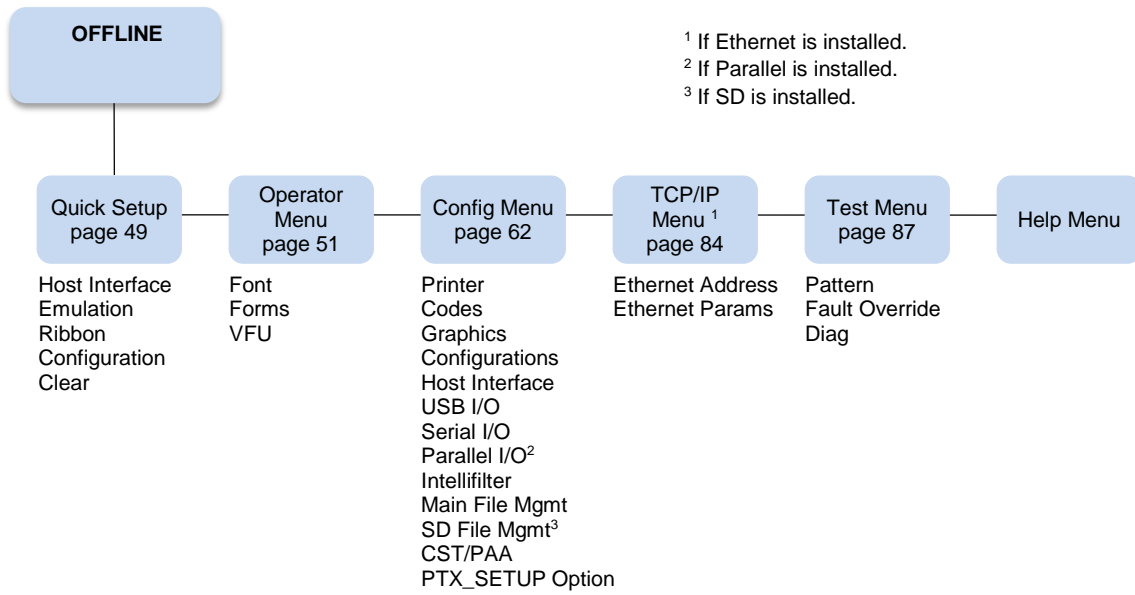
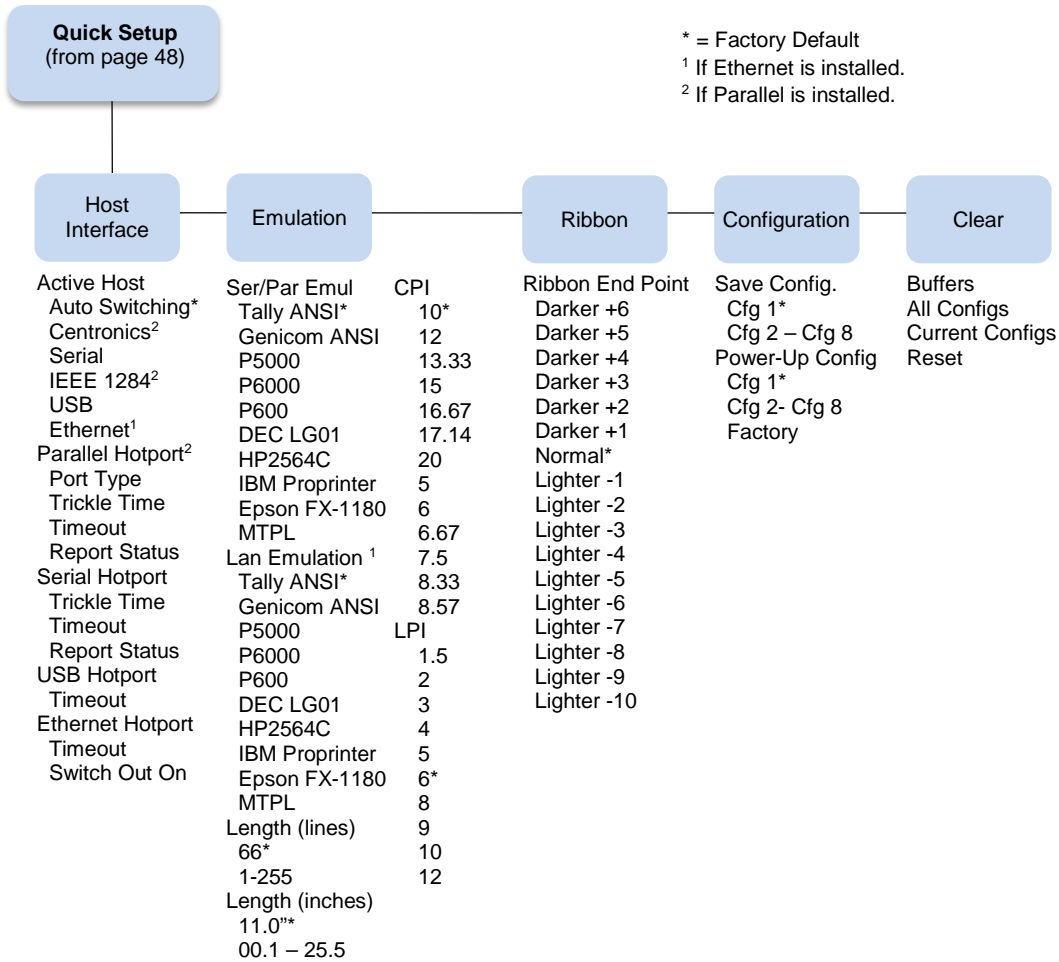


Figure 20 6800 CRP Main Menu Configuration

Quick Setup



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). This menu selects which host I/O is currently active (see page 75). Other selections include Centronics, Serial, IEEE 1284, USB, and Ethernet. Note that selections will only appear if installed.
- **Parallel Hotport**. This submenu controls the parameters for hot porting with the Centronics or IEEE 1284 interface.
- **Serial Hotport**. This submenu controls the parameters for hot porting with the serial interface.
- **USB Hotport**. This submenu controls the parameters for hot porting with the USB interface.
- **Ethernet Hotport**. This submenu controls the parameters for hot porting with the Ethernet interface.

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. 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 configuration changes 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 Emulation (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%.

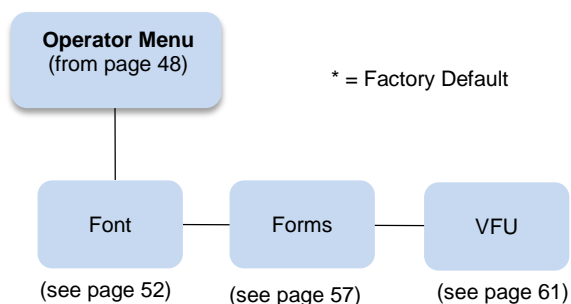
Configuration

- **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 42 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.

Clear

- **Buffers.** Clears all buffers and 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 place of cycling power to the printer. As with cycling power, the Powerup Configuration is loaded as the Current Configuration.

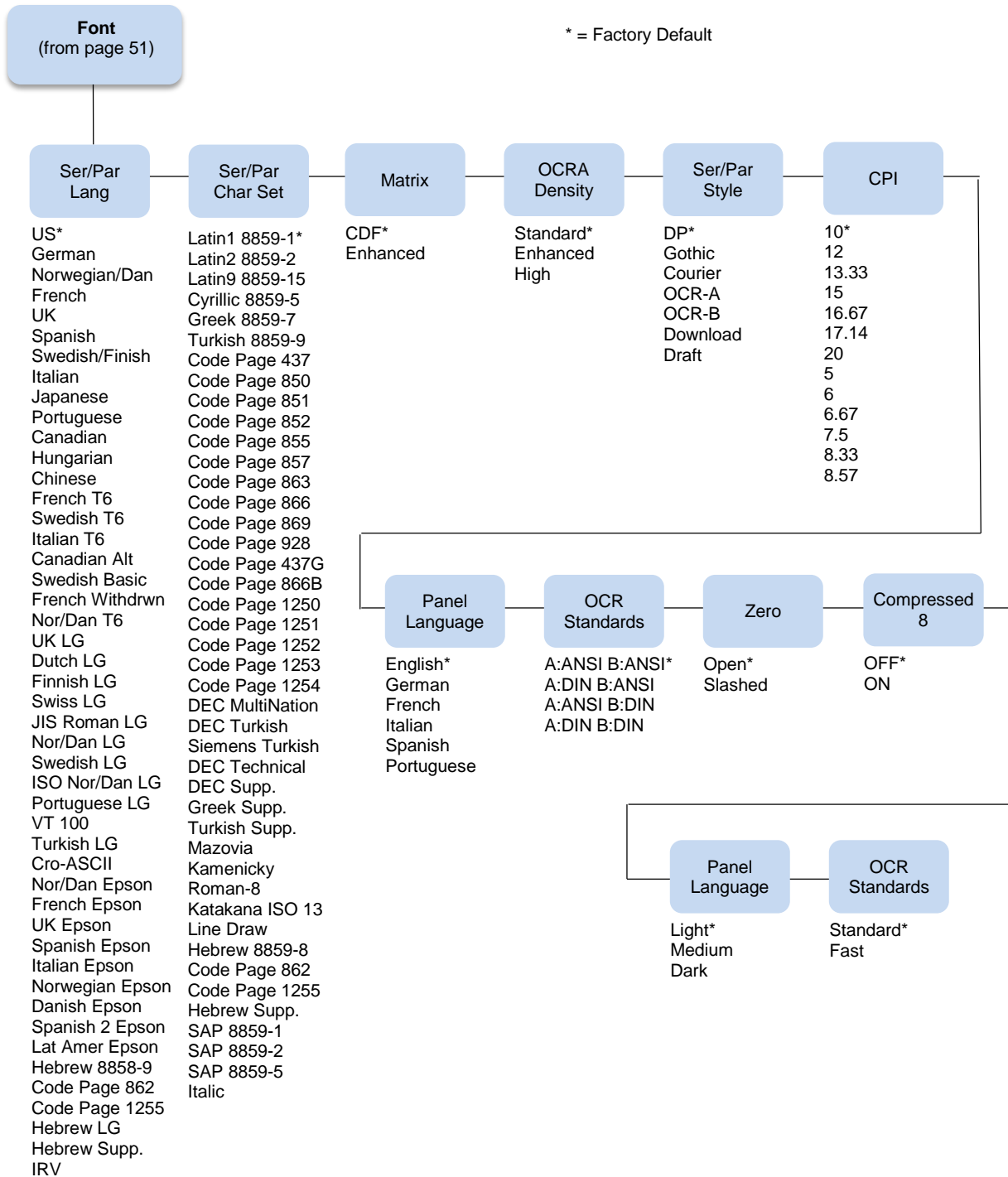
Operator Menu



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:



Ser/Par Lang

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 *6800 Emulations Manual* for details on character substitutions. The possible selections are:

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
ISO Nor/Dan LG	Portuguese LG	VT 100
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	Hebrew 8859-8
Code Page 862	Code Page 1255	Hebrew LG
Hebrew Supp.	IRV	

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 *6800 Emulations 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 Supp.	Greek Supp.	Turkish Supp.
Mazovia	Kamenicky	Roman-8
Katakana ISO 13	Line Draw	Hebrew 8859-8
Code Page 862	Code Page 1255	Hebrew Supp.
SAP 8859-1	SAP 8859-2	SAP 8859-5
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 143 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.

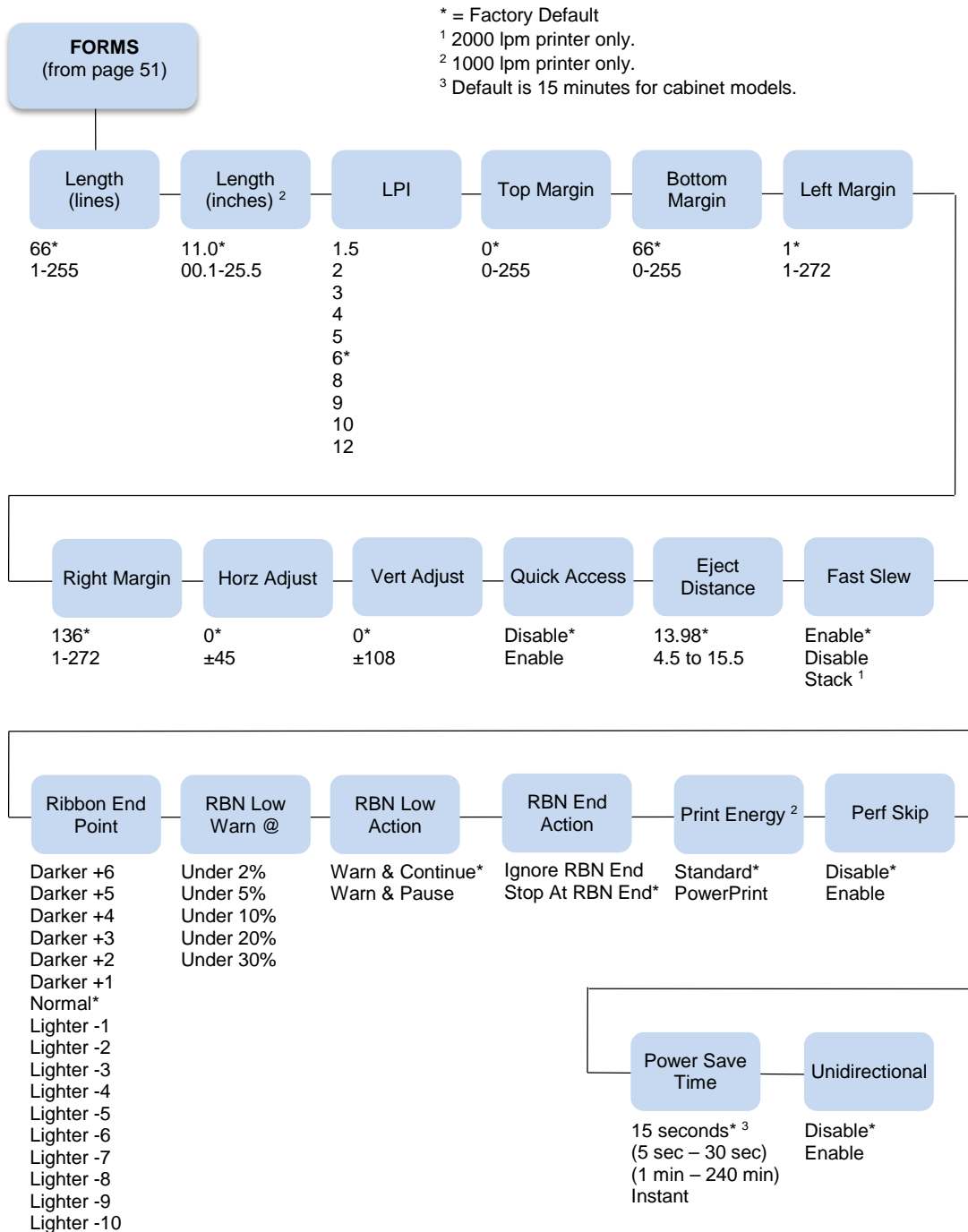
Italic Quality

Use this option to adjust the quality of italic printing.

- **Standard** (default). This prints the best quality italic.
- **Fast.** This prints a faster version of italic.

Forms Submenu

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



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 00.1 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 a pedestal 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 pressing the VIEW key. (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 15.5. The default is 13.98 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 is 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.

Print Energy

NOTE: For 1000 lpm printers only.

This menu allows the user to optimize the energy or impact of the hammers when printing single or multipart forms.

- **Standard** (default). When this option is selected the printing energy is optimized for normal jobs.
- **PowerPrint**. When this option is enabled printing is optimized for multi-part forms.

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. The default is 15 minutes for cabinet models and 15 seconds for all other models.

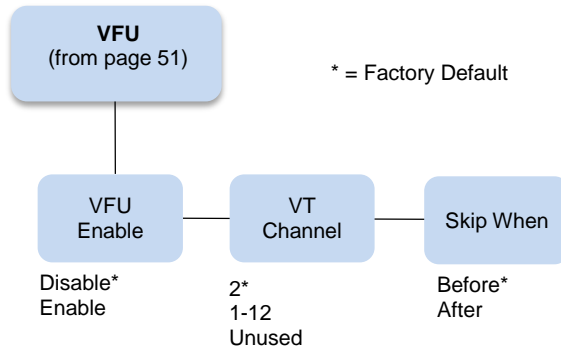
Unidirectional

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.

Vertical Format Units (VFU) Submenu

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



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.

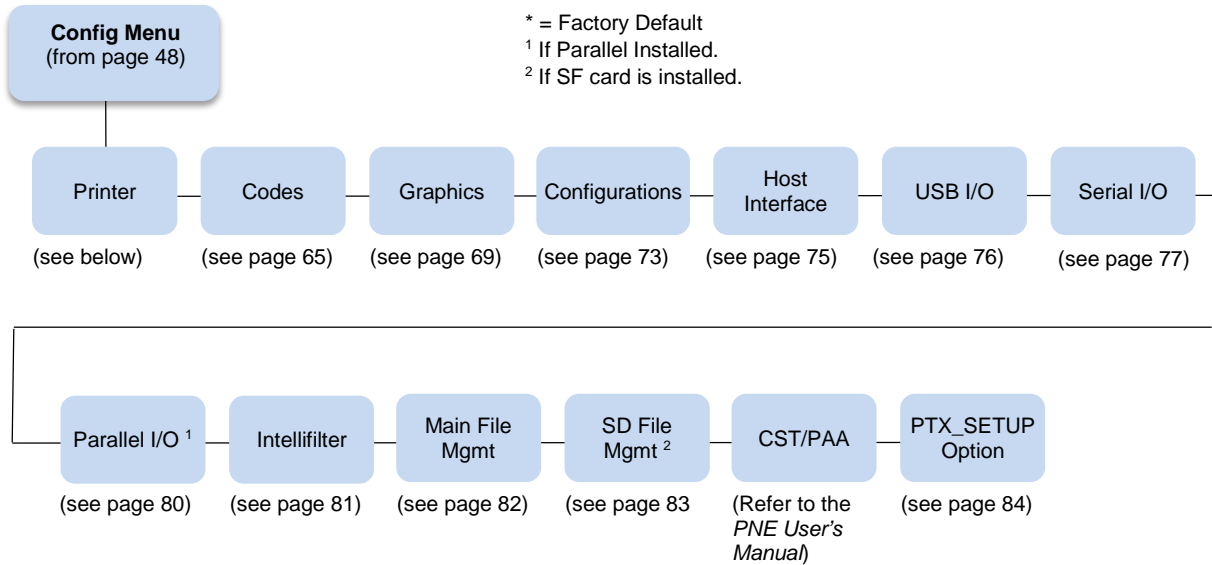
VT Channel (Vertical Tab Channel)

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 50.

Skip When

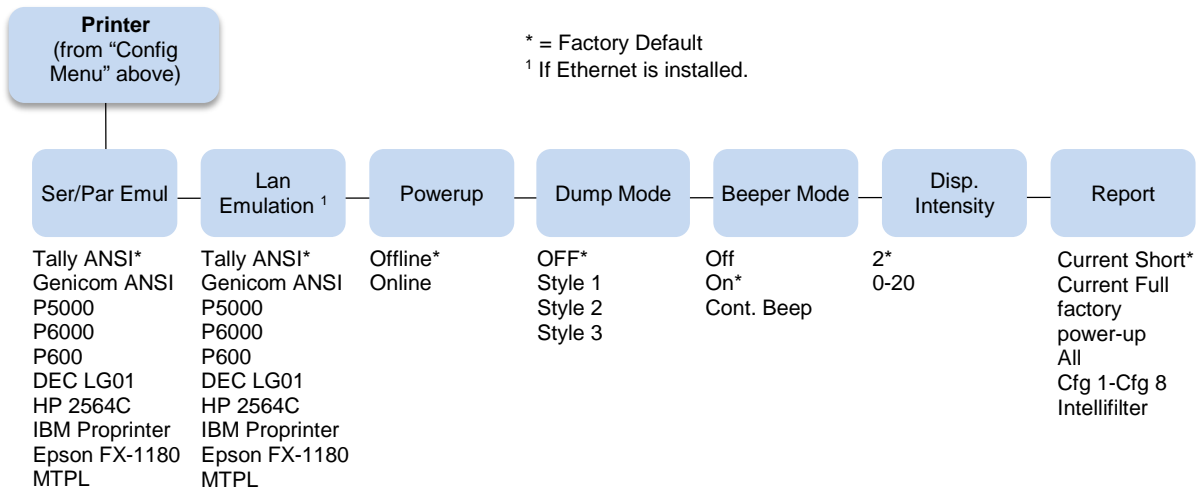
This parameter applies only to the emulations which make explicit use of the VFU channels. This parameter designates where the Skip Length distance will begin, before or after the Bottom of Form channel. The Skip location is determined by using the designated Bottom-of-Form Channel in the downloaded 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



The following are explanations of each submenu and parameter.

Printer Submenu



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 Emulation (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 63).

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.

