

LG^{plus} Series

Text and Graphics Printer



Operator's Guide

Order Number: EK-LGPLE-OG, Rev. A

Digital Equipment Corporation



Notices

FCC Notice

This equipment has been tested and found to comply with the limits of a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide a reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the 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 be required to correct the interference at his own expense.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Installing this equipment in an FCC Level B product results in an FCC Level A Composite System as defined in the FCC Rules and Regulations.

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About this Operator's Guide

Digital wants you to feel comfortable using the LG^{plus} Series Printer and this guide. This book has been designed to meet the needs of all users, from beginners to those experienced with line matrix printers.

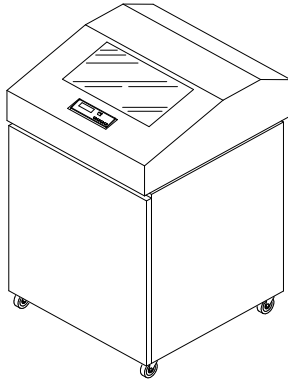
Follow the directions in this guide along with those in your *Setup Guide* in order to avoid injury to you and damage to the printer.

This guide is divided into three sections:

Basic Operating Procedures — gives an overview of the control panel and provides procedures for loading paper and ribbon.

Configuration — provides procedures for using the control panel to save, modify, and delete configurations.

Troubleshooting — gives instructions for clearing paper jams, cleaning components, and troubleshooting.



LG^{plus} Series Printer



Conventions

Warnings, Cautions, and Notes

Warnings provide information about conditions that could harm you or damage the printer.



Cautions provide information about conditions that could damage the printer.



Notes provide supplemental information that could affect printer operation or use.



Message Display

These boxes show display messages as they appear on the printer.



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BASIC OPERATING PROCEDURES

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Powering On the Printer

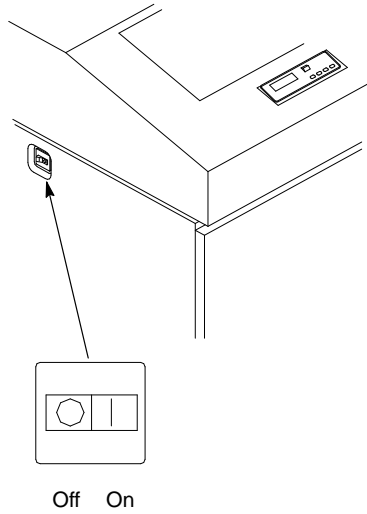
warning

Before powering on the printer, make sure it is plugged into the appropriate power source.

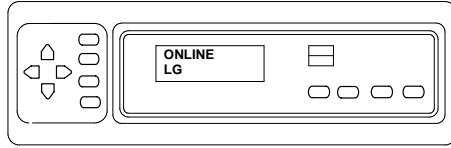
Refer to the “Select a Site” section in Chapter 2 of the Setup Guide for information on proper power sources.

The power switch is located at the top left side of the cabinet.

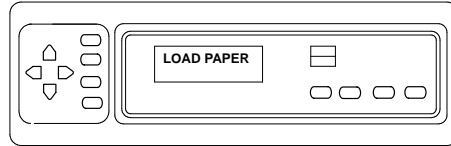
Push the On (I) switch to power on the printer. Push the Off (O) switch to power off the printer.



When you power on the printer, the printer executes a power-on self-test. The message “Testing Hardware Please Wait” displays. When the self-test completes, the message “Diagnostics Passed” displays. Once the software has initialized successfully, the status indicator lights to indicate the printer is online and an online message appears in the display, followed by the name of the active emulation (the default is LG).



If there is a fault during the self-test, the status indicator flashes and a specific fault message appears on the display (such as “LOAD PAPER”). See page 64 for information on Fault Messages.

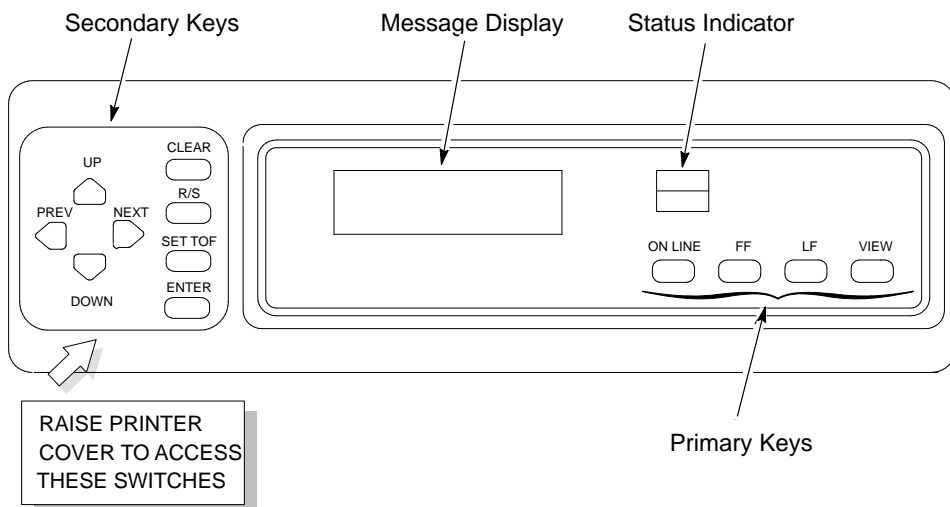


Using the Control Panel

Use the control panel to perform routine operations such as:

- Placing the printer in the online or offline mode
- Advancing or retracting the paper, and setting the top-of-form
- Clearing fault conditions
- Configuring the printer
- Running printer self-tests

Control Panel Layout



The printer's operating modes, message display, status indicator, and control panel keys are described on the following pages.



Operating Modes

The printer operates in one of three modes, as described below:

- **Online Mode** — In online mode, the printer can receive and print data sent from the host. Pressing the **ON LINE** key toggles the printer from offline to online mode. The status indicator is lit in online mode.
- **Offline Mode** — In offline mode, you may perform operator functions, such as loading paper and setting top-of-form. You may also traverse the printer's configuration menus. Pressing the **ON LINE** key toggles the printer from online to offline mode. The status indicator is off in offline mode.
- **Fault Mode** — a fault condition exists that must be cleared before printing can continue. In fault mode, the status indicator is flashing, the alarm beeps three times, and a descriptive fault message displays.

The current operating mode may be selected via control panel keys, or may result from routine operations such as powering on the printer. The current operating mode is frequently indicated as part of the printer display message.

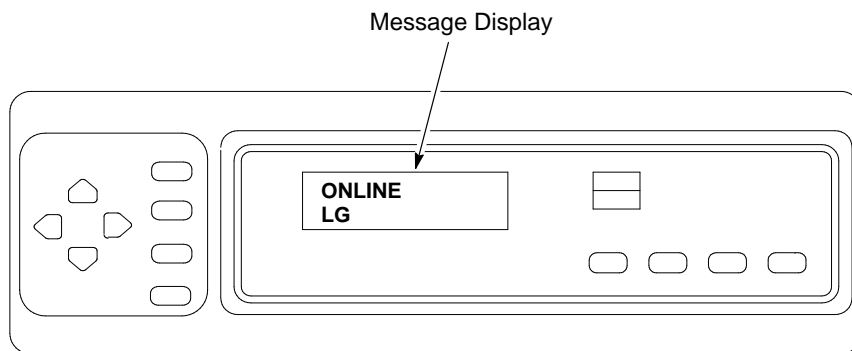


Format Conventions

Messages, keys, and indicators are shown as they appear on the control panel. Key combinations are indicated with the plus (+) sign. For example, "Press **CLEAR+ENTER**" means to press the **CLEAR** key and the **ENTER** key at the same time.

Message Display

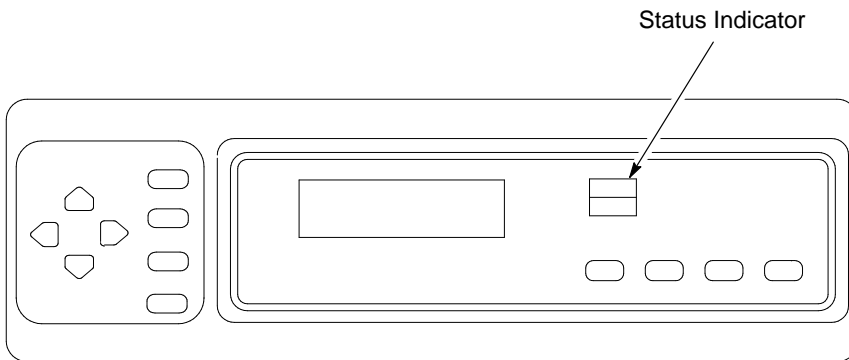
Function Displays operating modes, menu options, and fault messages.



