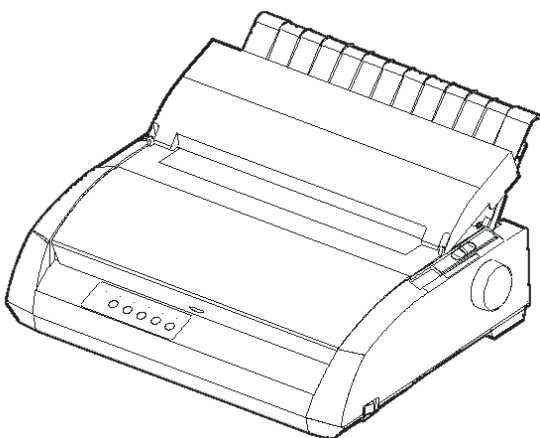
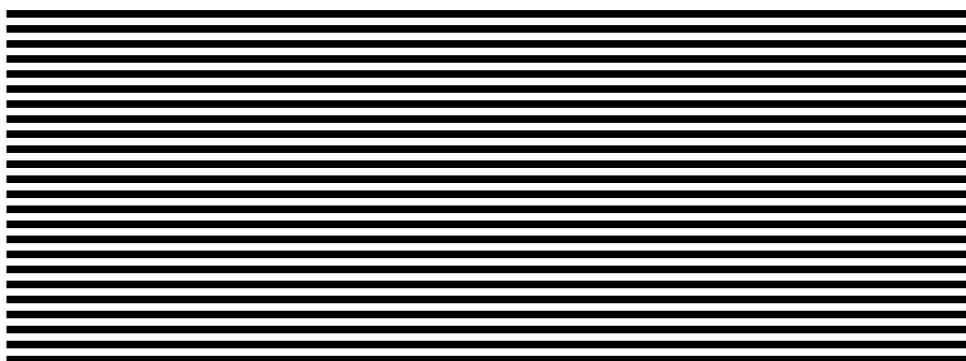
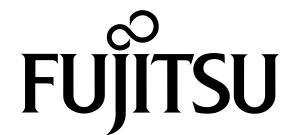


USER'S MANUAL



24-pin dot matrix printers

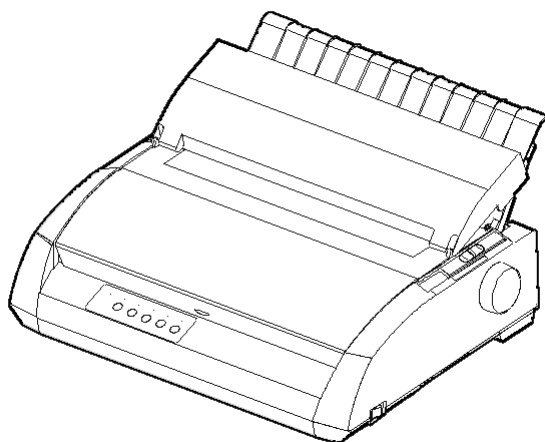
FUJITSU
DL5750+/5850+



FUJITSU DL3750+/3850+

DOT MATRIX PRINTER

USER'S MANUAL



IMPORTANT NOTE TO USERS

READ THE ENTIRE MANUAL CAREFULLY BEFORE USING THIS PRODUCT. INCORRECT USE OF THE PRODUCT MAY RESULT IN INJURY OR DAMAGE TO USERS, BYSTANDERS OR PROPERTY. While FUJITSU ISOTEC has sought to ensure the accuracy of all information in this manual, FUJITSU ISOTEC assumes no liability to any party for any damage caused by any error or omission contained in this manual, its updates or supplements, whether such errors or omissions result from negligence, accident, or any other cause. In addition, FUJITSU ISOTEC assumes no liability with respect to the application or use of any product or system in accordance with descriptions or instructions contained herein; including any liability for incidental or consequential damages arising therefrom. FUJITSU ISOTEC DISCLAIMS ALL WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN, WHETHER EXPRESSED, IMPLIED, OR STATUTORY. FUJITSU ISOTEC reserves the right to make changes to any products described herein without further notice and without obligation.

Using This Product in High-risk Situations

This product is designed and manufactured for use in standard applications such as office work, personal devices, household appliances, and general industrial use. This product is not intended for special uses (nuclear-reactor control in atomic energy facilities, aeronautic and space systems, air traffic control, operation control in mass transit systems, medical devices for life support, or missile firing controls in weapons facilities) where particularly high reliability requirements exist, where the pertinent levels of safety are not guaranteed, or where a failure or operational error could threaten a life or cause a physical injury (hereafter referred to as "high-risk" use). Customers considering the use of this product for high-risk applications must have safety-assurance measures in place beforehand. Moreover, they are requested to consult our sales representative before embarking on such specialized use.

Federal Communications Commission Radio Frequency Interference Statement for United States Users

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15B of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measure:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC warning: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTES

1. Testing of this equipment was performed on model number M33331A or M33333A.
2. The use of a nonshielded interface cable with the referenced device is prohibited. The length of the parallel interface cable must be 3 meters (10 feet) or less. The length of the optional serial interface cable must be 15 meters (50 feet) or less. The length of the LAN cable must be 100 meters (330feet) or less.
3. The length of the power cord must be 2 meters (6.6 feet) or less.

Notice for Canadian Users

This class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Notice for German Users

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

- M33330B
- M33331B
- M33332B
- M33333B

in Übereinstimmung mit den Bestimmungen der

- EN 45014 (CE)

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As an ENERGY STAR® Partner, FUJITSU ISOTEC LIMITED has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

The International ENERGY STAR® Office Equipment Program is an international program that promotes energy saving through the use of computers and other office equipments. The program backs the development and dissemination of products with functions that effectively reduce energy consumption. It is an open system in which business proprietors can participate voluntarily. The targeted products are office equipment such as computers, displays, printers, facsimiles, and copiers. Their standards and logos are uniform among participating nations.

CE Declaration

This product sold in Europe conforms to the standard in accordance with EC Directives.

The contents of this manual may be revised without prior notice and without obligation to incorporate changes and improvements into units already shipped.

Every effort has been made to ensure that the information included here is complete and accurate at the time of publication; however, Fujitsu Isotec Limited cannot be held responsible for errors and omissions.

Printer model specifications differ with the print column (80 or 136) and the power supply input voltage (100-120 or 220-240 VAC).

C147-E047-01EN July 2004

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Other product names mentioned in this manual may also be trademarks of their respective companies.

ABOUT THIS MANUAL

Thank you for buying the Fujitsu DL3750+/3850+ dot matrix printer. You can expect years of reliable service with very little maintenance. This manual explains how to use your printer to full advantage. It is written for both new and experienced printer users.

This manual describes how to install, set up, and use your printer and printer options. It also explains how to keep the printer in good working condition and what to do should something go wrong. Detailed procedures are provided for first-time users. Experienced users can skip some of the details, using the table of contents and chapter introductions to locate information.

This manual has several appendixes, a glossary, and an index. Appendix A lists supplies and additional documentation and information available from your dealer or authorized Fujitsu representative. Fujitsu offices are listed at the end of the manual.

PRINTER MODELS AND OPTIONS

This manual covers model DL3750+, an 80-column printer and model DL3850+, a 136-column printer. Each model has a 100-120 VAC or 220-240 VAC power supply. A serial interface is a factory option. A LAN card, a user add-on option, can be installed only on printer models with the Centronics parallel+USB interfaces. You must specify these when purchasing the printer.

DL3750+/3850+

- Basic specifications
 - Print line at 10 cpi: 80 columns (DL3750+)
136 columns (DL3850+)
- Interface: Centronics parallel
 - Centronics parallel + RS-232C
 - Centronics parallel + USB + LAN (LAN:use option)
- Alternative specification
 - Power supply: 100–120 VAC or 220–240 VAC
- Factory option
 - RS-232C serial interface (for Centronics parallel model only.
It must be installed by a field engineer.)
- User add-on option
 - LAN card

cpi: characters per inch

ORGANIZATION

This manual is organized as follows:

Quick Reference summarizes everyday printer operations. After you become familiar with the printer, use this section as a memory aid.

Chapter 1, Introduction, introduces the printer and identifies key features and options that enhance the printer's capabilities.

Chapter 2, Setting Up, gives step-by-step procedures for setting up the printer for immediate use and identifies the main parts of the printer. If this is your first printer, you should read the entire chapter before attempting to use the printer.

Chapter 3, Paper Handling, explains how to load and use paper with your printer.

Chapter 4, Printing, covers basic printing operations. This chapter describes everyday operations from the printer's control panel, such as loading paper and selecting print features, in detail. After you become more familiar with the printer, use **Quick Reference** at the beginning of the manual to refresh your memory as needed.

Chapter 5, Using Setup Mode, describes how to change the printer's optional settings, such as print features, hardware options, and top-of-form. Most settings only affect print features such as the typestyle and page format. Note that certain settings directly affect hardware and software compatibility. Refer to this chapter as indicated in Chapter 2 or as required.

Chapter 6, Maintenance, explains basic maintenance procedures for this printer.

Chapter 7, Trouble-Shooting, describes problem-solving techniques. Before you contact your dealer for help, check the list of problems and solutions provided in this chapter.

Chapter 8, Installing Options, describes the options available for the printer and explains how to install them.

At the end of this manual, you will find several appendixes, a glossary, and an index. Appendix A gives order numbers for printer supplies, options, and publications. Other appendixes provide additional technical information about the printer.

CONVENTIONS

Special information, such as warnings, cautions, and notes, are indicated as follows:

WARNING

A WARNING indicates that personal injury may result if you do not follow a procedure correctly.

CAUTION

A CAUTION indicates that damage to the printer may result if you do not follow a procedure correctly.

NOTE

A NOTE provides “how-to” tips or suggestions to help you perform a procedure correctly. NOTES are particularly useful for first-time users.

For Experienced Users:

If you are familiar with this printer or with dot matrix printers in general, this information will help you use the manual effectively.

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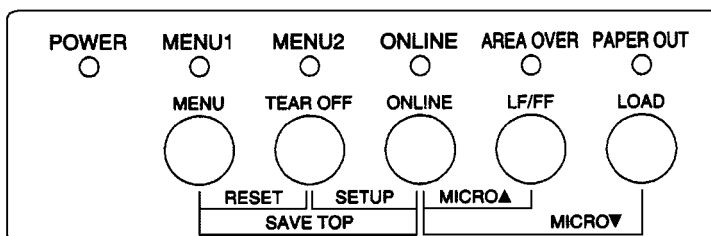
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Q

QUICK REFERENCE

Quick Reference is written for experienced users — users who are familiar with how the printer works, but who may need to refresh their memory occasionally. *Only the printer's normal (non-setup) mode is covered.* For details on setup mode, see Chapter 5.

Normal mode operation includes everyday operations, such as paper handling and font selection. The printer comes up in normal mode when turned on. To enter setup mode, press the TEAR OFF and ONLINE buttons at the same time while the ONLINE indicator is off (not lit).



Control panel

The table on the next page lists normal mode operations with online and offline conditions and gives the required user response. Operations are listed alphabetically.

