TallyGenicom®

LGi Series
Operator Manual

Serial - Parallel - LAN

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FCC Statement
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15, Subpart B of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment gener-ates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will berequired to correct the interference at his own expense.

WARNING
Only trained qualified personnel may open covers or remove parts that are not explicitly shown and described in the Operator's Manual as being accessible to the operator.

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Preface

Introduction

The T6200 Series offers the following I/O configurations (Modules):

- Standard Serial/Parallel
- FourPlex (Standard plus Twinax/Coax)
- FourPlex IPDS
- LANPlex (Standard plus Ethernet 10/100 BASE-T)
- LANPlex IPDS

In less than five minutes you can add other configurations by inserting a new module. Installation instructions come with the module.

All interface configurations and printer setups are performed through the control panel. In addition, the printer's operational configuration is stored in nonvolatile memory; you'll never have to reconfigure your printer because of a power loss.

About This Manual

Chapter 1: Setting Up Your Printer

In Chapter 1, you are instructed on how to set up your printer. You will find criteria for site selection, instructions for removing the protective shipping hardware from your printer, and locations of connectors for printer to host communications and power hookups. In addition you will find instructions on how to install the ink ribbon, load paper, and adjust the paper movement mechanisms.

Chapter 2: Printer Control Panel

This chapter explains the various components of the Control Panel and their functions in various printer modes.

Chapter 3: Printer Menus and Configuring Your Printer

Chapter 3 explains the different menus that are available on your printer and all of the parameters contained in them. It also presents Menu Tutorials that show how to perform a variety of different menu operations.

Appendix A: Troubleshooting

Appendix A contains a listing of the error and fault messages that may appear on the Control Panel Display and various troubleshooting procedures and problem fixes.

Specifications

This section lists and explains technical aspects of printer performance and general design specifications.

Conventions

We use the following conventions throughout this manual.

Notes are additional important or helpful information.

This symbol marks information about actions that may damage the equipment or injure the user.

Chapter 1

Site Preparation

Choosing a site for your printer is important because the environment affects your print quality. The best site for your printer is one that is protected from dirt and heavy dust, and has a moderate temperature and humidity range. In addition, the power source should be adequate for printer operation and protected from power surges.
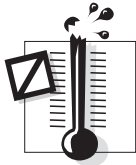
Keep the following factors in mind when choosing a printer location.

Keep the operating environment temperature between 50°F and 104°F (10°C and 40°C).

Do not locate your printer near air conditioners, open windows, heaters, nor in other areas where the temperature changes abruptly.

The relative humidity should be between 10% and 90% (noncondensing). Be sure to locate the printer away from any sources of moisture, such as water faucets, refrigerators, and humidifiers.

The heat load contribution to the environment is 188 BTUs per hour at idle and can go as high as 2050 BTUs per hour under continuous full-load printing conditions.

Keep your printer away from dust, dirt, and open flames.

Plug your printer into a grounded (3-prong) outlet.
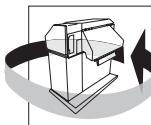
Minimum floor space recommended for your printer is 36" wide x 36" deep (91.4 cm x 91.4 cm) to allow air movement around the printer. Allow space to open printer doors as well. When the doors are fully opened, the printer takes up 6.5feet (2.0 m) of floor space.

Unpacking your printer

Instructions for unpacking your printer are located on the outside of the shipping container. After you have removed your printer from its container, store the shipping materials for possible later use.

Repacking

Repacking your printer for storage or shipping is the reverse order of unpacking. If shipping materials are needed, you can reorder them from your dealer.

Reversible Doors

Both front and back doors may be installed to open either left or right:
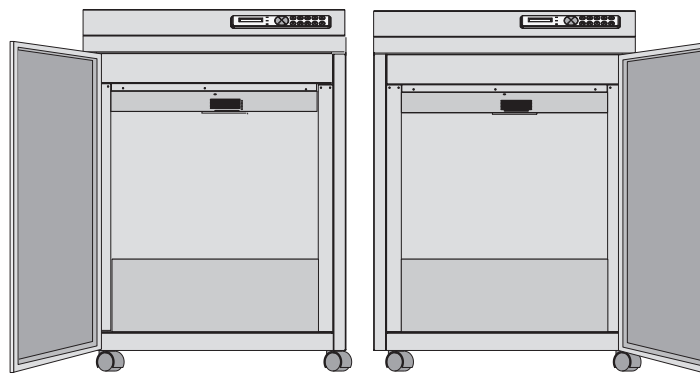
Figure 1-1. Reversible Doors

Removing the Shipping Hardware

The Shipping Hardware consists of 4 screws, identified by red tags, that secure the printer base to the inside mechanism, tie restraints that secure the Paper Stacking Chains to the Wire Exit Rack inside the back door of the printer, and a rubber band holding the platen open.

CAREFUL!

DO NOT power up your printer before removing the shipping hardware.
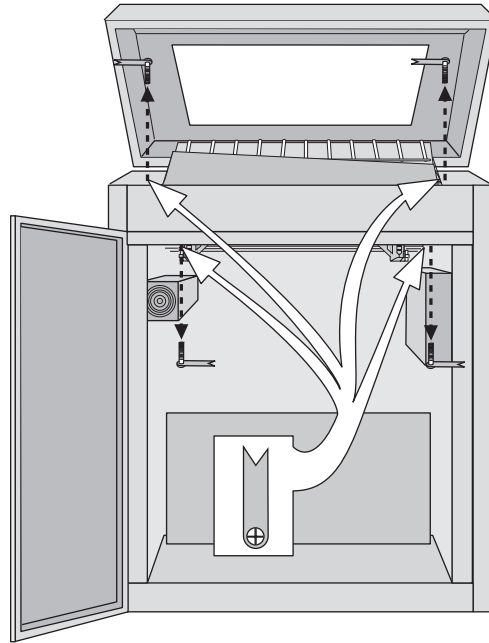
Figure 1–2. Shipping Screw Locations

Setting Up Paper Stacking Chains

Paper exits the print area through a set of passive Paper Stacking Chains that help fold and stack printed forms uniformly. Proper loading of the paper in the tractors improves paper stacking (see Loading Paper).

Release the restraints securing the chains to the wire guides. Make sure chains are not tangled.

Straight Chains must be placed on OUTSIDE of looped chains.
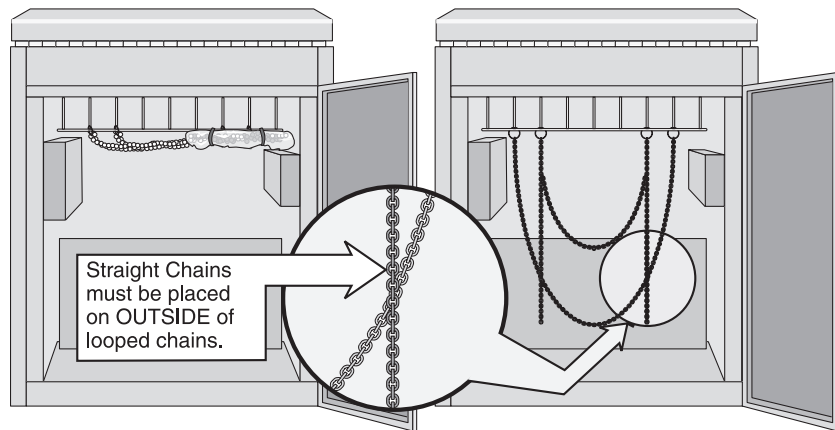
Figure 1-3. Paper Stacking Chains

Interface Connections and Powering Up

Interface Connectors

Properly secure the cable to the printer interface using the correct connectors.

CAREFUL!

Shielded I/O cables must be used on all installations to comply with FCC regulations.

Maximum Interface Cable Length

Serial/Parallel only

Your printer should be located within 50 feet (15.2 meters) (cable length) of your computer for a serial interface, or 6 feet (2 meters) for parallel interfaces. Communication distances farther than these can cause data transmission problems and printing errors.

Twinax

The Twinax interface allows a maximum of 5,000 feet (1.5 km) between the host computer and the last device. Distances longer than this can cause transmission problems and data errors.

Coax

The Coax interface allows a maximum of 5,000 feet (1.5 km) from the host computer to the printer. Distances longer than this can cause transmission problems and result in data errors.
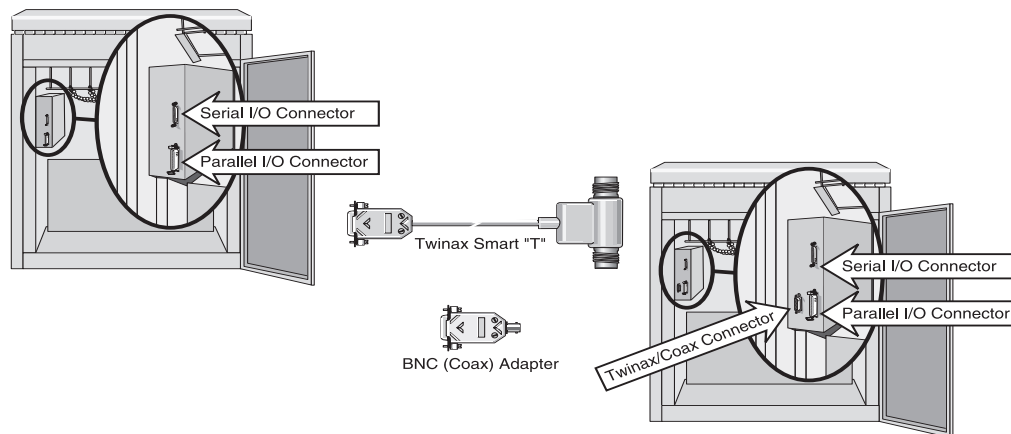
Figure 1-4. Serial/Parallel and FourPlex Interface Connectors (Rear View)

Connecting the I/O

After connecting each interface to your printer, run a print job from the Host Computer to verify proper function of the printer.

Serial/Parallel

The serial interface operates up to 38.4 kBaud and uses a standard DB 25 serial cable connector and standard RS-232-C signals.

The Centronics parallel port is IEEE-1284 compliant and uses a 36-pin 1284-B type connector (AMP 555119-1 or equivalent).

To connect the Serial or Parallel I/O cable, plug in the cable to the proper connector on the I/O panel.

Twinax Connector

To connect your printer to a Twinax host system, use the Smart T connector. Plug the DB-15 connector into the Host Interface plug on the printer I/O panel.

If you are installing a printer on an active system, go through the following list before connecting the Twinax cable(s).

- Verify that the printer address matches the one given it on the host and that no addresses are duplicated anywhere on the line. You can check the address of the printer by accessing the HELP Menu on your printer control panel and printing out a Control Panel Selections Printout (see Chapter 3).
- Make sure the printer is turned OFF.
- Terminate the device immediately up cable (between the printer and the host) from the printer.
- Any jobs going to devices down cable (between the printer and the end of the network) must be put on HOLD.
- Place any devices that are down cable from the printer OFFLINE.

Now connect the cable from the out connector of the up cable device to either side of the Host Connector Smart T and if there are devices down cable, connect the cable going to them to the other side of the Smart T. The Smart T automatically takes care of terminating the Twinax line or allowing throughput of data to devices located down cable from the printer.
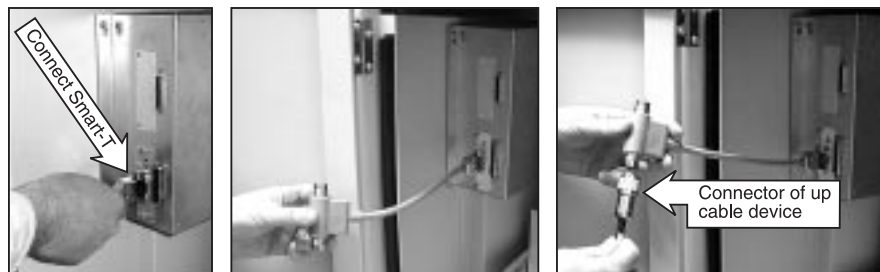
Figure 1-5. Connecting the Host Connector Smart T

Your Twinax hookup is now complete and it is time to test your printer to verify its operation. Load your printer with paper and an ink ribbon. Run the IBM printer verification test. If the test is successful, your installation is complete.

Twinax Trouble Checklist

If the Printer Verification Test fails, check the following:

- Does the printer have the correct address setting?
- Does the address in the system configuration match the setting on the printer?
- Is the device type in the system configuration correct for the type of printer being emulated?
- Is the cable to the device immediately up cable on the Twinax line correctly connected?
- Are the devices down cable functioning properly?
- Is the last device on the line properly terminated?
- Is the printer properly configured?

If all of the above check out and you still have problems, call your Customer Support Representative.

Coax Connector

Your printer uses a DB-15 to Coax connector pigtail.

To connect your printer to a Coax system, use the BNC adapter. Connect the adapter to the Host Interface plug on the printer I/O. Make sure that the printer is turned off, then attach the Coax cable to the BNC adapter.
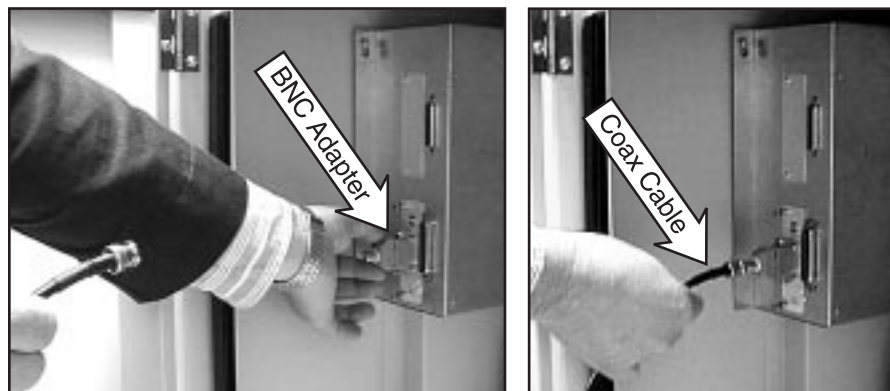
Figure 1-6. Connecting with the BNC adapter.

Powering Up

The power switch is located on the left side of the printer, and the power and interface connectors are inside the printer housing, accessible through the back door.
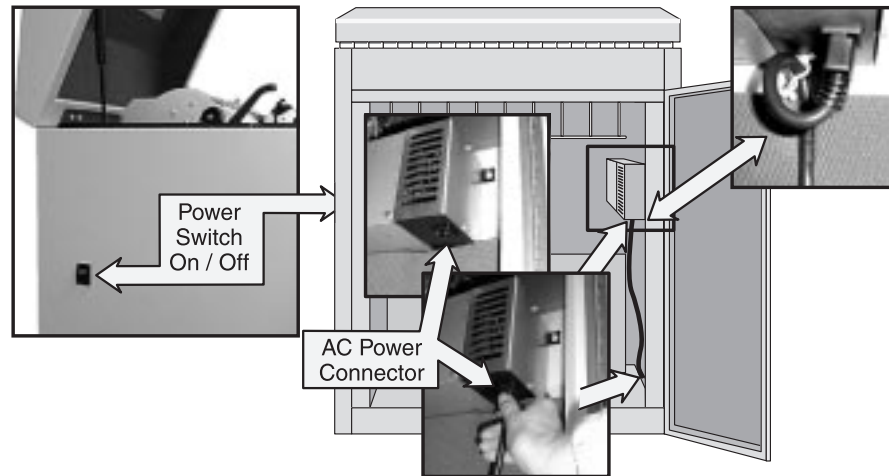
Figure 1–7. Printer (Rear View)

Step 1.