Status Indicator

The status indicator indicates the printer's operating mode, as follows:

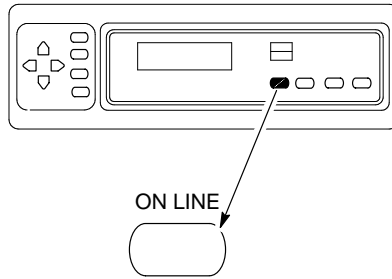
- *On* — Status indicator illuminates continuously when the printer is in online mode.
- *Off* — Status indicator is off when the printer is in offline mode.
- *Flashing* — Status indicator flashes if a fault condition exists and the printer is in Fault mode. An error message will generally display that describes the error condition.



ON LINE

Function Toggles the printer between online and offline modes.

Action To place the printer in online mode, press once. The status indicator remains continuously lit.
To place the printer in offline mode, press once. The status indicator is off.



Result When the printer is in online mode, it is ready to receive data and control commands from the host computer, and prints the data immediately.

When the printer is in offline mode, printing stops after the current line finishes printing. Communication with the host stops, and you may perform operator functions such as setting the top-of-form or configuring the printer.

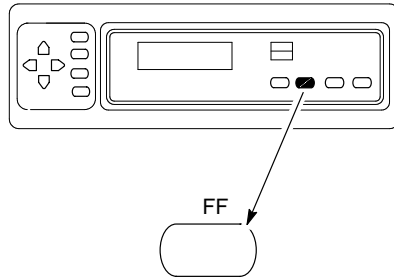


FF (Form Feed)

Function Causes the paper to advance to the top-of-form on the next page.

Action In online or offline mode, press and release to advance the paper to the top-of-form on the next page. If there is data in the printer's buffers, the data will print and then the paper will move to the next top-of-form.

Other In the fault state **FF** does not advance the paper to the next top-of-form; instead, it will slew the paper 11 inches.



LF (Line Feed)

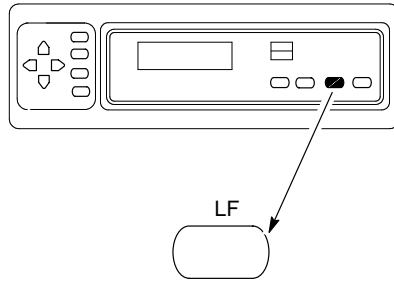
Function Advances the paper one line at a time. Unprinted data in the print buffer will print before the paper moves.

Action With the printer offline, press and release to advance the paper one line at a time.

If there is data in the printer buffer, the data will print before the line feed occurs.

Press and hold to repeat forward paper movement.

Other LF does not operate in the fault or online states.

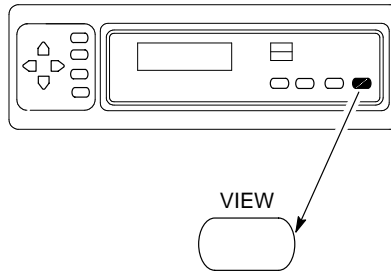


VIEW (Forms Alignment)

Function In offline or online mode, allows you to view and adjust the placement of data on the page, or to remove peel-off labels.

Action In offline mode, press and release to move the last data printed to the tractor area for viewing. Press **VIEW** a second time to move the last data printed back to the print position.

To adjust fine vertical forms alignment while the printer is online and printing, press **VIEW** to stop printing and move the last data printed to the viewing area; press ▲ or ▼ to adjust the paper up or down in 1/75" increments; press **VIEW** a second time to move the paper back to its original print position and return the printer to online.



note

Pressing ON LINE also moves the paper back to its original print position and returns the printer to online.



CLEAR

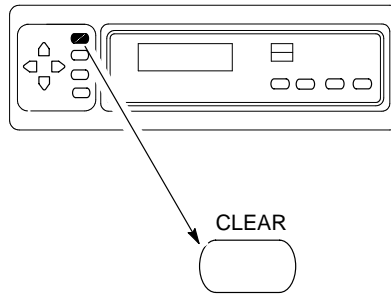
Function Clears a fault message and returns the printer from fault mode to offline mode.

Action After correcting a fault condition, press and release.

Result The fault message is cleared, and the printer returns to offline mode.

Other

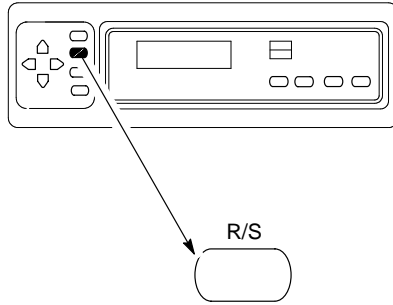
- 1) Press **CLEAR+ENTER** to cancel a print job. The print job must also be stopped from the host system (see page 36).
- 2) Press **CLEAR** to move from anywhere in the configuration menus to the top menu ("OFFLINE/CONFIG. CONTROL")



R/S (Run/Stop)

Function Starts and stops diagnostic tests, and generates a configuration printout.

Action In the configuration menus, when one of the DIAGNOSTICS menu Printer Tests displays (such as Shift Recycle), press **R/S** to start the test. Press **R/S** again to stop the test.



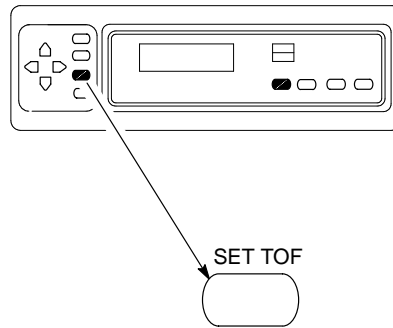
SET TOF (Top-of-Form)

Function Sets the top-of-form on the printer. This key is active only when the printer is offline and will not operate if the printer is in a fault condition.

Action Raise the forms thickness lever; align the first print line (directly below the perforation) with the TOF indicator on the tractor; close the forms thickness lever; then press **SET TOF**. (See page 23 for a complete procedure.)

Result The paper moves down to the print position and aligns to the top-of-form.

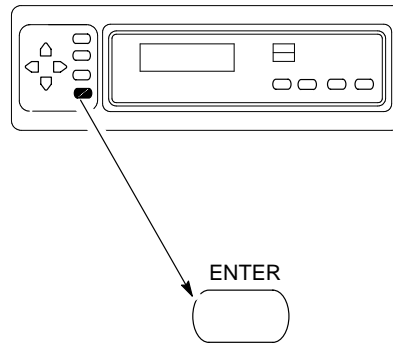
Other This key is not active during a fault condition.



ENTER

Function In the menus, selects the currently displayed option value as the active value.

Action When the display shows the desired configuration value, press and release to select that value as the active value. An asterisk (*) appears next to the active value on the display.



(The **ENTER** key must be unlocked before you can use it to select option values. To unlock the **ENTER** key, press **▲+▼** at the same time from offline mode. To relock the **ENTER** key, press **▲+▼** a second time.)

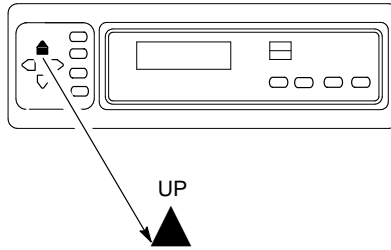
Other Starts and stops printer tests, and generates a configuration printout. Press **ENTER** to start a printer test (or configuration printout). Press again to stop the printer test.



UP and DOWN (▲ and ▼)

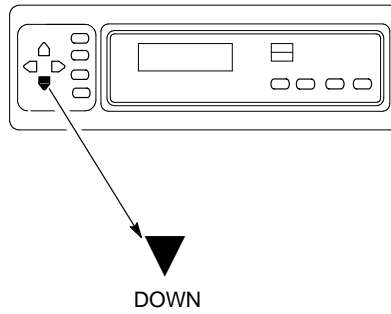
Function Moves up and down between levels in the configuration menus.

In offline mode, press both keys at the same time to toggle the **ENTER** key between locked and unlocked.



Action In the configuration menus, press ▲ to move to a higher level in the menu structure. Press ▼ to move to a lower level in the menu structure.

In offline mode, press ▲+▼ at the same time to unlock the **ENTER** key; press them again to relock the **ENTER** key.



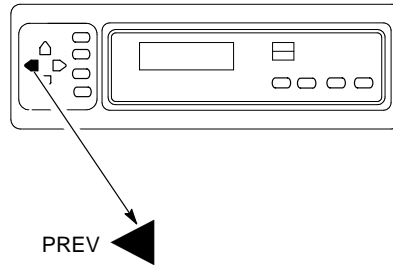
Other After pressing **VIEW**, press ▲ or ▼ to adjust the paper up or down in 1/75" increments for fine vertical forms alignment (see page 11).



PREV and NEXT (◀ and ▶)

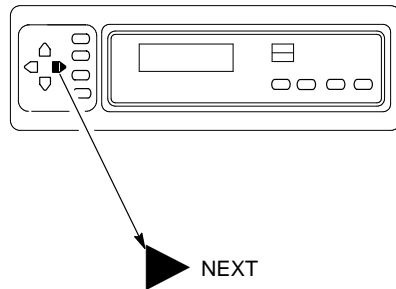
Function Moves between the options on the current level of the configuration menu.

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



Action In the configuration menu, press ◀ to scroll backward or press ▶ to scroll forward through menu selections on the same level.

Press ◀ + ▶ to reset the printer by reloading the power-up configuration and resetting the printer's internal state.