Printer Operations (Normal Mode)

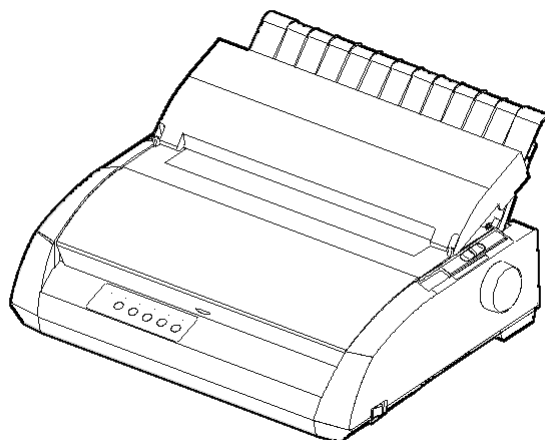
- √ : Operation can be performed when the printer is in this state.
 — : Operation cannot be performed when the printer is in this state.
 N/A : Does not apply.

Operation	Online	Offline	Required Response
Clear print buffer	—	√	Press MENU and TEAR OFF.
Eject single sheets	√	√	Press LF/FF.
Enter normal mode	N/A	N/A	Turn printer on. (Press on the power switch.)
Enter setup mode	—	√	Press TEAR OFF and ONLINE.
Exit to normal mode	—	√	Press ONLINE, then press TEAR OFF or MENU.
Form feed (forward)	√	√	Press and hold LF/FF until the operation starts.
Line feed (forward)	√	√	Press LF/FF within three seconds.
Load paper	√	√	Press LOAD.
Micro feed (backward)	—	√	Press ONLINE and LOAD.
Micro feed (forward)	—	√	Press ONLINE and LF/FF.
Place printer offline	√	—	Press ONLINE.
Place printer online	—	√	Press ONLINE.
Reset power-on defaults	√	√	Turn printer off, then on.
Resume printing after paper end	—	√	Press ONLINE.
Save adjusted load positions	—	√	Press ONLINE and MENU.
Select MENU1 or MENU2	—	√	Press MENU.
Start/stop/resume printing	√	√	Start: Send print command. Stop/resume: Press ONLINE.
Self-test printing	√	√	Start: Turn printer off. Press LF/FF while turning printer on. Pause/resume: Press TEAR OFF . Exit: Press ONLINE.
Tear off forms (Continuous forms only)	√	√	Press TEAR OFF. Tear off forms, then press any button to retract forms.
Unload paper to park position (Continuous forms only)	√	√	Press LOAD.

INTRODUCTION

Congratulations on purchasing this printer. This printer is a compact, versatile printer that offers maximum compatibility with today's software packages and personal computers.

The 24-wire print head provides crisp, clear printing for business, office, and home environments. This printer is also easy to install and use.



Dot matrix printer

FEATURES

Key printer features and options are listed in the next two sections.

- **Software compatibility.** This printer, which operates primarily with the Fujitsu DPL24C PLUS command set, is compatible with the IBM Proprinter XL24E command set and the Epson ESC/P2 command set.
- **Various character sets.** As basic character sets, IBM PC character sets 1 and 2 are available for the Fujitsu DPL24C PLUS command set and the IBM Proprinter XL24E emulation, and the italic character set and graphics character sets 1 and 2 are available for the Epson ESC/P2 emulation. As national character sets, a total of 57 or 61 national character sets (depending on the emulation), including IBM PS/2 character sets, are available.

- **Multiple fonts.** The printer has nineteen resident fonts: Ten bit-map fonts -- Courier 10, Pica 10, Prestige Elite 12, Boldface PS, OCR-B 10, OCR-A 10, Correspondence, Compressed, Draft, and High-speed Draft and nine outline fonts -- Timeless, Nimbus Sans, and Courier, each in upright, italic, and bold.
- **High-speed printing.** At 10 cpi, print speed ranges from 113 cps for letter quality to 400 cps (80-column printer) or 448cps (136-column printer) for high-speed draft quality.
- **Large print buffer.** 128K bytes are available in total for storing input data and downloading fonts. A large input data buffer allows you to send files to the printer and return quickly to work in your application. A large download buffer allows you to use custom fonts.
- **80-column or 136-column print line.** 80-column printers are the most suitable for printing in landscape mode using letter- or A4- size paper. 136-column printers are the most suitable for printing in landscape mode using legal- or standard-size computer forms.
- **Simple switching of paper types.** The ability to "park" continuous forms makes it easy to switch between continuous forms and single sheets.
- **Auto tearoff.** Continuous forms are fed automatically up to the tear-off position at the end of each job.
- **Maintenance-free.** The printer only requires periodic cleaning and changing of the ribbon cartridge.

OPTIONS

A LAN card is available as a printer add-on option. A user installable function, the LAN card can be installed only on printer models with the Centronics parallel + USB interfaces.
For details, see Chapter 8.

SETTING UP

Your new printer is easy to install and set up. This chapter tells you how to set up the printer and start printing right away. If this is your first printer, you should read the entire chapter before attempting to use the printer.

In this chapter, you will learn how to:

- Unpack, assemble, and select a good location for the printer
- Identify the printer's major parts
- Connect the power cord and the interface cable
- Test the printer before connecting it to your computer
- Select an emulation and print a sample page using your software
- Installing the printer driver

If you have a problem while setting up the printer, review the section Solving Problems in Chapter 7. If the problem persists, contact your dealer.

SELECTING A GOOD LOCATION

This printer is suitable for most business, office, and home environments. To obtain peak performance from the printer, select a location that meets the following guidelines:

- ✓ Place the printer on a sturdy, level surface.
- ✓ Place the printer near a well-grounded AC power outlet.
- ✓ Ensure easy access to the front and rear of the printer by leaving several inches of space around the printer. Do not block the air vents on the front, left, and right sides of the printer.
- ✓ Do not place the printer in direct sunlight or near heaters.
- ✓ Make sure that the room is well-ventilated and free from excessive dust.

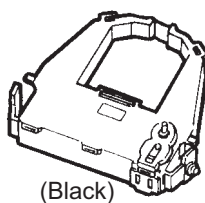
- √ Do not expose the printer to extremes of temperature and humidity.
- √ Use only the power cord supplied with the printer or recommended by your dealer. Do not use an extension cord.
- √ Do not plug the printer into a power outlet that is shared with heavy industrial equipment, such as motors, or appliances, such as copiers or coffee makers. Such equipment often emits electrical noise or causes power degradation.

UNPACKING THE PRINTER

Unpack the printer as follows:

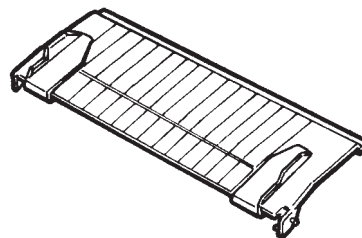
1. Open the carton and remove the printer and its components. Make sure that you have all of the items shown below. Note that the power cord supplied depends on the printer model (100-120 or 220-240 VAC power supply).

Ribbon cartridge

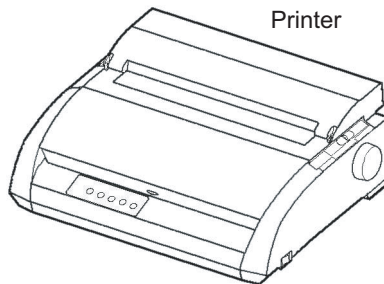


(Black)

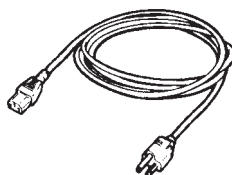
Cut sheet stand



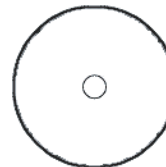
Printer



Power cord

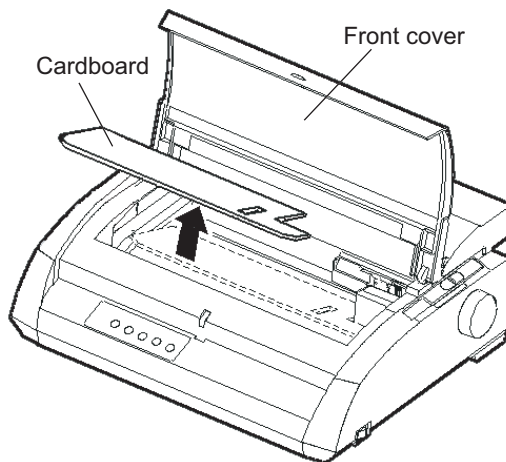


Setup disk



Checking items received

2. Carefully examine each item for damage. Report any problems to your dealer or shipping agent.
3. Place the printer where you plan to use it.
4. Remove the tapes securing the front cover, ejection cover, and back cover. Open the front cover and remove the shipping restraint cardboard that holds the print head carriage in place (shown below).



Removing the shipping restraint cardboard

5. Store the original shipping carton and packaging materials for future use. For example, the original packaging is ideal for use when you move or ship your printer to another location.

NOTE

The interface cable is not included with the printer. You must purchase it separately. Connection of the interface cable is described later in this chapter.

Checking Options and Supplies

The following options and supplies, if ordered, are shipped separately:

- LAN card (user installable option)
- Extra monochrome ribbon cartridge

The RS-232C serial interface is a factory option. It must be installed by a field engineer. If you ordered a printer with the interface, the board is already installed in the printer.

Make sure that you received all the options you ordered.

Once you are sure you have everything, you are ready to assemble the printer.

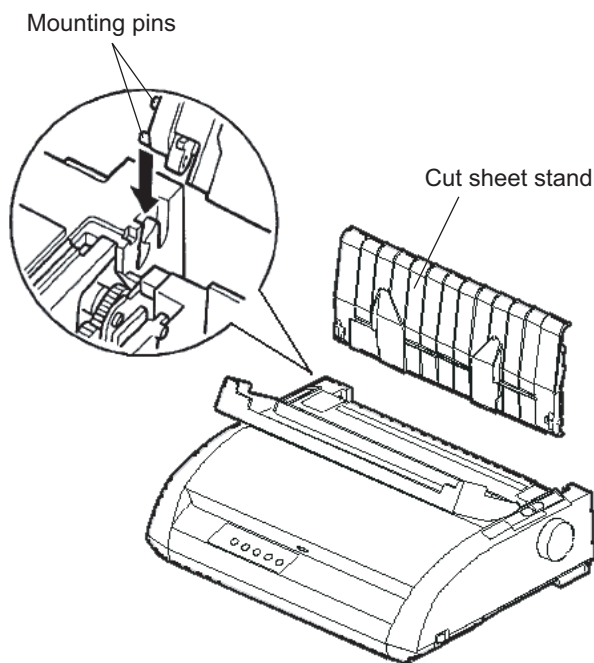
ASSEMBLING THE PRINTER

This section explains how to install the cut sheet stand and ribbon cartridge.

Installing the Cut Sheet Stand

The cut sheet stand enables smooth feeding of both single sheets and continuous forms. Install the cut sheet stand as described below:

1. Referring to the following figure, locate the two grooved notches on the top of the printer, behind the top cover. Note that each notch has a front groove and a rear groove.
2. Locate the two mounting pins on each side of the cut sheet stand.



Installing the cut sheet stand

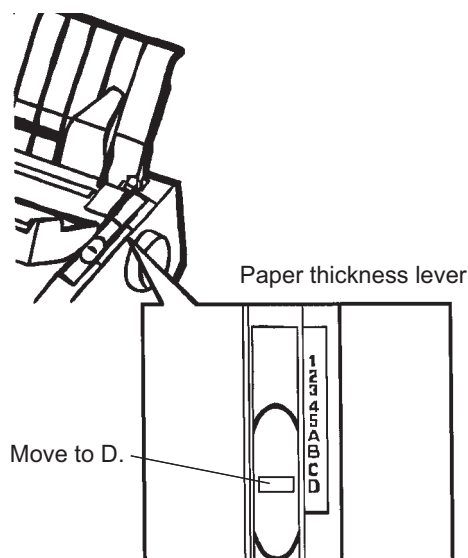
3. Hold the cut sheet stand at an angle over the top of the printer. Slide the mounting pins into the long, front grooves of the notches. This is the cut sheet stand's *up* position, used for printing single sheets.