Make sure the power is off. Connect the power cord inside the cabinet, and run it through the opening in the bottom of the printer. Plug the power cord into a power outlet.

Always use a grounded (3-prong) single-phase outlet.

Step 2.

Turn the power on.

The printer runs a self-test each time it is powered up to check the main processor and buffers for errors. Note that when you turn the printer on this time, the Paper Out error displays. Don't be alarmed, we'll take care of that when we load paper. If any other error message appears in the display, check Appendix A for a description of the error and what actions are necessary to clear the error.

When connecting the **Twinax interface** at this time, other messages that may appear are Setup Address and Lost Sync (28). These messages appear because the printer/host interface has not been properly set up. If you cannot connect the interface at this time, you can still test certain aspects of printer performance by placing the printer Offline (depress the Online/Offline key), then entering the Menu Mode. While in Menu Mode you may select print and operation parameters or test certain printer systems.

Paper System

Paper System Components

The Tractors, Platen Gap Adjustment Wheel and Lever, Paper Tension Lever, and Ribbon Cartridge are all parts of the paper system. The first two assemblies are involved in how the paper moves past the print mechanism and through the printer.
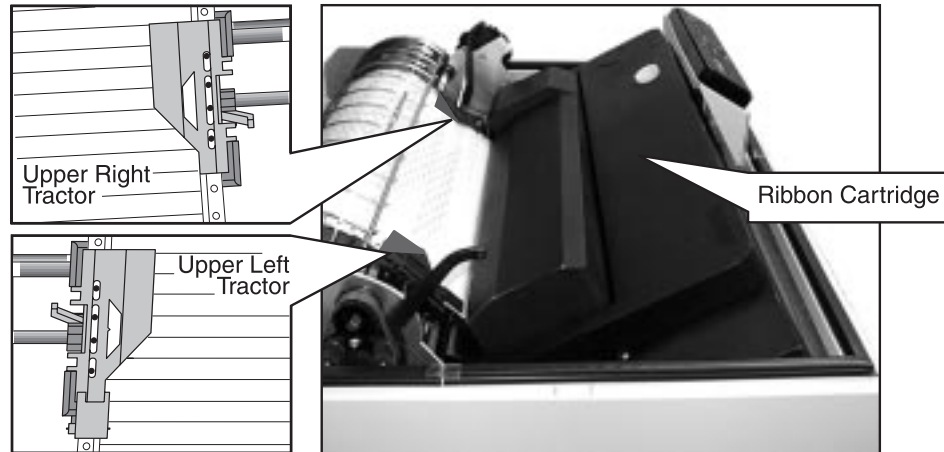
Figure 1–8. Paper System Components

Tractor Sets

Your printer has four tractors to control paper movement, two located above the print area and two below the print area.

A lever on each tractor keeps it locked in place on a horizontal shaft. To reposition a tractor, unlock the tractor and move it horizontally on the shaft (See Loading Paper).
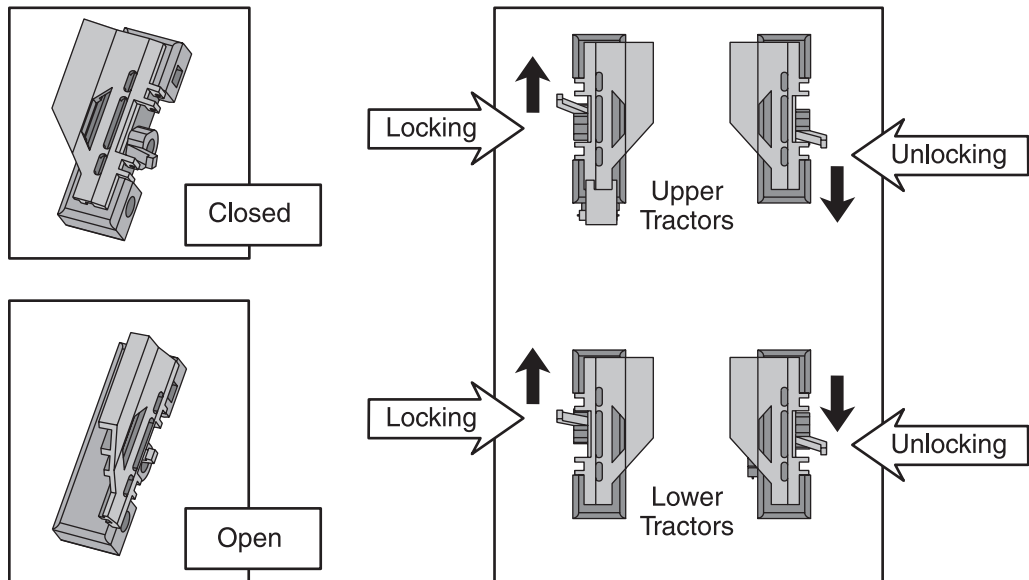
Figure 1–9. Opening, Locking, and Unlocking Tractors

Platen Gap Wheel and Lever

The Platen Gap Lever opens and closes the platen gap for loading paper and ribbon.

The wheel rotates to let the platen accommodate different thicknesses of paper. The higher the letter, the wider the platen gap. Once it's set, you don't need to readjust it until you need to load paper of a different thickness.

Platen Gap Adjustment Wheel

Platen Gap Lever

For a single-part form, set the wheel to the green indicator.
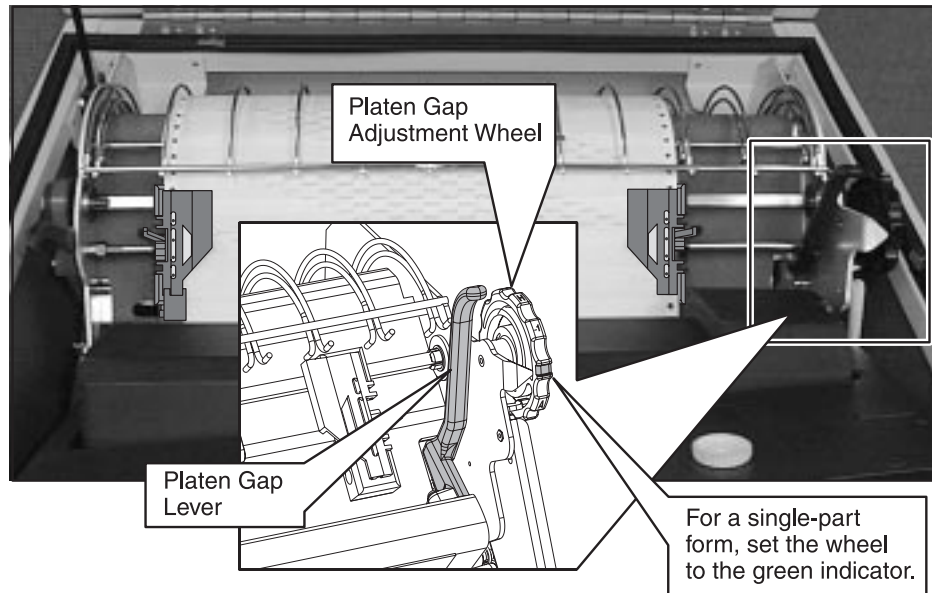
Figure 1–10. Platen Gap Adjustment Wheel and Lever

Before loading paper or a ribbon cartridge, use the Platen Gap lever to open the platen gap. When you are through loading paper, close the platen gap. If this is a new thickness of paper, adjust the wheel until it's snug against the form, but not too tight. Run a print test and adjust the platen gap wheel to obtain optimum print quality and paper movement. The print should be crisp and dark, with no smearing. Paper should move smoothly through the print mechanism. Here are some things to look for:

- If the platen gap is open too far, the print may start fading out, especially on the last sheet of a multi-part form.
- If the platen gap is too narrow, the ribbon will start smearing ink on the page, especially when the ribbon is moving and the paper is not. In extreme cases, the shuttle may stop, and the paper may jam.

Platen Gap Sensing

Your printer has a mechanism that senses the platen gap, used in conjunction with the Paper Weight and Impact Parameters to control paper movement and hammer impact force. This is explained in Chapter 3.

When the platen is open, the position is sensed, printing is disabled and the Platen Open message is displayed on the control panel.

Paper Tension Lever

The Paper Tension Lever controls the vertical tension between the upper and lower sets of tractors.

Figure 1–11. Paper Tension Lever

Paper tension can affect your print quality. Raising and lowering the Paper Tension Lever during a print test is one method that can be used to obtain optimum print quality. Here are some things to look for when you begin printing.

- If the paper tension is too loose, the dot columns and dot rows may not line up.
- If the paper tension is too tight, the paper holes will start elongating vertically and may tear. This can also lead to poor paper stacking and jams.

Installing the Ribbon Cartridge

Step 1.

Make sure the printer is Offline or power is off. Open the printer lid and open the platen gap using the lever, then remove the old ribbon by lifting it straight up off of the Ribbon Platform.

Step 2.

Remove slack in the new ribbon by turning the knob on the ribbon cartridge counter-clockwise, then slip the ribbon over the two ribbon guides and between the front and rear panels of the ribbon shield on the printer.

Ribbon Advance Knob
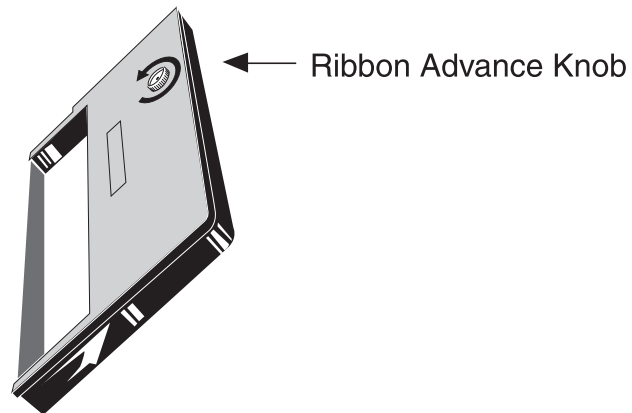
Figure 1–12. Removing Ribbon Slack

Step 3.

Press down lightly on the cartridge while turning the ribbon knob counter-clockwise until it seats on the cartridge drive posts. Make sure that the ribbon does not twist or fold over.

Keep Ribbon between two Ribbon Shields

Rear Ribbon Shield

Ribbon Cartridge

Hammer Bank Housing

Ribbon Platform
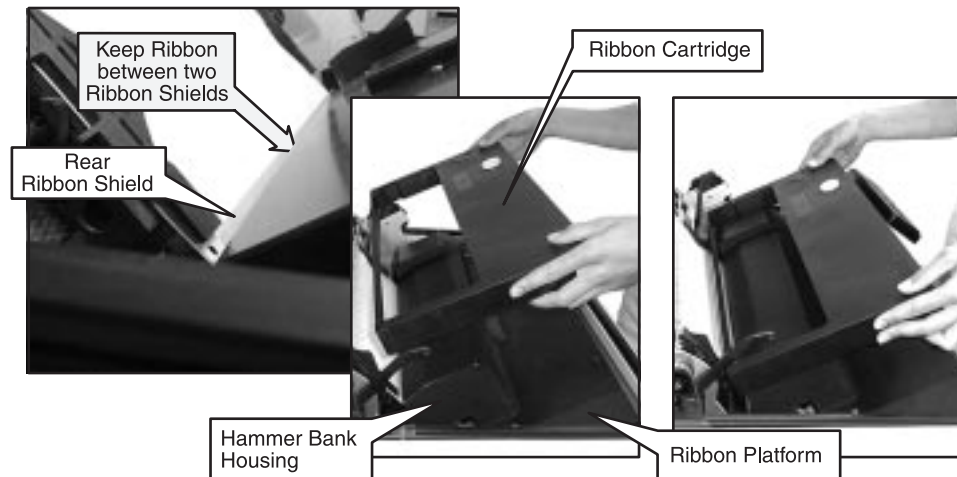
Figure 1-13. Installing the Ribbon Cartridge

Step 4.

Close the Platen Gap lever.

Loading Paper

Your printer is designed to use a continuous sheet, sprocket-fed paper. It can handle:

- Six-part forms (1 original and 5 copies) with a maximum thickness of .025"   (0.6 mm).
- Page widths of 2.5" to 18" (6.4 cm to 45.7 cm).
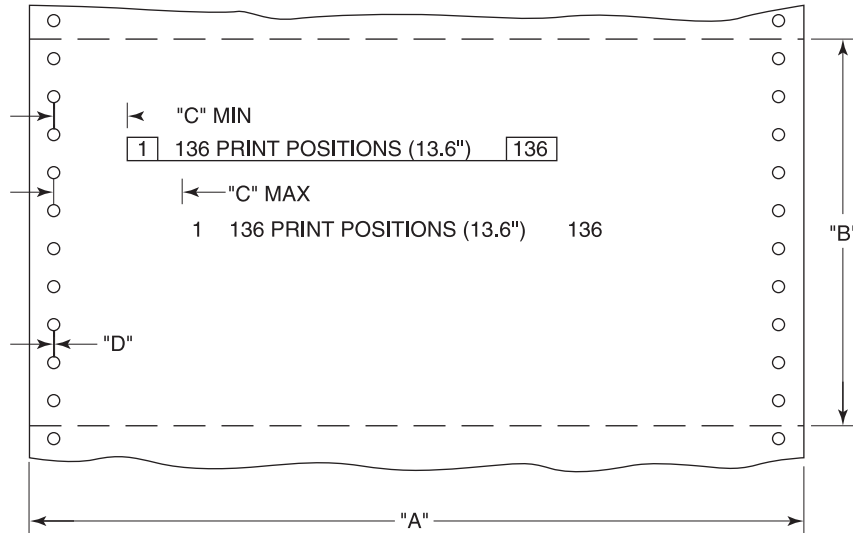
Figure 1–14. Paper Size Specifications

Form Characteristics

Minimum Form Width - "A"	2.50 in.	64 mm
Maximum Form Width - "A"	18.00 in.	457 mm
Horizontal Form Adjustment - "C"		
Without Horizontal Vernier		
Minimum	0.16 in.	4.1 mm
Maximum	1.80 in.	45.7 mm
With Horizontal Vernier - Forms < 15.86 in.		
Minimum	0.16 in.	4.1 mm
Maximum	1.80 in.	45.7 mm
With Horizontal Vernier - Forms > 15.86 in.		
Minimum	"A" - 15.70 in.	"A" - 399 mm
Maximum .	1.80 in.	45.7 mm
Tractor Hole to Paper Edge (per ISO 2784) - "D"		
Minimum	0.208 in.	5.3 mm
Maximum	0.264 in.	6.7 mm

Step 1.