Disp. Intensity

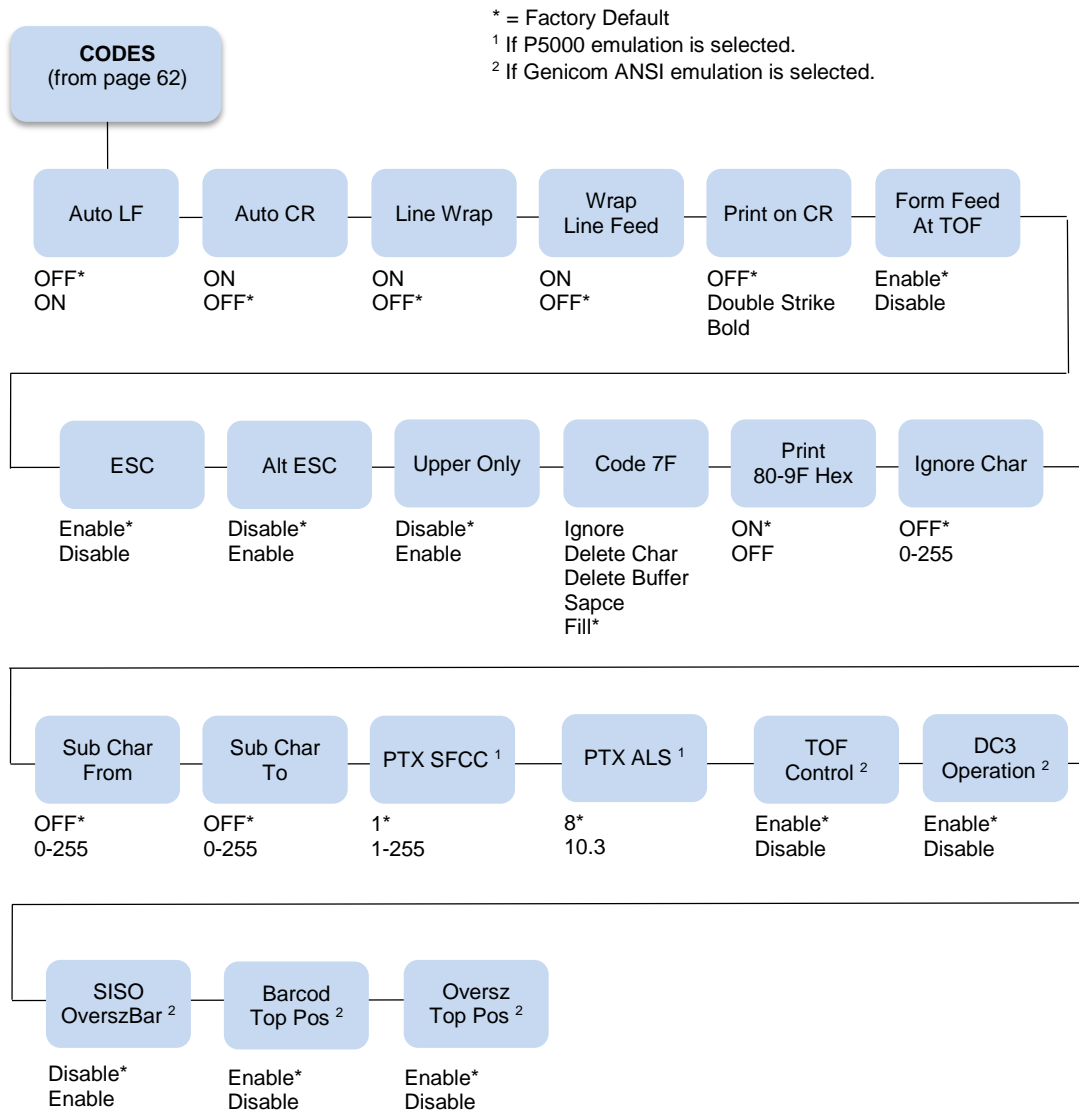
This menu controls the intensity of the LCD display. The range is 0-20 and the default setting is 2.

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.
- **Cfg 1 – Cfg 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



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 62).

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 62).

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 62).

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 49.).

- **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 - 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 non-downloadable 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)

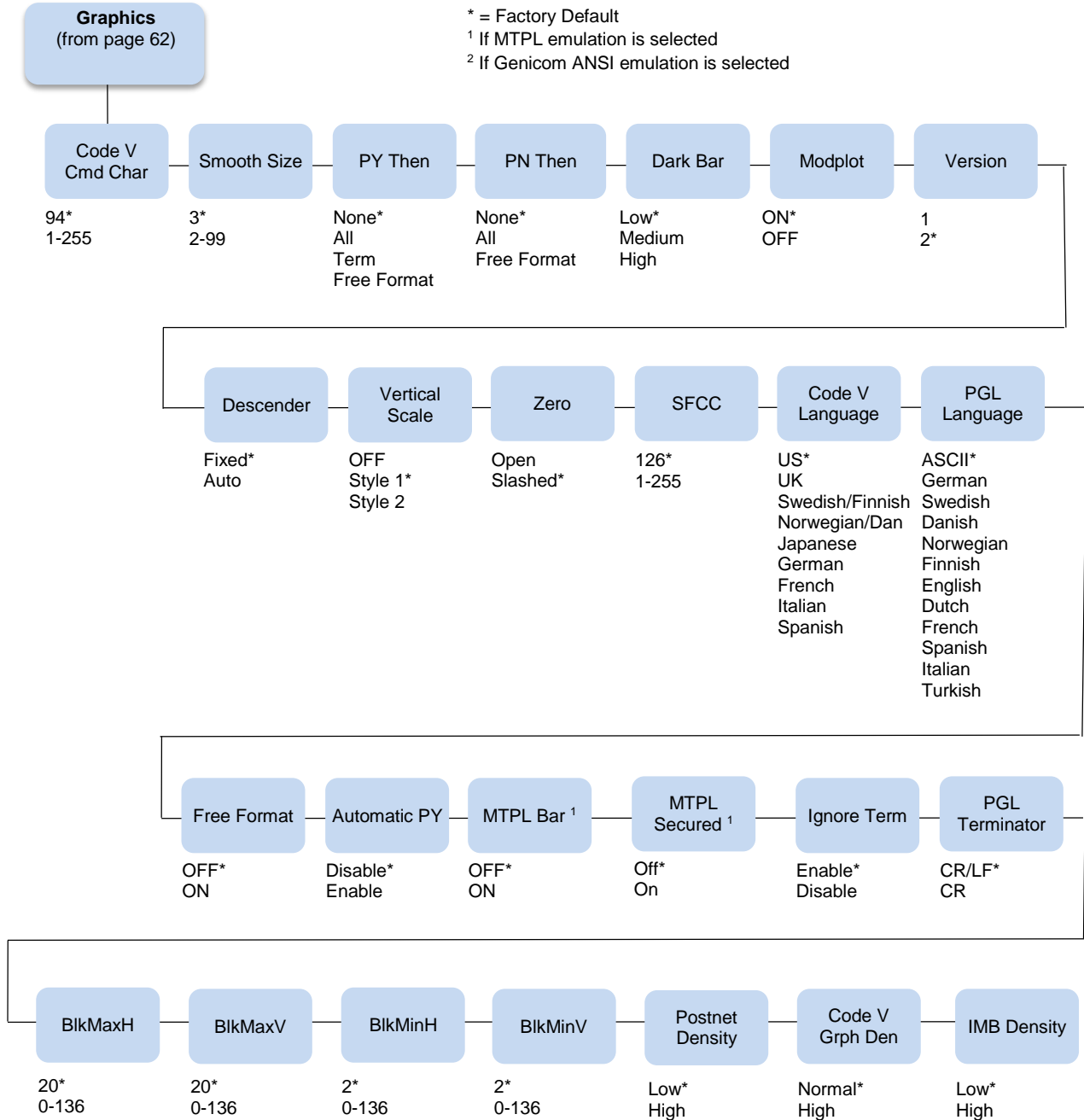
When set to Enable (the default), the paper position is reset to the top of the bar code after printing. When set to Disable, the paper position is left at the end of the bar code after printing.

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:



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

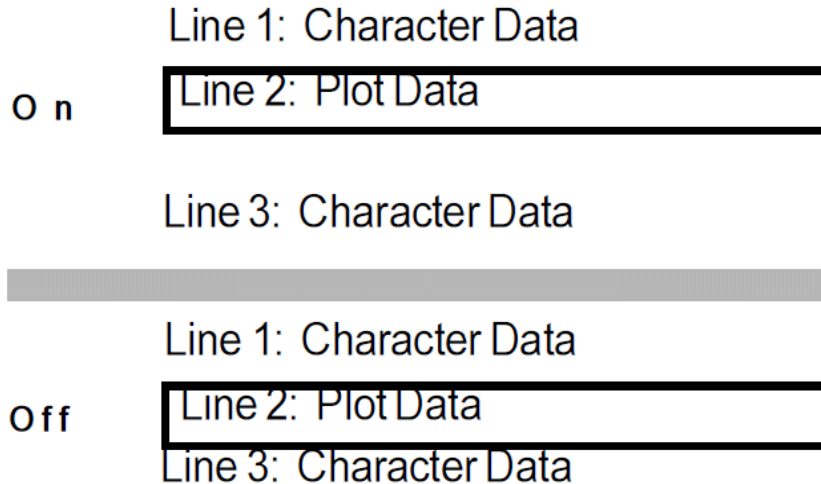
This parameter allows you to set the base dot density at which bar codes will print. Default is Low.

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.



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 will print at half the speed of Low Density.

Code V Grph Den

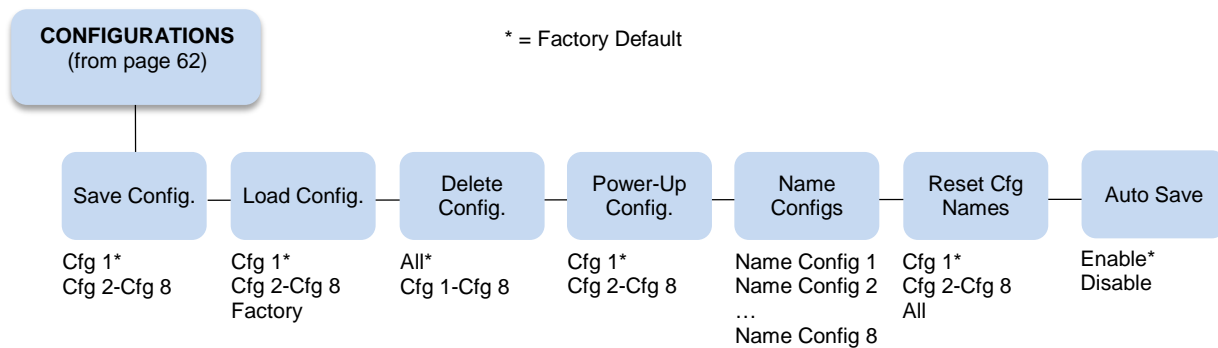
This parameter allows for graphic items in Code V to be printed in either single density (Normal) or double density (High). The default is Normal.

IMB Density

Determines whether the horizontal Intelligent Mail barcodes (IMB) are printed in Low Density (120 DPI) or High Density (180 DPI). Low Density is the default setting. IMB barcodes printed in High Density will print at lower speeds.

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:



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 42 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 Cfg 1 - Cfg 8) will be the power-up configuration.

Name Configs

Under this option are eight different submenus that allow you to select which configuration you wish to rename.

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. See Example 2 on page 45 on how to name configurations.

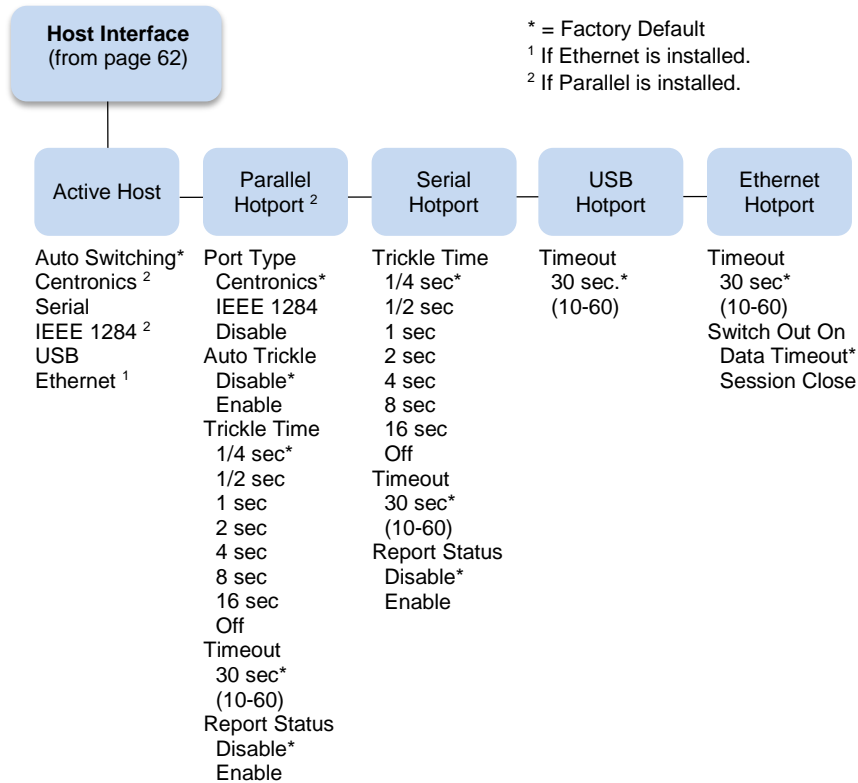
Reset Cfg Names

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



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. There are also submenus available to setup the hotport parameters for each interface type.

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.

Port Type

Select the parallel interface type connected to the printer. For example, if your printer is attached to one host with a Centronics connection, you would select Centronics under the Parallel 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.

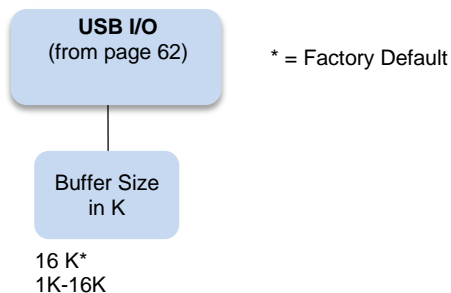
Report Status

- **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.

USB I/O Submenu

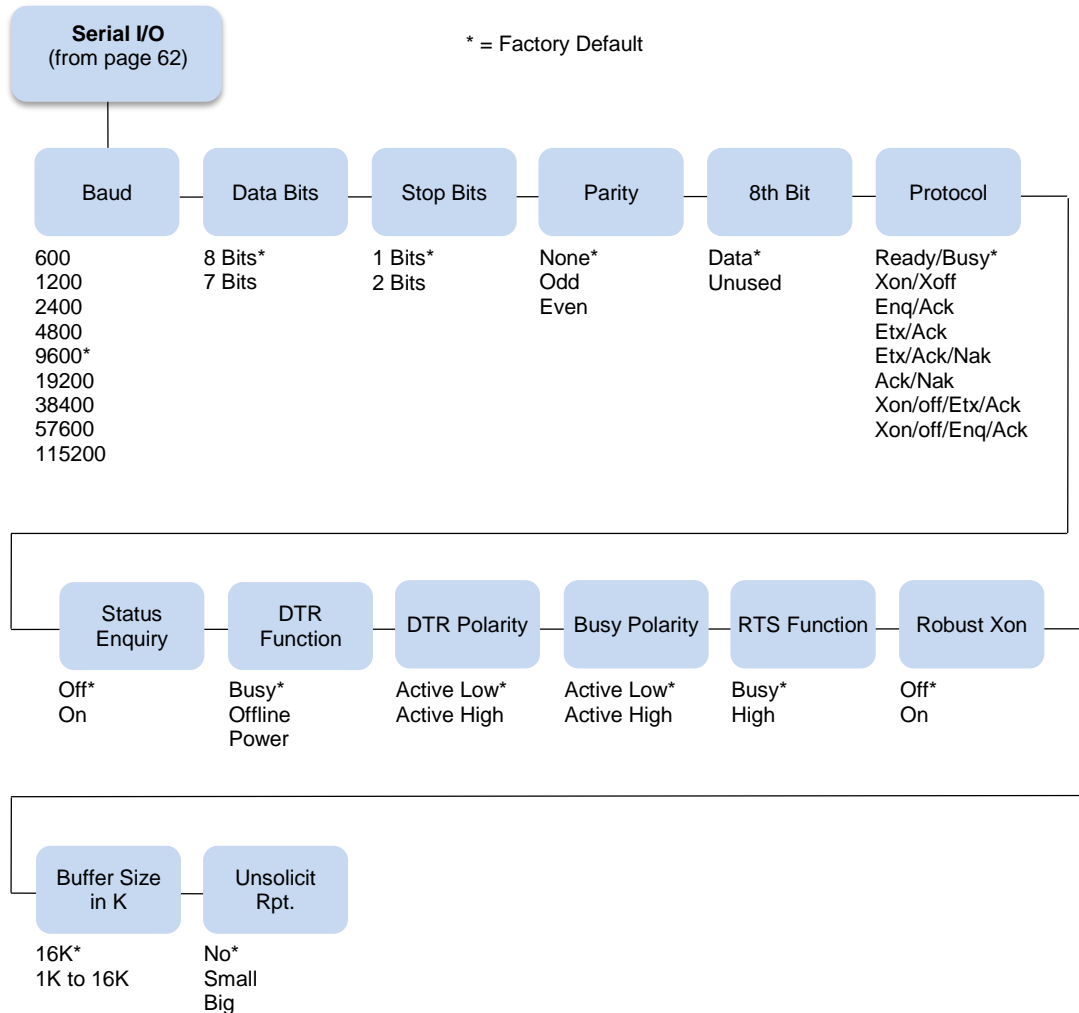


Buffer Size in K

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

The default is 16K.

Serial I/O Submenu



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 set to On, 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 4 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 5 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 set to On, 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.

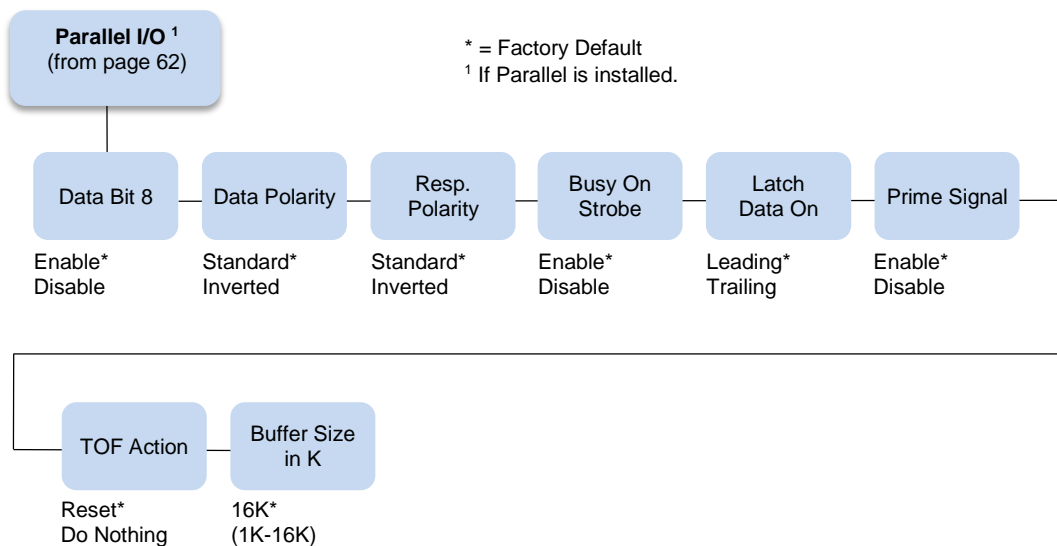
The default is 16K.

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



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

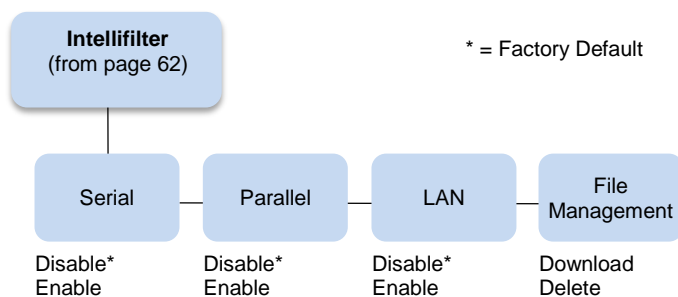
- **Reset** (default). A form feed is performed before a warm start when the prime signal is asserted from the host. This setting is used only if the prime signal parameter is enabled.
- **Do Nothing**. Nothing occurs before a warm start when the prime signal is asserted from the host.

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 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.