To rotate the cut sheet stand to its down position, grasp it at the sides and lift it up until the two upper mounting pins clear the front notches. Rotate the cut sheet stand backward to place the upper mounting pins in the rear grooves.

Installing the Ribbon Cartridge

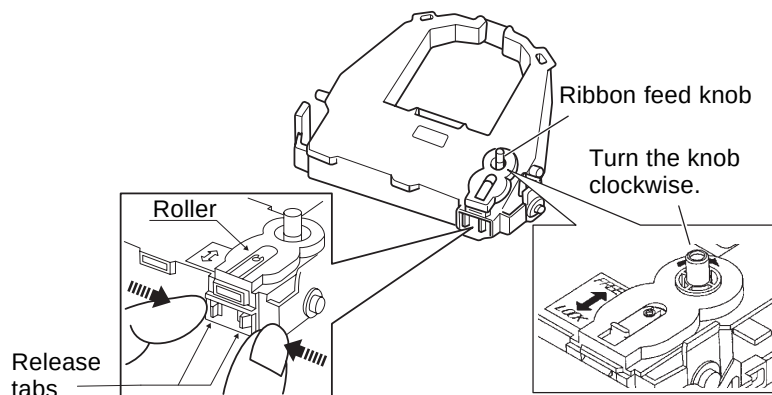
The printer uses a black ribbon cartridge. To install the ribbon cartridge:

1. Turn the printer off. Open the front cover of the printer. For easy installation, slide the print head carriage so that it does not face a bail roller.
2. The paper thickness lever, located on the right of the printer, has nine positions. Before you install the ribbon cartridge, move this lever to **D**.



Preparing to install the ribbon

- Using the procedure below, release the roller from the LOCK position and turn the ribbon feed knob clockwise to take up any ribbon slack. Push in the gray ribbon release tabs on the side of the ribbon cartridge to release them, and slide the roller from the LOCK position to the FREE position.

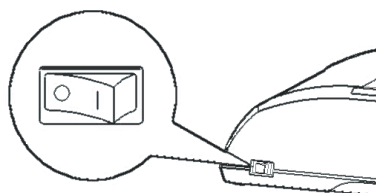


Preparing the ribbon cartridge

CAUTION

Do not turn the ribbon feed knob in counterclockwise direction.

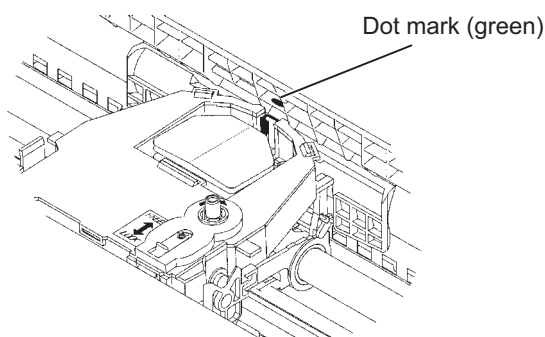
- Verify that the power to the printer is off.
(Make sure that the circle mark on the power switch is pressed.).



Installing the ribbon cartridge

- Move the paper thickness lever to the D position.
- Open the front cover.

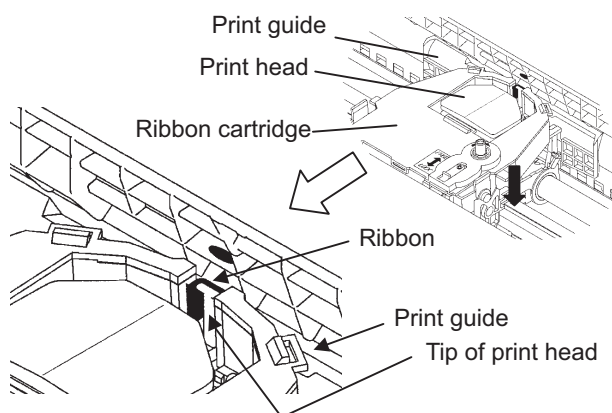
7. Align the print head position with the dot mark (green) on the printer ejection cover.



WARNING

Avoid touching the print head while using or immediately after using the printer, as doing so may lead to burns. Wait until the print head cools down before touching it.

8. Thread the ribbon between the print head and the print guide, then gently press down on the ribbon cartridge against the printer until it clicks into place.
(Make sure that the ribbon feed knob is facing upward.)

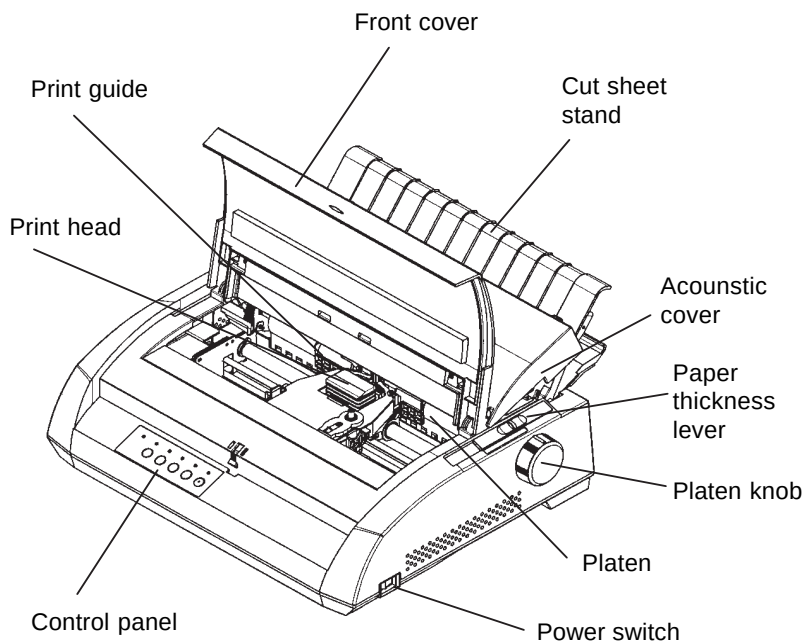


9. Turn the ribbon feed knob clockwise to take up any ribbon slack.
10. After the ribbon cartridge has been installed in the printer, adjust the paper thickness lever to match the thickness of the paper and the number of sheets of paper to be used
For information about the paper thickness lever, see the section entitled **Adjusting the Paper Thickness** in Chapter 3.

GETTING ACQUAINTED WITH YOUR PRINTER

Now that your printer is assembled, take a moment to become familiar with its major parts.

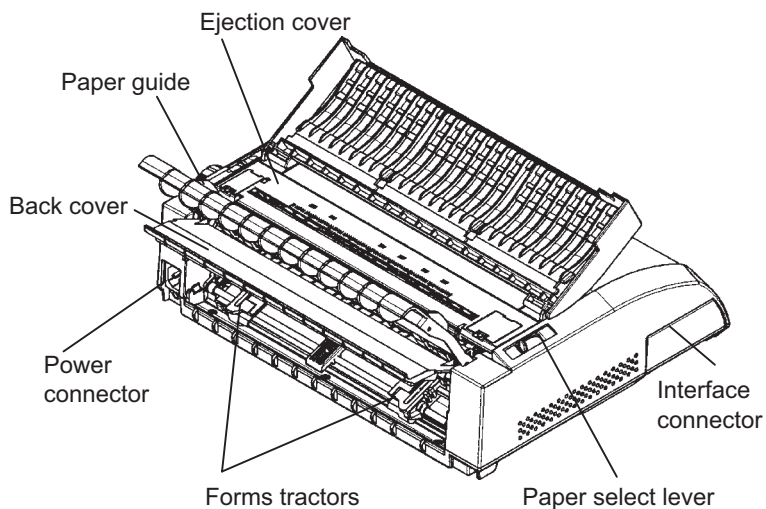
Looking at the printer from the front right side, you can see the parts of the printer shown in the figure below.



Printer components (front and right)

The printer control panel has the buttons and indicators used to load and feed paper (see Chapter 3) and select print features (see Chapter 4). The control panel also allows you to change the printer's optional settings (see Chapter 5).

Looking at the printer from the back with the cut sheet stand and back cover removed, you can see the following parts of the printer:



Printer components (rear)

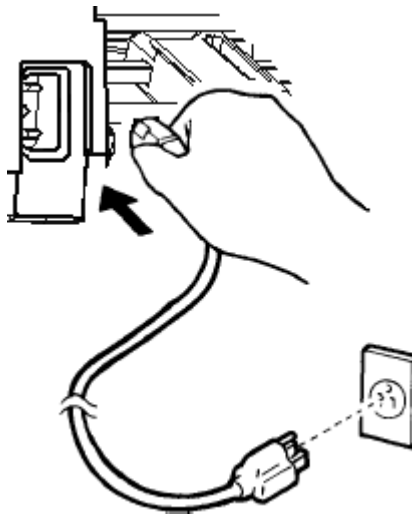
CONNECTING THE POWER CORD

Before you plug in the printer:

- ✓ Make sure that the printer power is switched off. The side marked “1” on the power switch should be raised.
- ✓ Make sure that the power outlet is properly grounded.
- ✓ Make sure that you use the power cord shipped with the printer. This cord is designed to minimize radio frequency interference.

To plug in the power cord:

1. Plug one end of the power cord into the power connector on the rear of the printer.
2. Plug the other end of the power cord into the power outlet.



Connecting the power cord

3. Make sure that the power cord is securely connected.
4. Turn on the power by pressing the side marked “1” on the power switch. Within a few seconds, the POWER indicator on the printer control panel will light, the print head will move to its home position, and the ONLINE indicator will light (green).

NOTE

If no forms are loaded, the printer may beep and the red PAPER OUT indicator may light and the ONLINE indicator will not light if the paper select lever is set backward to the continuous forms position. Move the paper select lever forward to the single sheet position (as described in the next section). The PAPER OUT indicator will go out. This condition is a result of the factory default settings and poses no problem.

TESTING THE PRINTER (OFFLINE)

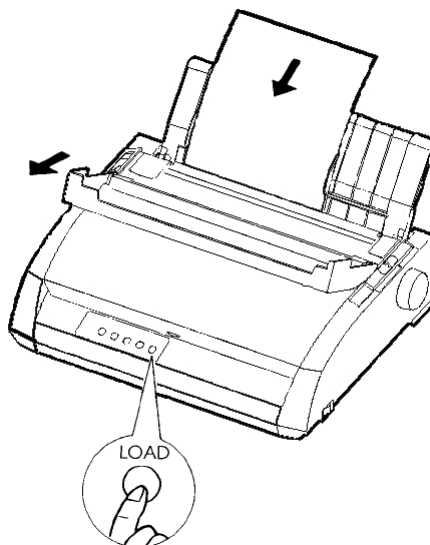
At this point, load paper and run the printer self-test. The self-test checks printer performance and print quality before you connect the printer to the computer. Use either single sheets or continuous forms (see Chapter 3). This section describes the self-test procedure using single sheets.

Loading Paper for the Self-Test

To print the self-test, use paper wider than 215.9 mm (8.5 inches) and set the left paper guide all the way to the right to avoid clipping the test pattern. Standard letter or A4 size paper can be used *lengthwise* (portrait mode).