Make sure the printer is Offline or printer power is off.

Step 2.

Open the new box of paper. Remove the box top so that the paper can be pulled out freely, then place the new box of paper under the printer.
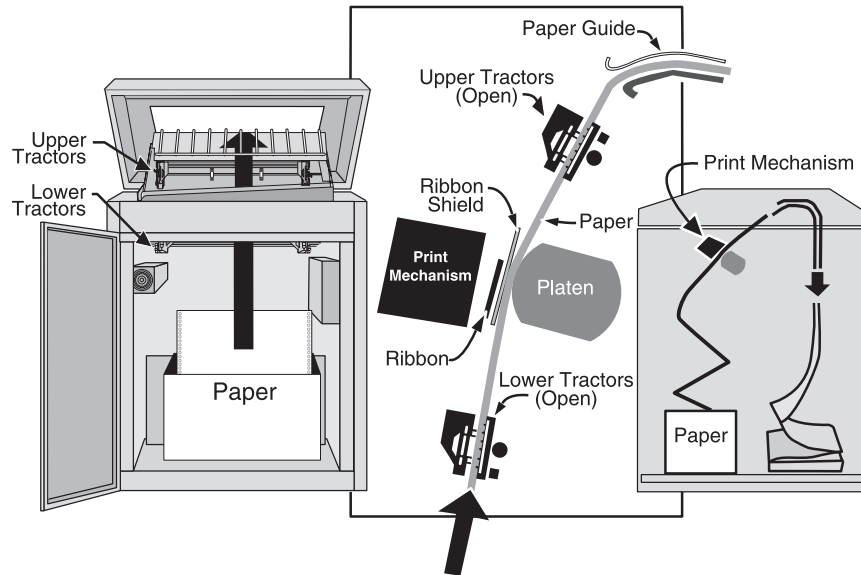
Figure 1–15. Paper Box Placement and Paper Path

Step 3.

Raise the printer lid, open the platen gap, and open the doors on all of the tractors.

Step 4.

Feed the paper up and through the printer, as shown above.

Step 5.

Place the left-side paper holes onto the upper left tractor pins and close the tractor door.

CAREFUL! **The left end of the scale (5 & 10 CPI) on the ribbon platform marks the position of Column 1. Before printing, make sure that this marker is aligned with the desired position on the form. To align the paper on the column marker, unlock the tractor and slide it to the desired position, then lock it in place.**
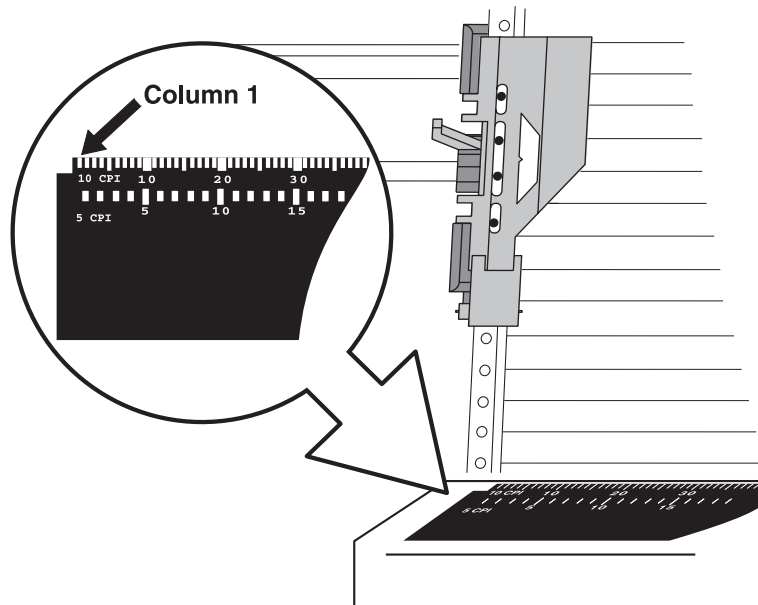
Figure 1–16. Column Alignment Scale

Step 6.
Unlock the right tractor and move it so that the paper holes align directly over the tractor pins, then close the tractor door. Gently push the tractor to the right until the paper is smooth and reasonably taut, then lock the tractor.

Step 7.
Unlock the lower tractors, place the paper over the tractor pins, then adjust the tractors so that the pins line up with the paper holes. Lock the tractors.

Step 8
Adjust the platen gap, then use the Paper Tension Lever to adjust the tension on the form between the upper and lower tractors. Don't forget to reset the top-of-form (TOF) before proceeding with printing (see Chapter 2).

Let's Check

Before beginning a print job, check the following items:

- All tractor locking levers are locked.
- The upper tractor sprocket pins are snug against the top of each paper hole. The bottom tractor sprocket pins are snug against the bottom of each paper hole.   The paper holes should not be elongated or torn horizontally or vertically.
- The tractors are feeding correctly.
- The paper is properly routed through the print mechanism and between the Paper Stacking Chains.
- Make sure that the Paper Stacking Chains are hanging properly without being tangled.
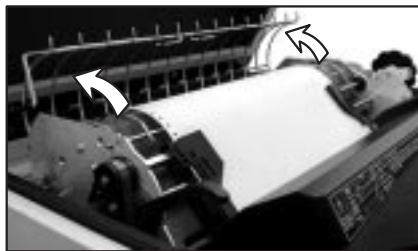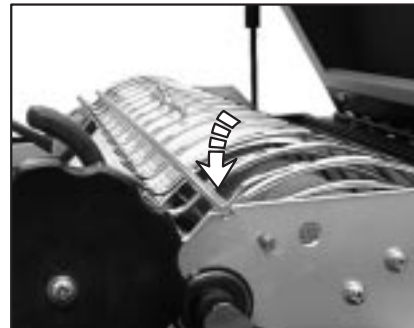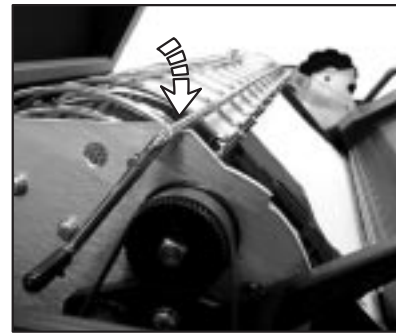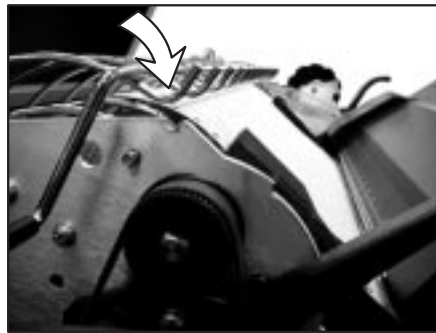
Now that you have installed your printer and loaded it with the ink ribbon and paper, you are ready to configure it to function on your system. Chapter 2 discusses the Control Panel Components and how they function, and Chapter 3 lists and explains all of the menu parameters available for configuring your printer.

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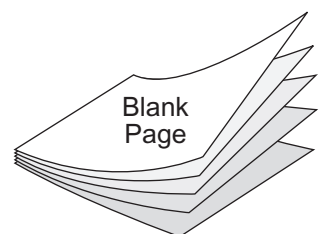
Chapter 2

Introduction

In this chapter you will learn about the Printer Control Panel and how it is used to control printer functions.

Control Panel Components

The Control Panel is located on the top cover. You can use it to program and direct most printer functions.

32-character   3 LED   11 control
2-line display   Indicators   keys

Includes a beeper
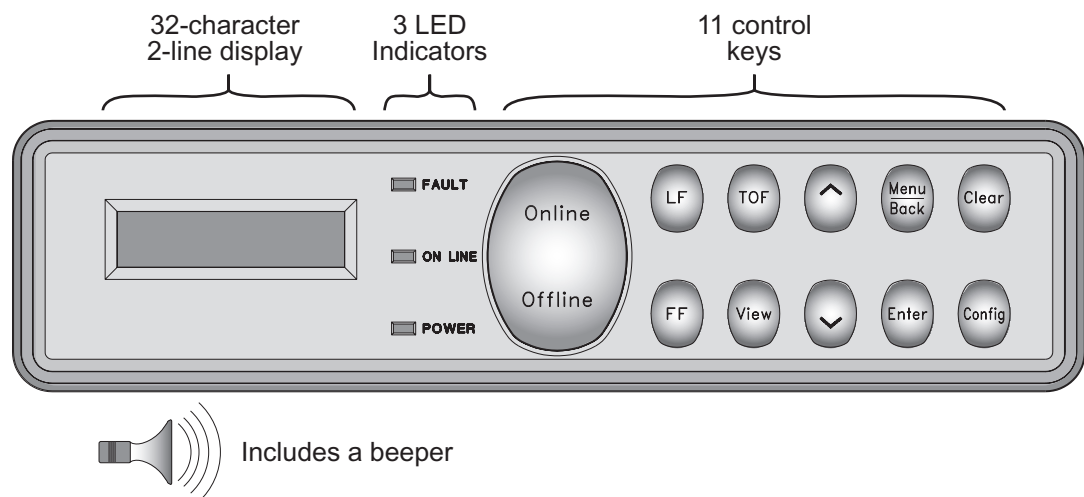
Figure 2–1. Control Panel

LED Indicators

The green POWER Indicator illuminates whenever there is power to the printer.

The red FAULT Indicator illuminates whenever an error or fault is detected. A message also appears on the display to indicate what kind of fault is present (see Appendix A for explanations of all error and fault messages).

The yellow ON LINE Indicator illuminates to indicate when the printer is ready to accept data.

LCD (Liquid Crystal Display)

The LCD is located at the left of the Control Panel. It shows printer status, menu selections, and normal, fault, and error messages. The LCD is divided into four main areas. Each area displays one of the following: Current State, Paper Indicators, Options, and Current Selection Indicator.
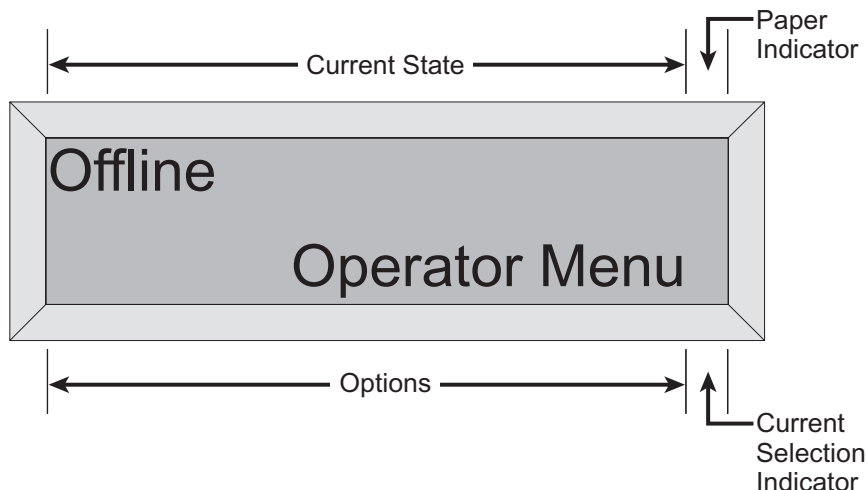
Figure 2-2. Control Panel Display

Current State

The Current State appears in positions 1-15 of the first display line. During normal operation, this area displays Online, Offline or a fault message. If you're using the printer menu, the menu, category or parameter items display here as well.

Options

The Options appear in positions 1-15 of the second display line. During normal operation, this area is blank. When you access the printer menu, this area shows each item as you scroll through the menu.

When you are in Offline mode using the Config key, this area displays configuration labels as you scroll though each one (see Key Functions, this chapter).

Current Selection Indicator

The Current Selection Indicator occupies position 16 of the second line of the display. When you're in menu mode and scrolling through menu options, an asterisk appears when you come to the currently selected parameter.

Paper Indicators

The Paper Indicators occupy position 16 of the first line of the display. Table 2-1 shows the meaning of each indicator.

Indicator	Paper Weight	Impact
(blank)	The platen is in the Light Weight zone when Paper Weight is on Auto or set to Light.	The platen is in the Normal Impact zone when Impact is on Auto or set to Normal.
h	The platen is in the Medium Weight zone when Paper Weight is on Auto or set to to Medium.	The platen is in the Normal Impact zone when Impact is on Auto ot set to Normal.
H	Paper Weight is set to Heavy.	The platen is in the Normal Impact zone when Impact is on Auto or set to Normal.
<u>h</u>	The platen is in the Medium Weight zone when Paper Weight is on Auto or set to to Medium.	The platen is in the High Impact zone when Impact is is on Auto ot set to High.
<u>H</u>	The platen is in the Heavy Weight zone when Paper Weight is on Auto or set to to Heavy.	The platen is in the High Impact zone when Impact is is on Auto ot set to High.
—	The platen is in the Light Weight zone when Paper Weight is on Auto or set to to Light.	Impact is set to High.

Table 2 - 1 Paper Weight Indicators

Key Functions

Online/Offline Key

This key toggles the printer between Online and Offline states, or exits from the menu directly to an Online state. When the printer is Online, the indicator will light, and the printer is ready to accept data from the host. When it's Offline, it cannot accept host data. In the Offline state, you may change parameter selections, load paper, and so on.

LF Key (Line Feed)
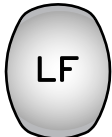
This key advances the paper one line. It performs the same function whether the printer is Online or Offline. You may auto-repeat this command by holding down the key.

While Online With Data Buffered

Any buffered data falling in the next line (as defined by the current LPI setting), prints. This repeats upon subsequent LF keystrokes as long as there is data in the buffers. If pressed while printing is in progress, the printer ignores the key command and maintains the Top of Form position.

While Online with No Data Buffered

Paper advances one line. While printing is in progress, the printer ignores the command and maintains the Top of Form position.

While in a Fault Condition

Paper advances one line. No data is printed and the Top of Form position moves down one line. This allows the use of the LF Key to advance paper while in a Paper Out condition without printing any buffered data.

FF Key (Form Feed)
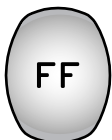
This key performs the same function whether the printer is Online or Offline.

While Online With Data Buffered

Any buffered data falling between the current form position and the top of the next form (as defined by the current Form Length setting), prints. This function repeats upon subsequent FF keystrokes as long as there is data in the buffers. The printer ignores the command while printing is in progress and maintains the Top of Form position.

While Offline With No Data Buffered

Paper advances to the top of the next form. The printer ignores this command while printing is in progress and maintains the Top of Form position.

When In a Fault Condition

Pressing the FF Key while in a Fault Condition advances the paper one form. No data prints, and the Top of Form position is maintained. This allows the use of the FF Key to advance paper while in a Paper Out condition, without printing any buffered data.

TOF Key (Top of Form)

TOF

When you load paper, you line the top of your form (usually the perforation) with the indicated position on the tractor (see Figure 2-3). Once the paper is loaded, pressing this key moves the paper so that printing commences at the proper position on the form.