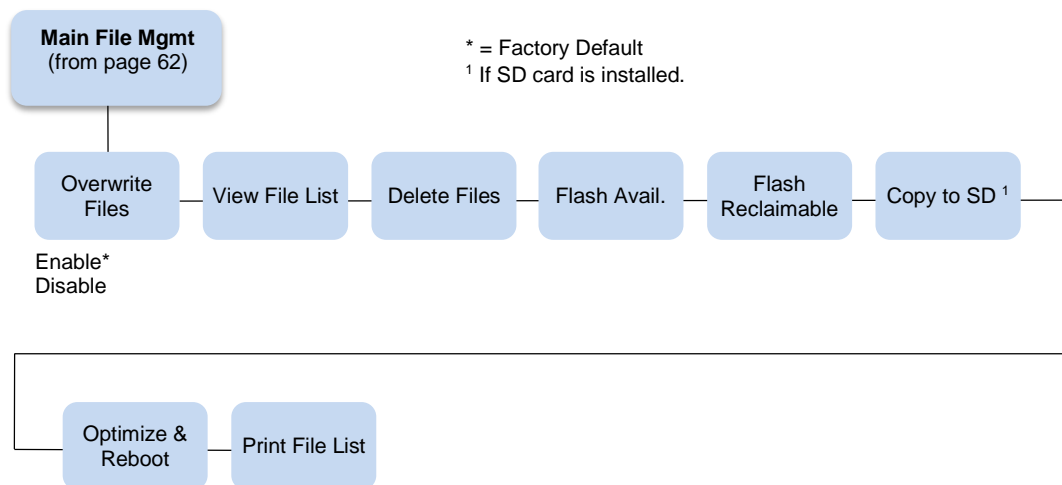
Serial, Parallel, LAN

- **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.

Main File Mgmt Submenu



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.

Flash Reclaimable

The amount of flash marked deleted. The deleted flash but cannot be used until the Optimize&Reboot operation is performed.

Copy To SD

If the SD card is inserted, then section will allow the user to copy selected files from the main file system to the SD card (root directory).

Optimize&Reboot

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

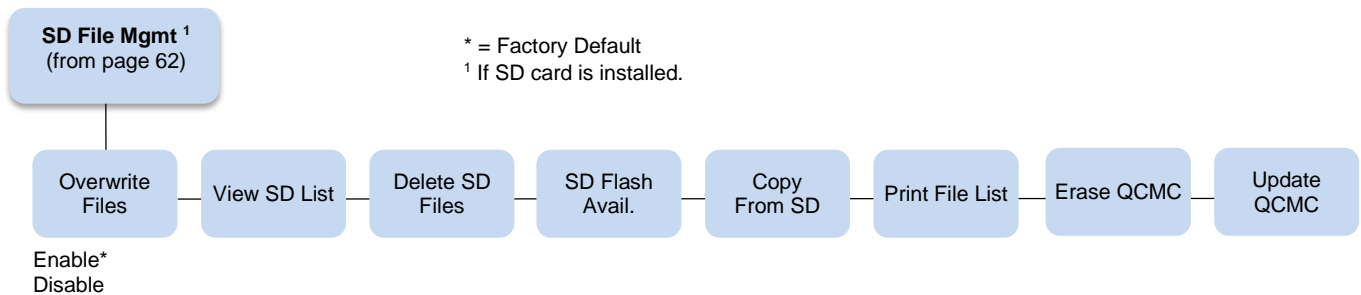
NOTE: When the Optimize&Reboot option is executed, the message, "Optimizing Flash Files" does not display before printer rebooting takes place.

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.

SD File Mgmt Submenu



Overwrite Files

- **Enable** (default). Allows SD files to be overwritten.
- **Disable**. Allows you to prevent SD files from being overwritten by disabling the overwrite function.

View SD List

Displays the list of files on the SD card (root directory). Pressing the DOWN key displays the file size.

Delete SD Files

Displays the list of SD files on the SD card (root directory). Pressing the ENTER key deletes the file displayed on the front panel.

SD Flash Avail

The amount of SD memory available for the user to save or download files into the SD card.

Copy From SD

This selection allows the user to copy selected files from the SD card (root directory) to the Main File System.

Print File List

Prints a summary of the files stored on the SD card (root directory) and several statistics regarding the SD File System usage.

Update QCMC

Updates the configuration within the QCMC image stored on the SD card (see Appendix D, Quick Change Memory Card (QCMC)).

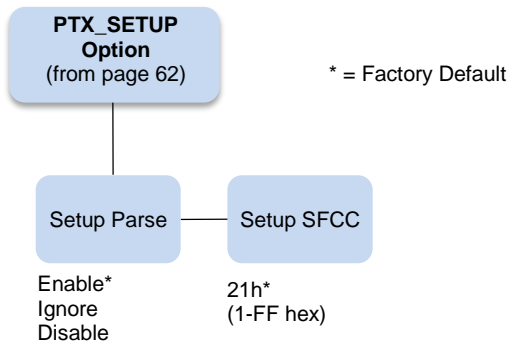
Erase QCMC

Erases the QCMC image stored on the SD card (see Appendix D, Quick Change Memory Card (QCMC)).

CST/PAA Submenu

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

PTX_SETUP Option Submenu



Selects the Special Function Control Code for the PTX_SETUP command and functions. See Appendix E on page 165 for PTX_SETUP Commands.

Setup Parse

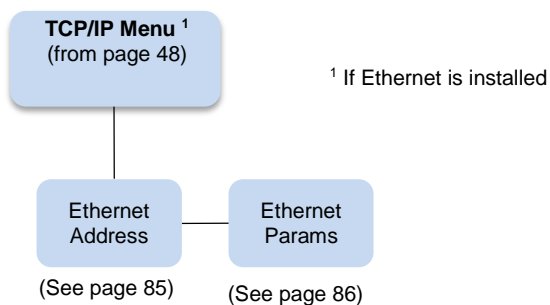
Disables or enables the PTX_SETUP command.

Setup SFCC

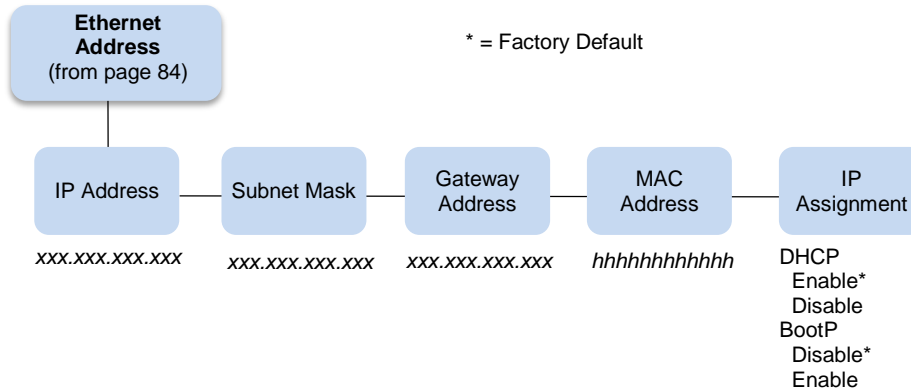
Allows you to choose the hex value of the ASCII character you wish to use as the SFCC for the PTX_SETUP command. Valid hex values are 01-FF.

The default value is hex 21, which corresponds to the "!" character.

TCP/IP Menu



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 networks 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.

IP Assignment

This menu includes two submenus: DHCP and BootP. Press the ENTER key to go to these submenus.

DHCP

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

The options include:

- **Disable**
- **Enable** (default)

BootP

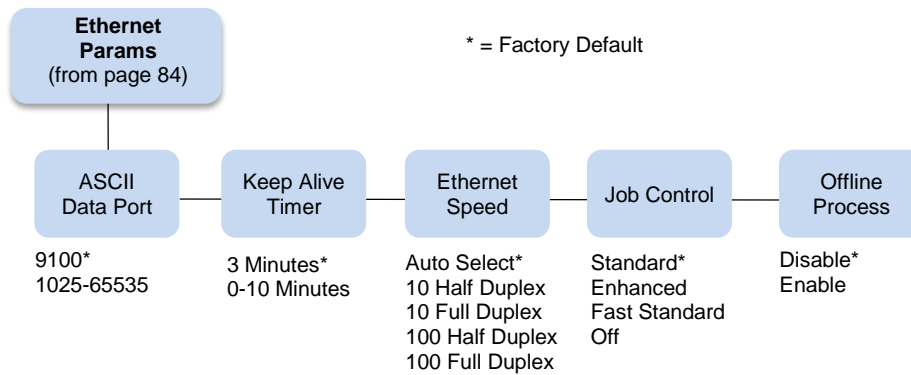
You can enable or disable the BootP protocol using this option. Consult your administrator for the appropriate setting.

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



The Ethernet Params menu helps your printer communicate on a network.

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:

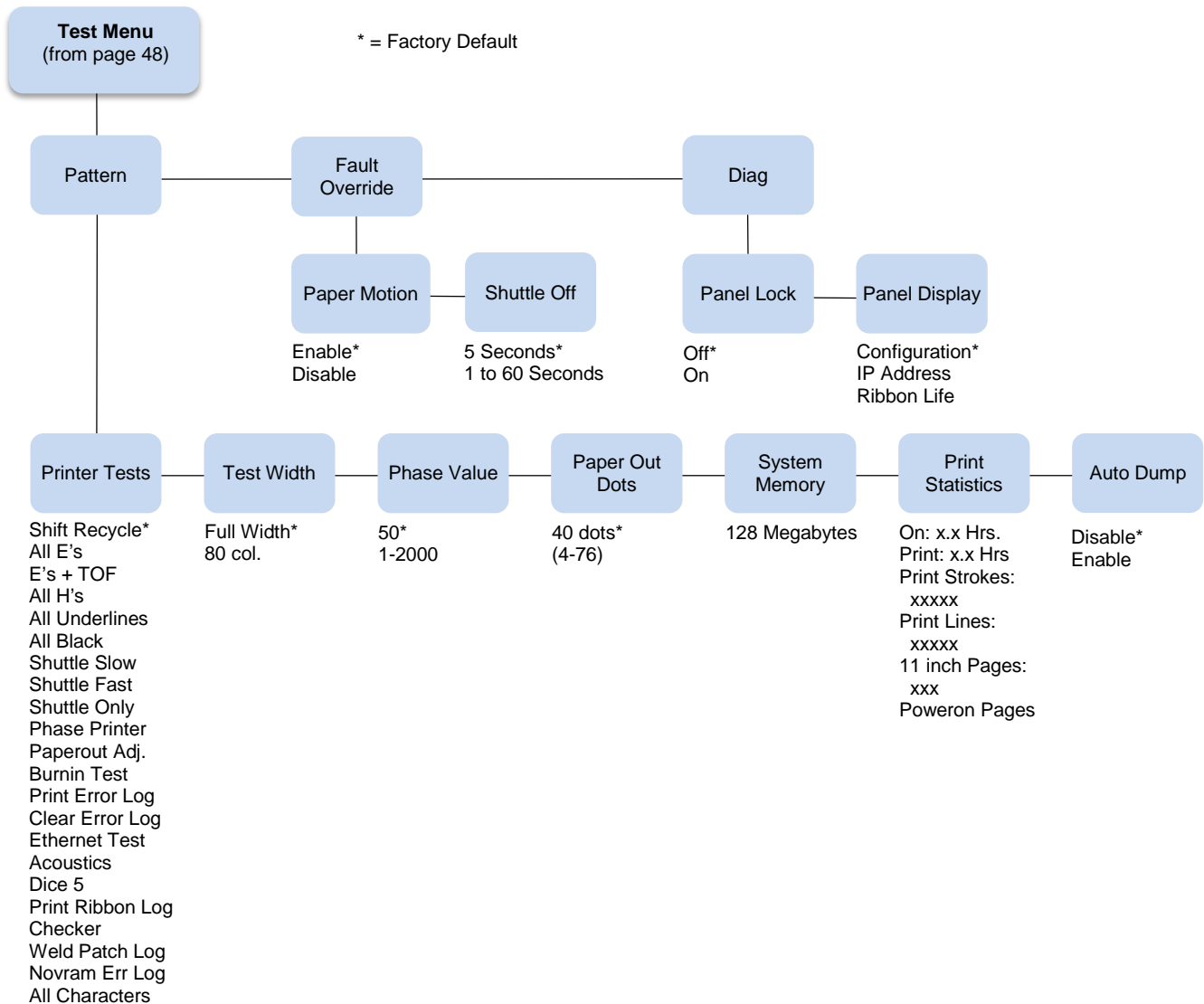
- **Standard** (default). The NIC waits for the printer to finish receiving the current job before sending another job. The status line shows “done” when the job is completely received by the NIC. This is the default.

- **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 acknowledgement of the EOJ packet because of the amount of data being printed.
- **Off.** No job synchronization between the NIC and the printer.

Offline Process

- **Disable** (factory default). When set to disable, the printer does not network data while in offline mode.
- **Enable.** When set to enable, the printer continues to process without printing the current network job while the printer is offline until the printer’s buffer is full.

Test Menu



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 until the Phase Value menu is reached. To change the Phase 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.

- **Novram Err Log.** Prints detailed information about the most recent Novram related failure that has occurred. It is useful when the front panel reports “BAD NVM” or “ILL NVM” error types. Contact the Customer Solutions Center and provide this information if such an error occurs.
- **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.

Phase Value

During the Phasing Test, this value changes until printing is phased. The range is between 1-2000.

System Memory

Displays the amount of RAM installed (128 Megabytes).

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.

Auto Dump

- **Disable** (factory default).
- **Enable.** When a printer receives a ‘E03x’ message type on the control panel, a dump file will be automatically created and stored in flash as file “autodbg1.dbg” or “autodbg2.dbg” in the printer file system. This file can be uploaded to the host using the PrintNet Enterprise Suite application. Upon receipt of this file, it should be sent to TallyGenicom Customer Support for review and evaluation.

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.
- **IP Address**. The IP Address displays on bottom line of the LCD.
- **Ribbon Life**. The Ribbon Life indicator displays on the bottom line of the LCD.

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 75).

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:

- High Speed Serial Port (RS-232)
- USB 2.0 Universal Serial Bus

Optional Host Interfaces:

- Centronics Parallel
- IEEE 1284 parallel bidirectional
- 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.

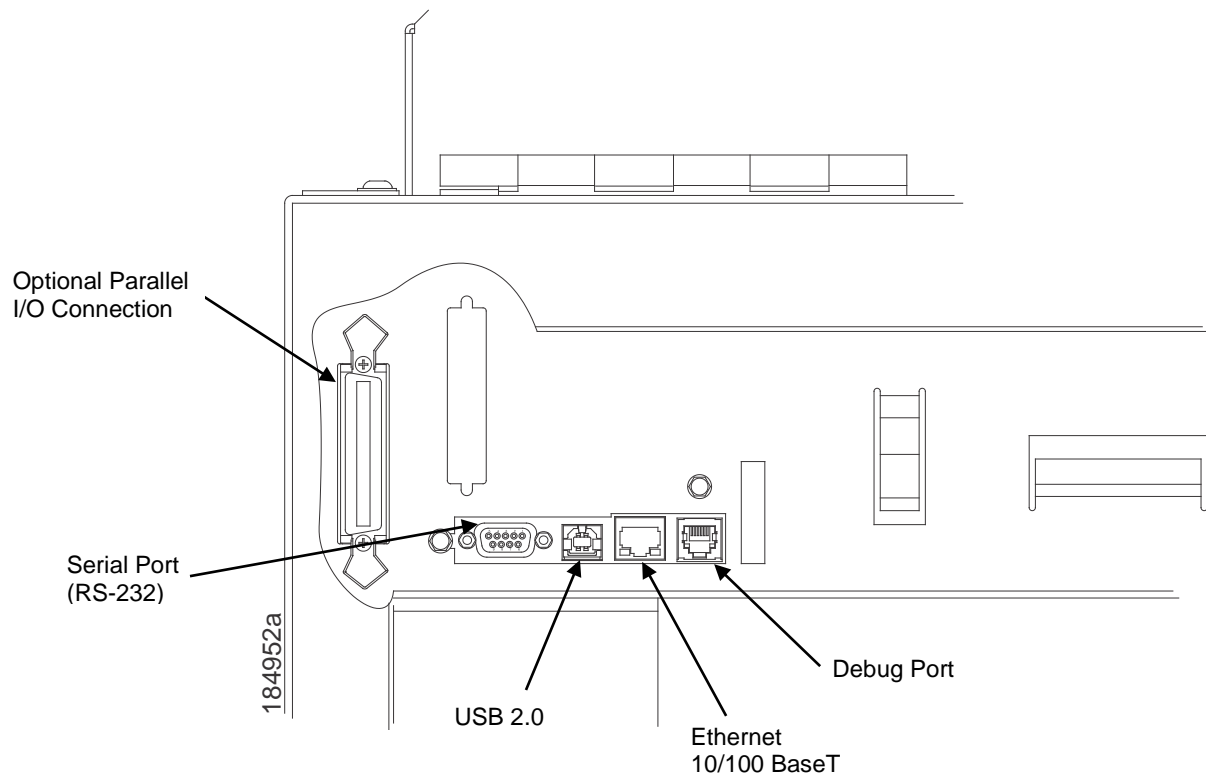


Figure 21 Cabinet Model Interface Connectors

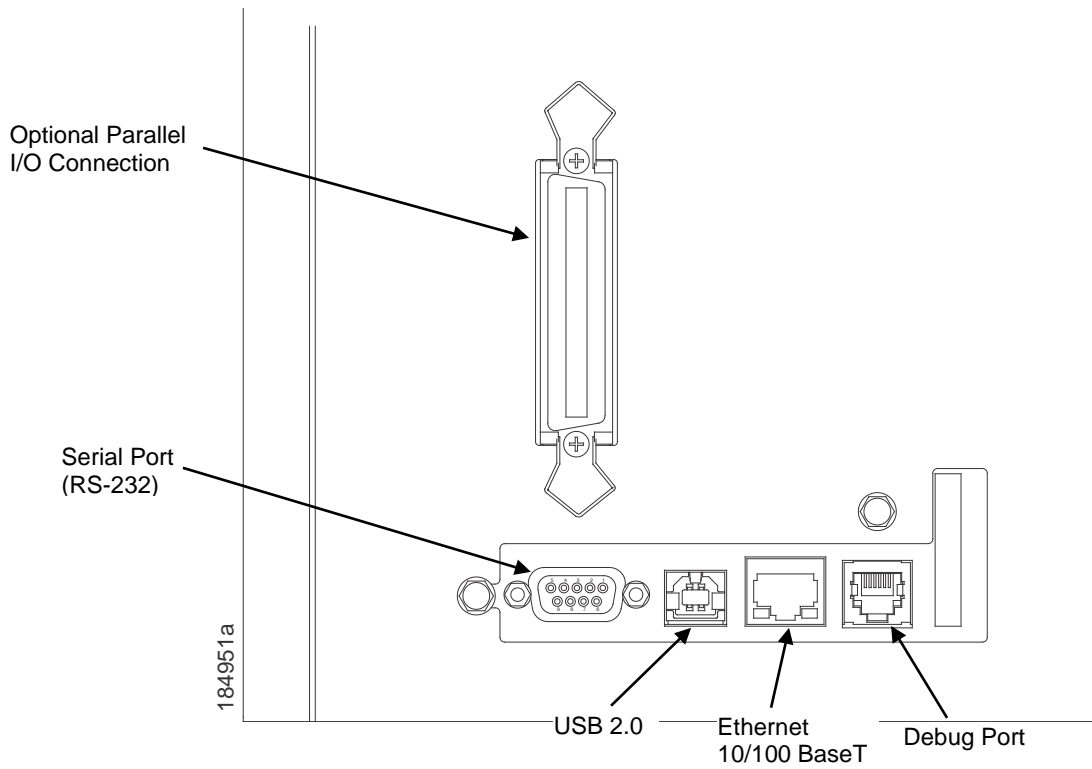


Figure 22 Pedestal Model Interface Connectors

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.

**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.

USB

Menus

The Universal Serial Bus (USB) port is part of Auto Switching and is active when the Host Interface menu is set to Auto Switching. It can also be selected as the only Host Interface under the Host Interface menu by selecting USB.

A top level USB Port menu with two submenus is also available:

- **Buffer Size in K.** The input buffer size used by the USB port. The range is from 1 to 16. The default is 16.
- **Timeout.** The Hotport Timeout value used to determine when the port is inactive. The range is from 1 to 60 seconds. The default is 10 seconds.

Centronics Parallel Interface

Table 8 Centronics Interface Connector Pin Assignments

Input Signals		Output Signals		Miscellaneous	
Signal	Pin	Signal	Pin	Signal	Pin
DATA LINE 1	2	ACKNOWLEDGE	10	CHASSIS GROUND	17
Return	20	Return	28		
DATA LINE 2	3	ONLINE	13	GROUND	30
Return	21	Return	28		
DATA LINE 3	4	FAULT	32	Spares	14
Return	22	Return	29		
DATA LINE 4	5	PAPER EMPTY	12	No Connection	34,35, 36
Return	23	Return	28		
DATA LINE 5	6	BUSY	11	+5 Volts	18
Return	24	Return	29		
DATA LINE 6	7				
Return	25				
DATA LINE 7	8				
Return	26				
DATA LINE 8	9				
Return	27				
DATA STROBE	1				
Return	19				
PAPER INSTRUCTION	15				
Return	29				
PRIME	31				
Return	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 ONLINE 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 9). 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 9 lists each of the signals associated with the corresponding pins on the 1284 interface. Descriptions of the signals follow.