Loading Paper

This procedure shows you how to load paper into an empty printer or change the paper supply to a different size.

note

To reload the paper after a "LOAD PAPER" fault message, refer to page 26.

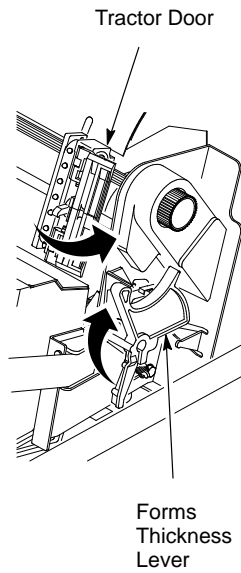
- 1** Press **ON LINE** to place the printer in offline mode.

Open the printer cover.

Unload the current paper, if necessary (page 30).

- 2** Raise the forms thickness lever as far as it will go.

Open both tractor doors.

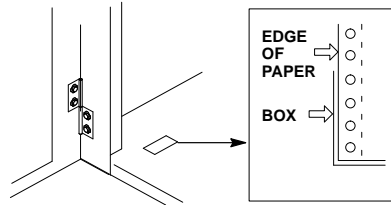


loading paper

- 3** Open the cabinet front door.

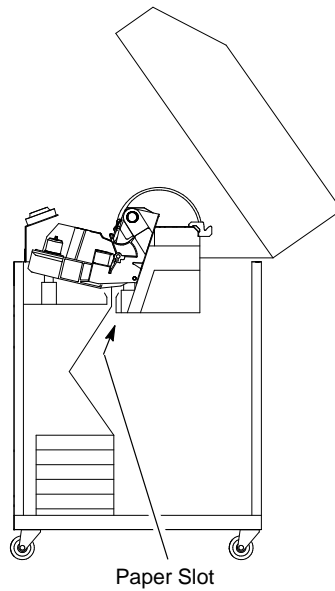
Align the paper supply with the label on the floor.

Ensure that the paper pulls freely from the box.



- 4** Feed the paper up through the paper slot inside the cabinet.

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



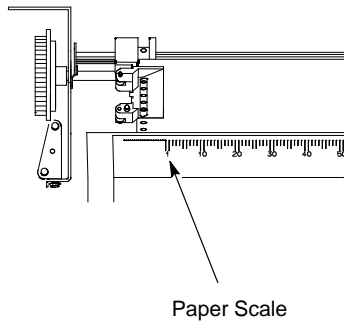
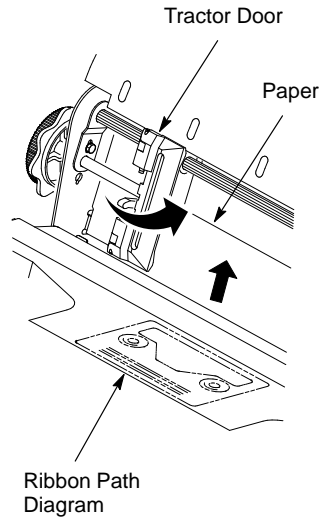
5 Pull the paper above and behind the ribbon mask. (The ribbon mask location is shown on the ribbon path diagram.)

6 Load the paper on the left tractor and close the tractor door.

7 Normally, you should not need to adjust the position of the left tractor.

If adjustment is necessary, unlock the left tractor. Slide the tractor until it is aligned directly to the left of the number "1" on the paper scale and lock it.

(You can also use the paper scale to count columns.)



caution

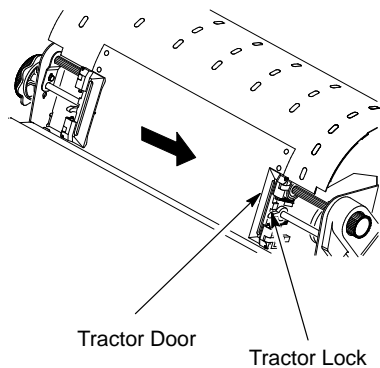
To avoid damage to the printer caused by printing on the platen, always position the left tractor unit directly to the left of the "1" mark on the paper scale.



8 Unlock the right tractor.

Load the paper onto the sprockets and close the tractor door.

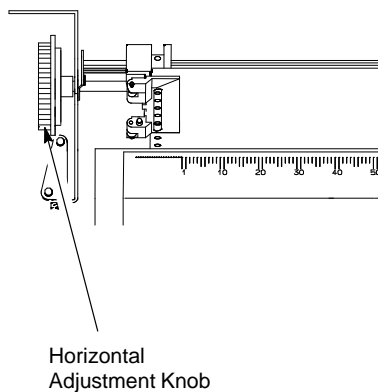
If necessary, slide the right tractor to remove paper slack or to adjust for various paper widths. Then, lock the tractor.



After both tractors are secured, you may use the horizontal adjustment knob to make fine horizontal paper adjustments.

9 Close the cabinet front door.

10 Continue on to the next section to set the top-of-form.



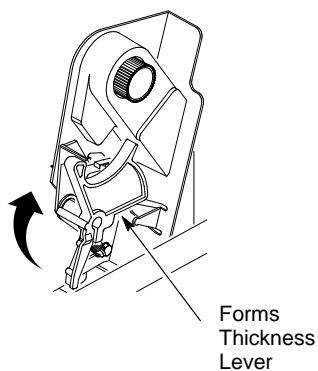
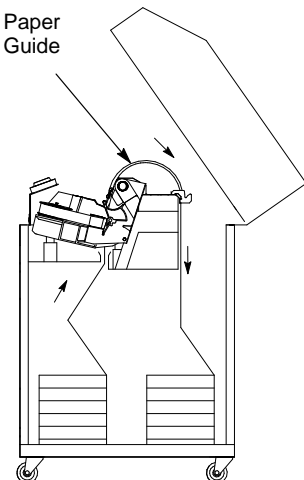
Setting Top-of-Form

The top-of-form setting determines where the first line of print appears on a page. Be sure to set the top-of-form under the following conditions:

- Before each new print job
- After loading paper
- After clearing a paper jam

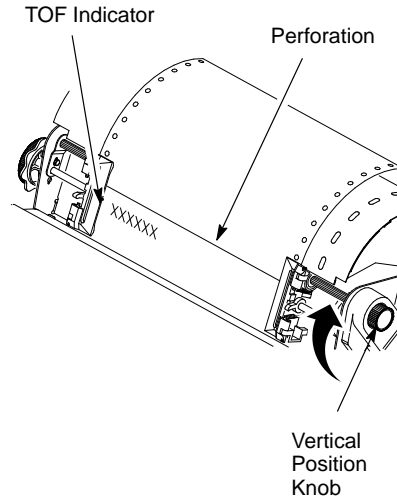
Follow this procedure to set the top-of-form.

- 1** Make sure the printer is in offline mode. (Press **ON LINE** to toggle from online to offline mode.)
- 2** Press **FF** several times to make sure the paper feeds properly beyond the tractors and over the lower paper guide. Feed sufficient paper to ensure the paper stacks correctly.
- 3** Open the printer cover. Raise the forms thickness lever as far as it will go. (If the cover and lever are already raised, go directly to Step 4.)



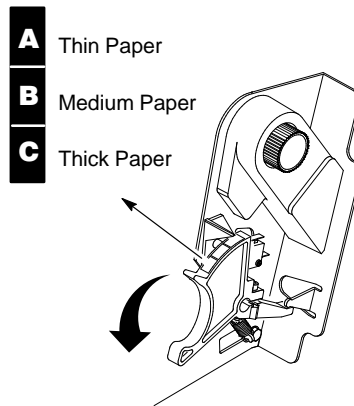
- 4** Align the top of the first print line with the TOF indicator on the tractor by rotating the vertical position knob.

The first print line on the form should be 1/2 inch or more from the perforation for best print quality.



- 5** Lower the forms thickness lever. Set it to match the paper thickness.

(The A–B–C scale corresponds approximately to 1–, 3–, and 6–part paper thickness. Adjust until you have the desired print quality.)



note

Do not set the forms thickness lever too tightly; excessive friction can cause paper jams, ribbon jams with potential for ribbon damage, smeared ink, or wavy print.



- 6** Press **CLEAR** to clear any fault messages (such as “LOAD PAPER”) from the Liquid Crystal Display.

- 7** Press **SET TOF**. The top-of-form you have set moves down to the print position. (If there is data in the buffer, the paper moves back to the last print position.)

- 8** Press **ON LINE** and close the printer cover.



Reloading Paper

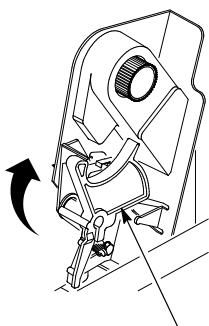
Follow this procedure when “LOAD PAPER” displays. (This message occurs when the last sheet of paper passes through the paper slot.) Use this procedure to reload paper without removing the last sheet of the old paper supply.

note

If you are using multi-part paper and it is too thick for the new paper to be loaded over the existing paper, do not use this procedure. Instead, remove the existing paper and load new paper using the loading paper procedure (page 19).