Align Desired Top-Of-Form Location At This Point
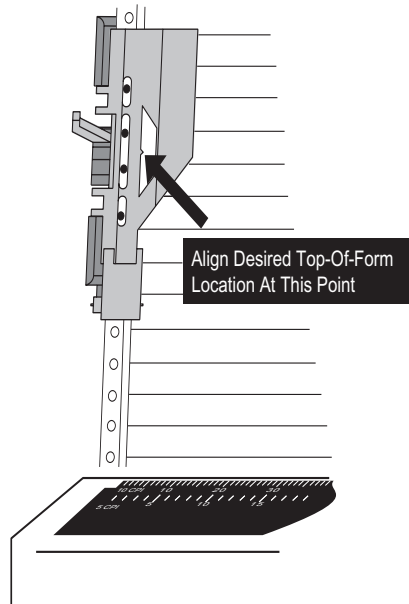
Figure 2-3 . Aligning Form on Tractors

View Key

View
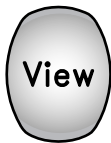
Holding down this key moves the paper up so that you can see the last line that was printed. If you press it while a job is printing, it will suspend the print job until you release the key.

Up and Down Arrow Keys
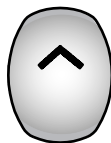
Online, these keys make fine adjustments to the Top of Form position.

Offline, these keys position the paper in preparation for setting the Top of Form position. (In this mode, these keys will auto-repeat if you hold them down). They are also for scrolling through Menu items (see Menu/Back key, next).

After making adjustments, it's not necessary to reset the Top of Form (unless a different top margin is required for a new form).

In **Operator, Config, or Test** modes, the Up and Down Arrow keys scan lists of categories, parameters, and selections.

Menu/Back Key

Pressing this key allows you to access menu selections, which you can scroll through using the Up and Down Arrow keys. Pressing the Menu/Back key returns you to a previous selection. This key command is only available when the printer is in an Offline mode.

Enter Key

In any of the menus, this key allows you to enter a lower level, to assign a selection to a parameter, or to perform a menu function.

When the printer is in a Paper Out Fault condition, and the PrntEOF **Parameter is set to Off, pressing the Enter Key allows printing to the end of the current form. When** PrntEOF **is set to On, the printer automatically prints to the end of the current form.**

Clear Key

Online, pressing the Clear key clears the panel of any errors that do not cause the printer to go Offline, such as "Parity Error."

Offline, if the printer is in a clearable fault condition, the fault clears upon pressing the Clear key. If it's not in a clearable fault condition, pressing the Clear key brings up the Clear menu.

In **Operator, Config, Test**, or **Help** menus, pressing this key returns the printer to Offline status.

The Clear Menu

Clear Buffers (not in Twinax or Coax)
Clears all buffers. It also resets the application task to its initial state.

Clear Ribbon Count
When using the Ribbon Monitor feature, this selection must be used to clear the ribbon count when changing ribbons. See the RibbonMonitor and RibnMon Thresh setting in the Forms category of t he Operator menu in Chapter 3.

Clear All Configs
Copies the Default Configuration settings into all saved configurations. Any parameters not listed on the Configuration Report (see Chapter 3), such as special characters downloaded from the host computer, are unaffected.

Clear Current Config
Copies the Default 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.

Clear Reset

The printer controller performs a hardware reset. You may use this in lieu of cycling power to the printer. As with cycling power, the Powerup Configuration is loaded as the Current Configuration (see Chapter 3).

Clear Cancel (Twinax and Coax only)

Allows you to send a Cancel Job message to the host via the I/O while the printer is Offline. It performs the same functions as the Cancel Job request when the printer is Online. The display reads "Cancel Job" and the printer remains Offline.

For Coax, this function is valid only in NonSCS mode.

Clear Reprint (Coax only)

This allows you to reprint the previous buffer contents. After reprinting the buffer, the printer returns to Enable Print condition and continues printing the rest of the job. This option is convenient in cases of paper jams or any time you do not need to send the complete job.

This function is valid only in Non SCS Mode. If you select this in SCS Mode, an Invalid Key error message displays for a few seconds.

Config Key

Offline

This is a shortcut to the Load Configurations menu item (see Chapter 3), allowing you to enter a menu where any of ten saved configurations can be loaded into the Current Configuration.

Use the Up and Down Arrow keys to scroll through the configurations. Pressing the Enter key loads the one you choose.

Blank
Page
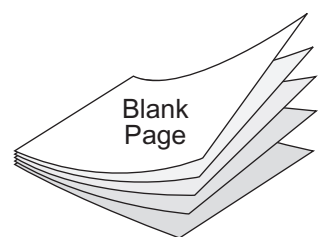
Chapter 3

Introduction

In this chapter you will learn about the printer's modes, multilevel menus, parameters, parameter values, and how to select and store parameter values as part of a configuration. You will also learn how to obtain printouts that show all available parameters, current configuration settings, and technical information like accumulated running time and operating thresholds.

In addition, any time you need to review the active selections in each configuration you may do so by printing out the Configuration Report (see Configuration Menu). This report shows all configurations and how they are set up.

Control Panel Menus

This section discusses the menus and how to access and select parameter values from them for formatting documents, controlling print operations, or testing the printer. The four main menus are Operator, Config, Test, and Help.
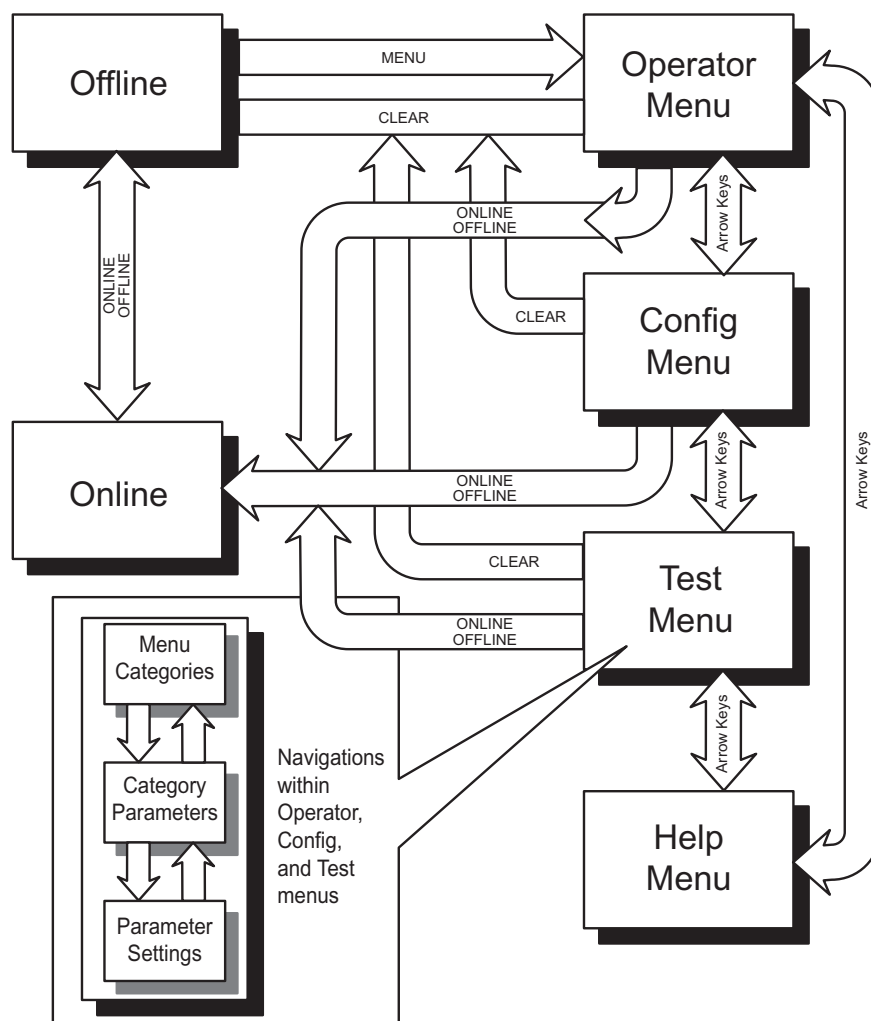
Figure 3-1 Control Panel Navigation

Categories, Parameters and Selections

Within the Operator, Config, and Test menus, there are a number of **catego-ries**. Within each category is a list of **parameters**. In some cases, a param-eter can execute a function upon pressing Enter, or in other cases, it displays yet another list of **selections** for that parameter.

The Help menu has no categories or parameters. You'll use this menu to print out a list of all menus, categories, parameters and selections. See "How to Print a Control Panel Selections Report", this chapter.

Using Menus

Now you are ready to learn how to access menus. Here are some things to remember:

- You must first be in Offline state to access menus.
- The **Online/Offline** key takes the printer Online and Offline.
- All scrolling is performed using the **Up and Down Arrow** keys.
- The **Enter** key selects parameter values or initiates a desired proce-dure.
- Active selections are marked with an asterisk (*).
- To exit **Menu** mode without making changes, depress the **Clear** key or the **Online/Offline** key.

When the printer is Online, the display reads:

> Online

The name of the **last loaded configuration** displays on the lower line.

In this state, the only keys that respond are:

- Up and Down Arrow
- LF
- FF
- Clear
- View
- Online/Offline

When the printer is Offline, the display reads:

> Offline

In the Offline state, pressing the Menu key gives you access to the first level of the menu system. Upon doing this, the display reads:

```
Offline
          Operator Menu
```

Now, in the Offline state, you may access one of four available menus (Operator, Config, Test, and Help) by pressing the Up and Down Arrow keys, followed by Enter.

As you scroll through (with Operator displaying first) the display reads in order:

```
Offline
          Config Menu
```

```
Offline
          Test Menu
```

```
Offline
          Help Menu
```

Each of these menus except for Help has multiple levels of categories, selections and parameters. You access them by scrolling through the lists with the Up and Down arrows, and by pressing Enter when you see the category, parameter, or selection you want.

Example: Changing Form Length Using the Menu System

Here is how the menu system works. If, for instance, you wanted to change the Form Length from the default of 66 lines to 65 lines, this is how you do it:

1. Make sure your printer is in an Offline state. If it's not, press the Online/Offline key.

2. Press the Menu key. The display reads:

```
Offline
          Operator Menu
```

3. Press Enter to select the Operator menu. The display reads

```
Operator Menu
              Font
```

4. Press the Down Arrow key until you see Forms.

```
Operator Menu
              Forms
```

5. Press the Enter key. Your display then reads:

```
Forms
                Form Length
```

6. Form Length is the selection you want, so press the Enter key. The display reads:

```
Form Length
                66*
```

(The asterisk means that 66 is the current selection.)

7. You want to change this to 65. Press the Down arrow once and the display reads:

```
Form Length
                65
```

8. Press the Enter key. The Form Length is set to 65. Exit the menu mode by pressing the Clear key.

It's helpful to remember that at any time, you may leave a menu in one of two ways.

- Depress the Clear key to leave Menu Mode and remain Offline.
- Depress the Online/Offline key to leave Menu Mode and return the printer to Online.

How to Print a Control Panel Selections Report

The organization of the multilevel menus is shown on the Control Panel Selections Printout. All current selections are marked with an asterisk.

1. Make sure the printer is Offline.
2. Press the Menu/Back key.
3. Use the Up or Down arrow keys until you see Help Menu on the display.
4. Press Enter.

The Control Panel Selection Report begins printing. When it's finished, press the FF key, tear off the sheet and use it to become familiar with menu items.

All of the menu items and explanations are also listed on the following pages in this chapter.

Operator Menu

Following are explanations of each menu category and parameter.

Font Category

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

Ser/Par Language

This allows you to select the language used by emulations attached to the Parallel, Serial, and LAN ports (except for LAN-IPDS). 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.

The details of the character substitutions can be found in the Line Printer Applications Manual. The possible selections are:

IRV	US	German
Norwegian/Dan	French	UK
Spanish	Swedish/Finish	Italian
Japanese	Portuguese	Canadian
Hungarian	Chinese	French T6
Swedish T6	Italian T6	Canadian Alt
Swedish Basic	French Withdrwn	Nor/Dan T6
UK LG01	Dutch LG01	Finnish LG01
Swiss LG01	JIS Roman LG01	Nor/Dan LG01
Swedish LG01	Nor/Dan Epson	French Epson
UK Epson	Spanish Epson	Italian Epson
Norwegian Epson	Danish Epson	Spanish 2 Epson
Lat Amer Epson		

Tx/Cx Language (displays on Twinax/Coax printers only)

This parameter defines the language used by emulations attached to Twinax and Coax ports (except IPDS). The default is US.

*The details of the character sets can be found in the Line Printer Applications Manual. The possible selections are:

IRV	US	German
Norwegian/Dan	French	UK
UK	Spanish	Swedish/Finish
Italian	Japanese	Portuguese
Canadian	Belgian	Brazilian
Spanish Speak	Code Page 905	Code Page 1026
Katakana		

IPDS Language (displays only if IPDS is installed)

This defines the language used by the IPDS emulation. The default is US.

The details of the character sets can be found in the Line Printer Applications Manual. The possible selections are:

Internat'l 500	English US 037	Aus/German 273
Nor/Dan 277	French 297	English UK 285
Spanish 284	Fin/Swedish 278	Italian 280
Jap/English 281	Portuguese 037	Canadian 037
Belgian 500	Brazilian 275	Spanish Spk 284
Katakana 290	Portuguese 282	Swiss 500
Icelandic 871	Latin2 870	Cyrillic 880
Turkish 905	Turkish 1026	

Ser/Par Character Set

This 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 (except for IPDS over LAN). The default depends on the following:

Emulations	Default Character Set
MT660, P600, P6000, P5000	Latin 1 8859-1
IBM Proprinter, MTPL, Genicom ANSI	Code Page 437
Epson FX	Italic
DEC LG01	DEC MultiNation
HP 2564C	Roman-8

The details of the character sets can be found in the Line Printer Applications Manual. 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 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	Roman-8	Katakana ISO 13
Line Draw	Italic	

Matrix

There are two font modes available on your printer. One mode is called Enhanced and the other is called Constant Density. Enhanced fonts include Draft and Data Processing, Near Letter Quality (Gothic and Courier), and Optical Character Recognition Fonts (OCR-A and OCR-B). Constant Density fonts include only Draft and Data Processing. In addition, the available 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 than that of 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.

CPI Selection is limited in Constant Density Mode. The Specifications Section of this manual has a listing of the CPI selections available in Constant Density fonts. If you select a CPI value, either through the Control Panel or via an escape sequence from the host computer, that is not available in Constant Density Mode, the printer will automatically switch to Enhanced Mode for printer output.

Ser/Par Style

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

Style selections

Draft	(High-speed)
DP	(Data Processing, Default selection)
Gothic	(Sans Serif NLQ)
Courier	(Serif NLQ)
OCR-A	(Optical Character Recognition)
OCR-B	(Optical Character Recognition)
Download	(Selects the downloaded font)

Tx/Cx Style

This allows you to select the default font style used by emulations attached to the Twinax and Coax ports (except IPDS).