Before loading paper, make sure that the printer is on. Then, proceed as follows:

1. Make sure that the paper thickness lever (located on the top right of the printer) is at position 1. Make sure that the paper select lever (located on the top left of the printer) is set to the front, as shown below.



Loading a sheet of paper

2. Raise the cut sheet stand. Move the left paper guide all the way to the right. Insert the sheet of paper into the cut sheet stand. Letter or A4 size paper, inserted *lengthwise* (portrait mode) with this setting, will not result in clipping.

Adjust the right paper guide so that the paper lies flat on the cut sheet stand.

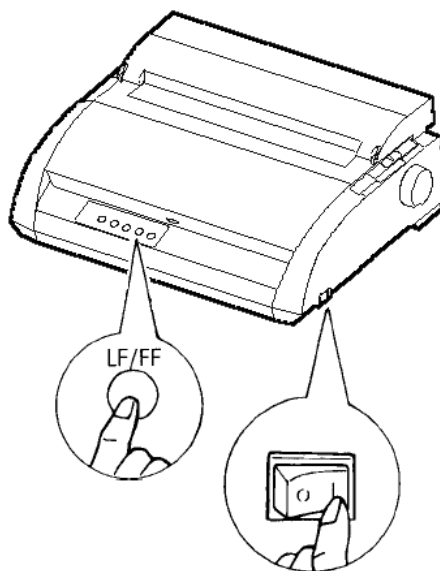
3. Slide the paper along the cut sheet stand until its bottom edge touches the platen. Then press the LOAD button. The paper will advance to the top-of-form position.

Printing the Self-Test

The printer has a built-in self-test program. The self-test prints the firmware version, the names of the printer's resident emulations, and all of the characters available in the emulations. The self-test prints 80 characters per line.

To print a self-test page, make sure that a sheet of paper is loaded. Then proceed as follows:

1. Turn the printer off.
2. While pressing the LF/FF button, turn the printer back on. Keep the LF/FF button pressed until the printer beeps. Self-test printing will start.



Starting the self-test

3. Allow printing to continue for a dozen or more lines of repeat printing. To stop printing, press the TEAR OFF button. Manually turn the platen knob clockwise to remove the test page.

NOTE

Do not try to use the LF/FF (line feed/form feed) button to eject the paper. In self-test mode, LF/FF cannot be used to feed paper forward.

4. Examine the self-test page. It should look like the sample on the next page.

Check that printing is uniform and that there are no light, dark, or smudged areas. If the print quality is good, go to step 5. Otherwise, try to correct the problem as follows:

- Make sure that the ribbon is installed correctly.
- Make sure that the paper thickness lever is set to position 1.

- Insert a new sheet of paper into the cut sheet stand. Turn the platen knob to manually advance the paper until the top edge has moved past the paper bail rollers.
- Press the TEAR OFF button to restart printing. If the print quality remains poor, turn off the printer and contact your dealer for assistance.

BUTTON	ACTION
<ONLINE>	Exit to normal mode
<LF/FF >	Return to <<FUNCTION>> mode
<TEAROFF>	Pause/resume printing

1. Software specification

KA02008-J101 (01A) 024601

2. Emulations

DPL24C+	---	FUJITSU DPL24C PLUS	Ver. 2.02
IBMXL24E	---	IBM Proprinter XL24E	Ver. 1.02
ESC/P-2	---	EPSON ESC/P-2	Ver. 1.02

3. Repeat printing

LOG ; 00 00 00 00 00 00 00 00

01	00	00	00	00	00	04	05	00	00	10	00	00	00	11	01	00	00	00	00
00	00	00	00	00	00	01	00	00	00	00	04	05	00	10	10	00	00	00	11
01	00	00	00	00	00	00	00	00	00	10	00	30	30	60	00	00	00	00	01
00	01	00	00	0A	0A	33	43	00	10	10	11	00	00	01	00	11	00	00	00
16	16	11	00	00	00	00	00	00	12	00	00	00	00	00	00	01	F5	00	00
F9	FE	FB	00	00	00	00	00	00	00	00	00	00	00	00	F8				
00	00	00	00	00	00	00	00	47	62	00	00								

[illegible]

Sample self-test page

5. To exit the self-test mode, press the ONLINE button. The printer will return online.

NOTE

The printer can also print a special “demo pattern” that illustrates some of the printer’s capabilities. To print the demo pattern:

1. Load a sheet of letter or A4 size paper.
2. Turn the printer off .
3. While pressing **TEAR OFF** button, turn the printer back on. The printer will start printing the demo pattern.
4. The demo pattern stops printing after one page. To pause or restart the demo during printing of a page, press the **ONLINE** button.
5. To exit demo mode, turn the printer off.

Printing technology: 24 wire dot matrix, Logic seeking
 Resolution: Letter quality - 360 X 180 dots/inch
 Draft quality - 120 X 180 dots/inch
 High speed draft - 90 X 180 dots/inch
 Standard command set: Fujitsu DPL24C PLUS Version 2.01
 Resident emulations: Epson ESC/P2, IBM Proprinter XL24E
 Character sets: IBM PC char.sets 1 and 2
 IBM PS/2 char.sets (Codepage 437,850,851,
 852,855,860,863,865,866)
 ISO8859-1/ECMA 94
 National character sets (USA,UK,German,
 French,Italian,Spanish,Swedish,Finnish,
 Norwegian,Danish 1 and 2,Hungarian 1 and 2,
 Slovenia 1 and 2,Mazowia 1 and 2,PG-DHN,
 Polish 1 and 2,Latin2 1 and 2,Latin P,
 ISO-Latin,Kamenicky 1 and 2,Turkish 1 and 2,
 ELOT927,ELOT928,Cyrillic,Lithuanian 1 and 2,
 Mik,Macedonian,PG-MAC,ABG,ABY,DEC GR,Greek11,
 HBR-DEC,HBR-OLD,ISO-Turkish,Korean and Legal)
 691 characters per font
 Print functions: See below.

Fonts - <Bitmap> Courier 10, Pica 10, Prestige 12, Boldface PS
 Compression 17, Correspondence 10, Draft 12, HI-Draft 12
 OCR-B 10, OCR-A 10
 <Scalable> Courier scalable Upright/Italic/Bold
 Timeless PS Upright/Italic/Bold
 Nimbus Sans PS Upright/Italic/Bold

Bold printing Shadow printing Italic printing Underline
 Condensed Superscript Subscript

Double width Double height Double W & H

(The following functions are for the DPL24C PLUS only)

Underline TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5 TYPE 6 Overline

Bar code print: Codabar,EAN8,EAN13, EAN example:
 Code 3 of 9,
 Industrial 2 of 5,
 Interleaved 2 of 5,
 Matrix 2 of 5,
 UPC type A,Code 128



Scalable font + Screened outline:

SCALABLE

Demo pattern

CONNECTING THE PRINTER TO YOUR COMPUTER

Your printer supports one of the following interface options:

- Centronics parallel interface only
- Centronics parallel interface+RS-232C serial interface
- Centronics parallel interface+USB (+LAN) interface

The RS-232 serial interface is a factory-installed option for a Centronics parallel interface model. Installation of the serial option provides a dual interface feature enabling the connection of either interface but inhibiting the operation of both interfaces at the same time.

The parallel interface connector has wire clips. The serial interface connector has tapped holes. Cables for these interfaces are available from dealers, cable manufacturers, and other suppliers.

The LAN card is a user installable option. For details, see Chapter 8 or refer to the Online Manual that comes with the LAN card.

For detailed interface specifications, see Appendix D.

Selecting a Parallel Interface Cable

For the parallel interface, use a cable that meets the following specifications:

- ✓ At the printer end, use a shielded male Centronics connector, such as an Amphenol DDK 57FE-30360 or its equivalent. To prevent RFI (radio frequency interference), the connector cover must be connected to the cable shield.
- ✓ At the computer end, most computers (including IBM PCs) require a male DB-25P connector. Some computers, however, require a Centronics connector. To determine the type of connector your computer uses, refer to your computer user manual.
- ✓ Make sure that the cable length does not exceed 3 meters (10 feet).

Selecting a Serial Interface Cable

For the serial interface, use a cable that meets the following specifications:

- ✓ At the printer end, use a 25-pin male connector, such as a Cannon DB-25P or its equivalent.
- ✓ To determine the type of connector your computer requires, refer to your computer user manual or ask your dealer.
- ✓ The cable length can be up to 15 meters (50 feet). This type of length is required in many networking and shared-printer configurations.

Selecting a USB Cable

- ✓ When the USB interface is used to connect to the host computer, the parallel interface and the serial interface (factory add-on option) cannot be connected simultaneously.
- ✓ The USB interface does not guarantee all connections of USB-supported devices.

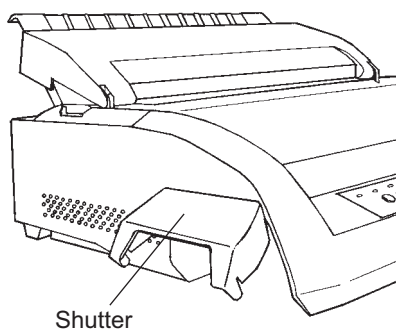
Selecting a LAN cable

- ✓ When the LAN cable is connected, the parallel and USB cables cannot be used.
- ✓ The LAN cable, when used in 100BASE-TX environments, must conform to category 5 or higher.

Connecting the Interface Cable

To connect the interface cable:

1. Turn off both the printer and the computer.
2. Pull the shutter on the left side of the printer upward as far as it will go.



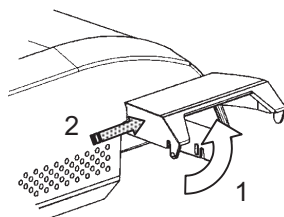
Opening the shutter

NOTE

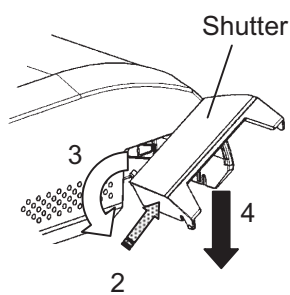
Removing and Attaching the Shutter

When use of the shutter is not required, remove it by using the following procedure.

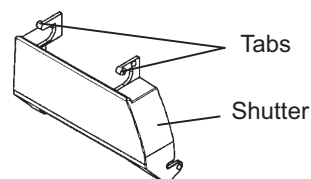
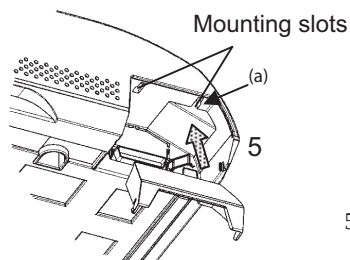
Removing the shutter



1. Open the shutter.
2. Gently push the back end of the shutter toward the front of the printer.
3. While holding the shutter in the position described in step 2, rotate it in the manner shown in the figure on the left to disengage it.
4. Remove the shutter.