- 1 Raise the printer cover. Raise the forms thickness lever as far as it will go.

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



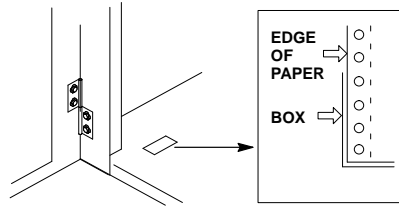
Forms
Thickness
Lever



2 Open the cabinet front door.

Align the paper supply with the label on the floor.

Ensure that the paper pulls freely from the box.

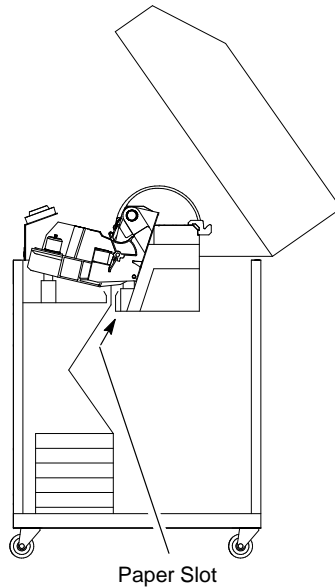


3 Locate the paper slot inside the cabinet and feed the paper up through the slot.

note

It may be easier to feed one corner of the new paper up through the slot first. When this corner can be grasped from the top, rotate the paper back to the normal position. If necessary, gently press the existing paper back.

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



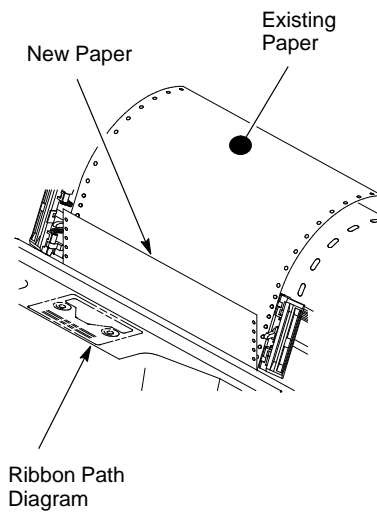
- 4** Pull the new paper above and behind the ribbon mask, but in front of the existing paper. (The ribbon mask location is shown on the ribbon path diagram.)

If necessary, gently press the existing paper back.

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

- 5** Load the new paper over the existing paper.

Open and load the tractors one at a time to prevent the paper from slipping.



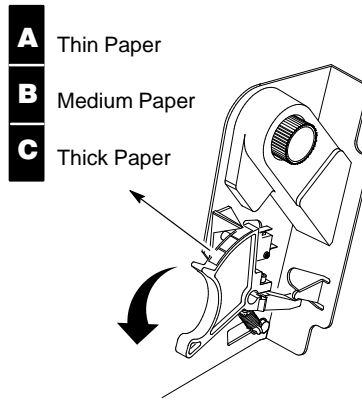
note

Ensure that the top edge of the new paper lines up with the top perforation of the existing paper.



- 6 Lower the forms thickness lever. Set it to match the paper thickness.

(The A–B–C scale corresponds approximately to 1–, 3–, and 6–part paper thickness. Adjust until you have the desired print quality.)



caution

Do not set the forms thickness lever too tightly; excessive friction can cause paper jams, ribbon jams with potential for ribbon damage, smeared ink, or wavy print.

- 7 Press **CLEAR** to clear the "LOAD PAPER" fault message from the Liquid Crystal Display.
- 8 Close the printer cover.
Close the cabinet front door.
- 9 Press **ON LINE** to place the printer in online mode and resume printing.
- 10 Open the cabinet back door and ensure that the paper folds in the stacker the same way it does in the supply area, then close the cabinet back door.



Unloading Paper

To unload paper from the printer, perform the following steps.

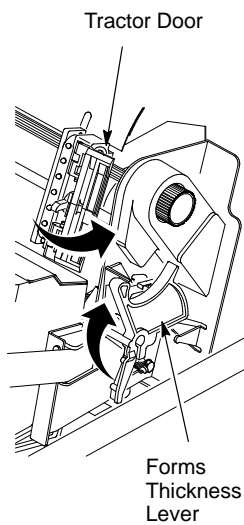
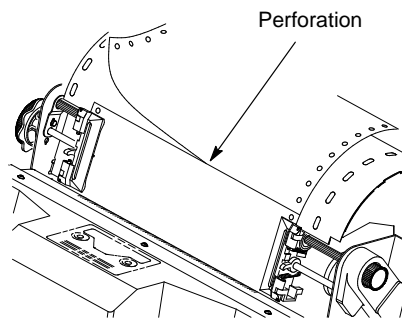
- 1** Press **ON LINE** to place the printer in offline mode, and open the printer cover.

- 2** Tear off the paper at the perforation.

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

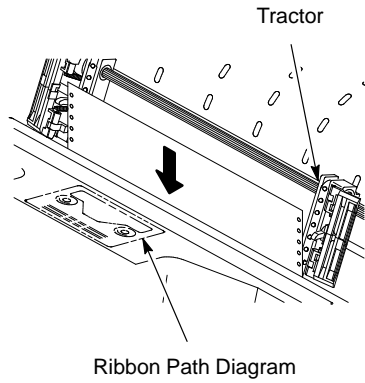
- 3** Raise the forms thickness lever as far as it will go.

Open both tractor doors.



- 4 Remove the paper from the tractors. Open the cabinet front door. *Gently* pull the paper down through the paper slot.

Do not let the paper perforations or tractor holes damage the ribbon mask. (The ribbon mask location is shown on the ribbon path diagram.)



Allow the paper to fall into the paper supply area.

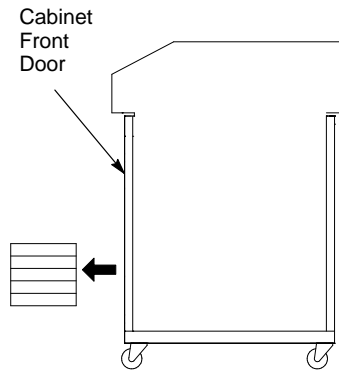
caution

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

- 5 Remove the stacked paper from the cabinet floor.

- 6 Close the cabinet front door.

- 7 Close the printer cover.



Replacing the Ribbon

When replacing ribbons, use only the ribbons listed below:

note

Use of ribbons that do not meet Digital specifications may void warranty.

Part Number	Description
LGxxR-SR	One OCR Application 60-yard ribbon (LG04 ribbon) Length: 60 yards (54.84 m) Width: 1 inch (2.54 cm) Thickness: .0039 inches (.009906 cm)
LGxxR-LR	One OCR Application 100-yard ribbon (LG04 ribbon) Length: 100 yards (91.4 m) Width: 1 inch (2.54 cm) Thickness: .0039 inches (.009906 cm)

To order replacement ribbons, call
1-800-DIGITAL.



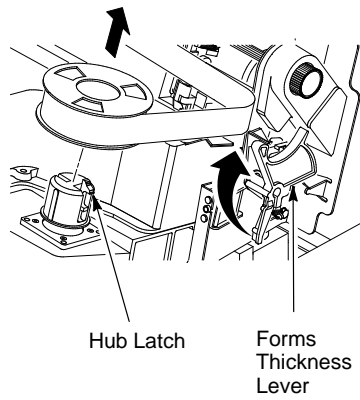
1 Press **ON LINE** to place the printer in offline mode, and open the printer cover.

2 Remove the old ribbon:

- a.** Raise the forms thickness lever as far as it will go.
- b.** Press in on the hub latches and lift the ribbon spools off the hubs. Lift the ribbon out of the ribbon path. (Refer to the ribbon path diagram on the shuttle cover.)

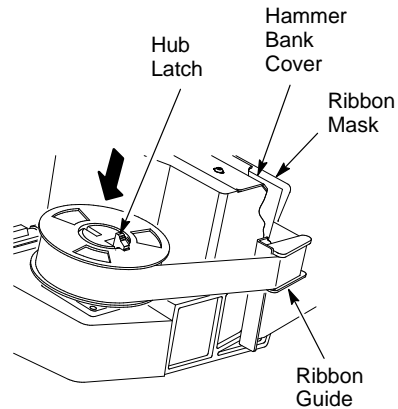
c. Discard the old ribbon.

3 If necessary, clean the interior of the printer. (See page 59.)



4 Install the new ribbon:

- a. With the ribbon to the outside, place the right spool on the right hub. Press down on the spool until the hub latch snaps in place.
- b. Thread the ribbon around the ribbon guide and along the ribbon path. (Refer to the ribbon path diagram on the shuttle cover.) Be sure to thread the ribbon between the hammer bank cover and the ribbon mask.



caution

The ribbon must not be twisted. A twisted ribbon can lower print quality, shorten ribbon life, or cause paper jams.