Table 9 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)		
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)		

Table 9 1284 Signals

Pin	Source of Data	Type of Mode		
		Compatible	Nibble	Byte
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 / Interrupt. 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.

Ethernet

Refer to the *Integrated Network Interface User's Manual* for detailed information on the ethernet interface.

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 the 6800. 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 23 to locate the debug port at the rear of the printer.
3. Insert the SPX into the debug port as shown.

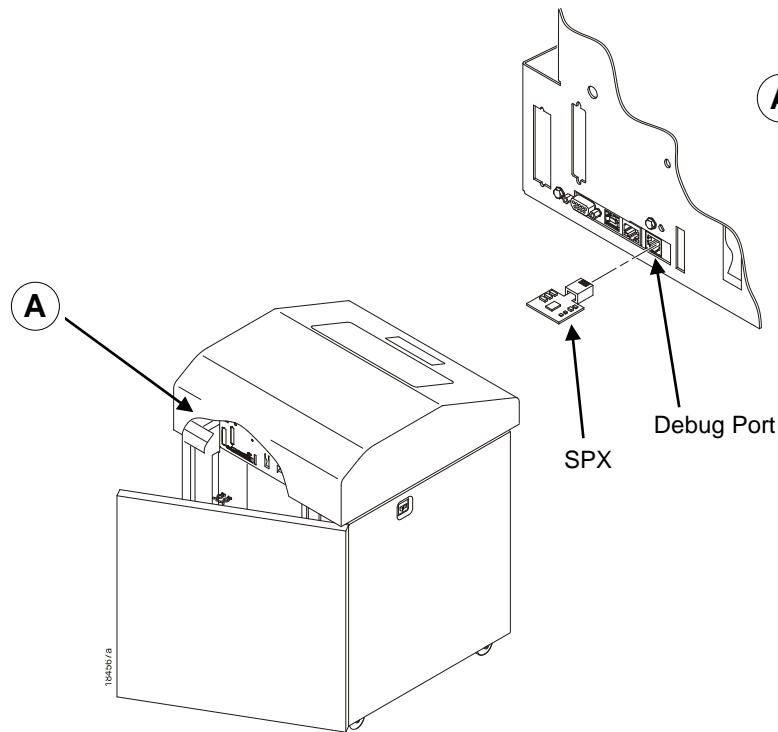


Figure 23 Inserting The SPX into the Debug Port

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 8 and follow the troubleshooting instructions.

6. Press the **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:
"UPGRADED - REMOVE SPX
Downld code if needed"
8. Remove the SPX from the debug port at the rear of the printer.
9. Press the **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 *Downloading Firmware*

The controller board contains 256 MB of FLASH memory. The printer firmware which includes the printer control languages (emulations), engine control, and printer operating system software are loaded into FLASH memory at the factory, but there are occasions when you may need to load the software:

- firmware upgrade to a newer level
- replacing a controller or reloading firmware if FLASH becomes corrupt.

Different firmware types are included on the CD-ROM for printer upgrades. It is recommended to copy the target firmware type to a computer's hard disk. From there, employ one of the various download methods presented in this chapter. Downloading firmware can be accomplished through any host IO installed on the printer, but it may not be valid for all methods.

IMPORTANT The target firmware must be consistent with the options present in the controller Security Key. Otherwise, the firmware download will be prevented.

NOTE: With exception to the manual two-key and manual three-key power-up sequences, downloading new firmware does not require the user to put the printer into any special mode. Most downloading methods are employed when the printer is ONLINE and ready to receive data, making the download procedure easy.

FLASH is used to store the firmware, but also contains a file system that holds System and User Flash Files. User Flash Files consist of downloaded fonts, logos, forms, setup files, feature files, and files specific to the user's setup or application. These files are either preserved or deleted based on the download method used in Table 10 on page 102.

IMPORTANT Regardless of download method, any saved configurations will be erased. Before starting a download procedure, be sure that you have printed or saved configurations on your host computer so they can be restored after the download process is complete.

Table 10 Firmware Download Methods

Firmware Download Method	File Type(s)	User FLASH Files
WebPanel (Ethernet only) Requirements: network option installed, a browser, and the IP address.	FILENAME.prg	Preserved
Automatic download (any host IO) Using the FILENAME.exe, firmware can be downloaded from a Windows Command Prompt without having to manually put the printer into download mode.	FILENAME.exe	Preserved
Manual two-key download (any host IO) The two-key (ADVANCE+CANCEL) power-up sequence places the printer in download mode. Firmware can be loaded through any host IO port.	FILENAME.prg FILENAME.exe	Preserved
Manual three-key download (USB or Parallel) The three-key power-up sequence should be used when a new controller is installed, the program in FLASH is corrupt, or a different firmware type will be installed. Firmware must be loaded via USB or parallel (if installed).	FILENAME.prg FILENAME.exe	Deleted
PrintNet Enterprise (Ethernet only) User must install the PrintNet Enterprise application from the PrintNet CD. This is the most versatile and powerful method to upgrade printers but requires that your computer can run Java™ programs.	For a detailed description, refer to the <i>PrintNet Ethernet User's Manual</i> .	

Firmware File Types (.prg) and (.exe)

Using firmware with an .exe extension (FILENAME.exe) is convenient, but firmware with the .prg extension may not be available in all situations. Download methods as described in Table 10 requires the .prg extension (FILENAME.prg) (e.g., WebPanel).

From **FILENAME.exe**, extract the file **FILENAME.prg** by executing the following command in a Windows command prompt session:

```
FILENAME<Enter>
```

This will extract the **FILENAME.prg** file in the same directory where **FILENAME.exe** was executed. For example, executing **123456.exe** in the directory C:\download will generate a file C:\download\123456.prg.

IMPORTANT Be sure to copy the FILENAME.exe file to your computer's local drive before executing commands in the Windows command prompt.

WebPanel Download

This download method requires firmware with the .prg extension (*FILENAME.prg*).

1. Make sure the printer is online and Ethernet cable is connected.
2. Obtain the IP address from the front panel (under TCP/IP Menu icon in the menus).
3. Enter the IP address of the printer in your browser (e.g., http://10.224.5.34).
4. When prompted for a user name and password, use "root" for user name, no password, and click OK.

5. Click “Printer Configuration”, “Configuration Management”, or “File Management” as shown in Figure 24.

WebPanel 6810Q

Welcome to PrintNet Enterprise

Welcome to WebPanel. From here it is possible to see the status of the printer as well as configure some of the printer options. The right side of this window contains information and current status of your printer.

6810Q



Print Server

- PrintServer Configuration



Figure 24 Selecting Printer, Configuration, and File Management Options

6. Click the “System” link in the top header section (see Figure 25).

WebPanel 6810Q

[Printer](#) | [Network](#) | [Print Path](#) | [Print Model](#) | [Log Path](#) | [SNMP](#) | [Administration](#) | [System](#)

System ?

System

NOTE: 'Reboot' and 'Default' will immediately shut down all services on the PrintNet Enterprise and reset the unit.

- This will reboot the printer.
- This will reboot the PrintNet Enterprise with factory default settings.
- This will allow to upgrade the firmware of the printer.

Job Capture

- This will start the job capture into of memory.
- This will upload the job capture data to a file.

Figure 25 System Configuration Screen

7. Click “Upgrade” on the System page.
8. Browse the directory and select **FILENAME.prg** in the “File to Upload” field then click “Upgrade” (see Figure 26).



Figure 26 Upgrading Firmware

9. A Warning message appears (Figure 27). Click "OK".

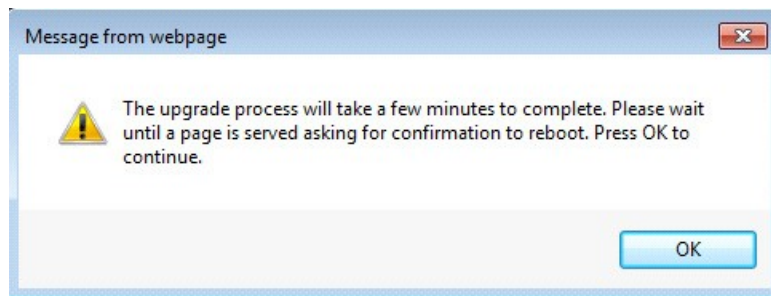


Figure 27 Firmware Upgrade Warning

10. Click "Yes" to confirm reboot (Figure 28).

WebPanel 6810Q

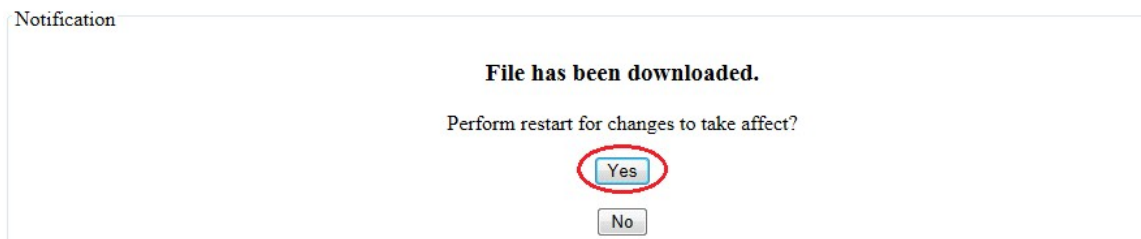


Figure 28 Rebooting after Downloading Firmware Upgrade

11. Wait until the printer finishes firmware upgrade and restarts (Figure 29).

WebPanel 6810Q

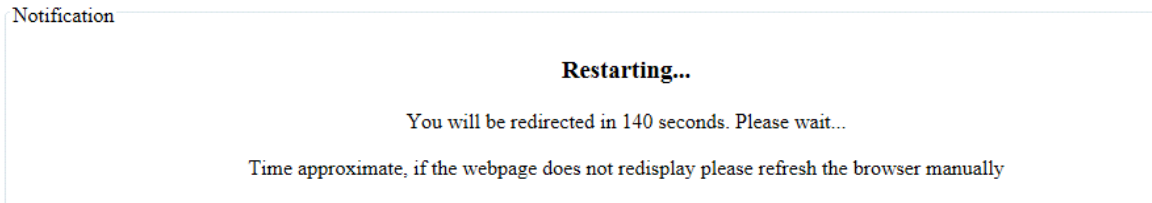


Figure 29 Printer Reboot Notification

When the Web page is redirected, download process is complete.

Automatic Download (.exe)

NOTE: This method of download requires firmware in the form of **FILENAME.exe**. The firmware can be downloaded without manually putting the printer into download mode.

1. Make sure the printer online state and that applicable host IO cables are connected.
2. Navigate to the directory where the target firmware is located. If the target firmware is on the CD, insert the printer emulation software CD into your computer's CD drive.
3. The target firmware must be in the format **FILENAME.exe** where the FILENAME is a six digit number with the .exe extension (e.g., 123456.exe).
4. For USB connections, the Windows Driver must be installed. Install the Windows Driver on the Starter Kit CD before continuing. Alternatively, drivers can be found at <http://www.tallygenicom.com/products/drivers.aspx>.

During installation, make sure to share the printer when prompted and record the "Share name" (Figure 30).

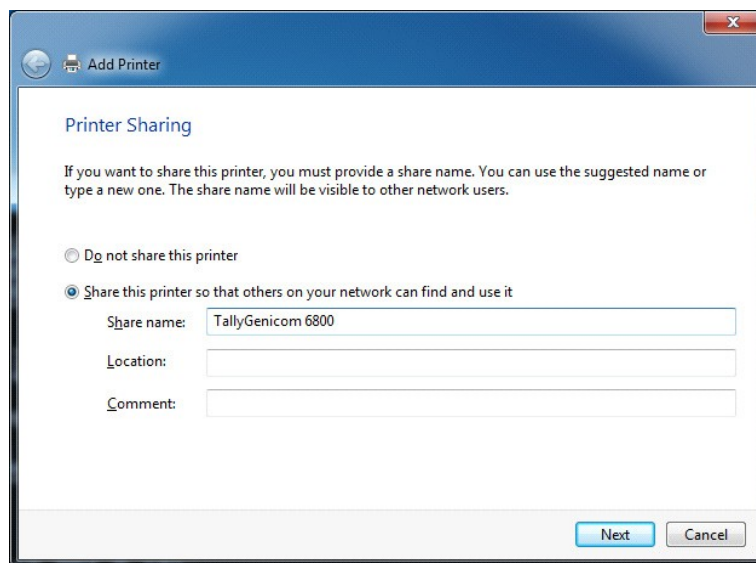


Figure 30 Specifying a Printer Share Name for USB Connection

- For USB connections, the printer must have a “Share name” established. The “Share name” will be required when executing the **FILENAME.exe** command. This should be accomplished during installation, but can be verified at any time. Select the driver, right-click the mouse button and select “Printer Properties”. Click the “Sharing” tab, and if necessary, checkmark (enable) the “Share this printer” option, and enter the “Share name” (Figure 31).

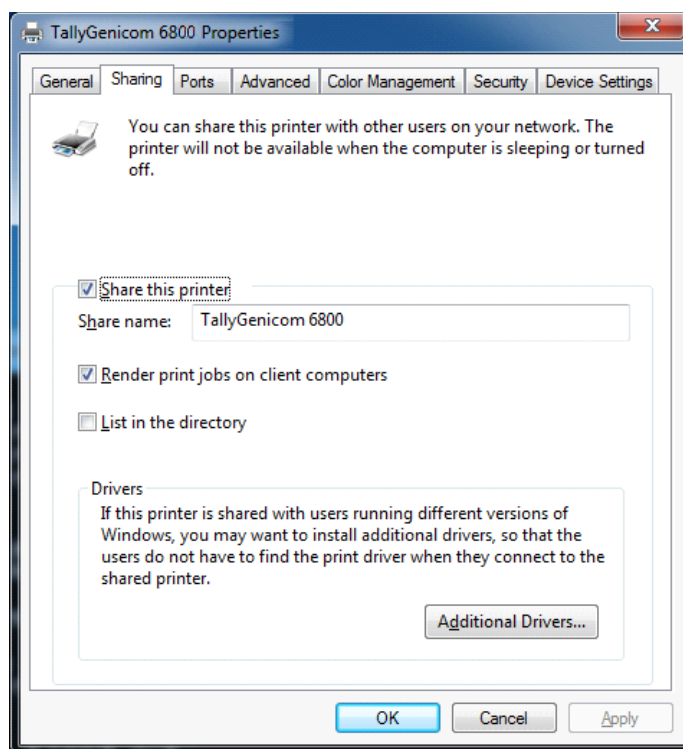


Figure 31 Sharing Properties

- Start a Windows command prompt session.
- Navigate to the directory containing the target firmware (e.g., c:\download).
- Execute **FILENAME.exe** as follows:

Connection Type	Command
Parallel	FILENAME -a -pb <Enter>
Serial	mode COM1:9600,N,8,1 <Enter> mode LPT1=COM1 <Enter> FILENAME -a -pb <Enter>
USB	FILENAME -a -pbSharedName <Enter> where SharedName of the printer is the 'Share name' entered during installation.
Ethernet	FILENAME -n xxx.xxx.xxx.xxx <Enter> where xxx.xxx.xxx.xxx represents the IP address

IMPORTANT DO NOT interrupt the download process once it has started. Interrupting a download will leave the flash memory on the controller PCBA incompletely loaded, and the printer may not boot up.

When the new software has successfully loaded into flash memory and the printer has reset itself, the process is complete.

Manual Two-Key Download Sequence

This method of download can be completed with firmware in the form of **FILENAME.prg** or **FILENAME.exe**. When the printer is in the download mode, use any host IO to download the firmware.

To get the printer ready for download, do the following:

1. Set the printer power switch to O (Off).
2. Connect the Ethernet cable to the printer interface.
3. Press and hold down the ADVANCE and CANCEL keys on the printer control panel.
4. Set the printer power switch to I (On).
5. After five seconds, release the control panel keys.
6. The printer may take 1-2 minutes to power-up. Wait until you see "PROGRAM DOWNLOAD" on the top line of the LCD before proceeding.
7. Start a Windows command prompt session.
8. Navigate to the directory with the target firmware (e.g., c:\download).
9. Proceed with sending firmware to the printer as described for various host IO options following:
 - Sending Firmware via Ethernet (FTP) on page 108
 - Sending Firmware via USB on page 109
 - Sending Firmware via Parallel on page 113
 - Sending Firmware via Serial on page 113

Manual Three-Key Download Sequence

If the flash memory contains only boot code (e.g., if it is new), or if flash memory is corrupt, or you want to delete all Flash User Files, you must download software using the manual three-key download method.

This can be completed with firmware in the form **FILENAME.exe** or **FILENAME.prg**. When the printer is in download mode, only USB or parallel can be used to download the firmware.

1. Set the printer power switch to O (Off).
2. Connect the Ethernet cable to the printer interface.

3. **USB Download:**

Press and hold down the ADVANCE, CANCEL, and DOWN control panel keys.

Parallel Download:

Press and hold down the TOF, CONFIG, and UP control panel keys. If the parallel option is not installed, the printer reverts to a USB download.

4. Set the printer power switch to I (On).
5. After five seconds, release the control panel keys.
6. The printer may take 1-2 minutes to power-up. Wait until you see "DOWNLOAD MODE USB" or "DOWNLOAD MODE PAR." on the bottom line of the LCD before proceeding.
7. Start a Windows command prompt session.
8. Navigate to the directory with the target firmware (e.g., c:\download).
9. Proceed with sending firmware to the printer as described for various host IO options following:
 Sending Firmware via USB on page 109
 Sending Firmware via Parallel on page 113

Sending Firmware in Download Mode

This section describes how to send the firmware data to the printer in the desired host IO after the printer is in download mode (two-key or three-key method)

NOTE: The three-key download sequence only allows download through USB or Parallel.

While the program file **FILENAME.prg** is used in the examples, any file with a download header can be substituted to download flash files.

Sending Firmware via Ethernet (FTP)

IMPORTANT You will need the IP Address of the printer.

1. Start the FTP (file transfer protocol) program by typing on your command prompt:
ftp xxx.xxx.xxx.xxx <Enter>
where xxx.xxx.xxx.xxx is the IP Address of the printer.
2. Log-in to the printer by entering:
root <Enter>
3. You are prompted for a password. By default there is no password, simply press <Enter>. If the FTP program requires a password, contact the system administrator.
4. Once logged in, type the following sequence at the command prompt to download **FILENAME.prg** to the printer:
cd dest <Enter>
cd d1prn <Enter>
bin <Enter>
put **FILENAME.prg** <Enter>
where **FILENAME.prg** is the target firmware.

5. When download is complete, exit the FTP program by typing:

quit <Enter>

IMPORTANT DO NOT interrupt the download process once it has started. Interrupting a download will leave the flash memory on the controller PCBA and NIC incompletely loaded, and the printer may not boot up.

When the new software has successfully loaded into flash memory and the printer has reset itself, the process is complete.

Sending Firmware via USB

This section explains how to download firmware through USB by remapping LPT1 to the USB port. This can be completed with firmware in the form **FILENAME.exe** or **FILENAME.prg**.

If the PC or laptop you are using is connected to a network or the Microsoft Loopback Adapter is installed, proceed as follows. If not, you must first complete the section Installing a Microsoft Loopback Adapter on page 109.

1. Remap the LPT1 port to USB by issuing the following commands at the command prompt:

```
NET USE LPT1\\Comp_Name\Shared_Name /Persistent:YES <Enter>
```

where:

Comp_Name is the computer name found in System Properties\Computer Name tab

Shared_Name is the printer's shared name found in the printer's Properties\ Sharing tab.

2. To check status of connection type, enter the following commands at the command prompt:

```
Net View \\Comp_Name <Enter>
```

where *Comp_Name* is the computer name found in System Properties\ Computer Name tab.

Now the computer system is ready to send the firmware through USB.

3. Navigate to the directory with the target firmware (e.g., c:\download).
4. Copy the file to the printer by entering these commands at the command prompt:

```
copy /b FILENAME.prg lpt1: <Enter>
```

where *FILENAME.prg* is the target firmware

or

```
FILENAME -pb <Enter>
```

where *FILENAME.exe* is the target firmware.

IMPORTANT DO NOT interrupt the download process once it has started. Interrupting a download will leave the flash memory on the controller PCBA incompletely loaded, and the printer may not boot up.

When the new software has successfully loaded into flash memory and the printer has reset itself, the process is complete.

5. To unmap LPT1 from USB, enter the following in the command prompt:

```
NET USE LPT1 /DELETE<Enter>
```

Installing a Microsoft Loopback Adapter

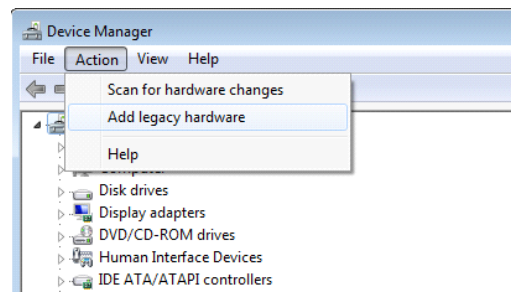
Refer to this section when the laptop or PC is not network connected and USB is needed for the download. If your laptop or PC is already network connected, go to Sending Firmware via USB on page 109.