Attaching the shutter



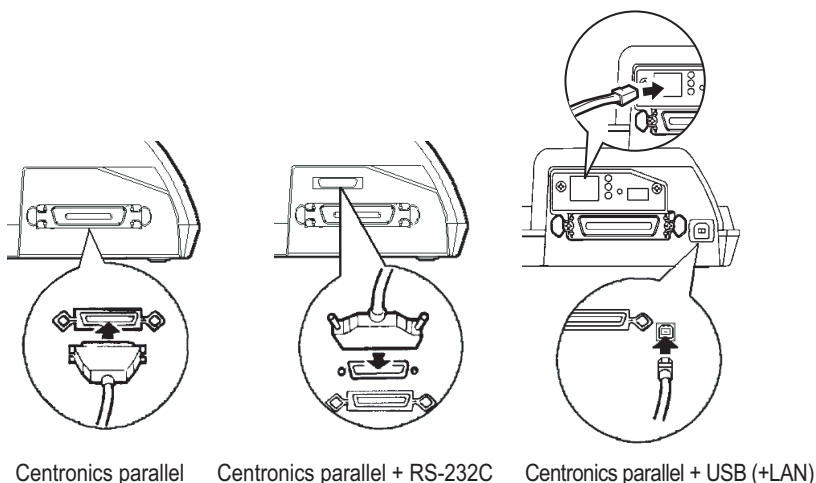
5. Tilt the shutter and pass the shutter tabs through the mounting slots, starting with the slot on side (a) shown in the figure on the left. The order in which the shutter tabs are passed through the slots is the reverse of that for removing the shutter.

CAUTION

Take care not to use excessive force when pushing the back of the shutter toward the front of the printer. Otherwise, the shutter tabs may be damaged.

To reattach the shutter, tilt the shutter and insert one of its convex parts into the installation hole of the printer, and then insert the other part in the other hole. After inserting both convex parts, lower and push the shutter in to its original position.

3. Attach the interface cable to the connector. Do not connect more than one interface cable type to the printer at the same time.



Centronics parallel

Centronics parallel + RS-232C

Centronics parallel + USB (+LAN)

Connecting the interface cable

NOTE

The LAN interface is a user add-on option.

When installing a LAN card, remove the two screws securing the cover and remove the cover. Then insert the LAN card and reattach the cover with the two screws removed earlier. For details, refer to the Online Manual that comes with the LAN card.

4. To secure a parallel interface cable, flip the fastener clips located on the printer into the notches on the cable connector. To secure a serial interface cable, tighten the screws in the cable connector.
5. Attach the other end of the interface cable to your computer. Gently pull on the cable to verify that it is secure.
6. Close the shutter.

SELECTING AN EMULATION

Before printing with your software, verify that the correct emulation is selected on your printer. This section describes the available emulations and their selection.

For Experienced Users:

The printer's preselected factory setting is the Fujitsu DPL24C PLUS emulation. If this emulation is acceptable, you may skip this section.

An emulation is a set of commands used by your software to communicate with the printer. There are many different emulations available for printers. Each emulation has unique features and capabilities. This printer offers three resident emulations:

- Fujitsu DPL24C PLUS (for Fujitsu DL-series printers)
- IBM Proprinter XL24E
- Epson ESC/P2

Resident emulations are stored in the printer's permanent memory.

Here are some points to help you determine which emulation to select:

- √ Determine which emulations your software supports. (Refer to your software documentation.) Since most software programs support this printer, try to run a program with the factory default emulation first. (DPL24C PLUS emulation is the factory default.) Try this emulation even if you are not sure of which emulation to choose. See Chapter 5 for detailed information about how your printer communicates with your software.
- √ If you are using more than one software package, determine which emulation is supported by the software you use most frequently. Select that emulation.
- √ If your software supports more than one emulation, select the DPL24C PLUS emulation if possible. This emulation has the greatest capabilities.
- √ If you want to use an emulation that is not supported by your software, contact your software manufacturer or printer dealer and ask whether support is available. You may be able to obtain a printer driver that is not shipped with the original software package.

To select an emulation, proceed as follows:

1. Turn the printer on and load a sheet of paper.

To change a single printer setting, such as the emulation, you can use a single sheet paper. To change several printer settings as described in Chapter 5, you must load continuous forms paper. See Chapter 3 for paper loading instructions.

2. Enter setup mode.

Press the ONLINE button to place the printer offline. Then, press the TEAR OFF button and the ONLINE button.

As the printer enters offline setup mode, it prints the following information:

*** OFFLINE SETUP MODE ***

- Red cursor indicates the option to be selected.
- The selected option is underlined.
- "SAVE&END" function must be selected to exit setup mode.
- Following list shows how buttons function in setup mode:

BUTTON	ACTION on <<FUNCTION>> menu	ACTION on <ITEM> menu
ONLINE	Reprint <<FUNCTION>> menu	Select option & return to <<FUNCTION>> menu
MENU	Select function	Select option & print next item
TEAROFF	Select function	Select option & print previous item
LOAD	Move cursor to the right	Move cursor right to the next option
LF/FF	Move cursor to the left	Move cursor left to the previous option

<<FUNCTION>>
menu

Function

<<FUNCTION>>
SAVE&END MENU1 MENU2 HARDWRE ADJUST CONFIG DEFAULT LIST SELF-TST HEX-DUMP
V-MEMNT

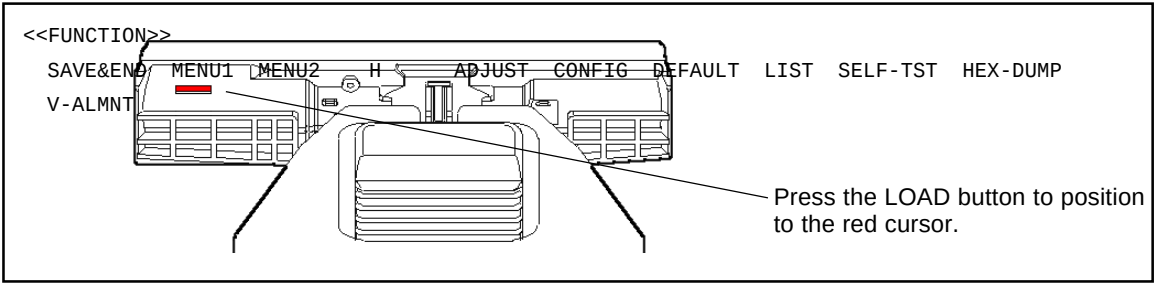
Red cursor on print guide

Initial printout in setup mode

Check that the <<FUNCTION>> menu is printed at the bottom of the page.

3. Select the MENU1 function.

Locate the red cursor on the plastic print guide. Initially, this cursor should be positioned under SAVE & END at the beginning of the <<FUNCTION>> menu. Press the LOAD button repeatedly to position the red cursor beneath MENU1, as shown below:



Press the MENU button to select MENU1 and print the following <EMULATE> options:



The currently selected emulation is indicated by a short underline. In the figure shown above, the Fujitsu DPL24C PLUS emulation is selected.

4. Select an emulation.

Press the LOAD button repeatedly to position the red cursor under the required emulation. Press the MENU button to select the emulation and print the next MENU1 item.

5. Exit MENU1.

Press the ONLINE button to exit the MENU1 function and reprint the <<FUNCTION>> menu.

6. Exit setup mode to save the emulation.

To exit setup mode and save the new emulation, make sure that the red cursor is positioned under SAVE & END. Then press the MENU button. The printer selects SAVE & END and then goes online.

To change other printer settings using the printer setup mode, see Chapter 5.

PRINTING A SAMPLE PAGE (ONLINE)

Once the self-test verifies that the printer is functioning correctly, try printing using one of your software packages. This exercise will ensure that the printer is correctly connected to your computer.

If you are using a parallel interface, the printer usually prints the correct characters automatically. However, you may need to adjust the page layout or various print features using your software or the printer setup mode. If you are using a serial interface, the printer may not work at all or it may print a lot of “?” characters. In this case, the serial settings on the printer do not match those of your computer or your software. Before changing any settings, use the procedure described below to try printing using the printer’s preselected factory settings.

Test communication between the printer and computer as follows:

1. Load a sheet of paper.
2. Check that the printer is online. If the ONLINE indicator is not green, press the ONLINE button.
3. Try to print using your word processor, a programming language, or other software.

4. Use your software printer selection menus or the printer setup mode (described in Chapter 5) to make required changes in the page layout or other print features.

If the printer does not print or prints the wrong characters, proceed as follows:

- Make sure that the interface cable is properly connected.
- Make sure that the printer emulation selected in your software is the same as that selected on the printer.
- If you are using a serial interface, make sure that the printer serial interface settings are the same as those on the computer. The printer's preselected factory settings are 8 data bits, no parity, 1 stop bit, 9600 baud, and XON/XOFF protocol.

You can change the serial settings on either the printer or your computer. To change the printer settings, see Chapter 5. To change the computer settings, use the selection menus provided by your software or the commands of your computer operating system. The following example uses the MS-DOS operating system:

Using MS-DOS to Specify Serial Interface Settings

For an IBM PC or compatible device, use the following MS-DOS MODE commands to set the computer serial settings to match the printer factory settings:

```
MODE COM1:9600,N,8,1,P  
MODE LPT1:=COM1
```

To activate these settings whenever you turn the computer on, write the MODE commands in your AUTOEXEC.BAT file. Make sure that the MODE.COM file is included in your root directory.

If the printer still doesn't work, consult your dealer or someone experienced in serial interface communications.

- If an error occurs during printing with Windows, simply printing the page again will cause the printed characters to be garbled. To avoid this problem, execute reset from the control panel or turn off the printer, then print the page again.

You are now finished setting up and testing the printer. To familiarize yourself with everyday printer operations, such as loading paper, selecting print features, and printing, see Chapters 3 and 4.

INSTALLING THE PRINTER DRIVER

A printer driver is required for using the printer in a Windows environment. Special printer drivers for Windows 95, 98, Me, NT 4.0, XP, and 2003 are provided with the DL3750+/3850+ printer.

For information about how to install printer drivers, refer to Readme.txt of the printer driver to be installed.

- These printer drivers run with DLP24C+ emulation. Be sure to specify DLP24C+ emulation for the printer mode.
- The DL3750+/3850+ printer driver is a printer driver for monochrome printing.

The color data printing result may differ from its print preview or the monochrome data printing result.

PAPER HANDLING

This chapter explains how your printer uses paper.

Topics covered are:

- Selecting paper
- Overview of paper operations
- Adjusting for paper thickness
- Using single sheets
- Using continuous forms
- Feeding and positioning paper
- Switching paper types

Tips for paper handling are given at the end of this chapter. Check that section if you are using multipart forms, envelopes, or labels.

SELECTING PAPER

The printer can handle either single sheets or continuous forms. Single sheets, also called cut sheets, include envelopes and noncontinuous, multipart forms. Continuous forms include labels and multipart forms fed into the printer using the forms tractors.

For best results, use paper that meets the specifications listed below. (See Appendix B for detailed specifications.) If you are unsure of the suitability of a particular paper, try testing the paper or consult your dealer.