Style selections

Draft	(High-speed)
DP	(Data Processing, Default selection)
Gothic	(Sans Serif NLQ)
Courier	(Serif NLQ)
OCR-A	(Optical Character Recognition)
OCR-B	(Optical Character Recognition)

IPDS Style

This allows you to select the default font style used by the IPDS emulation.

Style selections

Draft	(High-speed)
DP	(Data Processing, Default selection)
Gothic	(Sans Serif NLQ)
Courier	(Serif NLQ)

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. The possible selections are English (default), German, French, Italian, Swedish/Finish, and Spanish.

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 is dependent on the emulation. The possible selectiosn are:

A: ANSI B:ANSI	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

Slashed 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.

Forms Category

This category is used for setting form specifics.

Form Length

This allows you to set the form length from 1-255 lines, and 11 inches. Default form length is 66 lines.

LPI

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

IPDS

In the IPDS emulation, the value set in this category is not used, since the value is set up in the data stream.

Bottom Margin

This parameter allows you to set the bottom margin. The Bottom Margin is measured in lines from the top of the paper. The range is 0 to 255, with the default at 66.

IPDS

In the IPDS emulation, the value set in this category is not used, since the value is set up in the data stream.

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 was line 60 and the current LPI was 6. The Bottom Margin location would be 10 inches from the Top-of-Form location. If the LPI was then 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.

IPDS

In the IPDS emulation, the margin settings are absolute in regards to column number, so that changing the CPI also changes the physical location of the margin.

Right Margin

You can place the right margin at any column number across the page. As with Left Margin, 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.

IPDS

In the IPDS emulation, the margin settings are absolute in regards to column number, so that changing the CPI also changes the physical location of the margin.

If a requested margin setting indicates 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).

Print to End Of Form (EOF)

Before changing paper it is best to print to the end of the current form. This parameter allows you to set up the printer to print to the end of the form automatically. The settings are On and Off, with the default at Off.

For Print to EOF to function properly the last print line of the form must come before the perforation. If the Form Length setting allows printing to go over a perforation, it is possible for the printer to continue printing in a paper out situation without any paper in the printer, which may damage the printer.

If Print to EOF is ON:

The printer automatically prints to the end of the form then stops. The display reads **Paper Out**, the alarm sounds, and the FAULT indicator illuminates. At this point you can load the machine with more paper. After you load paper, ensure that the platen gap is closed, adjust the top-of-form location and make sure the paper is feeding correctly. When you are ready, depress the **Clear** key to clear the fault condition, then place the printer Online and continue printing.

If Print to EOF is OFF, you have two options:

Option 1:

Load a new supply of paper into the printer. After paper has been loaded, set the correct top-of-form location and check for proper paper feed. When you are ready, depress the Clear key to clear the fault condition, then place the printer Online and continue printing.

The printer will start printing where it left off, which may cause improper form and print location alignment.

Option 2:

Depress the Enter key. The printer prints to the end of the current form, then the display reads **Paper Out** and the FAULT Indicator illuminates. At this point you may load more paper on the printer. After loading paper, set the correct top-of-form location and check for proper paper feeding. When you are ready, depress the Clear key to clear the fault condition, then place the printer Online and continue printing.

The Paper Out Sensor will not work unless the Top-Of-Form location has been set properly (see Chapter 2).

Quick Access

This allows you to set up your printer for quick access to printed forms. When Quick Access is enabled and the printer is Offline, pressing the Enter key removes the last printed form. When you use the Quick Access feature, you should set a top margin equal to the distance from the hammer bank to the top part of the form remaining in the tractors in order to eject the whole form and remove it cleanly. The default for this setting is Disabled. Eject distance is set with the next parameter, the Eject Distance.

Eject Distance

The Eject Distance allows you to select the distance at which the paper ejects during Quick Access operation. The units are in tenths of an inch, from 0.0 to 25.5.

Impact

Impact is the relative energy level of the hammer impact on the form being printed. On Auto (the default), the printer senses the thickness of the form by the platen gap and varies the setting automatically from Normal to High. If you want to override it, you can set it to Normal or High (see note after Paper Weight).

Paper Weight

Paper Weight parameter defines the "paper moves" - how the paper motion and printing work according to the thickness of the paper. If on Auto (the default), the selection will vary from Light to Heavy depending on the position of the platen.

The following table illustrates the effect each parameter has on the printer's relative function (Impulse, Paper Moves, and Slew Speed). If all three parameters are set to Auto, the Impact and Paper Weight vary according to what the **platen gap sensor** tells the printer. The Slew Speed varies from 25 IPS to 40 IPS depending on the **Paper Weight** setting.

Parameters	Selection	Hammer Impulse	Paper Moves	Slew Speed
Impact	High	Thump	N/A	N/A
	Normal	Tick		
Paper Weight	Heavy	N/A	Varies Accordingly	31 IPS
	Medium			35 IPS
	Light			35 IPS
Fast Slew	Enabled	N/A	N/A	31-35 IPS
	Disabled			25 IPS

On the Auto setting, Impact and Paper Weight parameters mirror each other, because both parameters use the platen gap to sense what is needed. However, in some cases you may want to set each manually. For example, when printing on thick card stock, you'll need a Heavy Paper Weight but only a Normal Impact.

The graphic below shows how the platen gap setting affects both the Impact and the Paper Weight. If you have placed a thick form in the printer **and** both Impact and Paper Weight are set to **Auto**, the platen gap sensor tells the printer to set the Paper Weight to **Heavy** and the Impact to **High**.
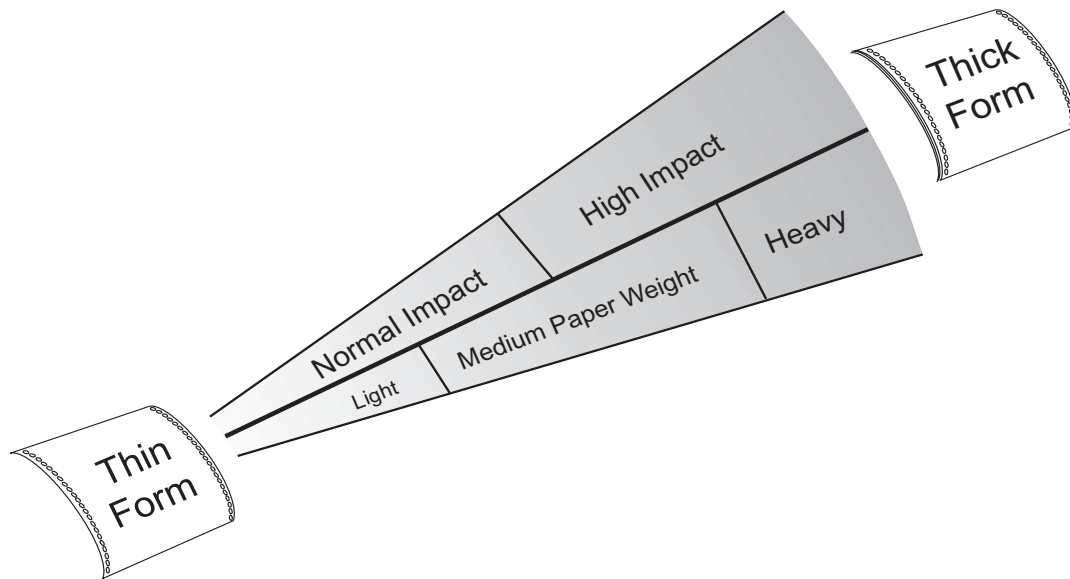
Fast Slew

> If your forms are not too thin or fragile such that output stacking is not an issue, you can increase the printer's slew speed by setting this parameter to Enabled. The default setting is Disabled. When Fast Slew is Enabled, the slew speed is automatically adjusted depending on the Paper Weight setting.

Double Strike

> When set to Enabled, the printer strikes each dot twice. Use this to get better print quality when you are printing on an exceptionally thick form. Default is Disabled.
>
> **Enabling this option decreases the printer throughput by approximately 50%.**

Quality (T6218 only)

> The Quality panel menu setup option only applies to heavy forms printing on the T6218 printer model. If the **Paper Weight** setting is **Light**, printing throughput will always proceed at optimum speed.
>
> If the **Paper Weight** setting is either **Medium** or **Heavy** and the **Quality** setting is **Enhanced**, the printing throughput rate will be reduced to ensure optimum print quality. The throughput reduction for the **Heavy Paper Weight** setting is greater than that for the **Medium Paper Weight** setting.

RibbonMonitor

> Enables the Ribbon Monitor feature. The selections are Enabled and Disabled (default).
>
> The Ribbon Monitor feature helps the printer operator determine when to replace ribbons for optimum and consistent print quality. It works by counting the estimated number of characters printed as jobs are printed. Since ribbons are rated for an estimated number of characters, when the character count threshold is reached for the current ribbon the operator is notified via the panel that the ribbon needs to be replaced.
>
> Ribbon Monitor can be disabled at any time. However, the characters printed count is reset to zero whenever Ribbon Monitor is enabled, so enabling the feature should only be done with a fresh ribbon.
>
> If the Ribbon Monitor Fault occurs, and is cleared without the ribbon life threshold being increased or the ribbon count reset to zero, the "Replace Ribbon" message will reappear approximately every one million characters until one of these operations is performed. This message will also appear upon powerup if the ribbon count is above the threshold at that time.

RibnMon Thresh

> Sets the ribbon life threshold of the Ribbon Monitor feature. The default setting is 40, assuming that a 40 million character ribbon is being used. This setting should be changed to 60 or 250 if a 60 million or 250 million character ribbon is used. The setting can be further refined based on the application being printed.

Ribbon Monitor Operation

When the number of characters printed reaches the ribbon life threshold, the current print job will stop, the Fault indicator will light, and the **Replace Ribbon** message will appear. When this situation occurs:

*Clear the fault with the Clear key. The fault indicator should turn off and the **Replace Ribbon** message should disappear.*

Look at the recently printed output of the printer to determine if the ribbon is exhausted. If the quality of the output is still acceptable, you can increase the ribbon life threshold through the RibnMon Thresh option. The the printer can then be placed back online and printing will resume.

If the printed output is too light, then the ribbon is exhausted. Replace the ribbon with a new one, and reset the ribbon count with the Clear Menu Ribbon Count option. The printer can then be placed back online and printing will resume.

If the printing application is particularly heavy, it may be necessary to decrease the threshold.

The current Ribbon Monitor status can be obtained by printing a Calibrations Report (see Configuration Menu - Printer Category - Report Option). This report will inducate whether Ribbon Monitor is enabled, the estimated number of characters printed since Ribbon Monitor was last reset, and the selected threshold.

If the LAN interface is installed, the Ribbon Monitor status can be viewed graphically in WebPanel in the form of a "gas gauge". The size of the gas gauge bar decreases as a percentage of remaining expected ribbon life. The color of the bar is green when expected remaining ribbon life is between 51% and 100%, yellow when between 26% and 50%, and red when 25% or less.

WebPanel can also be configured to send an Email Notification when the expected remaining ribbon life falls to 25%.

Vertical Format Units (VFU) Category

VFU Enabled

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. Setting this parameter to Enabled 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. The default is Disabled.

Vertical Tab (VT) Channel

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

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 down-loaded 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.

Configuration Menu

Following are explanations of each menu category and parameter. For all available selections under each parameter below, consult the Help Menu printout.

Printer Category

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.

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 (except LAN-IPDS). This parameter setting is automatically saved in the Powerup Configuration. MT660 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 selected emulation. The following table lists those parameters by emulation:

Parameter	MT660	DEC LG01	Epson FX	IBM Pro	MTPL
Character Set	Latin1	DEC	Italic	Code Page 437	Code Page 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	2	12	N/A	N/A	N/A
Skip When	Before	After	N/A	N/A	N/A

Parameter	P600	P6000	P5000	HP2564C	Genicom ANSI
Character Set	Latin1	Latin1	Code Page 850	Roman-8	Code Page 437
OCR-A	ANSI	ANSI	ANSI	ANSI	ANSI
OCR-B	ANSI	ANSI	ANSI	ANSI	ANSI
Auto CR	OFF	ON	ON	OFF	ON
Line Wrap	OFF	OFF	OFF	OFF	ON
Wrap LF	OFF	OFF	OFF	OFF	ON
Code 7F	Space	Space	Space	Fill	Fill
VT Channel	12	12	N/A	12	12
Skip When	After	After	N/A	After	Before

LAN Emulation (LAN Interface only)

Used to select the emulation attached to the Ethernet port when using the LANPlex interface. The possible selection are the same as the Ser/Par Emul option.

Twinax Emul (Twinax/Coax only)

Used to select the Twinax emulation when using the FourPlex interface. The possible settings are IBM 4234, IBM 4210, and IBM 5225. The default is IBM 4234. The Coax emulation will always be IBM 4234.

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: Dump Mode is disabled. (Default selection)
Style1: Two column output. Text, spaces, and control codes are printed in hexa-decimal 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.

Twinax Interface

There is only one style for Twinax. It is similar to the Serial/Parallel Style 1, except the Hex codes are EBCDIC instead of ACSII.

Coax Interface

There is only one style for Coax. It is a unique dump mode that prints the contents of the PCIA buffer associated with each data buffer.

IPDS Option

If the IPDS option is installed, the dump from the IPDS data stream will be uniquely formatted regardless of the Dump Mode selection.

IO Hold Time

This parameter allows you to set the amount of time the printer remains locked onto the I/O on which it is receiving data after data transmission stops. You can set this to be 5—600 seconds (Default selection = 30 seconds)

IRS (Intelligent Ribbon System)

The Intelligent Ribbon System Parameter allows you to enable an algorithm that adjusts the ribbon speed to optimize the amount of ink presented to the hammer bank. Enabled is the Default selection.

Report

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

Current Config

This selection produces a printed report of the current printer configuration. The report contains a header which identifies the installed software and interface, any options that are installed, and statistics for time powered on, time printing, and total lines printed.

All Configs

Produces a printed report of all the saved printer configurations. The report contains a header which identifies the installed software and interface, any options that are installed, and statistics for time powered on, time printing, and total lines printed.

Configs 1-10

Produces a printed report of any of the saved printer configurations. The report contains a header which identifies the installed software and interface, any options that are installed, and statistics for time powered on, time printing, and total lines printed.

Calibrations

Produces a printed report of the printer calibration settings. The report contains a header which identifies the installed software and interface, and statistics for time powered on, time printing, and total lines printed. The body of the report shows the values of the current sensor and print timing calibrations. It also contains a report of the Ribbon Monitor status.

Last Fault

Displays the last fault message on the control panel display.

Version

Displays the version numbers of the installed software on the control panel display.

Codes Category

In this category are parameters that allow you to determine the printer's response to certain conditions and to assign values to parameters that are used by other commands or escape sequences. For the IPDS Emulation, these options have no function.

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

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).