1. For **Windows XP**:
 - a. Click the "Start" menu.

- b. Select “Control Panel”.
- c. Click “Add Hardware Wizard”.

For **Windows 7**:

- a. Click the “Start” menu.
- b. Select “Control Panel”.
- c. Click “Hardware and Sound”.
- d. Under “Device and Printers”, click “Device Manager”.
- e. Select your PC and start the “Add legacy hardware” process from the “Action” menu as shown below.



2. Click “Next” in the initial “Welcome to the Add Hardware Wizard” screen.
3. The second screen asks if you have already connected the hardware to your computer. Select “Yes” (Figure 32) and then click “Next”.

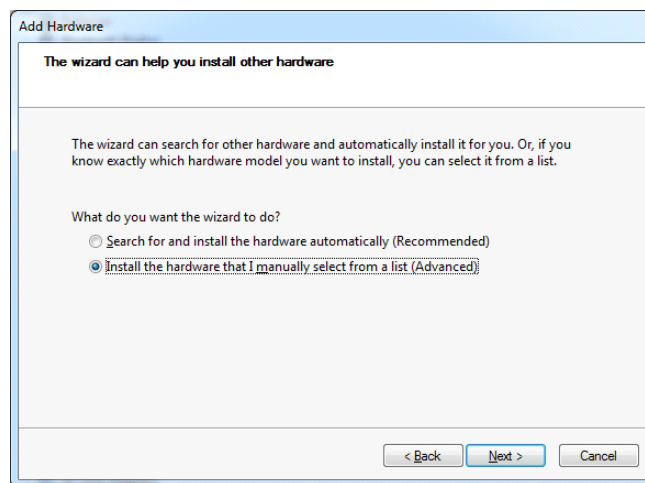


Figure 32 Confirming Hardware Connection

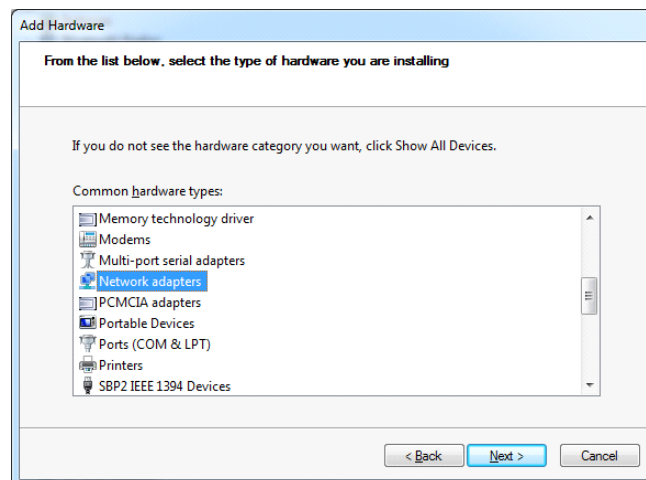
4. Select “Add a new hardware device” (at the bottom of the hardware devices list) then click the “Next”.



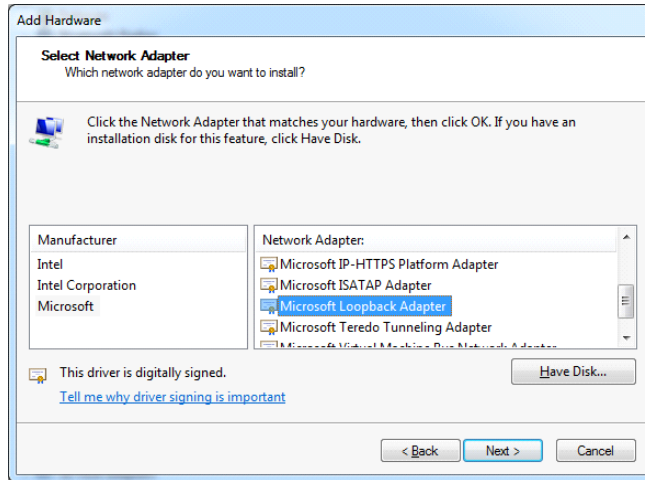
- When prompted for hardware installed options, select “Advanced” which that allows you to select the hardware from a list. Then click the “Next”.



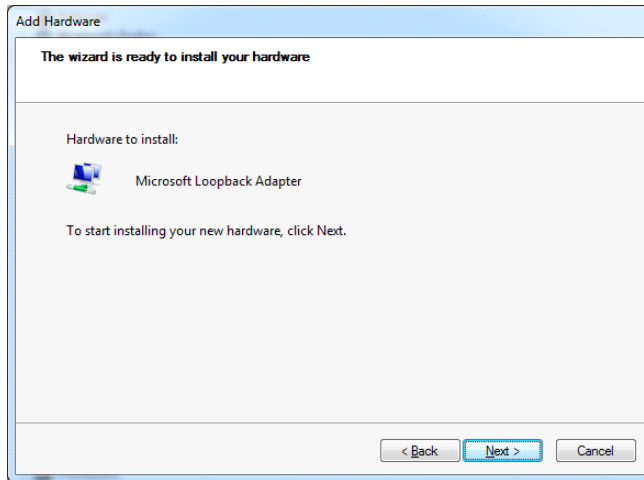
- Select “Network adaptor”, then click the “Next”.



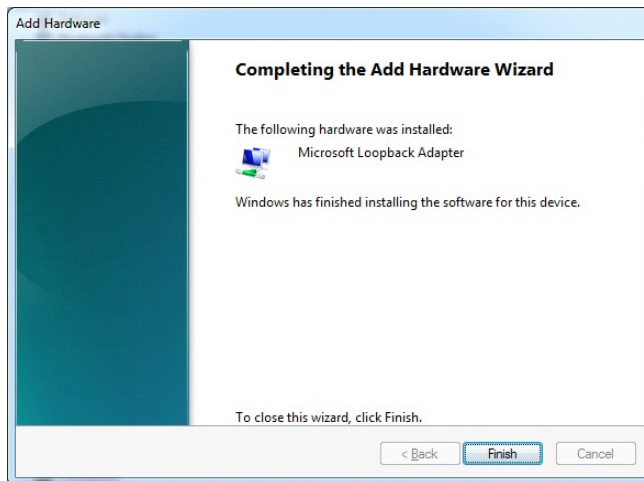
- Select “Microsoft Loopback Adapter”, then click the “Next”.



8. Click the "Next" button.

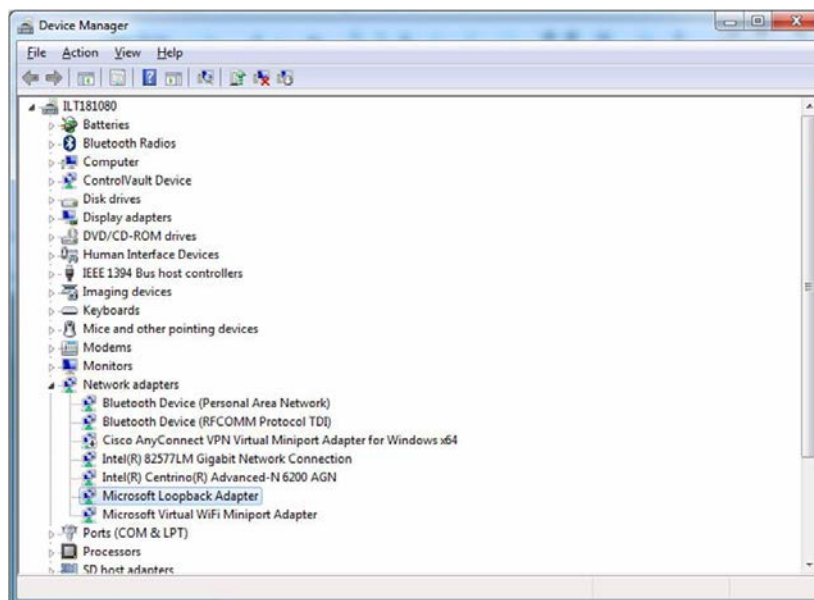


Installation is complete. Verify the proper installation in the following steps.



9. To verify installation, go back to the Control Panel and select "System" for WinXP. Under the "Hardware" tab, select "Device Manager". For Windows 7, select "Device Manager" directly from Control Panel.

10. Select the “Network Adaptors” and expand the selection if necessary. “Microsoft Loopback Adaptor” is listed. Leave all settings as default.



You are now finished and may proceed as outlined in Sending Firmware via USB on page 109.

Sending Firmware via Parallel

This method of download can be completed with firmware in the form

FILENAME.exe or ***FILENAME.prg***.

IMPORTANT You need the parallel option installed.

1. Copy the firmware to the printer by entering these commands at the Command prompt:

```
copy /b FILENAME.prg lpt1: <Enter>
```

where *FILENAME.prg* is the target firmware

or

```
FILENAME -pb <Enter>
```

where *FILENAME.exe* is the target firmware

IMPORTANT DO NOT interrupt the download process once it has started. Interrupting a download will leave the flash memory on the controller PCBA and NIC incompletely loaded, and the printer may not boot up.

The process is complete when the new software is successfully loaded into flash memory and the printer has reset itself.

Sending Firmware via Serial

Downloading firmware using serial RS-232 is not recommended due to the size of the firmware and significant wait time required to complete the process. Downloading through serial requires firmware in the form ***FILENAME.prg*** only.

1. Copy the firmware to the printer by entering these commands at the Command prompt:

```
mode COM1:9600,N,8,1,P <Enter>
```

```
copy /b FILENAME.prg com1 <Enter>
```

where *FILENAME.prg* is the target firmware.

IMPORTANT Some systems can only use the 9600 baud rate. The baud rate information entered in the above commands must match the Baud Rate setting saved in the Power-Up Config.

IMPORTANT DO NOT interrupt the download process once it has started. Interrupting a download will leave the flash memory on the controller PCBA and NIC incompletely loaded, and the printer may not boot up.

The process is complete when the new software has successfully loaded into flash memory and the printer has reset itself.

Downloading Files to the Main File System

User Files can be downloaded into the Main File System (onboard PCB Flash) in a variety of ways as discussed in this section. This section will not cover specific methods used by the emulations but rather general ways of downloading files as shown in Table 11. Font download is discussed in a later section.

Table 11 File Download Methods

File Download Method	File Preparation
WebPanel (Ethernet only) User needs to know the IP address and have a browser.	None Required
PTX_SETUP (any host IO) User can employ PTX_SETUP commands around the file data to store the file into the Main File System.	Binary (raw) data of the file is embedded within PTX_SETUP commands.
Manual two-key download (any host IO) The two-key (ADVANCE+CANCEL) power-up sequence places the printer into download mode. Files can then be downloaded.	Run cnvt2fls.exe to add the proper header to the file
PrintNet Enterprise (Ethernet only) User must install the PrintNet Enterprise application from the PrintNet CD. This is the most versatile and powerful method to download files but requires your computer can run Java™ programs.	For a detailed description, refer to the <i>PrintNet Ethernet User's Manual</i> .

NOTE: Depending on the method of file download, the file itself may have to be modified so that when it is downloaded to the printer, it stores the file appropriately with the correct Main File System name and file type.

Filename Extensions Not Shown in Menus

Files with the one of the filename extensions (upper or lower case) in Table 12 are considered system files and are not shown in the View File List or Delete Files menu.

IMPORTANT DO NOT download any user files with extensions shown in Table 12.

Table 12 File Name Extensions Not Shown in Menus

Extensions		
*.bin	*.inf	*.ras
*.cpg	*.lfi	*.rfv
*.eng	*.map	*.sec
*.fon	*.pat	*.gz
*.qsm		

WebPanel File Download

1. Make sure the printer online and that the Ethernet cable is connected.
2. Obtain the IP address from the front panel (under TCP/IP Menu icon in the menus).
3. Enter the IP address of the printer in your browser (e.g., http://10.224.5.34).
4. When prompted for a user name and password, use “root” for user name and press OK. There is no password.
5. Click “File Management” to download the file.

WebPanel 6810Q

Welcome to PrintNet Enterprise

Welcome to WebPanel. From here it is possible to see the status of the printer as well as configure some of the printer options. The right side of this window contains information and current status of your printer.

6810Q

- [Printer Configuration](#)
- [Configuration Management](#)
- [File Management](#)



Print Server

Figure 33 File Management Option

6. Click “Browse...” to find the file and click “Download File”.

WebPanel 6810Q

[Printer](#) | [Network](#) | [Print Path](#) | [Print Model](#) | [Log Path](#) | [SNMP](#) | [Administration](#) | [System](#)
[Printer Configuration](#) | [Configuration Management](#) | [File Management](#)

File Management [?](#)

File Management

[Delete](#) Delete a File.

bitmap.lis:

charset.dat:

....

vietdp12.fnt:

vietdp15.fnt:

File Management

Overwrite Files: ▾

[View File List](#)

Flash Avail.: 65806336

Flash Reclaimable: 0

Optimize&Reboot: Will execute on submit when checked.

A confirmation notification displays. The webpage will refresh once the download is completed.

WebPanel 6810Q

Notification

File has been downloaded.

You will be redirected in 3 seconds. Please wait...

Time approximate, if the webpage does not redisplay please refresh the browser manually

PTX_SETUP Download

PTX_SETUP can be used to load files into the Main File System. See The PTX_SETUP Commands on page 165.

Example loading a font named ARIAL.TTF:

!PTX_SETUP

FILE_IO-CAPTURE;"ARIAL.TTF"

PTX_END

Arial TrueType font binary data

NOTE: Do not add any LF/FF at the end of the binary data

!PTX_SETUP

FILE_IO-CAPTURE;""

PTX_END

Manual Two-Key Download

1. Start a Windows command prompt session.
2. Navigate to the directory with the target file (e.g., c:\download).
3. Copy cnvt2fls.exe from your Starter Kit CD to the directory with the target file.
4. Convert the file to a downloadable format with the following at the command prompt:

```
cnvt2fls file_name1 file_name2 file_name3 A FONT <Enter>
```

where:

file_name1 is the name of the file to be converted into downloadable format

file_name2 is the name of the output file that will be downloaded into the printer

file_name3 is the name of the file within the Main File System.

The parameter *FONT* should only be used with fonts; otherwise, omit this parameter.

Example: cnvt2fls arial.ttf arial.dwn ARIAL.TTF A FONT <Enter>

This creates the file "arial.dwn" that will place "ARIAL.TTF" into the Main File System

5. Put the printer in download mode as described in Manual Two-Key Download Sequence on page 107.
6. Send the file as described in Sending Firmware in Download Mode on page 108. Substitute *file_name2* in place of the firmware **FILENAME.prg**.

The process is complete when the file has successfully loaded into flash memory and the printer resets itself.

7. Verify that the file is properly recognized and downloaded, look under the Main File Mgmt submenu of the Config Menu icon. One of the files should include *file_name3*.

Downloading Files to the SD Card

SD files can be utilized by the printer if the emulations support it. Since the SD file format is an industry standard, downloading files and fonts to the SD card does not require special facilities within the printer. This allows the user to copy files straight from their PC or laptop to the SD card as well as copy printer files on the SD card to their PC or laptop.

NOTE: The printer will only locate files stored on the root directory of the SD card. The name of the file within the root directory of the SD card will be the name shown in the SD File Mgmt submenu.

Alternatively, users can copy files from the Main File System to the SD card by using the “Copy to SD” selection within the Main File Mgmt menu. Likewise, users can copy files from the SD card to the Main File System by using the “Copy from SD” selection within the SD File Mgmt menu.

IMPORTANT The SD card must be installed at the time of power-up and cannot be removed until the printer is powered off.

Demo Facility

It may be desired to exercise the function of a TallyGenicom printer in an environment where there is no host computer system available. This might include the need to execute a particular type of “demo” test file from the menu system. When executed, the “demo” test file will run through the emulations as if the host computer sent the file. Once completed, it will run the file again until terminated.

This section describes how to download, configure, execute, and then terminate the demo. Demo files are considered as other User Flash Files and therefore are preserved across downloads by default.

Downloading a Demo File

1. Start a Windows Command Prompt session.
2. Navigate to the directory with the target demo file (e.g., c:\download).
3. Copy (or unzip) **demo2fls.exe** from your Starter Kit CD to the directory with the target file.
4. Convert the file to a downloadable format with the following command at the command prompt:

```
demo2fls file_name <Enter>
```

where *file_name* is the name of the file to be converted into downloadable format.

5. The output file for download will replace the *file_name* extension with “.fls”.

Example: demo2fls demo.txt <Enter>

This creates the file “demo.fls” that will place “demo.txt” in the Main File System when downloaded.

6. Put the printer in download mode as described in Manual Two-Key Download Sequence on page 107.
7. Send the file as described in Manual Three-Key Download Sequence on page 107. Substitute the file *.fls (e.g., demo.fls) in place of the firmware **FILENAME.prg**.

The process is complete when the file has successfully loaded into flash memory.

To verify that the file is properly recognized and downloaded, look under Test Menu -> Printer Tests submenu. One of the printer tests should include *file_name*.

Configuring the Printer to run a Demo File

This facility makes no attempts to identify which emulation a particular demo file is designed for. The user must configure the printer for the appropriate emulation before invoking the demo. The demo will inherit all menu configuration parameters when executed. The user is responsible to properly configure the forms size, typeface, orientation, etc. This facility will not restore any configuration settings when the demo file is finished printing.

Starting a Demo File

The demo file is initiated by selecting its Flash File name within Test Menu -> Printer Tests submenu, then pressing ENTER. This causes the printer to go online and start printing the demo file. Once the demo file starts, it repeats automatically until the demo file sequence is stopped.

IMPORTANT DO NOT run a demo file if currently running another type of test or host job. This will cause unexpected results. Similarly, DO NOT send host jobs when running demo tests.

Pausing a Demo File

The demo can be paused by going OFFLINE (pressing the ONLINE button). To resume printing, go back ONLINE.

Stopping a Demo File

The demo is stopped by executing a soft reset on the printer (pressing the LEFT and RIGHT keys simultaneously). This allows normal operation to resume.

Deleting a Demo File

Demo files can be deleted like any other file in the Main File System. Once deleted, it no longer appears as a valid selection in the Printer Tests submenu.

8 *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.

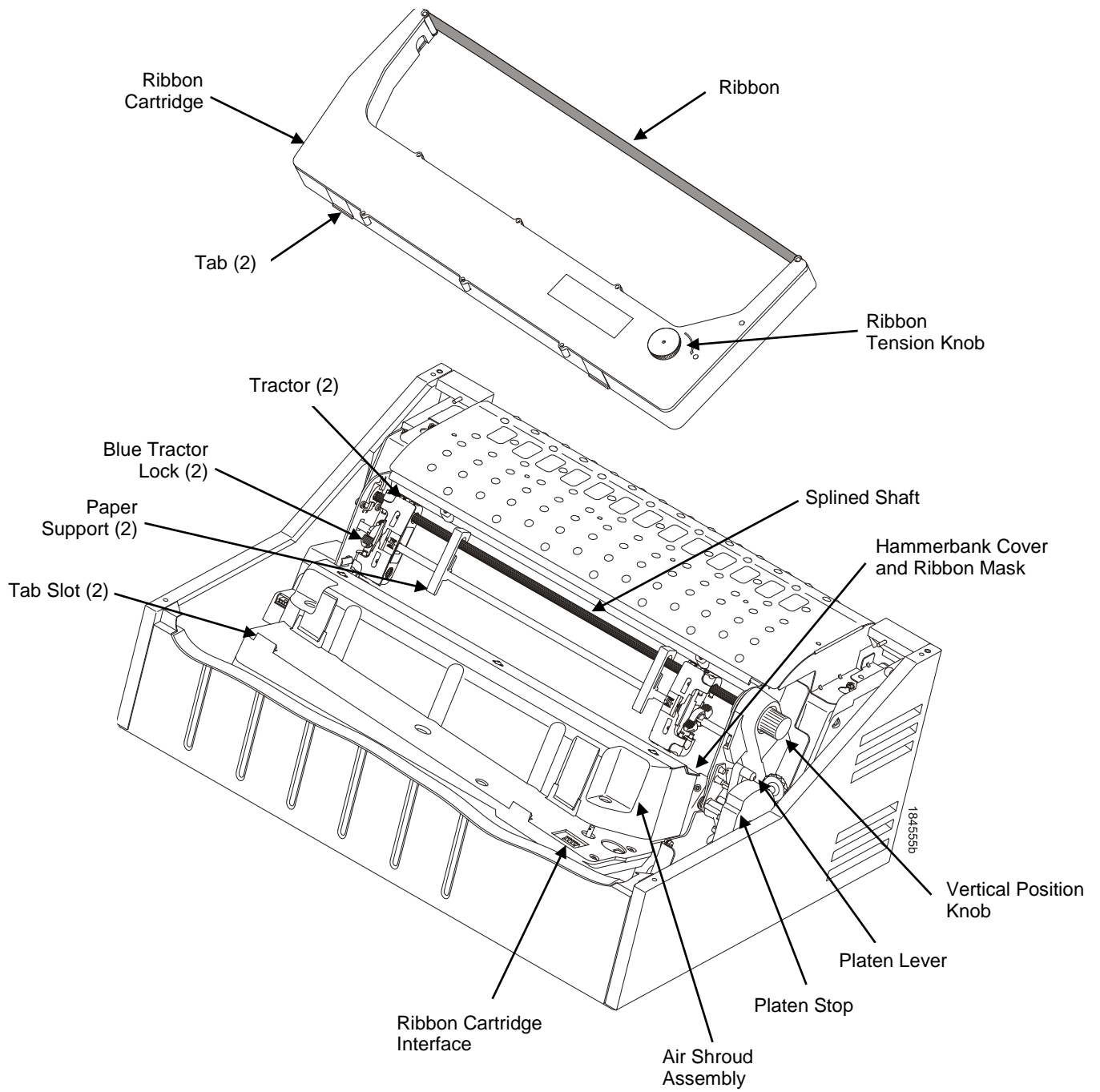


Figure 34 Interior Printer Components

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 cartridge.
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.