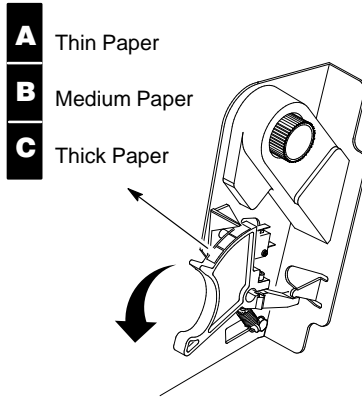
- c. Place the left spool on the left hub. Press down on the spool until the hub latch snaps into place.

Hand-turn the right spool to make sure the ribbon tracks correctly in the path and ribbon guides.



- 5** Lower the forms thickness lever. Set it to match the paper thickness you are using.

(The A–B–C scale corresponds approximately to 1–, 3–, and 6–part paper thickness. Adjust until you have the desired print quality.)



caution

Do not set the forms thickness lever too tightly; excessive friction can cause paper jams, ribbon jams with potential for ribbon damage, smeared ink, or wavy print.

- 6** Close the printer cover.
- 7** Press **ON LINE** to return the printer to online mode.



Canceling a Print Job

The procedure to cancel a print job depends on the printer emulation and your application software. See your System Administrator for additional information.

- 1** Place the printer offline.
- 2** From the host system, stop the print job.

note

*If the print job is not stopped from the host system before pressing **CLEAR + ENTER**, the print job will continue with data missing when the printer returns to online.*

Exercise caution to prevent unwanted data loss occurrences as this function will delete unprinted data in the printer. This function is active only in an offline condition; the purpose of this function is to eliminate the necessity of printing unwanted data when print jobs are canceled.

- 3** Press **CLEAR + ENTER**.
- 4** Set the top-of-form, as described on page 23.



CONFIGURATION

◆ Configurations and Parameters	38
◆ Saving Configurations	44
◆ Printing Configurations	46
◆ Loading Configurations	48
◆ Deleting Configurations	50
◆ The Power-Up Configuration	52



Configurations and Parameters

The following pages describe how to save, print, load and delete entire configurations, as well as how to select a power-on configuration.

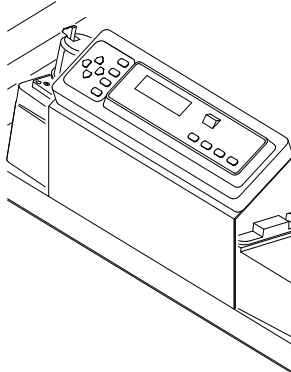
Configurations

A configuration is a group of parameter settings. For example:

- 8 lpi
- 10 cpi
- Data processing typeface, etc.

Nine configurations are available. Your printer has a preset factory configuration that cannot be changed or deleted, configuration 0. Configurations 1 to 8 are provided so that you can store custom configurations to meet specific print job requirements.

To create a custom configuration, modify any printer parameters as needed from the default values, then save the modified configuration (as number 1 to 8) using the "Save Config." menu option.



Once you have defined and saved a configuration to nonvolatile memory, it will not be lost if you power off the printer. You can load or delete configurations; you can also modify and overwrite (resave) them.

note

Configurations 1 to 8 are undefined until you define them using the "Save Config." menu option.



Parameters

Printer parameters are settings such as line spacing (lpi), characters per inch (cpi), typeface, etc. You can change a parameter by pressing keys on the operator panel or by sending a control code from the host computer.

A parameter such as 8 lpi is effective as long as the printer is on. To save the 8 lpi parameter, you must use the operator panel and save it as part of a configuration.

To learn more about the configuration menus and how to change individual parameters such as line spacing, typeface, etc., refer to the *LG^{plus} Series Setup Guide* or the programming reference manual for each emulation.

Control Codes

Control codes override parameters that were changed with the operator panel. For example, if you set line spacing to 6 lpi with the operator panel, and application software later changed this to 8 lpi with a control code, then 8 lpi would be the new, active parameter.