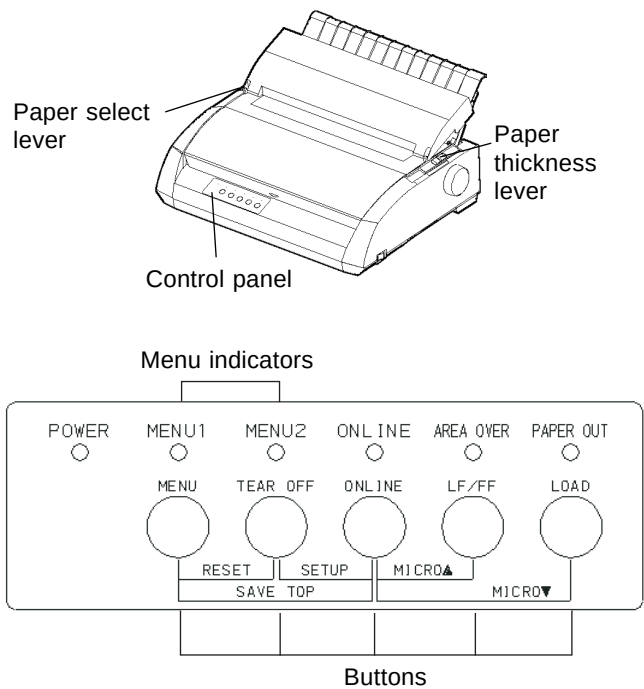
Length	80 column	Single sheets: 76 to 364 mm (3 to 14.3 in) Continuous forms: 102 mm (4 in) or greater
	136 column	Single sheets: 76 to 420 mm (3 to 16.5 in) Continuous forms: 102 mm (4 in) or greater
Width	80 column	Single sheets: 102 to 267 mm (4 to 10.5 in) Continuous forms: 102 to 267 mm (4 to 10.5 in)
	136 column	Single sheets: 102 to 420 mm (4 to 16.5 in) Continuous forms: 102 to 420 mm (4 to 16.5 in)
Thickness		0.35 mm (0.014 in) maximum total thickness.
Copies		1 to 5 copies, including the original. For carbon-interleaved paper, the carbon counts as a copy.

OVERVIEW OF PAPER OPERATIONS

The following levers and buttons are used in paper handling:

- Paper select lever at the top left corner of the printer
- Paper thickness lever at the top right corner of the printer
- LF/FF, TEAR OFF, LOAD, and MENU buttons on the control panel
(A different function is enabled when each button is pressed in conjunction with the ONLINE button.)

The following figure shows the location of each lever and button:



Printer levers and buttons

Table 3.1 summarizes the use of levers and buttons in paper handling. More detailed information is provided later in this chapter.

NOTE

To load or feed paper, the printer must be:

- Online but not receiving or printing data
- Offline but not in setup mode

To micro-feed paper, which is done with the ONLINE button, the printer must be:

- Offline but not in setup mode.

Table 3.1 Levers and Buttons Used for Paper Handling

Lever/Button	Purpose	Action
LF/FF	Form feed	Press and hold LF/FF to execute a form feed. Continuous forms are fed forward by one page. Single sheets are ejected.
	Line feed	Press LF/FF within three seconds to feed paper forward by one line.
	Forward micro feed	Press LF/FF and ONLINE to feed paper forward by 1/180 inch.
TEAR OFF	Advance forms for tear-off	Press TEAR OFF to advance the forms perforation to the tear-off edge. Tear off the forms, then press any button to retract the remaining forms.
LOAD	Load/unload	Press LOAD to load paper or to retract continuous forms to the "park position".
	Reverse micro feed	Press LOAD and ONLINE to feed paper backward by 1/180 inch.
MENU	Save adjusted load point	Press MENU and ONLINE to permanently store the load position adjusted by micro feeding
Paper select lever *	Select paper path	Move the paper select lever forward for single sheets (cut sheet stand). Move the paper select lever backward for continuous forms.
Paper thickness lever	Adjust for paper thickness or number of copies	Select the number corresponding to the number of copies (including the original). Vary the setting up or down (including A to D) to optimize printing. Select D when replacing ribbon or clearing a paper jam.

* The following graphics are engraved on the cover.



: Continuous forms



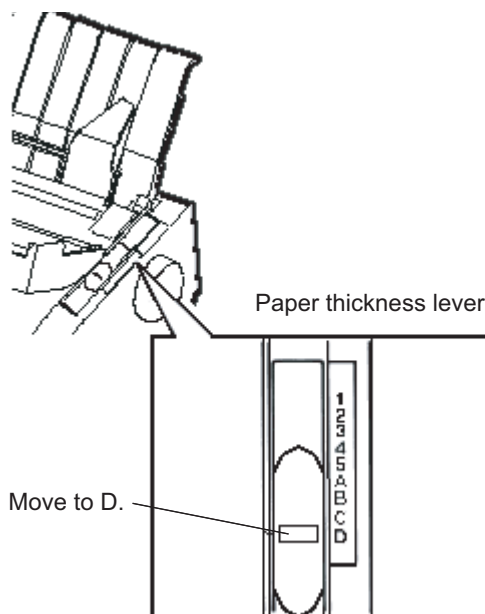
: Cut sheets

ADJUSTING FOR PAPER THICKNESS

The printer can handle paper of different thicknesses, including multipart forms with up to five parts (original plus four copies). For details on paper thickness specifications, see Appendix B.

The paper thickness lever, located at the top right corner of the printer, allows you to adjust for different paper thicknesses. Be sure to adjust the paper thickness lever whenever you change the number of copies being printed.

The paper thickness lever has nine settings: 1 to 5 and A to D. Use Table 3.2 to determine the appropriate setting for your paper; then, move the paper thickness lever to the appropriate position.



Adjusting the paper thickness lever

Table 3.2 Paper Thickness Lever Settings

Number of Copies (Including the Original) *1	Setting *2
1 copy	1
2 copies	2
3 copies	3
4 copies	4
5 copies	5
Ribbon replacement	D

*1 For carbon-interleaved paper, the carbon counts as one copy.

*2 Vary the setting up or down (including **A** to **D**) to optimize printing. Select **D** when replacing a ribbon or clearing a paper jam. For labels and envelopes, use trial-and-error to determine a satisfactory setting.

NOTE

If printing is messy, the ribbon misfeeds, or the paper jams, move the lever one setting higher.

USING SINGLE SHEETS

This section describes how to load paper in the cut sheet stand.

The cut sheet stand allows paper to be loaded manually, one sheet at a time.

Loading a Single Sheet of Paper

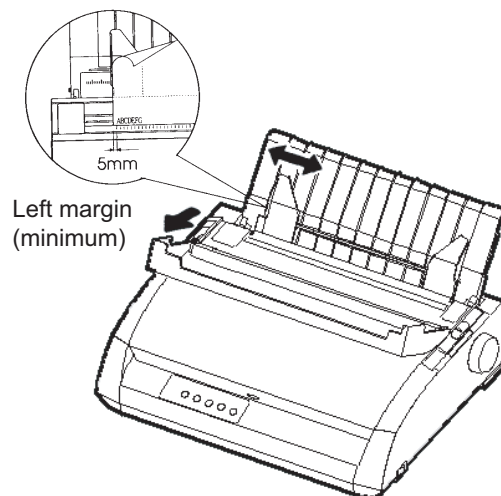
To load a sheet of paper into the cut sheet stand:

1. Make sure that the printer is turned on. Check that rear-fed continuous forms are retracted to the park position. (For details, see the section **Unloading Continuous Forms** later in this chapter.)

2. If necessary, reset the paper thickness lever. (See the section **Adjusting for Paper Thickness** earlier in this chapter.)
3. Move the paper select lever forward. (This lever is at the top left of the printer.)
4. Raise the cut sheet stand. Position the left paper guide. Note that its movable range is limited.

Adjusting the left margin

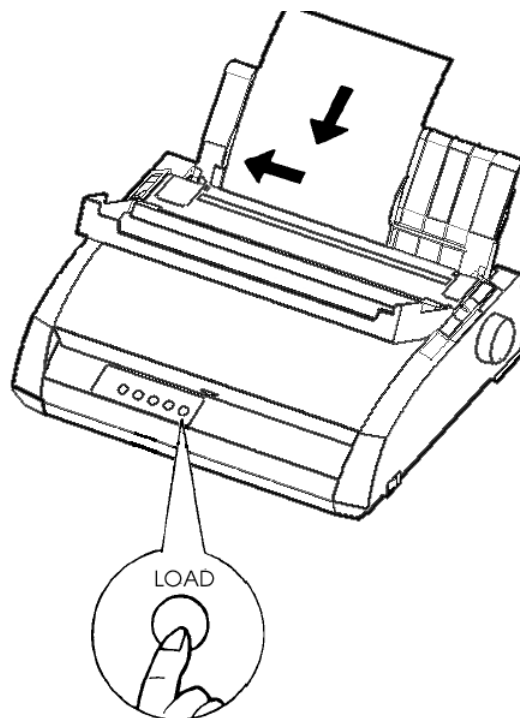
Below the left paper guide, the cut sheet stand has a scale graduated in units of 0.1 inch. When the left paper guide is positioned all the way to the right, the left margin is approximately 5 mm (0.2 inch). To help align paper, also use the two inch-based rulers on the ejection cover of the printer. The graduations on the ruler are for 10 columns per inch.



Preparing to load a sheet of paper

5. Insert a sheet of paper into the cut sheet stand. Make sure that the bottom edge of the paper engages snugly with the platen. Adjust the right paper guide.

6. Press the LOAD button. The paper will advance to the top-of-form position. The top-of-form position is the first line on which printing can start. To adjust the position of the paper slightly, simultaneously press the ONLINE button and the LF/FF button or the LOAD button. The paper will move forward or backward in 1/180-inch increments.



Loading a sheet of paper

7. Place the printer online. Print a sample page and check the page margins. Make the following adjustments, as necessary:
 - Horizontal alignment. Readjust the paper guides if required.
 - Top-of-form setting (see Chapter 5).
 - Margin settings. Use your software or the printer setup mode (see Chapter 5).

Ejecting Single Sheets

If you print using software, each sheet is ejected automatically when the end of the printed page is reached. To manually eject sheets of paper, use either of the following methods:

- Press and hold down the LF/FF button to execute a forward form feed.
- Turn the platen knob clockwise.

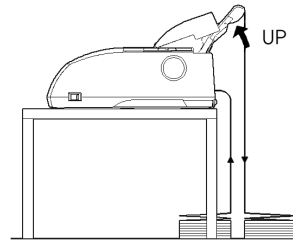
USING CONTINUOUS FORMS

Continuous forms paper, fanfolded at the horizontal perforations, is ideal for printing rough drafts and long files. The paper is fed into the printer using the forms tractors. The forms tractors unit at the rear of the printer pushes paper from the rear to the platen. This is called push-tractor feeding.

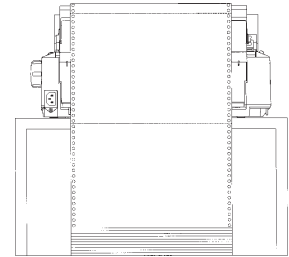
Positioning the Paper Stack

Place the stack of continuous forms paper directly below the rear of the printer. After the paper is installed in the printer, the paper path should look like this:

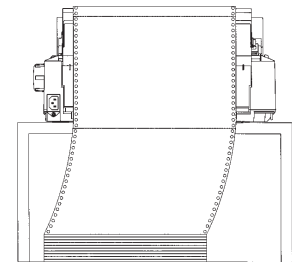
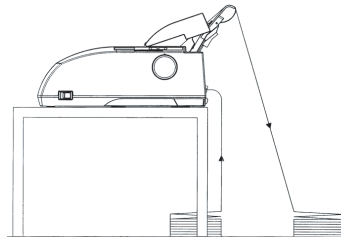
Good placement



Feed from rear slot



Bad placement



Placement of continuous forms

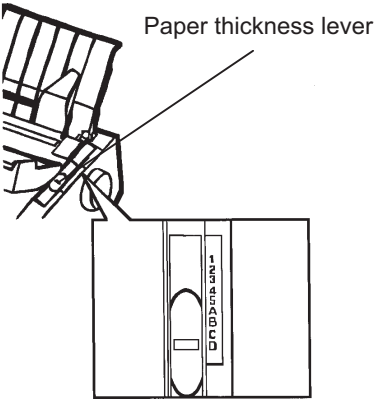
Loading Continuous Forms

This section explains how to use continuous forms. The tractor unit pushes continuous forms.