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 35 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
`abcdefgghijklmno 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
!"#$%&'()*+,-./0 21 22 23 24 25 26 27 28 29 2A 2B 2C 2D 2E 2F 30
123456789:;<=>?@ 31 32 33 34 35 36 37 38 39 3A 3B 3C 3D 3E 3F 40
ABCDEFGHIJ...! "#$%& 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
GHIJKLMNPOQRSTU 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{|}~ !"#$%&' 77 78 79 7A 7B 7C 7D 7E 20 21 22 23 24 25 26 27
()*+,-./01234567 28 29 2A 2B 2C 2D 2E 2F 30 31 32 33 34 35 36 37
89:;<=>?@ABCDEF 38 39 3A 3B 3C 3D 3E 3F 40 41 42 43 44 45 46 47
HI...!"#$%&'()*+,- 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
EFGHIJKLMNPOQRST 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
LMNPOQRSTUVWXYZ[ 4C 4D 4E 4F 50 51 52 53 54 55 56 57 58 59 5A 5B
\]^_`abcdefghijkl 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 35 Hex Dump Sample

The CD contains a utility called hexcode.exe. This utility can be run from a DOS window to convert an input file into a hexadecimal equivalent. The output from this utility can then be used to compare what is received when printing a hex dump.

Usage: **hexcode** <input file> <output file>

Sample output:

```
412068657820636F6465207072696E746F757420286F7220686578206475
6D70292069732061207472616E736C6174696F6E206F6620616C6C20686F
737420696E746572666616365206461746120746F20697473206865786164
6563696D616C206571756976616C656E742C206C697374696E6720616C6C
204153434949206368617261637465722064617461207265636569766564
2066726F6D2074686520686F737420636F6D707574657220776974682074
6865697220636F72726573706F6E64696E672074776F2D64696769742068
657861646563696D616C20636F6465732E204865782064756D7073206172
65207573656420746F2074726F75626C6573686F6F74207072696E746572
206461746120726563657074696F6E2070726F626C656D732E200D0A0D0A
5072696E7461626C652063686172616374657273207072696E7420617320
7468652061737369676E65642073796D626F6C3B206E6F6E7072696E7461
626C6520636861726163746572732061726520696E646963617465642062
79206120706572696F6420282E292E0D0A0D0A3C2050696374757265206F
66204865782044756D70203E0D0A0D0A54686520434420636F6E7461696E
732061207574696C6974792063616C6C656420686578636F64652E657865
2E2054686973207574696C6974792063616E2062652072756E2066726F6D
206120444F532077696E646F7720746F20636F6E7665727420616E20696E
7075742066696C6520696E746F20612068657861646563696D616C206571
756976616C656E742E20546865206F75747075742066726F6D2074686973
207574696C6974792063616E207468656E206265207573656420746F2063
6F6D706172652077686174206973207265636569766564207768656E2070
72696E74696E672061206865782064756D702E0D0A0D0A55736167653A20
686578636F6465203C696E7075742066696C653E203C6F75747075742066
696C653E2E0D0A
```

Most Frequent Problems and Solutions

Problem	Corrective Action
Poor print quality <ul style="list-style-type: none"> • dark print • light print • light print on half of the page • missing dots or characters • smeared print • wavy vertical lines 	<ul style="list-style-type: none"> • Adjust the forms thickness lever setting. Print quality can be affected if it is too loose or too tight. • Adjust the paper tension horizontally by moving the right tractor. Print quality can be affected if it is too loose or too tight. • Make sure the ribbon threads between the hammerbank cover and ribbon mask, as shown on the ribbon path diagram on the pedestal models. Turn the ribbon cartridge knob clockwise to ensure that the ribbon tracks correctly in the ribbon path. • Be sure to use an approved ribbon.
Torn or damaged forms	<ul style="list-style-type: none"> • Reset the forms thickness lever for thicker paper. • Adjust the paper tension horizontally by moving the right tractor. Too high a paper tension can cause tearing of the tractor feed holes. • Check the paper slot for foreign material. • For thick, multipart forms, set the OPEN PLATEN @ BOF to enable. Refer to the Printer Control Menu in the Administrator's Manual.
Loss of forms position	<ul style="list-style-type: none"> • Set the forms thickness lever for thicker paper.
Lost dots (incompletely formed characters) Horizontally or vertically misaligned character positions Erratic character height Vertically misaligned print	<ul style="list-style-type: none"> • Lower the forms thickness lever. • Adjust the paper tension horizontally by moving the right tractor. Print quality can be affected if it is too loose or too tight. • Clear the paper path of any obstructions. • If problems persists, contact a service representative.

Diagnostics for EXX, BAD NVM, or ILL NVM Errors

If the printer displays LCD error messages such as 'E03E DSI CXIW', "BAD NVM", or "ILL NVM", reboot the printer (turn power on and off) and continue. If the problem persists, then invoke a diagnostic option that will capture the failure dump in a flash file that can be later uploaded from PrintNet Enterprise Suite and sent to TallyGenicom Customer Support Center for analysis (see Appendix D, page 159).

This diagnostic option must be enabled for the printer to capture the information. If you choose to perform this diagnostic perform the following procedure:

1. Within the Test menu, set the Auto Dump option to Enable.
2. When the failure happens, reboot the printer and wait for it to power up again.
3. Within the Config Menu, go to the Main File Mgmt Submenu and then to View File List.

4. Verify that files 'autodmp1' or 'autodmp2' are present in the file list.
5. If present, use PrintNet Enterprise Suite to upload these files to your host computer.
6. Contact TallyGenicom Customer Support Center and send them the files along with the printer's configuration printout. Refer to the *PrintNet Enterprise Suite User's Manual* on how to accomplish these tasks.

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 13.

Displayed faults fall into one of two categories:

- Operator correctable
- Field service required

For the operator-correctable faults, follow the suggested solution in Table 13. After correcting the displayed fault, press the **CANCEL** 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 **CANCEL** 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 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
12 VOLT FAILED*	No	The power supply 12 volt output has failed.	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 printer firmware again.
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 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
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	Error can only occur during a program download (corrupt data).	<ol style="list-style-type: none"> 1. Download program again. 2. Check communications cable being used (Parallel, USB, or Network). If Parallel cable is used, reseat the PCI Parallel opt card.
B23 ERROR: DECOMPRESS CKSUM*	No	Error can only occur during a program download (corrupt data).	<ol style="list-style-type: none"> 1. Download program again. 2. Check communications cable being used (Parallel, USB, or Network). If Parallel cable is used, reseat the PCI Parallel opt card.
B30 STATUS: INITIALIZING...	N/A	Status message: the printer is running its initialization routines after startup and successful memory tests.	No action is required.
B50 STATUS: PANEL CODE BAD	No	Saved version of Panel Code is corrupt.	Reload released Firmware.
B51 STATUS: XX% LOADING...	No	Status message: printer boot-up routines are loading printer system software into flash memory and SDRAM.	No action required.
Bxx ERROR: NO DOWNLOADER FOUND	No	No Downloader was found while downloading a file.	Reload released Firmware.

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
BAD NVM CALL 1 BAD NVM CALL 2 BAD NVM CALL 3 BAD NVM CALL 4 BAD NVM CALL A	Yes	Printer firmware code error with the Novram module that stores configurations and statistics.	<ol style="list-style-type: none"> 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 again, record the exact display message, follow the instructions on page 124, Diagnostics for EXX, BAD NVM, or ILL NVM Errors, and contact your authorized service representative.¹
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.
CARTRIDGE AT END POINT Change Cart	Yes	Integrated Print Management System software has determined that the cartridge ribbon is out of ink.	Install a new cartridge.
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 ERR 1 COIL HOT ERR 2	No	One or more hammer coils are overheating.	Contact your authorized service representative. ¹

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
COIL TEMP FAIL	Yes	The coil temperature was never set or the attempt to set it did not result in correct numbers.	Allow printer to cool completely, then set coil temperature. If message continues to display, contact your authorized service representative. ¹
CARTRIDGE CONNECTION ERROR See User Manual	No	The hardware cannot communicate properly with the cartridge.	<ol style="list-style-type: none"> 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
CARTRIDGE INCOMPATIBLE Use correct cart	Yes	An incompatible ribbon cartridge was installed in the printer.	Install a cartridge designed for this printer.
CARTRIDGE MISSING Install new cart Press ONLINE	Yes	The ribbon cartridge is missing or installed improperly.	<ol style="list-style-type: none"> 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
CARTRIDGE NOT SEATED Re-install Cart	Yes	The ribbon cartridge is not properly positioned.	<ol style="list-style-type: none"> 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
CARTRIDGE/REGION X MISMATCH Use Correct Cart	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. NOTE: Specify the region of the printer when ordering ribbons.

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
CARTRIDGE/ SHUTTLE MISMATCH Use Correct Cart	Yes	This message displays when an Extended Life Cartridge is mounted on a 500 lpm printer.	Install Standard Life Cartridge.
CARTRIDGE/ TIPSIZE MISMATCH Use Correct Cart	Yes	The incorrect cartridge type is being used for the printer.	Install the correct ribbon cartridge type in the printer.
CATASTROPHIC ERROR	No	Fatal error in printer.	Contact your authorized customer service representative. ¹
D50 STATUS UPGRADING PANEL	No	Status message: The printer is upgrading the panel, where %XX represents the percentage completed.	No action is required.
D51 STATUS PROGRAMMING DONE	No	Status message: The printer is loading firmware, where %XX represents the percentage completed.	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.	<ol style="list-style-type: none"> 1. Cycle power. Run the print job again. If the message appears, download the emulation software again. 2. Cycle power. Run the print job again. If the message appears again, contact your authorized service representative.¹

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
E00 EXE @ ADDR0 E01A TYPE 0x40 E01B TYPE 0x60 E02 MACHINE CHK E03A DSI HASH L E03B DSI HASH S E03C DSI BAT PL E03D DSI BAT PS E03E DSI CXIW X E03F DSI CXOW X E03G DSI ECXIW X E03H DSI ECXOW X E04A ISI NO TRA E04B ISI DIRECT E04C ISI PROTEC E06 NOT ALIGNED E07 ILLEGAL INS E08 FLOATINGPNT E12 SYSTEM CALL E13 TRACE INT E16 ITRANS MISS E17 DLOAD MISS E18 DSTORE MISS E19 BREAKPOINT E20 SYS MANAGE E30 DEBUGGER E31A EVENT 0 BP E31B EVENT 1 BP E31C EVENT 2 BP E31D EVENT 3 BP E31E EVENT 4 BP E31F EVENT 5 BP E31G EVENT 6 BP E31H EVENT 7 BP E32A CND 0 BP E32B CND 1 BP E32C CND 2 BP E32D CND 3 BP E32E CND 4 BP E32F CND 5 BP E32G CND 6 BP E32H CND 7 BP E33 WRITE BP E34 TRACE CMLPT 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. 2. Cycle power. Run the print job again. If the message appears again, record the exact display message, follow the instructions on page 125, and contact your authorized service representative. ¹
E-Net Test Unavailable	Yes	The ethernet did not initialize correctly.	Cycle power. Wait for "E-Net Ready" to display, then retry operation. If it still fails, contact your authorized service representative. ¹

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
ERROR OCCURRED FLUSHING QUEUES*	Yes	An interim message that displays while the printer discards host data it cannot use because a fault condition exists. While this message displays, the asterisk (*) rotates.	Wait. When the asterisk (*) stops rotating, a different fault message will appear: troubleshoot the final message.
ERROR NOR FLASH WAS NOT CLEARED	No	Problem programming Boot Code.	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: LOCKED SN=nnnnnnnnnnnnnnnnnn n	No	nnnnnnnnnnnnnnnnnn n 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: NVRAM FAILURE	No	The non-volatile SRAM on the controller board has failed.	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 option(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: 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
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

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
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.
EXCEPTION ERROR	No	An EXCEPTION INTERRUPT has occurred.	Contact your authorized service representative. ¹
EXCESS RIBBON 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	Sensor cannot detect current in fan circuit.	Power off the printer and remove the paper path (see <i>Maintenance Manual</i>). 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
FLASH: CHECK RETURN	No	Printer encountered an error while trying to program Flash memory.	Contact your authorized service representative. ¹

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
FLASH: WAS NOT CLEARED	No	Printer encountered an error while trying to program Flash memory.	Contact your authorized service representative. ¹
FLASH: WRITE ERROR # 2	No	Printer encountered an error while trying to program Flash memory.	Contact your authorized service representative. ¹
FM HEADER ERROR*	No	Frame Header Error. Application software has violated header parameters.	Contact your system administrator.
FRAMING ERROR	Yes	The printed output may contain random ! (exclamation point) characters.	Make a configuration 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.
GENERATING XX% NAND FLASH TABLE	No	NAND FLASH is being read and system tables are being initialized.	No action is required.
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
<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
HAMMER COIL BAD* #, #, #, ...etc	No	Hammer coil # failed current test at power up.	Contact your authorized service representative. ¹
HAMMER DRIVER CIRCUIT BAD*	No	Driver Circuit Bad. The hammer coil count test failed.	Contact your authorized service representative. ¹

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
HAMMERBANK NOT INSTALLED*	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	Sensor 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 NVM VALUE 5 ILL NVM VALUE 6 ILL NVM VALUE 7	Yes	Illegal value was stored into the Novram module.	<ol style="list-style-type: none"> 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 again, record the exact display message, follow the instructions on page 124, Diagnostics for EXX, BAD NVM, or ILL NVM Errors, and contact your authorized service representative.¹
ILLGL OPR ACCSS*	No	Illegal Operand Accessed. Firmware error on controller board.	Contact your authorized service representative. ¹
INITIALIZING...	Yes	This message indicates the printer is beginning its initialization process.	No action is required.
INTAKE FAN CHECK	Yes	Sensor 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

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
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
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.
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
ONLINE	N/A	Printer state message: printer is online and in communication with host.	No action is required.
PANEL BAD CHECKSUM	No	Panel Code has a bad Checksum.	Reload released firmware.
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

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
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 INVLD CMD*	No	Paper Invalid Command. Firmware error on controller board.	Contact your authorized service representative. ¹
PAP INVLD PARM*	No	Paper Invalid Parameter. Firmware error on controller board.	Contact your authorized service representative. ¹
PAPER REQUESTED Install A4	Yes	A paper size mismatch is detected.	Check the paper size setting and if necessary, load new media and change the paper size menu option.
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.

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
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
PRINTER HOT	Yes	This message indicates internal temperatures of 80° Celsius or higher (176° 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.
PROCESSOR HALTED EC_FAULT_RTYSYS2	No	Real-time System Firmware error on controller board.	Contact your authorized service representative. ¹
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.
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
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.

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
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.
SD CARD ERROR Remove SD Card	Yes	The printer has been powered up with a card in the SD slot, but the card is not functioning properly. The card could be a compact flash card or a non-supported card.	Power down, reseal card, and power up again. If error persists, power down, remove card, and try another card.
SD FILE EXISTS Enable Overwrite	Yes	A write operation to the SD has failed because the file already exists on the SD card and the overwriting of existing files is disabled.	Enable overwriting of files on the SD using the overwrite files menu.
SD FILESYS FULL Delete Files	Yes	The SD file system is completely full.	Delete files on the SD card to make space.
SD FILESYS FULL File Too Big	Yes	A write operation to the SD has failed because the file is too big to fit in the remaining space on the SD card.	Delete files on the SD card to make space.
SD FILESYS WRITE Check SD	Yes	A write operation to the SD has failed for an unknown reason.	Ensure that the SD card is inserted correctly and that the SD card is a supported SDHC card.
SD INSERTED Reboot Printer	Yes	The SD card has been inserted after the printer was already powered up.	Turn off the printer and insert the SD card only when the printer is not powered on.
SD NOT FOUND Insert SD Card Pwr Off Printer	Yes	A write operation to the SD could not be performed because the SD card was not detected.	Ensure that an SD card is inserted correctly and that the SD card is a supported SDHC card.
SD READING Do not Remove	Yes	The SD card is currently reading files.	Wait until reading completes.
SD REMOVED Reboot Printer	Yes	The SD card has been removed after the printer was already powered up.	Turn off the printer and remove the SD card only when the printer is off.

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
SD WRITE FAIL WRITE PROTECTED Check SD Card	Yes	A write operation to the SD has failed because the SD card is write protected.	Ensure that the write protect tab on the SD card is not active. If the write protect tab is not active, use another SD card.
SD WRITING Do not Remove	Yes	The SD card is currently writing or erasing files.	Wait until the write or erase operation completes.
SDSC CARD NOT SUPPORTED Remove SD Card	Yes	The printer has been powered up with an SDSC card, and SDSC cards (< 4 GB) are not supported.	Power down, remove SD card, and insert an SDHC card in the printer.
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
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.
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
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

Table 13 LCD Message Troubleshooting Table

Displayed Message	Can User Correct?	Explanation	Solution
SHUTTLE STALL	Yes	The shuttle is not moving.	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
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 <i>TallyGenicom 6800 Maintenance Manual</i> .
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
UPGRADED - REMOVE SPX Downld code if needed	No	Status message: An SPX has successfully upgraded the security key on the controller board.	Remove SPX and download code if needed.

Table 13 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 SNSR ERROR See User Manual	No	The cartridge sensor could not be calibrated.	1. Make sure your cartridge is properly seated. 2. 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 the correct ribbon cartridge type is installed. 2. Make sure the cartridge is properly seated. 3. Contact your authorized service representative. ¹
XXXX CHECKING PATTERN	No	Running power on memory test.	No action is required.
XXXX MEMORY FAILURE	No	Memory in bank xxx has failed. Power on memory test.	Contact your authorized service representative. ¹
XXXX WRITING PATTERN	No	Running power on memory test.	No action is required.
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 America, Latin America (excludes Brazil), Canada	Asia Pacific (excludes China and India)	India and Brazil
Extended Life, 1 Pack	-101	-102	-103	-104
Extended Life, 4 Pack	-401	-402	-403	-104
Standard Life, 1 Pack	-101	-102	-103	-104

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.
Thickness:	Single-part: 15 to 100 pound (56 to 163 g/m ²) stock; Multi-part: 1- to 6-part forms
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.

Thickness:	Not to exceed 0.025 inch (0.064 cm) (including backing sheet)
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Printer Weight and Dimensions

Cabinet Type	Dimensions			Weight	
	Height (inches)	Width (inches)	Depth (inches)	Unpacked (pounds)	Packaged (pounds)
Cabinet	42.5	27	29	200	260
Open Pedestal	35	24.5	27	115	153
Zero Tear Pedestal	42.04	25.75	19.48	150	195

Environmental Characteristics

Temperature:

Operating: 50° to 104° F (10° to 40° C) up to 5000 feet (1524 meters)
 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

Table 14 Acoustic Noise Levels per ISO 9296

Printer Models	Printing	Standby
Cabinet	50 dB (ASCII 500 lpm/1000 lpm) 52 dB (300 lpm, 1500 lpm) 55 dB (600 lpm, 800 lpm, 2000 lpm)	48 dB
Pedestal	62 dB (300 lpm, 500 lpm) 65 dB (600 lpm, 1000 lpm)	50 dB
Zero Tear	66 dB (300 lpm, 500 lpm) 70 dB (600 lpm, 1000 lpm)	50 dB

Electrical Characteristics

Printer Type	Configuration	Voltage (+/- 10%)	Freq (+/- 10%)	Amps	Watts	BTU/Hr
Cabinet	6805Q	AC 100-240V	50/60 Hz	5A	320W	1093
Cabinet	6810Q	AC 100-240V	50/60 Hz	5A	320W	1093
Cabinet	6815Q	AC 100-240V	50/60 Hz	9A	475W	1622
Cabinet	6820Q	AC 100-240V	50/60 Hz	9A	475W	1622
Pedestal	6805	AC 100-240V	50/60 Hz	5A	320W	1093
Pedestal	6810	AC 100-240V	50/60 Hz	5A	320W	1093
Zero Tear Pedestal	6805Z	AC 100-240V	50/60 Hz	5A	320W	1093
Zero Tear Pedestal	6810Z	AC 100-240V	50/60 Hz	5A	320W	1093

The above values are calculated while printing 136 column, all upper case high speed “E’s”. The stand by (Energy Saver mode) wattage is 5W (17 BTU/Hr) for all models.