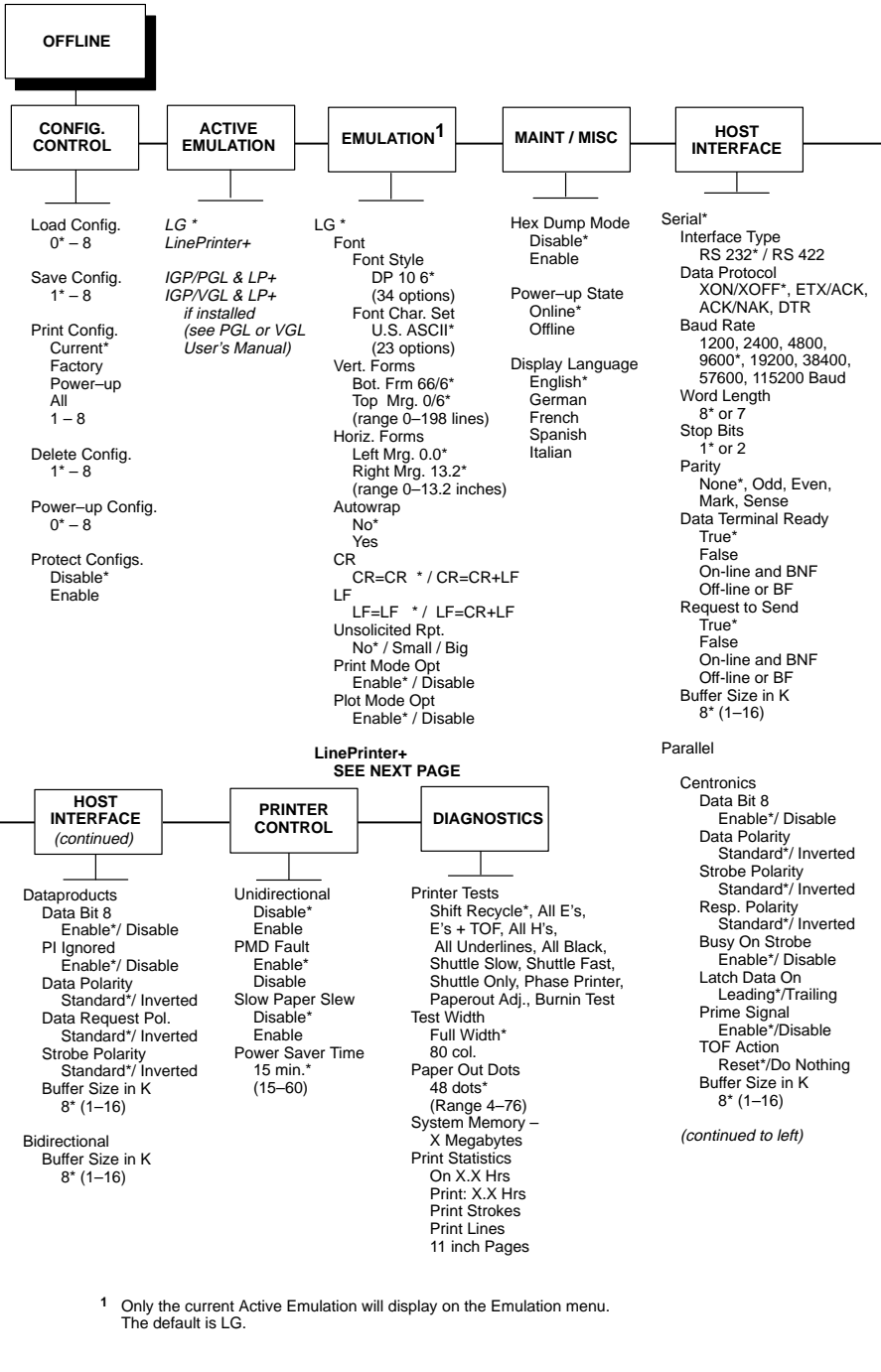


The Configuration Menus

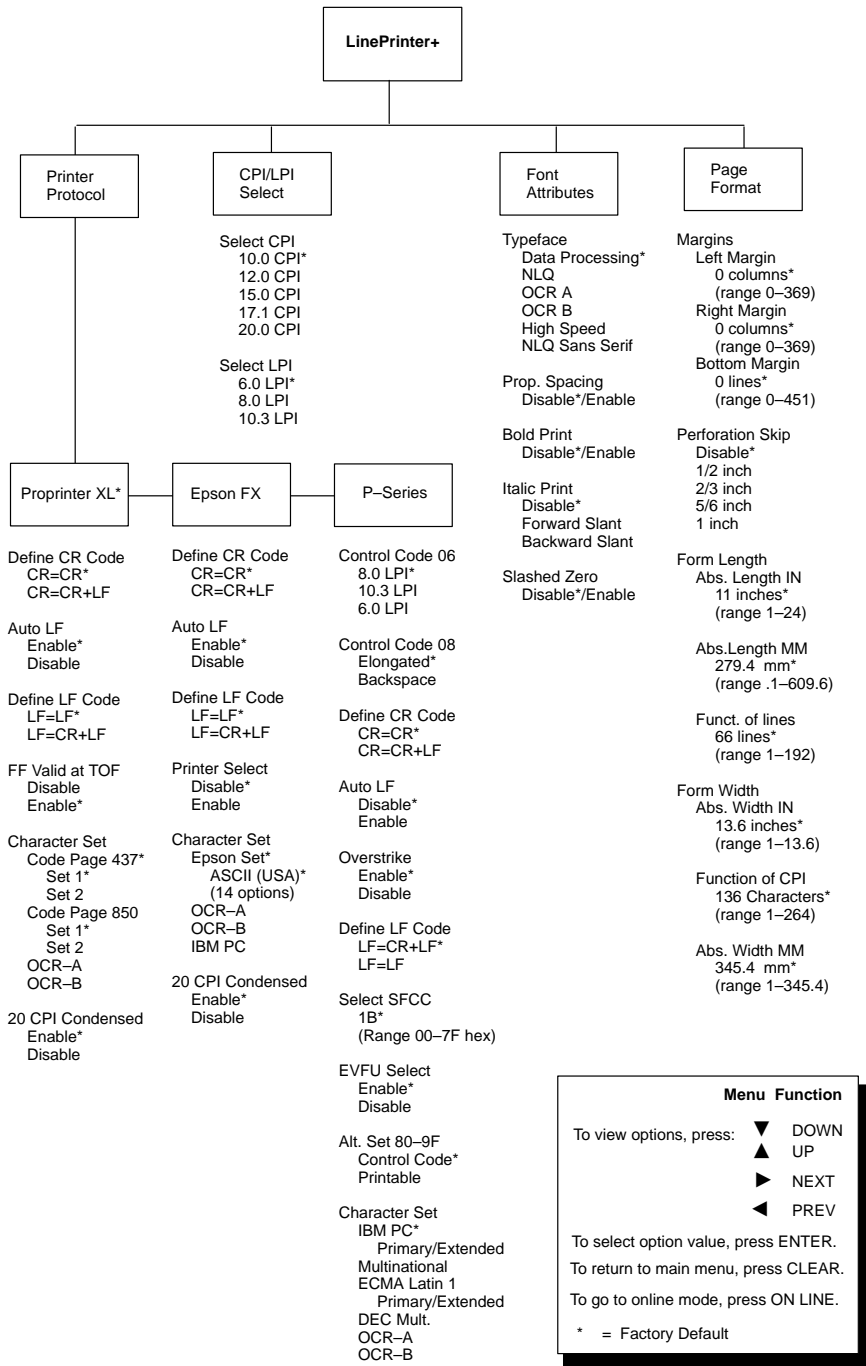
The following two pages show a summary of the entire set of configuration menus available with the *LG^{plus} Series*. Following this are several procedures for configuring particular menu options from the Config. Control Menu.

Refer to the *LG^{plus} Series Setup Guide* for descriptions of the configuration menu options.





configurations and parameters

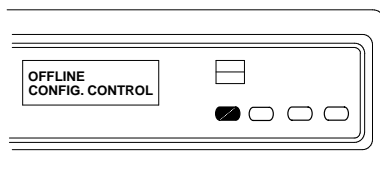


Saving Configurations

You can save up to eight unique configurations. They are stored in memory and will not be lost if you turn off the printer.

Configuration 0 is the factory–preset configuration and cannot be modified or deleted.

- 1 Press **ON LINE** to place the printer offline, and raise the printer cover.



- 2 Press **▲** and **▼** simultaneously to unlock the control panel. The message "UNLOCKED" displays briefly.



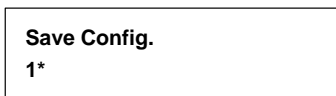
- 3 Press **▼**.



- 4 Press **▶** repeatedly until you reach the Save Config. parameter.



- 5 Press **▼**.



6 Press ► or ◀ until the desired configuration number (1–8) displays.

Save Config.
2

7 Press **ENTER** to select the value. An asterisk (*) appears next to the value in the display. Your active configuration is now saved as configuration 2.

Save Config.
2*

8 Press ▲ and ▼ simultaneously to lock the control panel. The message “LOCKED” displays briefly.

ENTER SWITCH
LOCKED

9 Press **ON LINE**. Close the printer cover. The printer is ready to resume printing.

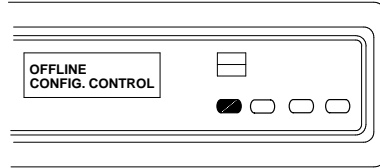
ONLINE



Printing Configurations

The configuration printout lists the stored configuration parameters (line spacing, forms length, etc.). You can print the following configurations: current, factory, power-up, the customized configurations (1–8), or all of the configurations.

- 1** Press **ON LINE** to place the printer offline, and raise the printer cover.



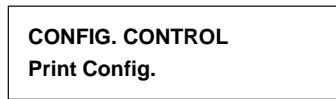
- 2** Press **▲** and **▼** simultaneously to unlock the control panel. The message "UNLOCKED" displays briefly.



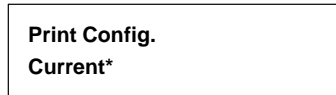
- 3** Press **▼**.



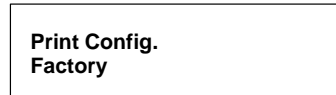
- 4** Press **▶** repeatedly until you reach the Print Config. parameter.



- 5** Press **▼**.



- 6** Press **▶** or **◀** until the desired option displays.



- 7** Press **ENTER**. The configuration prints. Tear off the configuration printout.

OFFLINE
CONFIG. CONTROL

note

*If a you try to print a configuration that does not yet exist (i.e., you have not previously saved values to that numbered configuration), then the following fault message will display:
"CONFIG. DOES NOT EXIST / Save First"*

- 8** Press **▲** and **▼** simultaneously to lock the control panel. The message "LOCKED" displays briefly.

ENTER SWITCH
LOCKED

- 9** Press **ON LINE**. Close the printer cover. Save the printout in a safe place. The printer is ready to resume printing.

ONLINE

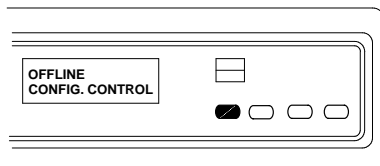


Loading Configurations

While the printer is on, you can load any of the eight customized configurations or the factory default configuration.

The configuration you load will remain in effect as long as the printer is on. When you turn the power off and then back on, the designated power-up configuration loads. See page 52.

- 1** Press **ON LINE** to place the printer in offline mode, and open the printer cover.



- 2** Press **▲** and **▼** simultaneously to unlock the control panel. The message "UNLOCKED" displays briefly.

ENTER SWITCH
UNLOCKED

- 3** Press **▼**.

OFFLINE
Load Config.

- 4** Press **▼**.

LOAD CONFIG.
0*

- 5** Press **▶** or **◀** until the configuration you want to load displays.

LOAD CONFIG
2



6 Press **ENTER**.

Loading Saved
Configuration

Load Config.
2*

note

If a you try to load a configuration that does not yet exist (i.e., you have not previously saved values to that numbered configuration), then the following fault message will display:

"CONFIG. DOES NOT EXIST / Save First"

7 Press **▲** and **▼** simultaneously to lock the control panel. The message "LOCKED" displays briefly.

ENTER SWITCH
LOCKED

8 Press **ON LINE** and close the printer cover. The printer is ready to resume printing.

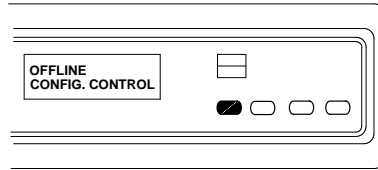
ONLINE



Deleting Configurations

You can delete any of your customized configurations. The factory preset configuration 0 cannot be deleted.

- 1 Press **ON LINE** to place the printer offline, and open the printer cover.



- 2 Press **▲** and **▼** simultaneously to unlock the control panel. The message "UNLOCKED" displays briefly.

ENTER SWITCH
UNLOCKED

- 3 Press **▼**.

CONFIG. CONTROL
Load Config.

- 4 Press **▶** repeatedly until you reach the Delete Config. parameter.

CONFIG. CONTROL
Delete Config.

- 5 Press **▼**.

Delete Config.
1*

- 6 Press **▶** or **◀** until the configuration you want to delete displays.

Delete Config.
3



7 Press **ENTER**.

Deleting
Configuration

Delete Config.
3*

note

If a you try to delete a configuration that does not yet exist (i.e., you have not previously saved values to that numbered configuration), then the following fault message will display:

"CONFIG. DOES NOT EXIST / Save First"

8 Press **▲** and **▼** simultaneously to lock the control panel. The message "LOCKED" displays briefly.

ENTER SWITCH
LOCKED

9 Press **ON LINE** and close the printer cover. The printer is ready to resume printing.

ONLINE



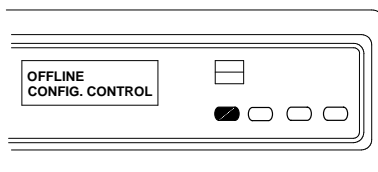
The Power-Up Configuration

When you power on the printer for the first time, it loads configuration 0, the factory default configuration.

If you save a configuration, such as configuration 1, and turn the power off and then back on, the printer will load the designated power-up configuration, not the last saved configuration.

For your convenience, you can specify which configuration (0–8) should be the power-up configuration.