Wrap Line Feed

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

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: Ignore bolding, print as regular text (Default setting)

Double Strike: Print line, then backup to reprint (bold by overstriking)

Bold: Print line once, bold portions 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 1-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. If set to Disabled, the printer ignores the Form Feed Control Code sent from the host. If set to Enabled (default selection) the printer performs the requested form feed and advances to the next top-of-form.

ESC

This parameter is valid only in the MT660 and LG01 emulations. When set to Disabled, the ESC control character is ignored. The default is Enabled.

Alt ESC (Alternate Escape)

This parameter is only valid in the MT660 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 Disabled. 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 lowercase characters in Hex positions 61 through 7A are overwritten by the uppercase characters in positions 41 through 5A. The default selection is Disabled.

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, presented earlier in this chapter.)

Ignore:	The code is ignored.
Delete Char:	The previous character is deleted.
Delete Buffer:	The previous characters on the current print line are deleted.
Space:	A Space character is substituted.
Fill:	A Fill character is substituted.

Print 80 to 9F Hex

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

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.**

Graphics Category

This category allows you to configure certain aspects of the Graphic Processing Options on your printer.

Code V Command Character (CVCC)

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:	All data, plus the line terminator are ignored (default)
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:	All data plus the line terminator, are ignored (default)
All:	All data is executed
Free Format:	Depends on the state for Free Format Mode

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 bar codes 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:

Table 3–1. Bar Code Dot Density

DarkBar Selection	"Normal" Mode	"Dark" Mode
Low	60 x 72	60 (120) x 144
Medium (Default)	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 (MT660) 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 MT660 and Printronix style graphics. It does not apply to text following Epson or Proprinter graphics.

On

Line 1: Character Data
Line 2: Plot Data

Line 3: Character Data

Off

Line 1: Character Data
Line 2: Plot Data
Line 3: Character Data
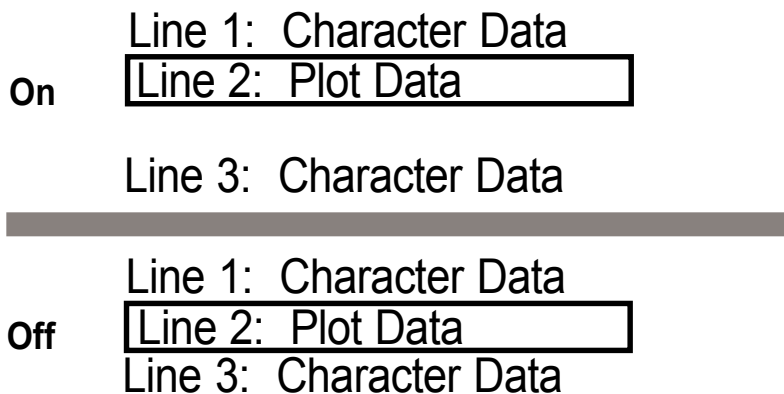
Figure 3–2. Modplot Example

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: The descender gap is always inserted after the line whenever Descender Mode is ON regardless of whether descenders are present or not.   (Default selection)

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. Style 1 is the default selection.

Style 1: Adds intercharacter gap after the character has been rotated.

Style 2: 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.

PGL Special Function Command Character (SFCC)

This parameter allows you to change the SFCC. The Default for this parameter is the ASCII tilde (~, Decimal 126, HEX 7E) character. Selections 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/Finish
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.

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 ON. This parameter only affects the MTPL emulation.

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 Denisty wil print at half the speed of Low Density.

Configurations Category

Your printer can save up to ten 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. When you first receive your printer, each label is a generic "CONFIG" followed by a number 1 through 10 (See How to Save Configurations, next).

Save

If you have a configuration you are going to use multiple times, you may want to save it. You'll use this parameter to do this.

How to Save Configurations

1. Set up the printer parameters the way you want them.
2. Make sure the printer is Offline (press the Online/Offline key), and press the Menu/Back key to enter Menu mode.
3. Use the Up or Down Arrow key to find the Configurations menu, and press Enter.
4. Scroll through the list of configurations. If you have not labeled them (see Config n Label) they will be listed as CONFIG 1 - CONFIG 10. Press Enter to save your configuration into any of these slots.

Next time you want to use this configuration, use the Load parameter, next.

Load

You will use this parameter to load any of your saved configurations into the Current Configuration. Use the Load parameter to choose the configurations you've previously saved.

Powerup Config

You will use this parameter to designate any of the saved configurations as the configuration that is loaded when the printer powers up. Scroll through the Powerup Config parameter to select the configuration you want to use, then press Enter. The default Powerup Config is CONFIG1.

Config n Label - (where n = 1 to 10)

You may want to call your configurations something more intuitive than CONFIGs 1 through 10. This parameter is used to set 15-character labels for each configuration slot.

How to label a configuration slot

1. Make sure the printer is Offline.
2. Press the Menu/Back key to enter Menu mode.
3. Use the Up and Down Arrow keys to get to the Config menu, and then press Enter.
4. Scroll until the display reads Configurations, then press Enter.
5. Scroll until you see Config n label, where n is the number of the configuration you want to label (1-10).
6. Press Enter.
7. A cursor appears underneath the first letter (C). Use the Up and Down Arrow keys to scroll to the number or letter you want to use. Repeat for up to 15 characters, pressing Enter after each letter. You must press Enter 15 times even if your label is shorter.
8. Press Clear or Menu to save it. Now, when you use the Save or Load parameters, this configuration name appears in the slot you've chosen.

Serial I/O Category

Serial Interface is a style of host computer-to-printer I/O communications. It requires certain parameters to be properly set in order for the printer and host computer to communicate.

Baud

The Baud parameter allows the user to set up the printer to receive data at different transmission speeds. The baud rate must be the same value at both ends of the communication line. 9600 is the default selection.

Data Bits

You can choose the number of data bits per byte. 8 bits is the default selection.

Stop Bits

This parameter sets the number of serial stop bits. 1 is the default selection.

Parity

Parity is a method the printer uses to verify that each byte of data it receives is exactly what the host computer transmitted. When selected, it keeps track of the number of high bits in each byte (either odd or even). Default is None.

The printer must match the parity of the host computer.

8th Bit

If 8 bits per byte is selected under Data Bits above, you use this parameter to determine how the 8th bit is to be used. If this bit is to be ignored, the parameter should be set to unused. If the bit is to be used, the parameter should be set to Data. Data is 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. For IPDS, this parameter allows the serial protocol to be set to either Ready/Busy or XON/XOFF. For all other printers, there are six additional protocols. The eight protocols are:

Ready/Busy	(Default selection)
Xon/Xoff	
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)

The above protocols are explained in detail in the Applications Manual.

Status Enquiry

When this option is enabled, the host may send an enquiry packet to the printer requesting status. The printer will then 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:

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:

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 selection)

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

Power

When this selection 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 selection, the DTR Polarity Parameter must be set to Actv Hi.

If your system is configured to use Xon/Xoff Protocol, using the Busy **selection above will cause interference with printer to host communication. You may however, use the DTR Line to signal the host that the printer is Offline or that the printer is powered up (Offline and Power selections, respectively).**

DTR Polarity

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

Busy Polarity

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

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 selection).

Robust Xon

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

Buffer Size

>This parameter allows you to configure the size of the Serial Data Buffer. The default selection is Dynamic.

>### Buffer Operations
>There are two basic buffering schemes used by your printer: Fixed or Dynamic.

>### Fixed Buffering
>For Fixed Buffering the printer uses a single input buffer to accept data from the host. When the host has filled the input buffer, the printer sends the busy signal and stops accepting input. The printer then processes and prints the buffered data before accepting any new data from the host.

>When using Fixed Buffering there are eight selections available for the buffer size the printer will use (128 thru 16K). The size selected should be twice the size of the host data block whenever possible for optimum data handling.

>Fixed Buffering is most effective when using Block Mode Protocols for data transfer. Block Mode Protocols were explained earlier under the Protocol Parameter.

>### Dynamic Buffering (Default Selection)
>For Dynamic Buffering the printer uses two buffers for data transfer. When the host fills one buffer the printer switches to the other buffer for data transfer while it processes and prints the first buffer. The printer only sends the busy signal to the host if both buffers are filled.

>The size of the buffers used for Dynamic Buffering depends on the I/O you are using. In Serial I/O operations the buffer size is set to 2K for each buffer. In Parallel I/O operations the buffer size is set to 1K for each buffer.

>The setting for one I/O is independent of the setting for the other I/O. The Serial I/O may be set up for Fixed Buffering while Parallel is set up for Dynamic Buffering and vice versa.

Parallel I/O Category

The **Parallel** Category on your printer has three parameters that can be changed according to user needs.

Print On Paper Command (POPC)

The POPC Parameter can be set up so that each time a paper advance command is received (such as a Line Feed, Form Feed, or Vertical Tab), any data currently held in the buffer will be printed before the command is carried out. The default selection is On.

8th Bit

The 8th Bit can serve several functions, depending on the software manufacturer. Check your software manual for information concerning the functions of this bit. Data is the default selection.

Buffer Size

This parameter allows you to configure the size of the Parallel Data Buffer. The default selection is Dynamic.

Buffer Operations

There are two basic buffering schemes used by your printer: Fixed or Dynamic.

Fixed Buffering

During Fixed Buffering the printer uses a single input buffer to accept data from the host. When the host has filled the input buffer, the printer sends the busy signal and stops accepting input. The printer then processes and prints the buffered data before accepting any new data from the host.

When using Fixed Buffering there are eight selections available for the buffer size the printer will use (128 thru 16K). The size selected should be twice the size of the host data block whenever possible for optimum data handling.

Dynamic Buffering (Default Selection)

During Dynamic Buffering the printer uses two buffers for data transfer. When the host fills one buffer the printer switches to the other buffer for data transfer while it processes and prints the first buffer. The printer only sends the busy signal to the host if both buffers are filled.

The size of the buffers used for Dynamic Buffering depends on the I/O you are using. In Serial I/O operations the buffer size is set to 2K for each buffer. In Parallel I/O operations the buffer size is set to 1K for each buffer.

The setting for one I/O is independent of the setting for the other I/O. The Serial I/O may be set up for Fixed Buffering while Parallel is set up for Dynamic Buffering and vice versa.

Twinax/Coax Category

Send PA (Coax Only)

There are two options for this category, PA1 and PA2. These options only have meaning when the printer is in the SCS Mode. If they are selected while the printer is in non SCS Mode, the Invalid Key error message will display briefly. These options perform special functions that change from one software application to another. Selecting one of these options while the printer is operating in SCS Mode causes the printer to:

- Display status code PA1 Key (61) or PA2 Key (62)
- Send an attention response to the host computer.
- Send a special operator request to the application program and wait for a response back.

Certain application programs may ask you to select the PA1 or PA2 option in this category. In this situation:

- The printer display will read Enter PA Key (63).
- The audible alarm beeps continuously.
- The host opens a 10 minute "window" for one of the PA options to be selected. If the correct PA option is not selected during this time, the display clears, the audible alarm stops, and the printer sends a No PA Key message to the host computer. The effect of this message is application-dependent. Depressing the Online/Offline key clears this condition.

Address (Twinax Only)

Sets the Twinax device address for the printer. The default is Undefined.

SPD (Coax Only)

When set to Disabled, this parameter causes the host Set Print Density command to be ignored. This is used to prevent the host from overriding control panel CPI settings. Default is Enabled.

SCD (Twinax Only)

When set to Disabled, this parameter causes the host Set Character Density command to be ignored. This is used to prevent the host from overriding control panel CPI settings. Default is Enabled.

IPDS: This option is not available.

SLD

When this parameter is set to Disabled, the host Set Line Density command is ignored. This prevents the host from overriding control panel LPI settings. The default is Enabled.

IPDS: This option is not available.

Host (Font) Style (Twinax Only)

When you set this parameter to Disabled, the host Page Presentation Media command is ignored. This is used when you want to prevent the host from overriding control panel Font Style settings. The default is Enabled.

IPDS: This option is not available.

Screen Size (Screen) (Coax Only)

The parameter allows you to set the screen size for the Coax screen copy function (in non SCS Mode only). The default is 1920.

Case (Coax Only)

If you set this parameter to Mono, all uppercase characters print. In Dual mode, upper and lower case characters print. This parameter applies in non SCS mode only. The default is Dual.

Compatibility Switches (Coax Only)

The compatibility switch settings define how the printer responds to Form Feed (FF), Carriage Return (CR), and New Line (NL - Carriage Return plus Line Feed) codes. The function of some of these switches depends on the end of buffer or printing past the right margin. This parameter applies to non SCS mode only. All compatibility switches default to OFF.

Comp Switch 1

This switch determines the printer response to a CR Command located at the right margin plus one character position. If OFF, the printer performs only a CR and starts printing over the same line again without advancing the paper. If ON, the printer performs an NL function, then begins printing.

Comp Switch 2

This switch determines the printer response to an NL command located at the maximum print position plus one character position. If OFF, the printer per-forms an NL function. If ON, the printer performs two NL functions.

Comp Switch 3

This switch determines whether or not a space is inserted at the beginning of the first print line on each form. This switch works in conjuction with Comp Switch 6, which determines how the printer responds to an FF command. If OFF, the printer performs the FF and a Space function. Printing starts one space in from the left margin on the first line of the next form.

Comp Switch 4

The settings of this switch are functional only if Comp Switch 7 is set to OFF. Comp Switch 4 determines printer response to an FF command located at the end of a buffer. If OFF, the printer performs an FF only. The new print location is the first print position on the next form. If ON, the printer performs an FF plus an NL. The print location is the first print position plus one line.

Comp Switch 5

This switch determines the printer response to formatted print lines composed entirely of unprintable characters (such as Control and Format commands). If OFF, and the Ignore bit in the PCIA is ON, the line is not printed and no NL function is performed. If ON, the printer prints a blank line in response to a line of unprintable characters and performs an NL function.

Comp Switch 6

This switch determines the printer response to an FF command according to where it is located in the data stream. If OFF, the printer performs an FF function only if the FF command is at the first print position or at the right margin plus one column. FF commands at any other location are treated as blanks. If ON, the printer recognizes FF commands any time they are part of a data stream.

Comp Switch 7

This switch determines printer response to an FF command and works in conjunction with Comp Switch 4. If OFF, and the FF command is the last byte in a print order, the printer responds according to how Comp Switch 4 is set. If the FF command is not the last byte in the print data and the current print position is not already at Column 1, the printer performs an NL function at the end of the print job. If ON, the printer performs an FF function after each print job if the print position is not at the top of form.

IR Delay (Coax Only)

This parameter defines the delay from the time a fault is reported on the printer control panel until it is reported to the host. This is used primarily to allow you to change paper before the host cancels the print job. The default is 10 minutes.

Hex Passthrough

When you set this parameter to On, the printer translates certain EBCDIC character streams into ASCII escape sequence commands, and executes the commands. Details can be found in the Twinax / Coax Applications Manual. Default is off.

IPDS: This option is not available.