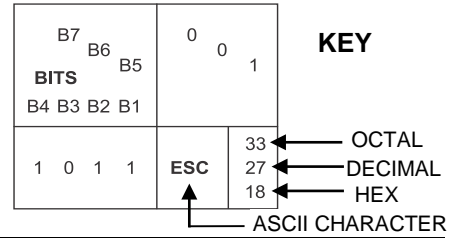
Interfaces

Type:	Standard:	USB 2.0 Universal Serial Bus RS-232 serial
	Optional:	IEEE 1284 Parallel Centronics Parallel 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 Speed

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



BITS B7 B6 B5 B4 B3 B2 B1	ROW	COLUMN		0		1		2		3		4		5		6		7		
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	
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 Pedestal Printer*

Overview

The P8000 Zero Tear Pedestal (ZTP) 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 ZTP printer is available as follows: 500 and 1000 line per minute models.

Operation

Position the Paper Input and Adjust the Paper Guides

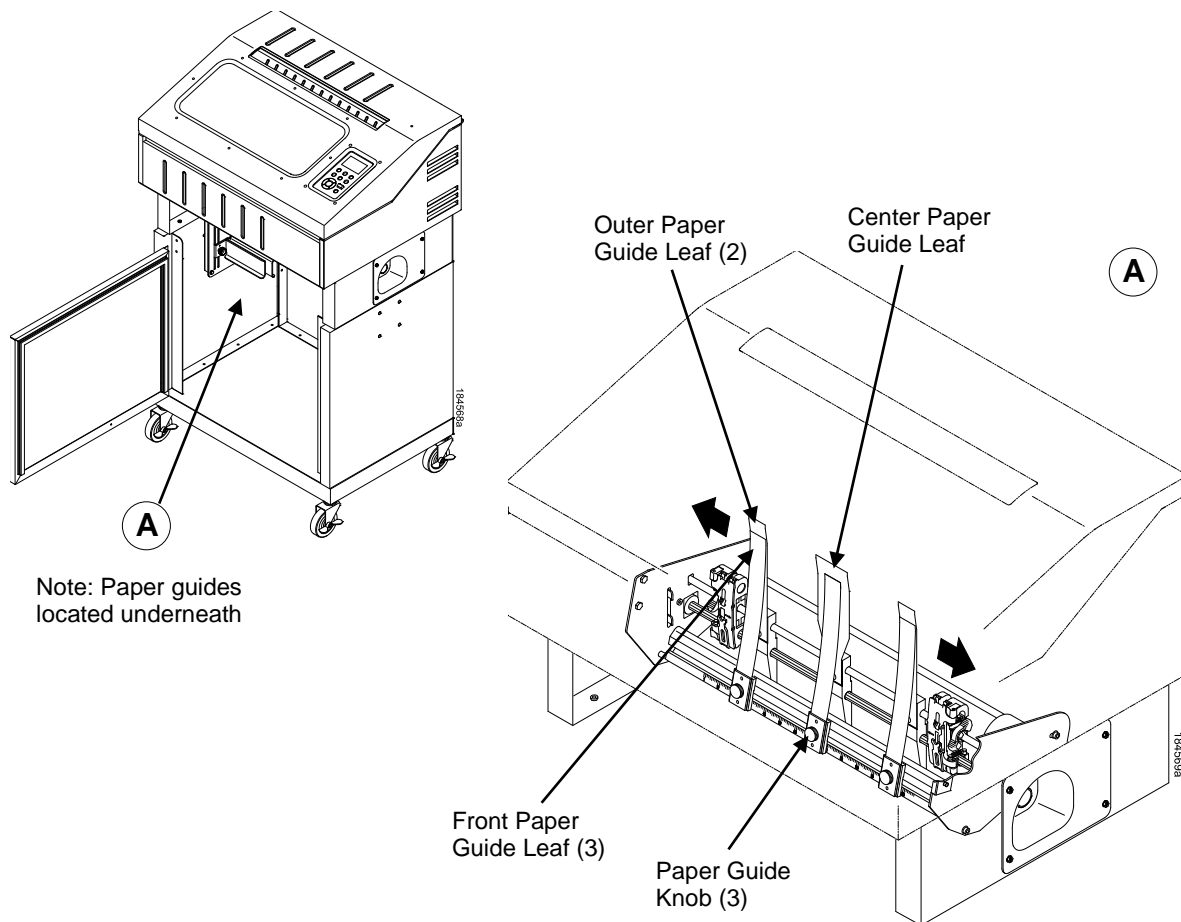


Figure 36 Adjusting the Paper Guides

NOTE: This operation is typically done during initial setup. Before beginning the procedure, ensure that the paper guides are not damaged.

1. Remove the left paper guide knob and the left, front paper guide leaf. (See Figure 36.)
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.

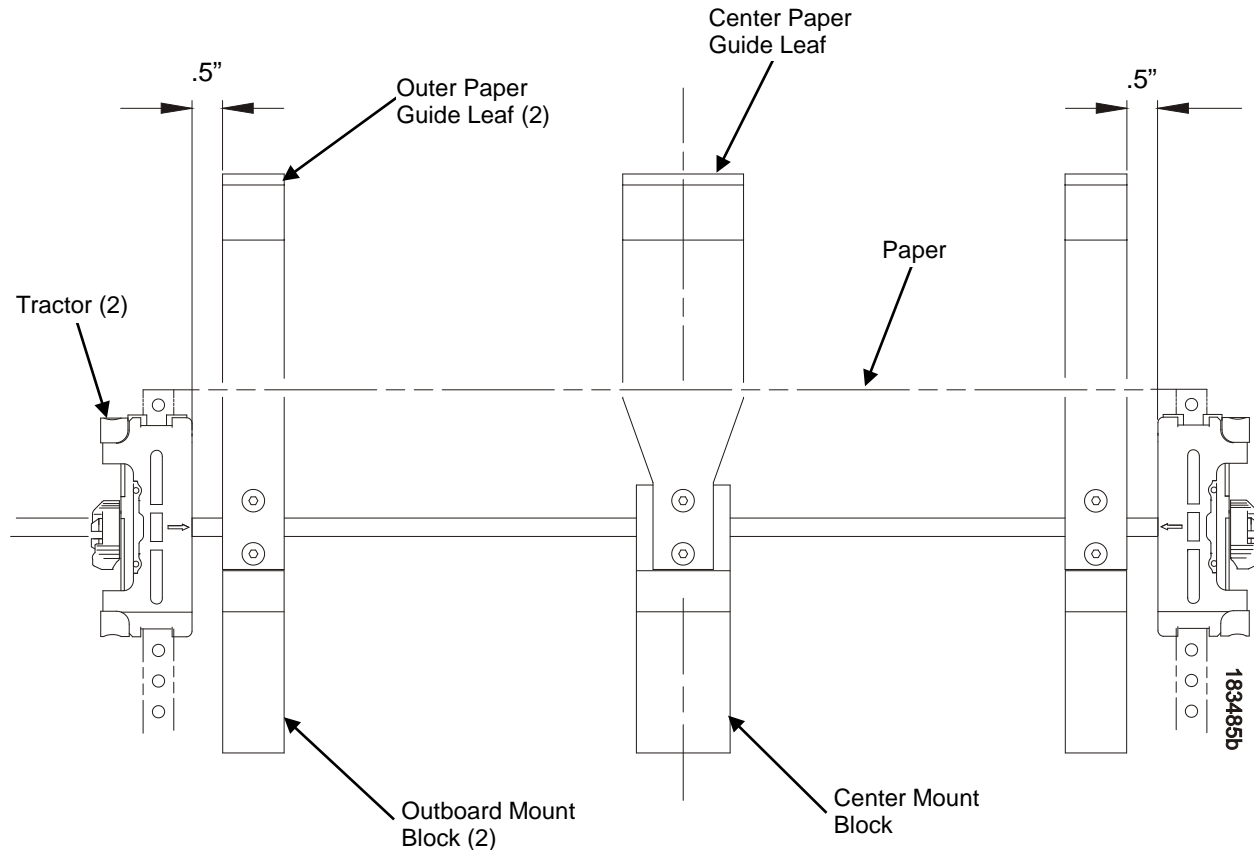


Figure 37 Adjusting Paper Guide Leaves

4. Slide the left outboard mount block so that the left outer paper guide leaf is .5 inches from the left tractor. (See Figure 37).
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 36.)

Load Paper

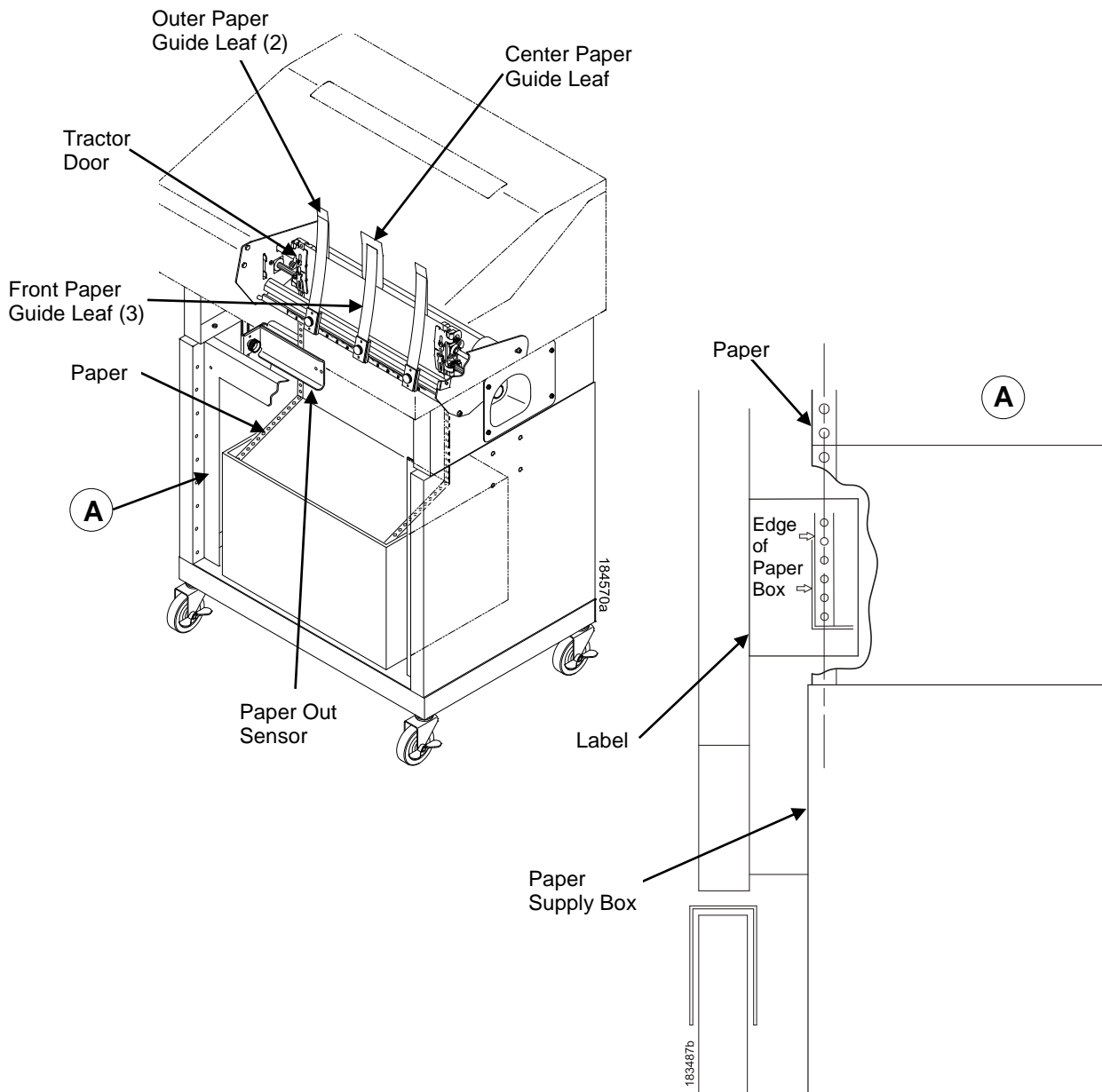


Figure 38 Loading Paper onto the Printer

1. Align the paper supply box with the label on the left side of the floor. (See Figure 38 on page 151.)
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.

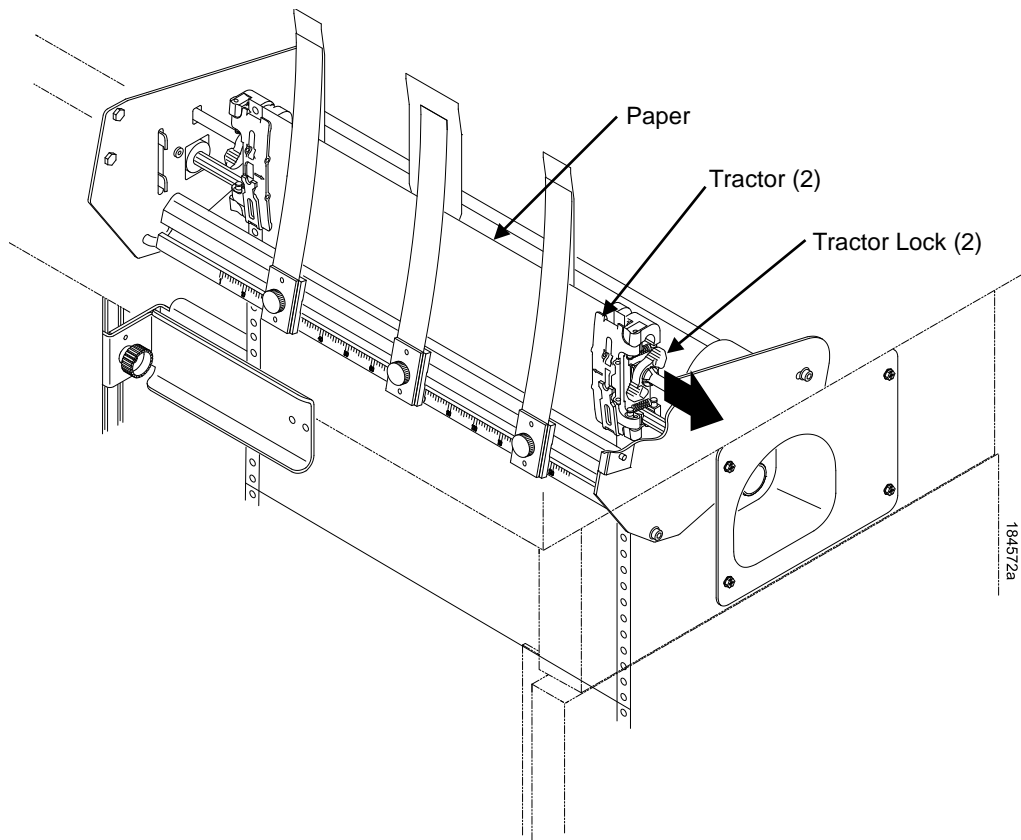


Figure 39 Adjusting the Horizontal Paper Tension

5. Adjust the paper web tightness by sliding the right tractor to remove slack or to adjust for various paper widths. (See Figure 39.)
6. Lock the tractors in position by pressing down on the tractor locks.

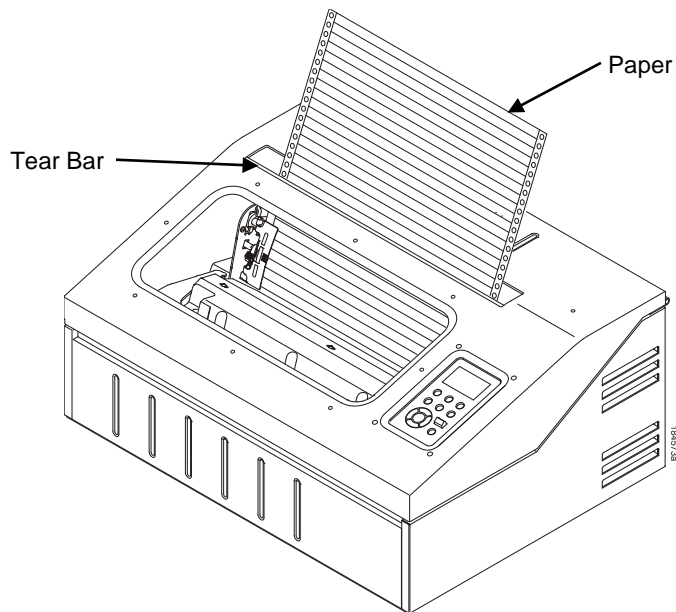


Figure 40 Paper Exiting the Top of the Printer

Position the Paper Out Sensor

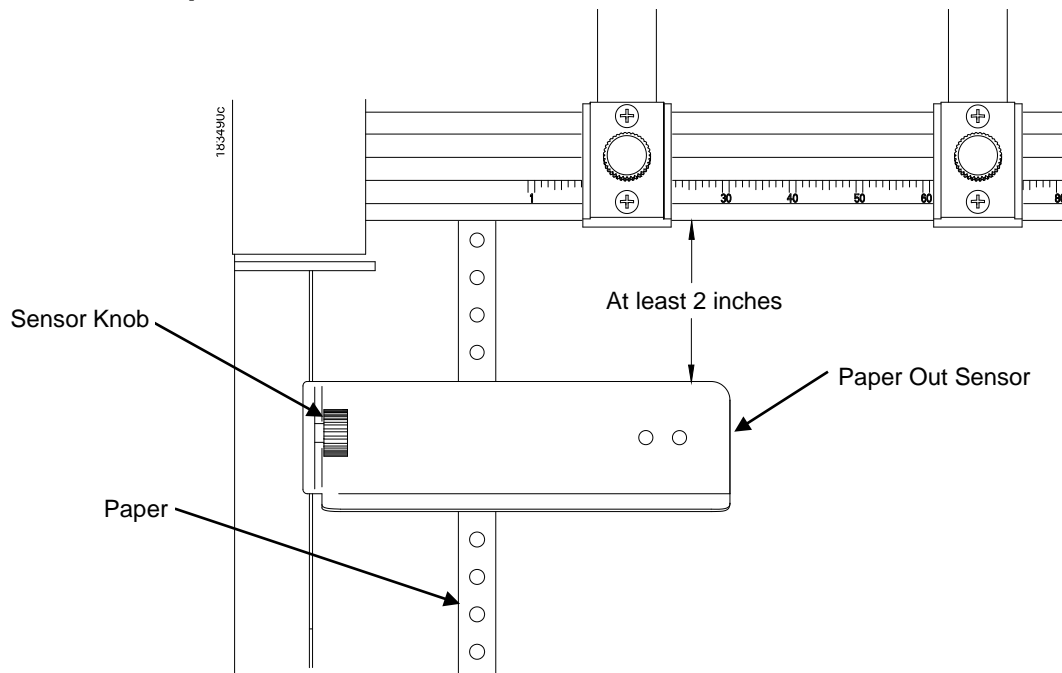


Figure 41 The Paper Out Sensor

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 ZTP printer requires you to load the paper through the paper out sensor slot (Figure 38 and Figure 41). 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 155).
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 **ENTER** key to enter Menu mode.
3. Press the right arrow \triangleright until the Config Menu icon is highlighted.
4. Press **ENTER** to go into Config Menu.
5. Press the down arrow ∇ until "ZTP SETTINGS" is highlighted.
6. Press **ENTER** to go into the "ZTP SETTINGS" submenu.
7. Press the down arrow ∇ until "ZTP TearDistance" is highlighted.
8. Press the left arrow \triangleleft or right arrow \triangleright to decrease or increase the tear bar distance in increments of 1/144th of an inch.
9. Press **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 42.