- 1 Press **ON LINE** to place the printer offline, and open the printer cover.



- 2 Press **▲** and **▼** simultaneously to unlock the control panel. The message "UNLOCKED" displays briefly.

**ENTER SWITCH
UNLOCKED**

- 3 Press **▼**.

**CONFIG. CONTROL
Load Config.**

- 4 Press **▶** repeatedly until you reach the Power-up Config. parameter.

**CONFIG. CONTROL
Power-up Config.**



5 Press ▼.

Power-up Config.
0*

6 Press ► or ◀ until the configuration you want displays.

Power-up Config.
4

7 Press ENTER.

Loading Saved
Configuration

note

If a you try to select a configuration that does not yet exist (i.e., you have not previously saved values to that numbered configuration), then the following fault message will display:

"CONFIG. DOES NOT EXIST / Save First"

Power-up Config.
4*

8 Press ▲ and ▼ simultaneously to lock the control panel. The message "LOCKED" displays briefly.

ENTER SWITCH
LOCKED

9 Press ON LINE and close the printer cover. The printer is ready to resume printing.

ONLINE





TROUBLESHOOTING

- ◆ Clearing Paper Jams 56
- ◆ Cleaning the Printer 59
- ◆ Solving Print Quality Problems 62
- ◆ Fault Messages 64



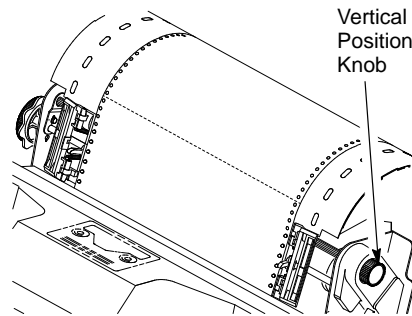
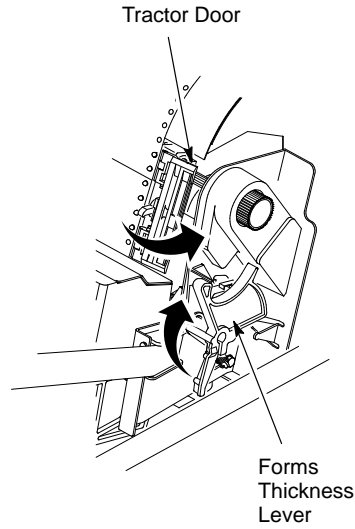
Clearing Paper Jams

Perform the following steps to clear a paper jam.

caution

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

- 1 Open the printer cover.
- 2 Raise the forms thickness lever as far as it will go.
- 3 Open both tractor doors.
- 4 Check the paper path and tractors for jammed or torn paper. Remove any pieces of paper by turning the vertical position knob.

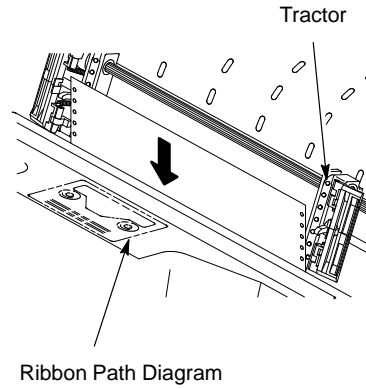


5 Check that the ribbon mask has not been deformed in such a way as to block the paper path. (If the ribbon mask is damaged or bent, contact an authorized service representative.)

6 Check the narrow paper path between the face of the platen and the ribbon mask for pieces of torn paper and ribbon lint. Refer to the ribbon path diagram on the shuttle cover.

7 Reload the paper on the tractors.

8 If you need to load a new box of paper, go to page 19. If you need to set the top-of-form after reloading paper, go to page 23 and start at Step 2.

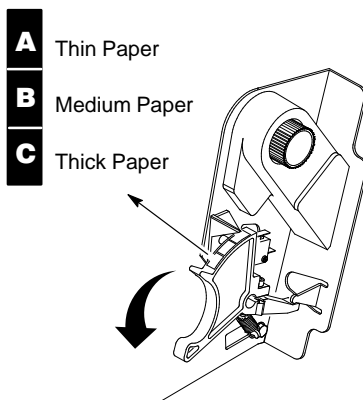


- 9** Lower the forms thickness lever.
Set it to match the paper
thickness.

The A–B–C scale corresponds
approximately to 1–, 3–, and
6–part paper thickness. Adjust
until you have the desired print
quality.

note

*Do not set the forms thickness lever too
tightly; excessive friction can cause paper
jams, ribbon jams with potential for ribbon
damage, smeared ink, or wavy print.*



- 10** Close the printer cover.

- 11** Press **ON LINE** to resume printing.



Cleaning the Printer

Periodic cleaning ensures efficient operation and clear print quality.

warning

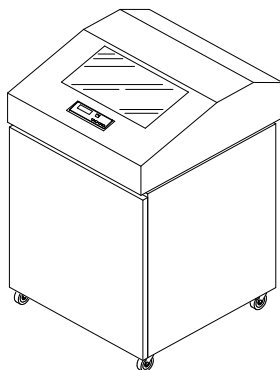
Disconnect the power source before cleaning the printer.

Cleaning Exterior of Cabinet

Clean the outside of the cabinet with a soft, lint-free cloth and mild detergent. (Dishwashing liquid works well.) Do not use abrasive powders or chemical solvents. Clean the windows with plain water or mild window cleaner.

caution

Always apply the cleaning solution to the cloth; never pour cleaning solution directly onto the printer.



Cleaning Inside the Cabinet

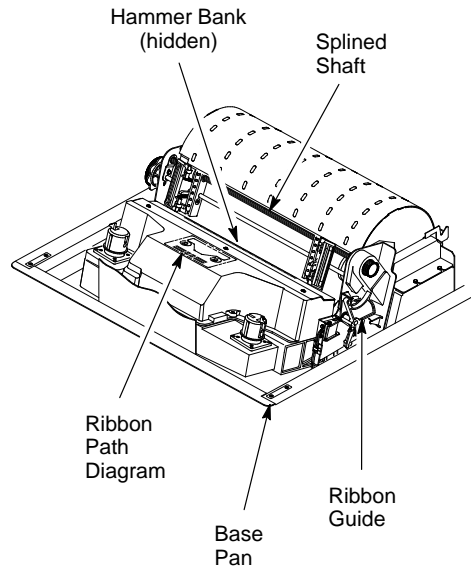
Over time, it is normal for particles of paper and ink to accumulate inside the printer. Paper dust and ink build-up must be removed periodically to avoid degraded print quality. To clean the interior of the printer, perform the following steps.



caution

To avoid damage to the printer, be extremely careful when vacuuming and dusting around the hammer bank and surrounding areas.

- 1** Power off the printer and unplug the power cord.
- 2** Unload the paper supply (page 30).
- 3** Remove the ribbon (step 2, page 33).
- 4** Using a soft-bristled, non-metallic brush, remove dust particles from the paper path, ribbon guides, and ribbon path. (Refer to the ribbon path diagram on the shuttle cover.)
- 5** Brush and vacuum accumulated dust or residue, especially in the tractor and base pan areas, and around the exterior of the hammer bank.



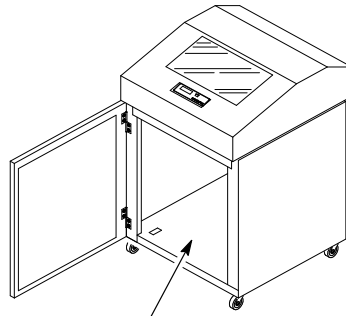
- 6** Wipe the splined shaft with a soft cloth.
- 7** Using a cloth dampened with anhydrous (not diluted with water) alcohol, clean the ribbon guides. Do not let alcohol drip into the hammer bank.

- 8** Brush and vacuum inside the lower cabinet.

Wipe the lower cabinet interior with a clean, lint-free cloth damp (not wet) with water and mild detergent.

Dry the interior with a dry, clean, lint-free cloth.

- 9** Load the paper (page 19) and reinstall the ribbon (page 34).



Interior of Lower Cabinet



Solving Print Quality Problems

If you are having print quality problems, locate your printer problem in the table below and do the Corrective Action. If more than one corrective action task is listed, test the printer after each task. If the problem persists, contact your authorized service representative.