To load continuous forms paper:

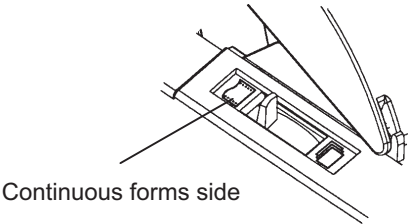
- 1. Make sure that the printer is turned on. Remove any single- sheet paper from the printer.
- 2. If necessary, readjust the paper thickness lever for continuous forms. (See the section **Adjusting for Paper Thickness** earlier in this chapter.)

No. of Copies	Setting
1	1 to 2
2 to 3	2 to 3
4	3 to 4
5	4 to 5



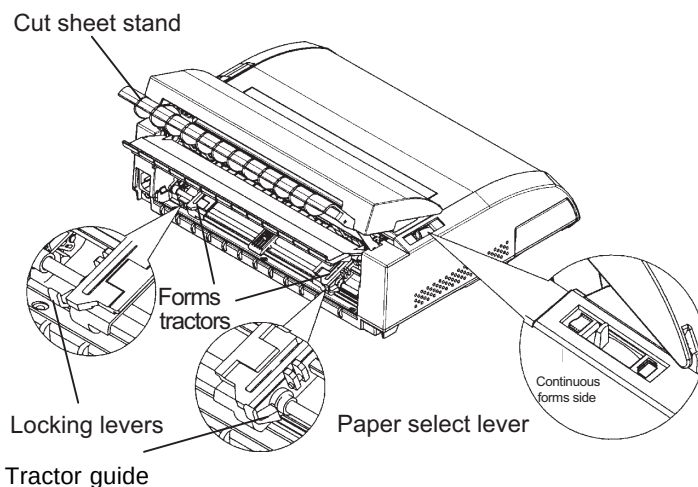
Paper thickness lever setting

- 3. Move the paper select lever to the rear of the printer.



Preparing to load continuous forms paper

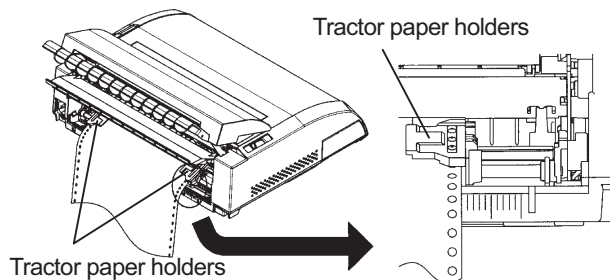
4. Release the tractor locking levers by pulling them up. Open the tractor paper holders. See the following figure.
5. Position the right tractor (as seen from the rear of the printer). Push the right locking lever down to secure the tractor. Center the middle forms support.



Positioning the tractors

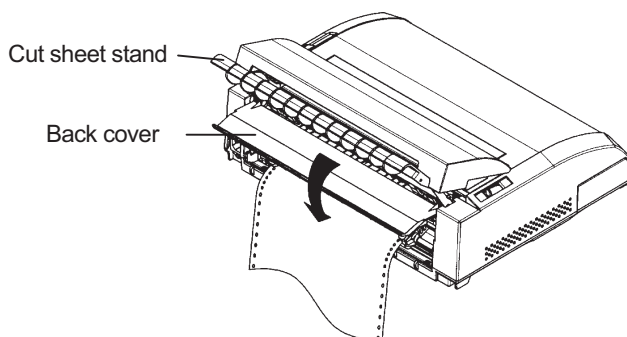
Adjusting the left margin

Below the right tractor, as seen from the back, there is a tractor guide, short inch-based ruler graduated in 10 columns per inch. Use the ruler to help position the tractor. When the paper edge is positioned to the left most line, the left margin is approximately 12mm (0.5 inch) including perforation area.



Adjusting the left margin

6. Fit the paper feed holes onto the left and right tractor pins. Adjust the left tractor (as seen from the rear of the printer) to the width of the form. Close the paper holders.
7. Pull the left tractor (as seen from the rear) to stretch the paper taut. Push the left locking lever down to secure the tractor in place.
8. Strongly pull the back cover off of the cut sheet stand (in the direction indicated by the arrow) and set it down.



Setting the back cover

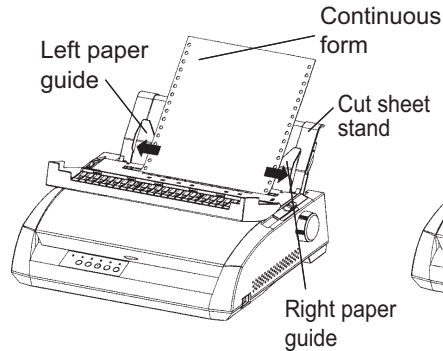
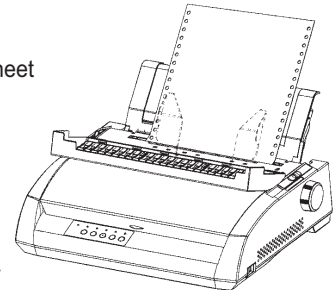
9. Install the cut sheet stand. For installation, see the section **Installing the Cut Sheet Stand** in Chapter 2.
10. Press the LOAD button to advance the paper to the top-of-form position. Top-of-form is the first line on which printing can start.
11. Press the ONLINE button to place the printer online. Print a sample page and check the page margins. Make the following adjustments, as necessary:
 - Horizontal alignment. Move the forms tractors as required.
 - Top-of-form setting (see Chapter 5).
 - Margin settings. Use your software or the printer setup mode (see Chapter 5).

If the paper cut position and the perforation position do not fit, adjust them by using the following procedure.

NOTE

When you use continuous forms, make sure that the edges of both left and right paper guides do not touch the paper.

Slide both paper guides flush against the ends of both sides.

Good**Unacceptable****Adjusting the TEAR OFF position**

When the TEAR OFF button is used to advance the paper to cut it, the paper cut position and the perforation position may not match. In such cases, adjust their positions by using the following procedure.

Adjustment procedure :

1. Use the TEAR OFF button to advance the paper to its cut position.
(Keep holding down the TEAR OFF button.)
2. While holding down the TEAR OFF button, adjust the cut position by using the LF/FF button or LOAD button.
 - LF/FF button: Pressing this button once extends the paper feed amount by 1/180 inches.
 - LOAD button: Pressing this button once reduces the paper feed amount by 1/180 inches.
 - The adjustment range is plus or minus 63/180 inches (approximately 9 mm). When it is exceeded, an alarm beeps.
3. When the cut position is adjusted, release the TEAR OFF button.
The paper feed amount at the end of the adjustment is stored as the amount by which the paper will be fed when the TEAR OFF button is pressed.

Unloading Continuous Forms

To unload continuous forms:

1. Make sure that the paper select lever is set to the rear position.
2. Press the LOAD button. The continuous forms paper is retracted to the park position. If the paper cannot be retracted in one operation, continue to press the LOAD button until the paper is parked.

NOTE

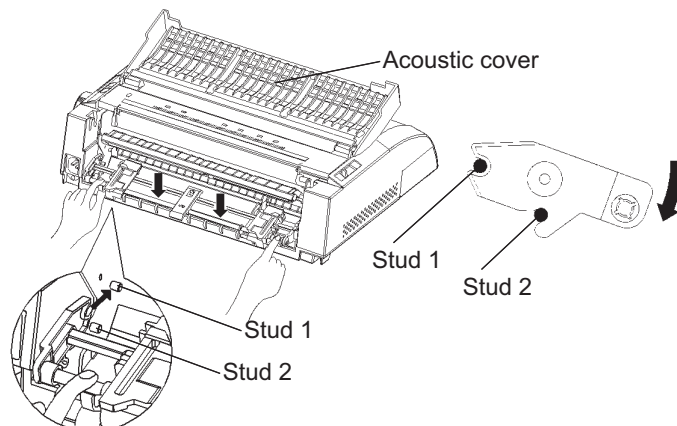
The printer can retract continuous forms paper a maximum of 55.8 cm (22 inches) per operation.

3. To remove the paper, raise the tractor paper holders and lift out the paper.

Installing the Tractor Unit

Install the tractor unit by following the procedure below if it happens to be disengaged from the studs.

1. Turn off the printer.
2. Remove the cut sheet stand and open the acoustic cover.
3. Hook the notch of the tractor unit against stud 1, and then rotate the unit downward so as to set the other notch onto stud 2.



Tearing Off Continuous Forms

Your printer has a special “tear-off edge” that allows you to tear off printed pages without wasting paper. The tear-off edge is located on the ejection cover.

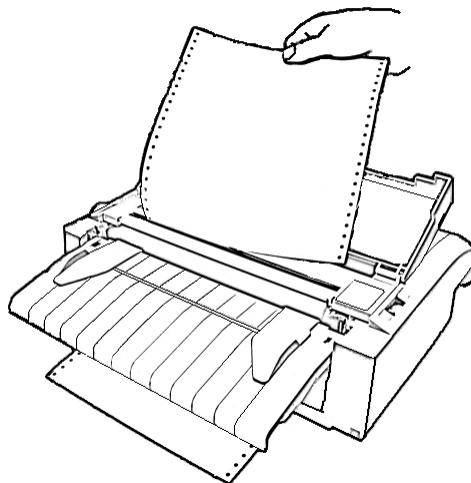
To tear off continuous forms using the tear-off edge:

1. Press the TEAR OFF button. The bottom perforation of the last page advances to the tear-off edge. If you specified TEAR OFF: AUTO using the CONFIG function in setup mode, the paper automatically advances to the tear-off edge at the end of each job (or when the printer has printed all the data received).

NOTE

If the bottom perforation of your paper is not positioned at the tear-off edge, the length of your paper may not be specified correctly in your software or the printer setup mode. Check that the paper length is specified correctly. For information on specifying page length using setup mode, see Chapter 5.

2. Tear the paper off at the perforation.



Tearing off continuous forms

3. Press any button to retract the forms back to the top-of-form position.

FEEDING AND POSITIONING PAPER

Line Feed/Form Feed

Use the line feed/form feed function to move paper forward. This function is valid when the printer is online or offline. Pressing and holding down the LF/FF button feeds one sheet of paper. Pressing the LF/FF button once advances the paper one line (do not hold the button more than three seconds).

The printer does not allow you to execute “reverse” form or line feeds from the control panel. To feed paper backward, manually rotate the platen knob. Remember that the top-of-form will slip from the original setting.

Micro Feed

Use the micro feed function to fine tune the position of the paper. This function is valid when the printer is offline. Press the ONLINE and LF/FF buttons simultaneously to micro-feed paper forward. Press the ONLINE and LOAD buttons simultaneously to micro-feed paper backward.

Remember that the top-of-form will slip from the original setting.

Load Position Adjust

Use also the micro feed function to adjust the load position of the paper. This function is valid when the printer is offline. When this function is used immediately after the LOAD button is pressed, the adjusted position is retained temporarily as the new load position until the power is turned off.

Pressing the ONLINE and MENU buttons simultaneously saves the new load position permanently. Load positions are saved separately for single sheets and continuous forms.