EPC

The Early Print Complete parameter allows you to set up the printer data buffering scheme to emulate the 4234 data-handling characteristics. When this parameter is set to Off (the default), the printer emulates the buffering scheme of the IBM 4234 printer, which results in standard IBM 4234 error handling. The printer notifies the host after it is finished processing the print buffer and is ready to accept more data. Then the host sends another buffer of up to 4K of data. This processing mode causes short pauses during the printing process due to the wait between notifying the host and the host sending the next buffer.

When this parameter is set to On, the printer notifies the host before it is finished processing the print buffer. This allows faster processing because the text buffer is set by the host before the current buffer is fully processed and there is no delay between processing one buffer and the next buffer. This processing mode speeds up data handling but may result in slightly different error handling.

Graphics AVM

The Graphics AVM panel menu setup option only applies to the manner in which the Twinax AVM command is handled within a Code V, PGL, or Hex Pass-Through graphics job.

A Tx/Cx Absolute Vertical Move (AVM) command moves the current print poition vertically (forward only) to a line number specified by the command without changing the horizontal print position. When the line number is less than the current line position the line is moved to the appropriate line position on the next page. When the line number is greater than the number of lines in the page (form length) an invalid range parameter errors. Tally provides two responses to the AVM command.

Style 1: The print position moves forward, relative to the last text item or paper-move command that preceded the AVM command. The new line position is calculated by subtracting the height (in lines) of any graphic items preceding the AVM, from the line number specified in the AVM command. This style is intended for compatibility with printers that use an external or non-integrated Twinax interface. This is the default setting.

Style 2: The print position moves forward to the exact line number specified by the AVM command. The presence or absence of graphic items preceding the AVM does not affect the position of text and/or graphics following the AVM.

IPDS Category (IPDS Only)

Address (Twinax Only)

This parameter sets the Twinax IPDS device address for the printer. This feature allows the IPDS emulation to reside at a different address than the standard Twinax SCS emulation, hence providing two virtual Twinax printers. The default is Undefined.

Density

This parameter defines the dot density of the IPDS output. Low is 60x72, and High is 144x144. Medium (120x144) is the default.

Dark Bar

This parameter has three possible settings: Low, Medium, and High, with the default being Low. This affects the print density (and print speed) of bar codes selected through any emulation of graphics language as follows: Low (60x72), Medium (120 half spaced x 144), and High (120 full spaced x 144). This feature also works in conjunction with the selection of bar code density used by Code V and PGL (Normal vs. Dark). The densities will be set based on the previous Dark Bar selection table.

Smooth Size

This parameter defines the character size at which the block character smoothing algorithm is invoked. The default is 3, which means size 3 block characters will be smoothed, but size 2 block characters will not.

Zero

Provides for the printing of open or slashed zero block character. Default is slashed.

Host Override

The Host Override parameter gives you the option of allowing the host to control DPI for Graphics and Bar Codes or to control Graphics and Bar Code Density through the Control Panel. When Host Override is On, the host controls Graphic and Bar Code DPI with the Execute Order Anystate (XOA) command and Print Quality Control (PQC) Subcommand. When Host Override is Off, Graphics and Bar Code DPI is controlled through the Control Panel settings for Density and DarkBar parameters. The default selection is On.

TCP/IP Menu - LAN Interface Only

The TCP/IP Menu only appears if a TCP/IP LAN network interface card is installed in the printer.

IP Address

This option allows you to set up the four OCTETS of the IP Address.

Category	Parameter
OCTET 1	0-255
OCTET 2	0-255
OCTET 3	0-255
OCTET 4	0-255

Gateway

This options allows you to set the four OCTETS of the Gateway.

Category	Parameter
OCTET 1	0-255
OCTET 2	0-255
OCTET 3	0-255
OCTET 4	0-255

Subnet

This option allows you to set up the four OCTETS of the Subnet mask.

Category	Parameter
OCTET 1	0-255
OCTET 2	0-255
OCTET 3	0-255
OCTET 4	0-255

Make sure that the LAN cable is attached when the printer is powered on. If it is not, attach the cable and cycle power on the printer.

Test Menu

In **TEST** Menu you will find diagnostic test print patterns used to check printer functions and a parameter that allows you to control paper motion sensing.

Use the Up and Down Arrow keys to scroll to the desired selection. To move down in the menu use the Up Arrow key.

Pattern Category

The Pattern Category has a series of printer self-tests which have predefined patterns used to test the basic printer functionality. Selection of the patterns is done by scrolling with the Up or Down Arrow keys to the requested option, and pressing the Enter key. The test begins based on the current margins and font information selected. All of the panel keys are disabled while the test is running except for the View key and the Enter and Clear keys, which terminate the test. Once the test is terminated, all of the keys are activated.

Print

Option	Prints
Upper	Rolling ASCII characters between 0x20 and 0x5E
All Characters	All characters from the available character sets
63/69	63 uppercase characters followed by 69 spaces.
ECMA	A pattern specified by the European Computer Manufacturers Association. Used for acoustic testing.
Columns	Number of columns on the line, based on margin distances

Fault Override Category

This category deals with the configuration of fault information from the Engine Manager and the Control Processor. If the option is set to On, then the fault is overridden and won't be reported on the panel. If the option is set to Off, then the override is disabled and the fault is reported if it occurs.

Paper Motion

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.

Automatic Paper Motion Fault Retry is a feature that has been implemented to eliminate intermittent false paper motion faults. When a paper motion fault is detected while printing is in progress, the paper is reversed approximately 3 inches, then moved forward again. If the paper motion fault persists, the printer is placed offline and the fault is reported. This feature can eliminate false paper motion faults caused by random electrical noise or paper chads/dust that can be removed by the paper reversal.

Blank
Page
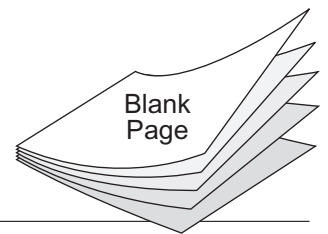
Appendix A

Introduction

This chapter deals with troubleshooting problems on a T6200 Series printer. Messages that indicate printer faults and errors are explained and corrective action given. The few paper handling and print quality problems that may occur are also explained.

Messages

Messages on the Control Panel Display report both normal operation and fault situations. In **Table A–1** we present a listing of the Display Messages that need explanation or action on the part of the operator or repair person. Each message listing includes causes and corrective actions where necessary.

Faults

When a fault occurs, it will cause the printer to cease operation and go Offline. The printer alarm will sound, the Fault Indicator will illuminate, and the display will report a fault message.

In some cases it is possible to clear an error message and continue using the printer by depressing the Clear key. However, the quality of the print may be questionable and collateral damage to other parts may result. If the fault message returns, perform the required corrective action.

If a nondestructive fault occurs in the middle of printing a document, one line of text may be lost after the error condition is corrected and the printer put back Online.

If the fault is in the control panel or interprocessor link, the fault message may not be displayed, and the beeper and Fault LED may not operate.

Fault Correction Procedure

Step 1. First check the fault message on the Control Panel Display and look it up in the Fault Message tables provided here.

Step 2. Perform the required corrective action. Some Fault and Error messages will automatically clear as soon as the problem is corrected (for example, the **Platen Open** message will clear when the Platen Gap Adjustment Wheel is rotated to the proper thickness).

Step 3. If a faulty piece of hardware is indicated, call your Customer Service Representative for repair.

Step 4. If any other faults appear on the display after you have corrected the original problem, go back to Step 1 and perform required corrective actions for the new problem. Otherwise place the printer back Online and test it during normal print operations.

Table A–1. Display Messages

MESSAGE	Explanation and Corrective Action	
ATTENTION	*Explanation:*	The host has sent the Bell Command
	Corrective Action:	Corrective action depends on the reason the Bell Command was sent. Contact your system operator.
Bad VFU Channel	*Explanation:*	A VFU channel command has been received from the host requesting an illegal channel.
	Corrective Action:	1. Correct data from host and retransmit.
		2. Ensure the integrity of the printer ground connection.
Bad VFU Count	*Explanation:*	An incorrect number of bytes has been detected in a VFU download.
	Corrective Action:	Correct data from host and retransmit.
Buffer Overflow	*Explanation:*	A buffer overflow has been detected on the currently active host interface. This is most likely caused by a host failure to respond to a busy signal.
	Corrective Action:	1. Ensure correct protocol has been selected.
		2. Check wiring of I/O cable between host and printer. (See the **Applications Manual** for a detailed explanation.)
Chnl Not Found	*Explanation:*	VFU Channel requested by the host computer cannot be found.
	Corrective Action:	1. Correct data from host, then retransmit it to the printer.
		2. Ensure the integrity of the printer ground connection.
Ctrl Fault	*Explanation:*	This message indicates that a fatal fault has occurred in the control processor.
	Corrective Action:	Call your Customer Service Representative for repair.
Ctrl Link Flt	*Explanation:*	The Control Processor has detected a fault in the Main Processor to Control Processor link.
	Corrective Action:	Call your Customer Service Representative for repair.
Data Overrun	*Explanation:*	A data overrun has been detected on the currently active host interface. This is most likely caused by an incorrectly config- ured serial baud rate, data bits, or parity.
	Corrective Action:	Check setting on Serial Baud Rate, Data Bits, and Parity parameters through the printer control panel.
Font Dnld Error	*Explanation:*	An error has been detected during a font download.
	Corrective Action:	Correct data and retransmit from host.
Graphic Check	*Explanation:*	This message indicates that the printer has received an unprintable graphic. This message only appears if the Set Graphic Error Action Command has been set properly.
	Corrective Action:	Clear the message (Clear key), then place the printer back Online. Confirm with host why Graphic check message was sent.
Heap Overflow	*Explanation:*	Graphics memory space is full and the printer cannot accept or process data. Printer will reset and data will be lost.
	Corrective Action:	Insert line terminators in data stream so the printer will process the data, then retransmit the data.

Key Disabled	*Explanation:*	Key has no function for this printer model or mode of operation.
	Corrective Action:	No corrective action.
Lost Adrs (27)	*Explanation:*	Certain communication signals have been lost between the printer and the host computer.
	Corrective Action:	Check cable connection, setup of host, and printer address setting.
Lost Sync (28)	*Explanation:*	The host is not communicating with the printer.
	Corrective Action:	Verify address of computer and host setup.
		Check I/O cables.
		When this message is displayed during printer installation, you may continue to test the printer by placing the printer Offline and entering Menu mode to select print tests or calibration routines.
Main CPU Fault	*Explanation:*	A fault has been detected in the main processor during powerup diagnostics.
	Corrective Action:	Call your Customer Service Representative for repair.
No VFU Loaded	*Explanation:*	A VFU command was received from the host before a VFU was downloaded.
	Corrective Action:	Download the required VFU information, then retransmit the data.
NVRAM Fault	*Explanation:*	The nonvolatile data checksum has failed because of one of the following conditions:
		(1) A new RAM has been installed
		(2) New software with different nonvolatile variables has been installed
		(3) The variable values have been altered in a destructive manner
	Corrective Action:	Depress the Clear Key. If the message does not clear, cycle printer power. If the message still does not clear, call your Customer Service Representative for repair.
Offline Data In	*Explanation:*	The printer is in Offline condition and nonprinted data is in the buffer
	Corrective Action:	There is no corrective action required. Under normal conditions, the printer continues to print when it is placed back Online. If you do not want the buffered data to print, enter the Clear menu by depressing the Clear key before going back Online and select the Clear Buffers entry to clear the buffered data.
Offline Dump On	*Explanation:*	The printer is in Offline condition and Dump Mode is enabled.
	Corrective Action:	No corrective action is necessary. Place the printer back Online when you are ready to print.
Online Download	*Explanation:*	The printer is receiving downloaded fonts or VFU information.
	Corrective Action:	This message will clear when the download is complete
Online Dump On	*Explanation:*	The printer is ready to accept and print data from the host through Dump Mode. All data received from the host will be printed in hexadecimal format.
	Corrective Action:	No corrective action is required.
Overflow VFU	*Explanation:*	An excessive number of bytes has been sent by the host in a VFU download.
	Corrective Action:	Correct data and retransmit from host.

Hammer Time	*Explanation:*	The software controlling the print hammer timing has detected an internal inconsistency.	
	Corrective Action:	Press the Clear key. If it faults repeatedly, call your Customer Service Representative and skip to the next print job.	
Hammer Voltage	*Explanation:*	One of the hammer drive circuits was turned on when it shouldn't have been, so all printing has been disabled. The usual cause is a failed drive transistor.	
	Corrective Action:	Call your Customer Service Representative for repair.	
Paper Motion Flt	*Explanation:*	The control processor has detected that the paper has failed to move the required distance after sending a command to the Paper Drive Motor.	
	Corrective Action:	Check for paper feed problems. If there are any paper feed problems, correct them, then press the Clear key to clear the fault. If there are no paper feed problems and the condition does not clear, call your Customer Service Representative.	
Paper Out	*Explanation:*	Paper is not being detected by the Paper Out sensor.	
	Corrective Action:	If this message is correct, refer to the Enter key section of **Chapter 2**, then load paper. (See **Loading Paper** Section of **Chapter 1**). If the fault does not clear, call your Customer Service Representative.	
Parity Error	*Explanation:*	Parity is enabled and a mismatch on Bit 8, between the computer and the printer, has been detected on the currently active host interface.	
	Corrective Action:	If there is a mismatch between the setting of the printer and the setting of the host, you can change printer parity by referring to the **Configuration Menu** section of **Chapter 3.**	
		If there is no mismatch between the printer and host settings, then the data sent from the host has been corrupted. Retransmit the data from the host. If the condition repeats, set up the printer for Dump Mode (see **Configuration Menu** Section in **Chapter 3**) and retransmit the data again. If you find no errors in the Dump Mode data, call your Customer Service Representative.	
Platen Open	*Explanation:*	The Platen Gap is open beyond the maximum setting allowed for paper thickness. This message will display when you are loading paper or a ribbon cartridge into the printer. This condition disables the printer and the only keys that will function on the control panel are the form movement keys.	
	Corrective Action:	When you are loading paper or a ribbon cartridge, this message will clear when you close the Platen Gap. If this message appears at any other time or will not clear, call your Customer Service Representative.	
Print Fault	*Explanation*:	Faulty communication between the main and control processor has occurred causing a dot row to misprint. The printer automatically recovers from this condition.	
	Corrective Action:	Under normal circumstances there is no corrective action other than to depress the Clear key to remove the fault message from the display. If, however, this problem persists, call your Customer Service Representative for repair.	