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

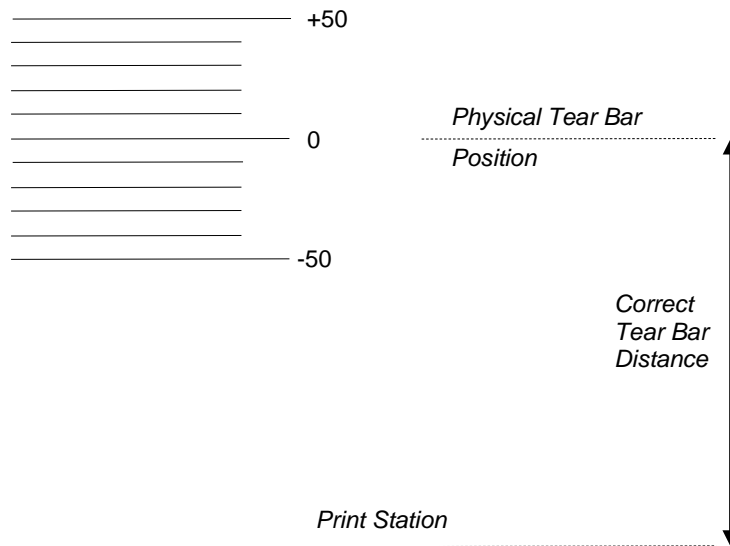


Figure 42 Correct Tear Bar Distance

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

10. Reset the top of form using the procedure on page 155.

Set the Top of Form

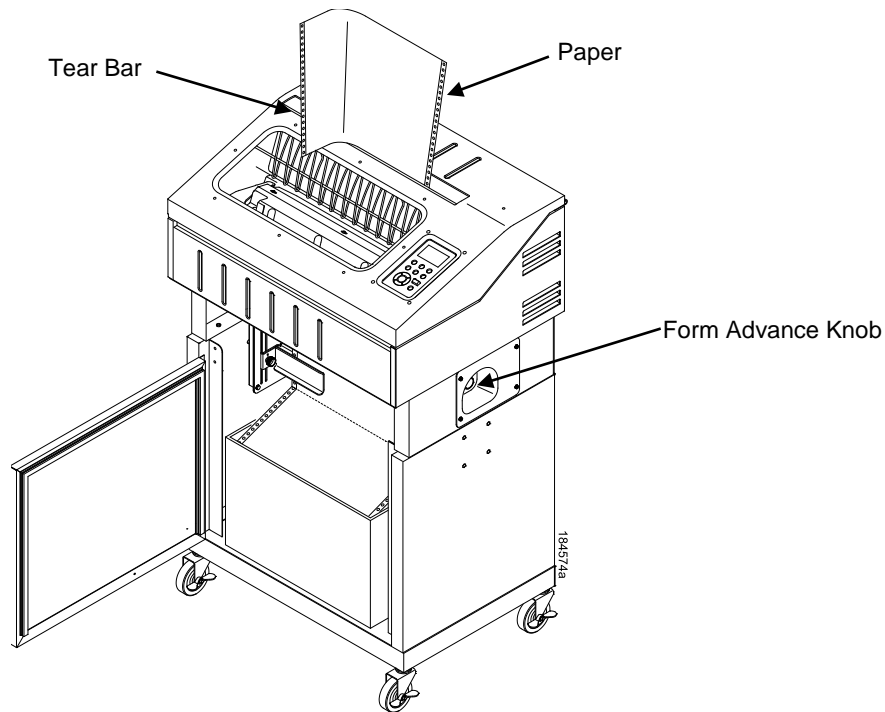


Figure 43 Setting The Tear Off Position

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 LCD will display "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.

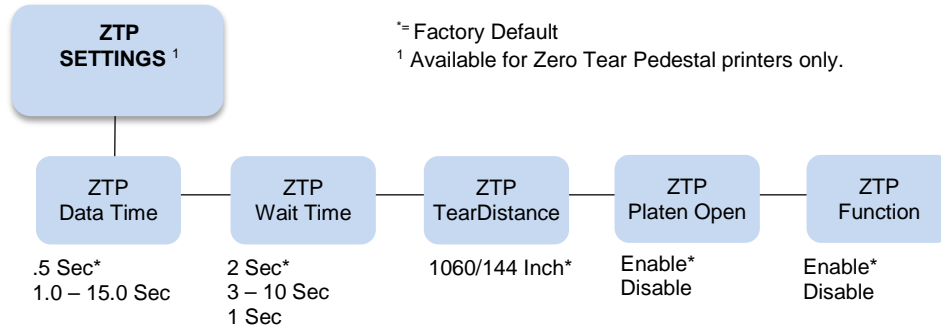
7. Press the **TOF** button again. The printer LCD will display "Top Of Form Set/Press ONLINE". The printer will then be brought OFFLINE and the top of form will be set.

NOTE: Unlike the non-ZTP models, the paper will not move.

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

ZTP SETTINGS Menu

The ZTP SETTINGS 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.



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 left and right 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 key is disabled and Slow Paper Slew is enabled.

Performance Considerations

Forms Type

The paper feed tractors on the ZTP 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 ZTP printer can use. If the forms do not fall within the range specified in Table 15, dot compression, line separation, and jamming 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 ZTP printer requires standard half inch spaced tractor feed holes. Cut sheet and continuous friction fed paper is not supported. The forms specified in Table 15 can have no more than one form per page horizontally.

Table 15 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	3 to 12 inches	7 to 12 inches

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.

Clearing Paper Jams or Removing Paper

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 151).

Paper Jams during Reverse Feed

Certain heavy forms may catch on the paper ironer during reverse feed. Refer to the *Maintenance Manual* for additional information.

How to Set the ZTP Printer to Help Mitigate Paper Jams

Available settings in the printer's software can help mitigate or even resolve most Forms Jams that may be attributed to the types of forms used on the ZTP printer.

Some single-part forms that are light in weight such as 18 to 20 pounds or multi-part forms that have very thin plies (i.e. 3 to 4 mils) may have a tendency to not hold their stiffness during high-speed slews or while printing medium to high speed typefaces. Since the form is being pushed up into the print station rather than being pulled like in the standard pedestal printers, the form may tend to buckle or deform as it moves through the hammerbank and create a Forms Jam.

NOTE: Forms using high Cut-to-Tie Ratios that exceed 4:1 to allow easy perforation tear-off (i.e. check forms, invoices, etc.) may come apart during forms slews and high speed typefaces. The parameter changes listed below may help to avoid Forms Jams.

Try setting one or more of the following parameters to help mitigate Forms Jams when using lightweight stock or multi-part forms with thin plies:

- Under the Emulation menu -> Font Attributes, select Typeface NLQ.
- Under the Emulation menu -> Font Attributes, set Bold Print to Enable.
- Under the Advanced User or Quick Setup menu, set Slow Paper Slew to Enable.
- Under the Printer Control menu, set Unidirectional to Enable.

IMPORTANT Setting any of the previous parameters may cause an overall slowdown in throughput and increased use of consumables. Set at your own discretion.

For some heavy single-part forms and thick multi-part forms, the rigidness of the forms' construction and the use of thicker plies is usually accompanied by the use of lower Cut-to-Tie Ratios below 4:1 on the primary horizontal perforation to keep the form together and not pull apart.

This primary horizontal perforation is usually where the form is at its thickest point up to .025" max.

On occasion, the forms' perforation may not allow itself to be compressed between the printers' paper ironer and platen, and may cause itself to jam inbetween during forward motion. This usually occurs at the forms outward perforation as it travels upward through the print station.

NOTE: Some heavy label stock can also cause jamming in the platen area especially if the label has thick adhesive that can get squeezed out or multi-part forms that are using attachment methods that may include gluing, crimps or staples.

To prevent jamming at the perforation, under the Printer Control or Quick Setup menu, set Open Platen @ BOF (Bottom of Form).

D *Quick Change Memory Card (QCMC)*

Overview

The QCMC provides the ability to duplicate an entire printer's firmware, saved configurations, and custom files quickly through the printer's control panel with a user friendly interface. No external host or files are needed to transfer this information to the QCMC. A "snapshot image" is saved of the printer's firmware, configuration settings, and custom files. The saved image can be copied to any number of printers using the same QCMC so that the printers will be identically configured (assumes same printer hardware and options are present).

The QCMC has its own resident network MAC address that will be used in place of the printer's LAN/WLAN MAC address when the cartridge is left installed in a printer. This allows a mission critical printer to be exchanged quickly with a spare printer that will be identically configured, including the network MAC address.

The following are examples of how the QCMC may make printer management more convenient:

- A site has 10 printers to install that should all be configured identically. Rather than inputting the information through the control panel individually to each printer, insert the QCMC into the first printer, capture the changes, then easily share the image with the other nine printers.
- A site is adding additional printers and wants them configured the same as the printers already installed, but is unsure what changes were originally made. By using the QCMC to capture the exact image of the older printers, no custom settings will be missed.
- A printer is set up on a network that is configured to only allow recognized MAC addresses to access the network. If the printer with the QCMC installed needs repair and must be removed from the network, the MAC that resides on the QCMC can be easily transferred to the replacement printer, along with all the configuration information and any other files stored as the "snapshot image" on the QCMC, making the replacement printer an exact duplicate for the downed printer. By using the MAC address that resides on the QCMC, the replacement printer can be installed without notifying the network administrator, thereby simplifying the exchange.

Installing the QCMC

CAUTION You must power off the printer before you install or remove the QCMC, or you may damage the QCMC and the printer. If you remove the QCMC after powering on the printer with the QCMC installed, the fault message “SD REMOVED Reboot Printer” will display. You cannot clear this message by reinserting the QCMC. You must cycle power.

1. Set the printer power switch to O (Off).
2. Insert the SD card into the QCMC slot on the back of the printer.

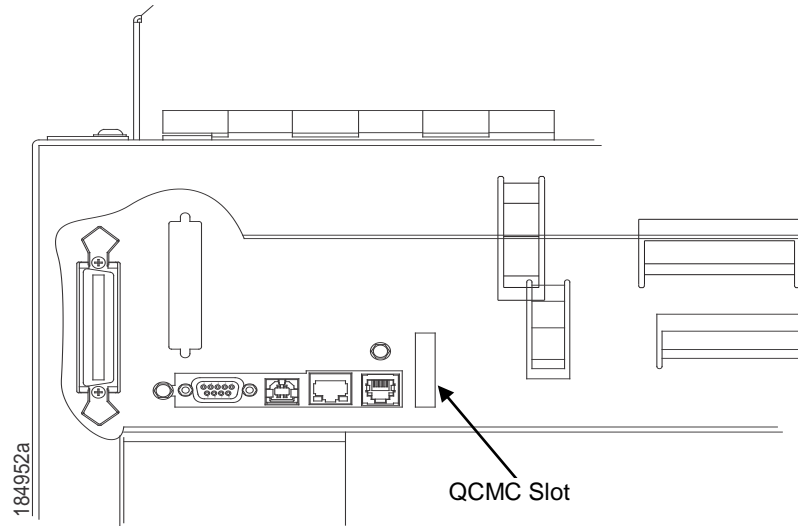


Figure 44 QCMC Slot on Back of Cabinet Model

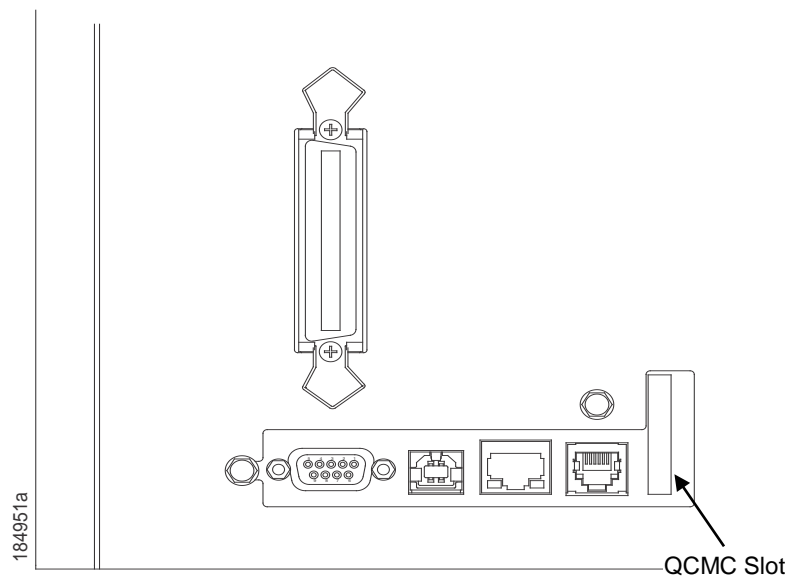


Figure 45 QCMC Slot on Back of Pedestal

Saving the Printer's Configuration to the QCMC

NOTE: The MAC address residing on the QCMC will be used in place of the MAC assigned to the printer's own network card whenever the QCMC is installed. If you do not want to identify the printer with this MAC address, make sure the QCMC is removed from the printer before attaching the printer to the network.

When the printer software detects the presence of a QCMC at power-up, a check of the QCMC will be performed to determine if there is already a saved flash image available. If no printer flash image exists on the QCMC, the software will then check to see if there are any saved configurations in the printer's NVRAM memory. If the QCMC is blank (no flash image) and saved configurations are detected in the printer's NVRAM then you will be prompted with a message on the front panel to save the printer's configuration to the QCMC.

QMC DETECTED

Save to QCMC?

Continue Press <ENTER>

Skip Press <CANCEL>

NOTE: This screen will appear every time at power-up until the printer's flash is saved to the QCMC.

If the <CANCEL> key is pressed, the printer will reboot into normal operation and not save any information to the QCMC. On subsequent power-ups the Save message on page 161 will display again.

When the <ENTER> key is pressed, the printer will not go online, but instead will copy the printer's entire flash image to the QCMC, creating a snapshot of the printer's memory.

Below is a list of items that will be saved to the QCMC:


- Printer Program File (software)
- Custom configurations (1–8)
- Feature files or CST's that have been downloaded on the printer.
- All variable settings from the printer's NVRAM
- Network settings (if LAN/WLAN is installed), including IP Address
- Other user files, such as fonts, bitmaps, or graphics files downloaded to the printer.

While the printer is saving its QCMC settings to the SD card, the following message will display. Do not interrupt the process.

DO NOT PWR OFF

Saving Setup

To QCMC...

 **XX%**

Upon successful completion of saving a flash image to the QCMC, the printer will display a message indicating the operation is complete. The printer will then reboot into normal operation.

**Save Complete
Printer Will Now
Reboot...**

If there is not enough space on the SD to save the entire flash image, you will be prompted with the following message.

**NOT ENOUGH
SPACE ON SD
Delete SD File**

This is a fatal error and requires user intervention. Cycle power on the printer, when prompted to save the QCMC select <CANCEL> to skip. The printer will boot online and allow access to the Main File Mgmt menus located under the Config Menu. Delete unnecessary SD files then try the QCMC Save operation again.

Copying the QCMC “Snapshot” Image to a Second Printer

Always power off the printer before removing or inserting the QCMC. Place the QCMC into the second printer’s memory slot. Upon power up, the printer software detects the presence of a QCMC and a check of the QCMC will be performed to determine if there is already a saved flash image from this QCMC on the printer. If no, the following message will display:

**QCMC DETECTED
Copy to Printer?
Yes...Press <ENTER>
No...Press <CANCEL>**

NOTE: This message will appear every time at power-up until the QCMC settings are copied to the printer.

If the <CANCEL> key is pressed, the printer will reboot into normal operation and not copy any information to the printer. On subsequent power-ups the Copy message above will display again if the QCMC remains installed in the printer.

NOTE: If the QCMC remains installed in the printer, the MAC address onboard will be used in place of the resident MAC address to the printer’s LAN/WAN interface card.

When the <ENTER> key is pressed, the printer will not go online immediately, but will copy the contents of the QCMC to the printer’s flash, creating a clone of the original printer. Before the copy process is allowed to continue, checks of the printer configuration will be made. If either of the checks fail, a message will display on the front panel (in the hierarchy shown on page 162) and the printer will not copy any settings.

INVALID SD

Power Off Printer
Remove Cartridge

This means that the QCMC is not compatible with the printer's software. A software upgrade is required, or a different configured QCMC will be needed.


A QCMC validation check will be performed to ensure the data stored on the SD is not corrupted. If the test fails the following fault message will display.

QCMC DATA ERROR
ON SD
Delete & Resave
QCMC Data

This means that the data on the QCMC was not saved properly, and must be deleted then resaved. Follow the instructions for deleting files, then repeat the copying process.

If all the checks pass, then the printer will copy the files from the QCMC to the target printer.

DO NOT PWR OFF
Copying QCMC To
Printer...

 **XX%**

Upon successful completion, the printer will display the following message on the front panel and reboot into normal operation.

Copy Complete

E *PTX_SETUP* Commands

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 16 lists all the command, sub-command, and parameter combinations and gives a brief description of the command.

Table 16 PTX_SETUP Commands (Non-Platform Specific)			
Command	Sub-Command	Parameter	Description
CONFIG	LOAD	<i>Cfg</i>	<i>Cfg</i> can be 0-8. The PTX_SETUP will load configuration <i>Cfg</i> . If configuration <i>Cfg</i> was not previously saved, the operator panel will display an error message and the current configuration will be kept.
	SAVE	<i>Cfg</i>	<i>Cfg</i> must be 1-8. This command will save the current configuration as configuration <i>Cfg</i> . If <i>Cfg</i> is not in the range of 1-8, the command is ignored.
	SETMENU	<i>Value;Menu_tag</i>	<i>Menu_tag</i> is the name of the menu as defined in the menu file. <i>Value</i> is the value to which the menu is to be set.
	POWERUP	<i>Cfg</i>	Sets the power-up configuration to <i>Cfg</i> and loads Configuration <i>Cfg</i> . <i>Cfg</i> can be any value from 0-8, where 0 is the factory default.
	PRINT	<i>Cfg</i>	Print Configuration <i>Cfg</i> . <i>Cfg</i> 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	<i>Cfg</i>	Deletes Configuration number <i>Cfg</i> . <i>Cfg</i> must be in the range of 1-8.
	UPLOAD	<i>Port;Cfg</i>	This command uploads the configuration stored in location <i>Cfg</i> to the port specified by <i>Port</i> . <i>Port</i> must either be 1284 or SERIAL. <i>Cfg</i> may be 1-8 or ALL.
	DOWNLOAD	<i>Cfg</i>	This command saves the configuration data that follows as configuration <i>Cfg</i> . <i>Cfg</i> must be 1-8 or END.

Table 16 PTX_SETUP Commands (Non-Platform Specific)

Command	Sub-Command	Parameter	Description
CONFIG	OVERLAY	<i>Cfg</i>	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	<i>"Port"</i>	This command uploads the names of the configurations to the port specified by Port. Port must either be "1284" or "SERIAL".
	SET_NAME	<i>Cfg</i>	This command downloads a name for the configuration specified by <i>Cfg</i> . <i>Cfg</i> must be 1-8.
	CLEAR_NAMES		This command resets all of the configuration names to their default values.
	MPI_SELECT	<i>MPI</i>	This command selects the active Management Protocol Interface (MPI). Currently there are two selections "UCP" and "PXML".
	PNE_PORT	<i>Port</i>	This command selects the port that the PNE will use to communicate to the printer. The valid ports are: <ul style="list-style-type: none"> • DISABLE • ETHERNET • USB NOTE: If ETHERNET is selected but not enabled, the selection will revert to DISABLE.
	PANEL		<i>LOCK</i>	This command locks the operator out of the printer's configuration menu.
		<i>UNLOCK</i>	This command unlocks the printer's configuration menu and allows the operator access to the menus. By default, the menu is unlocked.

Table 16 PTX_SETUP Commands (Non-Platform Specific)

Command	Sub-Command	Parameter	Description
CONFIG	PNE_PORT_NUM	<i>Port Number</i>	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 <i>Filename</i> . Receipt of a FILE_IO-CAPTURE command without the <i>Filename</i> 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.
	RUNFILE	File;Prop	The RUNFILE command will open the file named <i>File</i> for printing. After the PTX_END command is processed, the contents of <i>File</i> will get printed before any more data is read from the host. If the <i>Prop</i> field is present, RUNFILE will verify that <i>Prop</i> matches the saved file properties. Any mismatch will cause the command to be ignored.

Table 16 PTX_SETUP Commands (Non-Platform Specific)			
Command	Sub-Command	Parameter	Description
FILE_IO (DISK_IO)	UPLOAD	File;Port	Reads the file named <i>File</i> out of the flash file system and sends it to a host computer via the <i>Port</i> I/O port. <i>Port</i> 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.

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 FLASH.

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.

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 Main File Mgmt.

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)
- Configuration printout: Press **CONFIG** on the control panel, then press the **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 311
Asia Pacific	(65) 6548 4114
China	(86) 800-999-6836

<http://www.tallygenicom.com/support.aspx>

TallyGenicom Supplies Department

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Asia Pacific	(65) 6548 4100
China	(86) 400-886-5598
India	1800 102 7869

<http://www.tallygenicom.com/supplies-parts.aspx>

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6440 Oak Canyon Rd, Suite 200
Irvine, CA 92618
U.S.A.
Phone: (714) 368-2300
Fax: (714) 368-2600

Printronic LLC.
c/o Printronic Nederland BV
Bijsterhuizen 11-38
6546 AS Nijmegen
The Netherlands
Phone: (31) 24 6489489
Fax: (31) 24 6489499

Printronic Schweiz GmbH
3 Changi Business Park Vista
#04-05 AkzoNobel House
Singapore 486051
Phone: (65) 6548 4100
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Printronic Commercial (Shanghai) Co. Ltd
Room 903, 9th Floor
No.199, North Xizang Road
200070 Shanghai P.R.China
Phone: (86) 400 886 5598
Fax: (8621) 61171256

Printronic India Pvt Ltd
B-808/809, BSEL Tech Park
8th Floor, Sector 30A
Vashi Navi Mumbai 400705
India
Toll Free No.: 1800 102 7896
Fax: (9122) 4158 5555

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G *Communication Notices*

Notices

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Note!

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Communication Statements

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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 Rules. 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 Conformity



This product is in compliance with the EU directives for safety, EMC, ROHS, REACH, and WEEE. Please refer to the Service and Support section at our web site (www.printronix.com) for the most up to Declarations of Conformity.

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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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

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Handbuchtexzte: FCC class A entspricht: EMVG Klasse A

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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.

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Anmerkung:

Um die Einhaltung des EMVG sicherzustellen sind die Geräte, wie in den TallyGenicom Handbüchern angegeben, zu installieren und zu betreiben.

China

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Altitude and Non-Tropical Climate

Statement



仅适用于海拔 2000m 一下地区安全使用



仅适用于非热带气候条件下安全使用

LMPPLS, LMPPHS, LMPCLS, LMPCHS 系列

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Taiwan

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Korea

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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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