Problem	Corrective Action
Poor print quality: dark print light print light print on half the page missing dots or characters smeared print wavy vertical lines	<ol style="list-style-type: none"> 1 Adjust the forms thickness lever setting. (Print quality can be affected if it is too loose or too tight.) 2 Adjust the paper tension horizontally by moving the right tractor (print quality can be affected if the paper is too loose or too tight). 3 Make sure the ribbon threads around the ribbon guides and between the hammer bank cover and ribbon mask, as shown on the ribbon path diagram. Turn the ribbon spools to ensure that the ribbon tracks correctly in the ribbon path. 4 Clean the printer (see page 59). 5 Replace the ribbon (page 32) with an approved ribbon.
Torn or damaged forms	<ol style="list-style-type: none"> 1 Reset the forms thickness lever for thicker paper. 2 Adjust the paper tension horizontally by moving the right tractor (print quality can be affected if the paper is too loose or too tight). 3 Check the paper slot for foreign material.
<i>continued next page</i>	



Problem	Corrective Action
Loss of forms position	1 Set the forms thickness lever for thicker paper.
Asterisk does not appear after you change a configuration parameter with the ENTER key.	1 With the printer off-line, press UP and DOWN simultaneously so that the display reads "UNLOCKED". Display the configuration option you want to change. Press ENTER when the option is on the message display.
The configuration printout does not represent configuration parameters selected and changed.	1 Verify that you have saved the current configuration (see page 44).
Lost dots (incompletely formed characters)	1 Lower the forms thickness lever. 2 Clear the paper path of any obstructions. 3 If problems persist, contact your Digital Service Representative.
Horizontally or vertically misaligned character positions	
Erratic character height	
Vertically deformed print	



Fault Messages

When a fault condition occurs, the status lamps flash, the alarm sounds, and a specific message appears in the display. When this happens, correct the fault immediately.

You can correct most faults by performing a simple procedure, such as clearing a paper jam or reloading paper. The following pages list common fault messages and explain how to correct the fault conditions.

For more serious faults, indicated by an asterisk (*) following the fault message, a Digital Customer Service Engineer may be needed.

Perform the following steps to clear a fault message after you have corrected the fault condition, *and* before you call a Digital Customer Service Engineer for the faults indicated by an asterisk (*):

- 1** Press **CLEAR**, then **ON LINE** to continue printing.

- 2** If the fault message reappears, turn the printer power off, wait 15 seconds, then turn the printer back on. Run your print job again. If the message does not reappear during printing, no further attention is required. If the fault message reappears, go to step 3.

- 3** Press **CLEAR**, then **ON LINE** again and resume printing. If the message does not appear, no further attention is required. If the message reappears, call your Digital Customer Service Engineer.



8.5V PWR FAIL*	<i>8.5V PWR FAIL*</i> Internal power failure. Contact your Digital Customer Service Engineer.
15V CTL FAIL*	<i>15V CTL FAIL*</i> Controller voltage failure. Contact your Digital Customer Service Engineer.
23.5V CTL FAIL*	<i>23.5V CTL FAIL*</i> Controller voltage failure. Contact your Digital Customer Service Engineer.
48V PWR FAIL*	<i>48V PWR FAIL*</i> Internal power failure. Contact your Digital Customer Service Engineer.
ACCESS NULL PTR*	<i>ACCESS NULL PTR*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
A TO D OVERUN*	<i>A TO D OVERUN*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
BAD VFU CHANNEL	<i>BAD VFU CHANNEL</i> Error in channel assignment for a Vertical Format Unit (VFU), for one of the LinePrinter Plus emulations. Refer to the <i>LinePrinter Plus Programming Reference Manual</i> for further information.
BUFFER OVERFLOW	<i>BUFFER OVERFLOW</i> Host sends data after the printer buffer is full. (Serial interface.) Check your serial host interface parameter settings; if necessary, adjust them so that they match the settings of the attached host.



CLEAR PAPER JAM

CLEAR PAPER JAM
Clear jam and reload paper (see page 56). If this message recurs, contact your Digital Customer Service Engineer.

CLOSE PLATEN

CLOSE PLATEN
The forms thickness lever is open. Close the forms thickness lever.

COIL HOT

COIL HOT
One or more hammer coils are overheating. Contact your Digital Customer Service Engineer.

CTL VOLT FAIL*

*CTL VOLT FAIL**
Controller voltage failure. Contact your Digital Customer Service Engineer.

DRVR CIR BAD*

*DRVR CIR BAD**
Hammer coil count test failed. Contact your Digital Customer Service Engineer.

ENERGY STAR

ENERGY STAR
Status message: printer is in low-energy idle state, all fans and higher voltages are off, only+5Vdc logic circuits are active. No action required.

EXHAUST FAN FLT

EXHAUST FAN FLT
Sensors cannot detect current in fan circuit. Power off the printer and remove the paper path. Check that the fan cable connector is connected. Check for obstruction of vents and fan airway, and remove any obstructions. Check for items beneath the printer blocking cabinet vents. Power back on the printer. If this message recurs, contact your Digital Customer Service Engineer.



FIRMWARE ERROR

FIRMWARE ERROR

Application software tried to perform an illegal printer function or damaged memory detected on CMX board. Contact your Digital Customer Service Engineer.

FRAMING ERROR

FRAMING ERROR

Serial framing error (serial interface). Check your serial host interface parameter settings; if necessary, adjust them so that they match the settings of the attached host.

HAM. COIL OPEN*

*HAM. COIL OPEN**

Electrical malfunction of one or more hammer coils. Contact your Digital Customer Service Engineer.

HB NOT INSTALLED*

*HB NOT INSTALLED**

Self-test does not detect hammer coils. Contact your Digital Customer Service Engineer.

HMR BANK FAN FLT

HMR BANK FAN FLT

Sensors cannot detect current in fan circuit. Power off printer and remove paper path. Check that fan cable is connected. Check for obstruction of vents and fan airway; remove any obstructions. Check for items beneath the printer blocking cabinet vents. Power back on the printer. If this message recurs, contact your Digital Customer Service Engineer.

ILL EXT BUS ACC*

*ILL EXT BUS ACC**

Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.



ILL INST ACCSS*

*ILL INST ACCSS**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

ILLGL OPR ACCSS*

*ILLGL OPR ACCSS**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

INTAKE FAN FAULT

INTAKE FAN FAULT
Sensors cannot detect current in fan circuit. See description for HMR BANK FAN FLT.

LO DRV. SHORT*

*LO DRV. SHORT**
Circuit(s) on the hammer bank or in the hammer bank power cable shorted to ground. Contact your Digital Customer Service Engineer.

LOAD PAPER

LOAD PAPER
Printer is out of paper. Load paper.

PAP BAD TABLE*

*PAP BAD TABLE**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

PAP BSY TOO LNG*

*PAP BSY TOO LNG**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

PAP FIFO OVERFL*

*PAP FIFO OVERFL**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.



PAP FIFO UNDRFL*	<i>PAP FIFO UNDRFL*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
PAP ILLGL ST*	<i>PAP ILLGL ST*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
PAP INCMPL ENER*	<i>PAP INCMPL ENER*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
PAP INVLD CMD*	<i>PAP INVLD CMD*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
PAP INVLD PARM*	<i>PAP INVLD PARM*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
PAP NOT SCHED*	<i>PAP NOT SCHED*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
PAP NT AT SPEED*	<i>PAP NT AT SPEED*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
PAP UNEXP INT*	<i>PAP UNEXP INT*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.



PARITY ERROR

PARITY ERROR
Parity error (serial interface). Check your serial host interface parameter settings; if necessary, adjust them so that they match the settings of the attached host.

PLAT INV CMD*

*PLAT INV CMD**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

PLAT INV PARM*

*PLAT INV PARM**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

PLAT INV STATE*

*PLAT INV STATE**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

POWER SUPPLY HOT

POWER SUPPLY HOT
Circuits are overheating on the power supply board. Contact your Digital Customer Service Engineer.

PRINTER HOT

PRINTER HOT
Controller board sensors report high temperatures on the board. Contact your Digital Customer Service Engineer.

PROTECTED INSTR*

*PROTECTED INSTR**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

PWR SUPP VOLT*

*PWR SUPP VOLT**
Power supply failed. Replace power supply board.



RIB INVLD CMD*	<i>RIB INVLD CMD*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
RIB INVLD STATE*	<i>RIB INVLD STATE*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
RIBBON DRIVE	<i>RIBBON DRIVE</i> CMX controller does not detect ribbon drive motor. Contact your Digital Customer Service Engineer.
SECURITY VIOLATION	<i>SECURITY VIOLATION</i> Security code of PAL on controller board does not match code of firmware on the CMX controller board. Contact your Digital Customer Service Engineer.
SHUTL INV CMD*	<i>SHUTL INV CMD*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
SHUTL INV PARM*	<i>SHUTL INV PARM*</i> Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.
SHUTTLE JAM	<i>SHUTTLE JAM</i> No shuttle movement or shuttle moving at wrong speed. Check for obstruction to shuttle, a twisted ribbon, or forms thickness lever closed too tightly. If fault source is not apparent, contact your Digital Customer Service Engineer.



SOFTWARE ERROR*
Cycle power

*SOFTWARE ERROR**
Application software tried to perform illegal printer function, or damaged logic circuits found on controller board. Contact your Digital Customer Service Engineer.

STACK OVERFLOW*

*STACK OVERFLOW**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

STACK UNDERFLOW*

*STACK UNDERFLOW**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

TCB CORRUPTED*

*TCB CORRUPTED**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

UNDEF INTERRUPT*

*UNDEF INTERRUPT**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

UNDFNED OPCODE*

*UNDFNED OPCODE**
Fatal firmware error on CMX controller board. Contact your Digital Customer Service Engineer.

UP DRV. SHORT*

*UP DRV. SHORT**
Hammer driver circuits on the CMX boards shorted to ground. Contact your Digital Customer Service Engineer.