Ribbon Fault	*Explanation:*	The Ribbon Fault Detector is not reading any movement in the printer ink-ribbon.
	Corrective Action:	Depress the Clear key and try to print again. If the fault returns, try to turn the Ribbon Knob. If the Ribbon Knob will not turn, check to see if the ribbon is caught on the hammer bank or one of the other mechanisms through which the ribbon moves. If the Ribbon Knob does not turn and the ribbon is not caught somewhere, install a new ribbon cartridge. If the Ribbon Knob turns and the fault does not clear, call your Customer Service Representative for repair.
Setup Address	*Explanation:*	The printer address has not been set up or a configuration with address set to UNDEFIN has been loaded.
	Corrective Action:	Set up the printer address using the multilevel menus on the printer. The procedure is located in **Chapter 3**, under the **Configuration Menu**.
Shuttle Fault	*Explanation:*	If the control processor detects the shuttle operating either above or below the proper frequency, it shuts down the shuttle and attempts to restart it. If the shuttle still operates incorrectly after three consecutive attempts, the Control Processor goes Offline, and the Shuttle Fault message is displayed.
	Corrective Action:	Depress the Clear key, then put the printer back Online. If this doesn't work, turn the power switch off, then back on again. If the error condition persists after performing the above actions, call your Customer Service Representative.
Testing Hardware	*Explanation:*	The printer is performing internal diagnostic tests when the printer is powered up.
	Corrective Action:	If this message does not clear after a few seconds, then the Main CPU is dead. Under normal circumstances there is no corrective action. If the message does not clear automatically, call your Customer Service Representative for repair.
Thermal Fault	*Explanation:*	The ambient temperature has exceeded the limit (Max T).
	Corrective Action:	Turn the printer off and allow the unit to cool. After a few minutes, turn the power back on and retry the printer. If it fails again, call your Customer Service Representative.

Table A–2. Paper/Printing Corrective Action

Problem	Cause	Corrective Action
The paper holes are wider than normal after passing through the tractors.	Horizontal paper tension is too tight.	Unlock and readjust the tractors.
Printed characters on heavy-weight or multi-part paper are smeared.	The Platen Gap is not set correctly.	Open the Platen Gap.
The printed characters are too light.	The Platen Gap is out of adjustment or the ribbon is worn out.	Readjust the Platen Gap. If this does not correct the problem, replace the ribbon cartridge with a new one.
The printed characters are shakey	The Platen Gap is not set correctly.	Adjust the Platen Gap.
The printed characters in one line are shorter than normal.	Vertical paper tension is too loose.	Move the Paper Tension Lever until the paper is taut but not too tight.
The paper holes are elongated after passing through the tractors.	Vertical paper tension is too tight.	Move the Paper Tension Lever until the paper is taut
The paper comes out of the tractors or the paper tears at the right or left holes along the edges.	(1) The vertical or horizontal paper tension is incorrect.	To change the vertical tension, raise the Paper Tension Lever to increase tension, and lower it to decrease tension. To change the horizontal tension, unlock the upper right and/or lower right tractor and move it left or right to make the necessary adjustment.
	(2) The tractors are too far apart.	Unlock and realign the tractors.
	(3) Upper tractors not aligned with the lower tractors.	Unlock and realign the tractors so that the lower set is directly under the upper set.
	(4) The Platen Gap is not	Open the Platen Gap.

Specifications

Emulations

The emulations available on your printer are: MT660, Printronix P600, Printronix P6000, Printronix P5000, Epson FX-1180, IBM Proprinter III XL, IBM 4234 (Twinax and Coax), IBM 4210 and 5225 (Twinax Only), DEC LG01, HP2564C, MTPL, Genicom ANSI, PJL, Code V, PGL, IPDS.

Type Style

There are six resident type styles available on your printer. They include Gothic, Courier, Data Processing, Draft, OCR-A, and OCR-B. All type styles and the two output modes (for Draft and DP) are selectable through the printer control panel.

Gothic and Courier

These two type styles provide Near Letter Quality (NLQ) printing. They print at higher dot densities and use denser character matrixes for greater readability.

Draft and Data Processing

Draft and Data Processing type styles print in two modes: Constant Density Fonts (CDF) and Enhanced.

Constant Density Fonts print at the same dot density regardless of the CPI. This produces consistent print speed even when changing from one CPI to another.

Enhanced Mode provides higher resolution and a greater range of CPIs than CDF Mode. Because Enhanced Mode uses a variety of dot densities you should expect a change in print speed of text when switching from one CPI to another.

OCR–A and OCR–B

These print at 10 CPI only, mostly for Optical Character Recognition applications.

Characters Per Inch

Your printer offers a variety of CPIs for use in printer output. Available CPIs are dictated by the Type Style selected. Each CPI is based on one of 12 character matrixes and 12 Dot Densities. Each matrix uses a specific number of dot columns for character composition and intercharacter gap. CPIs are grouped in any given type style by the base CPI matrix used for the group. Those Base CPIs are 10, 12, and 15.

Densities and Throughput

Your printer supports Horizontal row plots (single and multiple row), Vertical column plots, and specialized Graphic plots.

Your printer supports the following horizontal DPIs: 40, 48, 60, 80, 90, 120, 180, and 240.   Scaled densities available on your printer are 50, 72, 75, 96, 100, 144, 150, 160, and 200. All other selections will be approximated by conversion to the next higher density.

Your printer supports the following vertical DPIs: 48, 72, 96, 144, and 288. All other selections are emulated through the use of scaling techniques.

Table S–1 Text Performance

Text Throughput - Lines per Minute		T6218	T6215	T6212
Upper Case / Lower Case				
Draft	10 CPI	1800/1500	1500/1285	1200/1000
	15 CPI	1800/1500	1500/1285	1200/1000
	17.14 CPI	1800/1500	1500/1285	1200/1000
Data Processing	10 CPI	1350/1080	1125/900	900/720
	15 CPI	1350/1080	1125/900	900/720
	17.14 CPI	1350/1080	1125/900	900/720
Gothic	10 CPI	720/600	600/500	480/400
	15 CPI	540/450	450/375	360/300
	17.14 CPI	540/450	450/375	360/300
Graphics Throughput - Inches per Minute				
60 X 48		225	187	150
60 X 72		150	125	100
120 X 72 DPI		75	62	50
Application Benchmarks				
AIAG 2-up Normal/PGL - Label/Hrt		4392	3660	2928
AIAG 2-up Read/Right/PGL - Labels/Hr		2788	2460	1968
POSTNET 6LPI Labels/Hr Draft		70,266	62,000	49,600
ECMA 132 - Pages Per Hour				
#2 Letter Performance 10 CPI Draft		1864	1645	1316
#3 Letter Performance 10 CPI NLQ		878	775	620
#4 Letter Endurance 10 CPI NLQ		884	780	624
#5 Spreadsheet Perf. 17 CPI Draft		2493	2200	1760
#6a Spreadsheet Perf. 17 CPI Draft		2493	2200	1760
#6b Spreadsheet Perf. 17 CPI NLQ		994	780	624
#7 Graphics Performance		1122	990	792

Lines Per Inch

Ten Lines Per Inch (LPI) settings are available through the Control Panel. They include 1.5, 2, 3, 4, 5, 6, 8, 9, 10, and 12 LPI. In some emulations the availability of certain LPIs is restricted.

Paper Movement Speed

Your printer has a normal slew speed of 36 inches per second. When printing in Heavy Forms mode, the maximum slew speed is decreased to 20 inches per second.

Languages and Character Sets

Up to 34 Language Character Sets with up to 192 characters (some emulations have fewer character sets with 256 characters) each are available on your printer. In addition, the ANSI and DIN character sets are available for use with the OCR-A and OCR-B type styles.

With the exception of ANSI and DIN, the language character sets can be printed in four different type styles: Gothic, Courier, Data Processing, and Draft. The ANSI and DIN characters can only be used with the OCR-A and OCR-B type styles and are selectable in four combinations through the Printer Control Panel.

Physical Configurations

Your printer only is available enclosed in a quietized cabinet.

Weight

Your printer has an actual weight of 185 lbs. (84 kg) and a shipping weight of 212 lbs. (96 kg).

Paper Description

The printer uses continuous, sprocket-fed type paper, 2.5 inches (64 mm) to 18 inches (457 mm) outside width and 3.0 inches (76 mm) to 12.0 inches (305 mm) in length. One- to six-part paper may be used with a maximum thickness of .025 inches (0.64 mm). (Reference specifications: ISO 2784, DIN 9771 and DIN 6721.)

Acoustics

The Sound Power of your printer is 6.7 Bel (9 position average, per ISO 7779) with a Sound Pressure Level of less than 52.0 dBA (4 position average, per ISO 9296).

Nonvolatile Memory

Your printer stores up to 10 printer configurations in nonvolatile EEPROM.

Power Supply

The printer requires single phase, 47 to 63 Hz. 90 to 264 VAC input power. The printer's universal power supply automatically adjusts to the correct values. A fuse is provided to interrupt power to the power supply. The following table gives typical current values.

Table S–2. Power Requirements

External Power Voltage Supply		Current/Wattage Requirements @ Nominal			
AC Volts (RMS)	Freq. (Hz)	Average Operating	Peak Operating	Average Idle (<5 min.)	Average Idle (>5 min.)
110	50	2.0 A/215 W	5.5 A/600 W	0.5 A/55 W	0.3 A/30 W
110	60	2.0 A/215W	5.5 A/600W	0.5 A/55W	0.3 A/30 W
220	50	1.0 A/215W	2.8 A/600W	0.3 A/55W	0.2 A/30W

Preventive Maintenance

This printer is designed to eliminate the requirement of scheduled maintenance procedures, such as alignment, adjustment, or lubrication. Preventive maintenance is limited to periodic cleaning. Dust and paper fibers should be removed periodically with a soft cloth and brush or a vacuum cleaner. Clean the printer case with a damp cloth and soapy water. **DO NOT** use any abrasive cleaners or solvents, as they will damage the case.

Safety

Personnel hazard areas have restricted access with appropriate warning labels. Catastrophic equipment failures are inhibited with protective functions in major areas of overload potential.

Cooling System

Cooling system malfunctions are detected and a failure will result in shuttle motion, paper motion, and printing functions being inhibited. The malfunction will be reported on the control panel display.

Environment

Operating

Temperature

Dry Bulb: 50°F to 104°F (10°C to 40°C)

Humidity: 10 to 90% noncondensing with a maximum wet bulb temperature of 82°F (28°C) and a minimum dew point of 36°F (2°C)

Altitude: To 8,000 ft. (2438 meters)

Nonoperating

Temperature:

    Boxed: -40°F to 151°F (-40°C to 66°C)

    Unboxed: 14°F to 122°F (-10°C to 50°C)

Humidity: 10 to 95% noncondensing

Altitude: To 10,000 ft. (3048 meters)

Thermal Shock: 61°F (20°C) per hour

Vibration: Units meet NSTA (National Safe Transit Association) requirements.

Heat Load Contribution

The average heat load contribution to the environment is approximately 735 BTUs per hour (215 Watts). The minimum heat load contribution is approximately 100 BTUs per hour (30 watts). The maximum is 2050 BTUs per hour (600 Watts), under continuous full-load printing conditions.
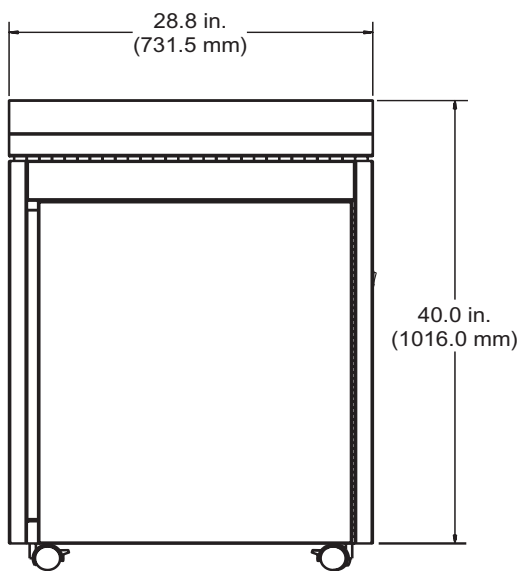
Table S–3. Heat Load Contributions

Printing Conditions (110 VAC/60 Hz)	Wattage	BTU/Hr
Power On, not printing	55 W	188
100% Uppercase Rolling ASCII	400W	1370
Black Page Plot	600 W	2050

Printer Dimensions
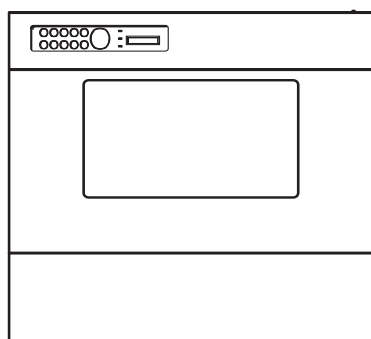
Top View

Back (and Front) View

Side View

28.8 in.
(731.5 mm)

40.0 in.
(1016.0 mm)

28.3 in.
(718.8 mm)

62.2 in.
(1579.9 mm)
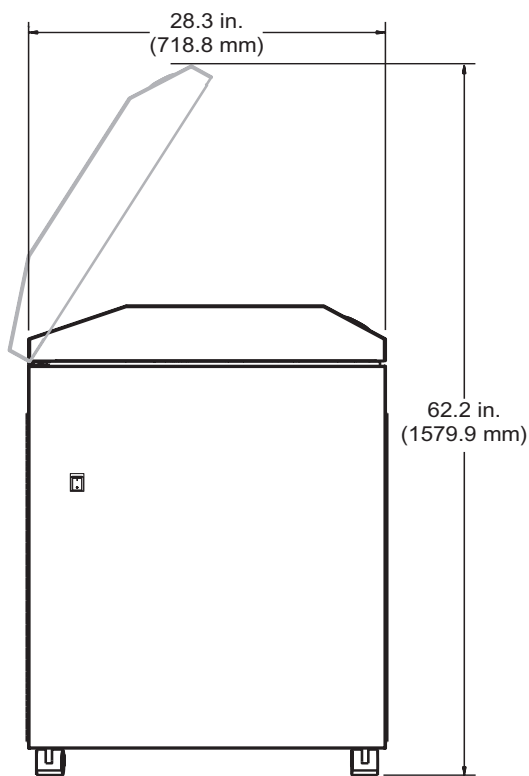
Figure S-1. Physical Dimensions

Industry and Agency Standards.

The T6200 Series is designed to meet the requirements of several industry and government agency standards.

Electro-Magnetic Emissions

EMI: FCC part 15, subpart J, Class A
and EN55022 Class B
Harmonics: EN 61000-3-2
Flicker: EN 61000-3-3

Electro-Magnetic Immunity

ESD: EN 61000-4-2
RF EMF: EN 61000-4-3
EFT/B: EN 61000-4-4
Surge: EN 61000-4-5
RF CM: EN 61000-4-6
PF MF: EN 61000-4-8
V Dips/Int: EN 61000-4-11

Energy Conservation

ENERGY STAR® compliant

Safety

IEC 60950:1991plus Amendment 1, 2, 3, and 4, and National Deviations AT, AU, BE, CA, CH, CZ, DE, DK, ES, FI, FR, GB, GR, HU, IE, IT, JP, KR, NL, NO, SE, SG, SL, US and Group Differences per CB Bulletin 94AI(Mar 99).

ANSI UL 1990-95, CAN/CSA-C22.2 No. 950-95, and EN6950:1992, including Amd 1, 2, 3, and 4 safety requirements.

Acoustic

ISO 7779:1988(E)
ISO 9296:1988(E)

Marking

The printer complies with the CE mark requirements, per European norms.

Blank
Page