SWITCHING PAPER TYPES

If you have more than one type of job, it is often necessary to switch between continuous forms and single sheets. This section explains how to switch between paper types. It is not necessary to remove the continuous forms paper from the printer.

Switching to Single Sheets

To switch from continuous forms to single sheets:

1. Tear off your printed pages.
2. Retract the forms paper to the park position by pressing the LOAD button. The PAPER OUT indicator turns red.

CAUTION

Failure to retract the forms paper will cause paper jams.

3. Move the paper select lever forward to the single sheet position.
4. Mount the cut sheet stand. (For details, see the section **Using Single Sheets** earlier in this chapter.) If you are using the cut sheet stand, press the LOAD button to advance the paper to the top-of-form position.

You are now ready to print using single sheets.

Switching to Continuous Forms

To switch from single sheets to continuous forms:

1. If a sheet of paper is loaded, remove the paper by turning the platen knob or pressing and holding down the LF/FF button.

CAUTION

Failure to remove paper may cause a paper jam.

2. Move the paper select lever to the rear to the continuous forms position.
3. Press the LOAD button. The continuous forms paper advances to the top-of-form position.

You are now ready to print using continuous forms paper.

TIPS ON PAPER HANDLING General Tips

- Use high-quality paper. Do not use paper that is wrinkled or curled at the edges.
- Do not use paper with staples or metal parts.
- Do not use paper with unpredictable variations in thickness, such as paper with partial multilayers, paper with embossed printing, and labels with the backing sheet exposed.
- Store paper in a clean, dry environment.

Multipart Forms

- Avoid using carbon-interleaved single sheets if possible. Printing tends to become misaligned on the bottom sheet.
- To ensure smoother feeding of paper-stapled, multipart forms, raise the cut sheet stand to support the forms.

Envelopes

When printing envelopes, use the cut sheet stand or the manual feed slot.

Note the following:

- Set the paper thickness lever to best accommodate envelope thickness.
- When loading envelopes, make sure that the envelope flaps face forward. Otherwise, the envelopes may jam in the printer.

Labels

- Be careful to check operating conditions when using labels. Labels are sensitive to temperature and humidity.
- Only use labels mounted on continuous forms backing sheets. Do not print labels mounted on single sheet backing. Labels mounted on single sheet backing tend to slip and printing becomes crooked.
- Set the paper thickness lever to best accommodate label thickness.
- Do not feed labels backwards using the LOAD button from the control panel. Jamming may occur.
- Do not use the printer tear-off feature when printing labels. If the labels are retracted, the backing may peel off and the labels may jam in the printer.
- Do not leave labels loaded in the printer. If labels curl around the platen, jamming may occur when printing is resumed.
- Test-print labels before running a job. If jams occur, set the paper thickness lever to a wider position. If jamming problems continue, try a different type of label.

PRINTING

This chapter describes the following everyday printing operations:

- Selecting print features
- Starting, stopping, or resuming printing
- Removing printed pages
- Clearing the print buffer

Instructions for loading paper are given in Chapter 3.

SELECTING PRINT FEATURES

The print features you select determine how your printed pages will look. Print features include the following:

- Print quality
- Fonts
- Pitch (characters per horizontal inch)
- Page length and width
- Line spacing (lines per vertical inch)

To select print features, you can use either commercial software or the printer control panel. The method you use depends on the capabilities of your software. If your software has most of the features you require, you may rarely – if ever – have to use the control panel. *In fact, your software often overrides the printer settings.*

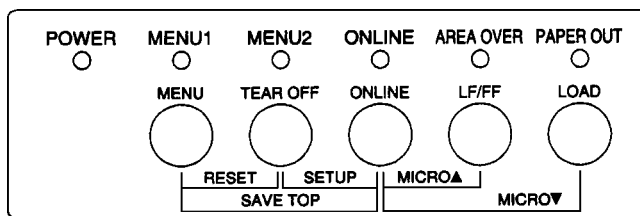
If your software has limited options, you can use the printer control panel to select print features. Sometimes, the control panel enables you to select features not available through your software. For example, you can select downloaded fonts not supported by your software.

Using Commercial Software

Many commercial software packages offer a wide variety of print features, including some features that are not supported by this printer. For example, software often provides a wider range of font sizes than the printer can accommodate. Software also allows you to specify multiple fonts on a page. To determine which features your software supports and how to select them, refer to your software documentation.

Using the Control Panel

Use the MENU button to directly select one of the two menus.



Printer control panel

The MENU button specifies MENU1 or MENU2, either of which allows you to specify different sets of options in advance. Some of the print features include emulation, print quality, character pitch, and line spacing.

When you first turn the printer on, the MENU 1 indicator is lit; that is, all of the print features assigned to MENU1 are enabled. However, you can easily switch to MENU2 before printing. You can also select a resident font other than the fonts assigned to MENU1 and MENU2.

NOTE

For easy reference, keep a list of your current MENU 1 and MENU 2 settings near the printer. To print a list of current settings, see the section *Printing a List of Selected Options* in Chapter 5. You may also want to use the space provided in Table 4.1 to record your settings.

Selecting MENU1 or MENU2

When you first turn the printer on, MENU1 is selected. To change to MENU2 or back to MENU1, proceed as follows:

1. Press the ONLINE button to place the printer offline.
2. Repeatedly press the MENU button. The lighted indicator (1 or 2) shows the menu selected. When the menu selection is changed, the font (font, pitch, and quality) assigned in the selected menu becomes valid.

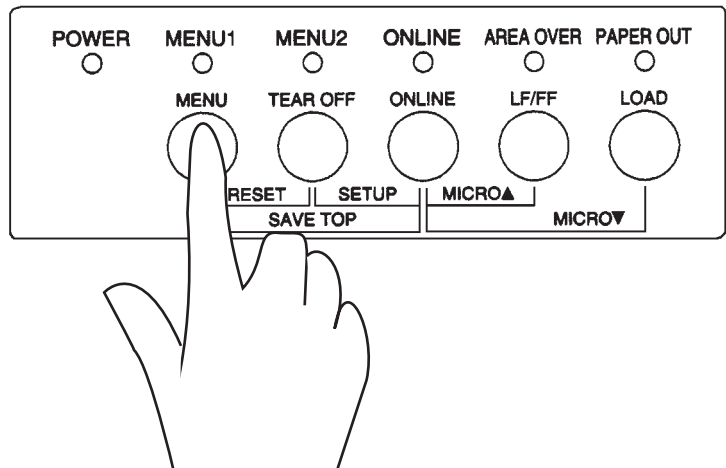


Table 4.1 MENU1 and MENU2 Settings

Setting	Default Settings	
	<i>For easy reference, check (✓) or record your default settings in the space below.</i>	
Print Feature	MENU1	MENU2
Emulation Fujitsu DPL24C PLUS IBM Proprinter XL24E Epson ESC/P2		
Font Courier 10 Prestige Elite 12 Compressed 17 Boldface PS Pica 10 Correspondence OCR-B 10 OCR-A 10 Courier Normal 10 (outline) Courier Bold 10 (outline) Courier Italic 10 (outline) Nimbus Sans Normal PS (outline) Nimbus Sans Bold PS (outline) Nimbus Sans Italic PS (outline) Timeless Normal PS (outline) Timeless Bold PS (outline) Timeless Italic PS (outline) Downloaded font 0 Downloaded font 1		
Print quality Letter Report Draft High-speed draft		
Pitch 2.5, 3, 5, 6, 10, 12 15, 17, 18 or 20 cpi Proportional spacing		
Other features:		

3. Press the ONLINE button to return online. You are ready to print using the selected menu.

STARTING OR STOPPING PRINTING

Starting Printing

Before you start to print, make sure that paper is loaded. Also, verify that the paper thickness lever is set to the appropriate position (**1 to D**).

To start printing, press the ONLINE button to place the printer online. Then start your software.

Stopping Printing

To stop printing immediately, press the ONLINE button to place the printer offline. You can also use your software to stop printing, but there will be a slight delay before printing stops. Any data sent to the print buffer but not yet printed is stored until you resume printing. Data in the print buffer is lost if you turn the printer off.

To resume printing, press the ONLINE button again. To cancel printing, use the cancel commands provided by your software or computer. To clear the print buffer, place the printer offline and press the MENU and TEAR OFF buttons. Any data sent to the print buffer before you canceled printing will be lost.

Resuming from a Paper-Out

The printer can “sense” when paper runs out. Depending upon how PPR-OUT (paper-out) is set in setup mode, the printer either:

- Stops printing and lights the red PAPER OUT indicator, or
- Continues printing until no more data remains in the printer.

See Chapter 5 for details on setting PPR-OUT. The factory default is to stop printing if continuous forms paper runs out and to continue printing if single sheet paper runs out.

To resume printing when paper runs out, use either of the methods described below:

Printing the remaining lines on a page

This method is convenient to continue printing under the paper-out condition.

1. Press the ONLINE button. The printer returns to online mode, prints or feeds one line, and the PAPER OUT indicator lights up again.
2. Repeat this procedure until the full page is printed. Line spacings, however, may be uneven.

CAUTION

When using the cut sheet stand or when printing remaining lines, be careful not to print on the platen. Printing on the platen may damage both the platen and the print head.

Continuing printing after supplying paper

1. Install paper on the forms tractors or on the cut sheet stand.
2. To load the first sheet of paper, press the LOAD button. The PAPER OUT indicator will turn off.
3. Press the ONLINE button to place the printer online. The printer resumes printing.

NOTE

For continuous forms paper, the page where printing stopped and the page where printing resumes may be incorrectly printed. In this case, wait for the entire job to finish printing. Then reprint the incorrect pages.

Resuming after an Area Over warning

The printer senses the left and right edges of paper and stores their positions when the paper is loaded. If your software will print data past either edge, the printer ignores that data but does not stop printing. Rather, the AREA OVER indicator lights to call your attention to the loss of data.

The AREA OVER indicator functions when AREACNT (area control) is set to ENABLE in setup mode. See Chapter 5 for information on setting AREACNT. The factory default is not to sense the edges. If paper is dark-colored or preprinted, the printer may not be able to sense the edges correctly. In this case, disable the sensor.

To resume printing when the AREA OVER indicator is on:

1. Stop your software and press the ONLINE button to place the printer offline.
2. Adjust the horizontal position of the paper or change the margin settings in the printer setup menu or your software.
3. Press the ONLINE button to place the printer online. Restart the software from the page that includes the lost data.

REMOVING PRINTED PAGES

This section describes the best methods for removing single sheets or continuous forms paper after printing.

Removing Single Sheets

When you print using software, the printer automatically ejects each sheet of paper when the end of the printed page is reached. To eject sheets manually, use one of the following methods:

- Press and hold down the LF/FF button to execute a form feed,
or
- Turn the platen knob clockwise.

Removing Continuous Forms

To avoid wasting paper, use the printer tear-off function to remove continuous forms paper. Press the TEAR OFF button to advance the perforation to the tear-off edge. Tear the paper off, and then press any button to retract the paper back to the top-of-form position. See Chapter 3 for more detailed instructions.

CLEARING THE PRINT BUFFER

Place the printer offline. Press the MENU and TEAR OFF buttons simultaneously to clear all data from the print buffer. This method is useful when you cancel a print operation and do not want to continue printing data already sent to the printer.

This method does not change or clear MENU1 and MENU2 settings, paper loading position settings, and downloaded fonts.