

Printer Specifications

Printing

Printing method:

24-pin impact dot matrix

Printing speed:

Characters per inch	Quality	Characters/second/line
10 cpi	High speed draft	300
10 cpi	Normal draft	250
10 cpi	Letter quality	83
12 cpi	Draft	300
12 cpi	Letter quality	100

* The paper thickness lever position or an overheated print head may affect the printing speed.

Printing direction:

Bidirectional logic seeking for text and graphics printing. Unidirectional text or graphics printing can be selected using software commands.

Line spacing:

1/6-inch or programmable in 1/360-inch increments

Paper feed speed:

Normal Mode

Continuous 5 inches/second
 Intermittent 60 ms/line at 1/6-inch line spacing

Copy Mode

Continuous 3.6 inches/second
 Intermittent 70 ms/line at 1/6-inch line spacing

Printable columns:

Characters per inch	Maximum printed characters per column
10 cpi	106
12 cpi	127
15 cpi	159
17 cpi	181
20 cpi	212

Buffer:

64KB or 0KB (selectable in the default-setting mode or the EPSON Remote! utility)

Bitmap fonts:

Font	Characters per inch available
EPSON Draft	10, 12, 15
EPSON Roman	10, 12, 15, proportional
EPSON Sans Serif	10, 12, 15, proportional
EPSON Courier	10, 12, 15
EPSON Prestige	10, 12
EPSON Script	10
EPSON Script C	proportional
EPSON Orator	10
EPSON Orator S	10
EPSON OCR-B	10

Scalable fonts:

Font	Available sizes
EPSON Roman	10.5, 8 to 32 points, in 2-point increments
EPSON Sans Serif	10.5, 8 to 32 points, in 2-point increments
EPSON Roman T	10.5, 8 to 32 points, in 2-point increments
EPSON Sans Serif H	10.5, 8 to 32 points, in 2-point increments

Barcode fonts:

EAN-13, EAN-8, Interleaved 2 of 5, UPC-A, UPC-E, Code 39, Code 128, POSTNET

Character tables:

One italic and 10 graphics character tables.

Character sets:

14 international character sets and one legal character set

Emulation:

ESC/P2
IBM 2390 Plus

Paper



Note:
Use recycled paper, labels, envelopes, and postcards only under normal temperature and humidity conditions, as follows:

Temperature	59° to 77°F (15° to 25°C)
Humidity	30% to 60% RH

Paper storage conditions:

Temperature	64° to 72°F (18° to 22°C)
Humidity	40% to 60% RH

Single sheets (manual insertion):

Width	3.6 to 11.7 inches (91 to 297 mm)
Length	3.6 to 16.5 inches (90 to 420 mm)
Thickness	0.0025 to 0.0055 inches (0.065 to 0.14 mm)
Weight	14 to 24 lb (52.3 to 90 g/m ²)
Quality	Plain paper, bond paper, and recycled paper

Single-sheet multi-part forms (manual insertion):

Width	3.6 to 11.7 inches (91 to 297 mm)
Length	3.6 to 16.5 inches (90 to 420 mm) 3.6 to 11.7 inches (90 to 297 mm)* *For the type glued at the side of the form
Copies	1 original + 4 copies
Total thickness	0.0047 to 0.015 inches (0.12 to 0.39 mm)
Weight/part	12 to 15 lb (40 to 58 g/m ²)
Quality	Carbonless multi-part forms with a line of glue at the top or the side of the form

Continuous paper (ordinary and multi-part):

Width	4.0 to 12.0 inches (101.6 to 304.8 mm)
Length/page	4.0 to 22.0 inches (101.6 to 558.8 mm)
Copies	1 original plus 4 copies
Total thickness	0.0025 to 0.015 inches (0.065 to 0.39 mm)
Weight	Ordinary paper 14 to 22 lb (52 to 82 g/m ²)

Part of multi-part form	12 to 15 lb (40 to 58 g/m ²)
Quality	Plain paper, recycled paper, and carbonless multi-part forms with spot gluing or paper stapling on both sides

Labels:



Note:
Use only labels mounted on continuous backing sheets.

Size	
Width	2.5 inches (63.5 mm), minimum
Height	0.94 inches (23.8 mm), minimum

Backing sheet	
Width	4.0 to 12.0 inches (101.6 to 304.8 mm)
Length/page	4.0 to 22.0 inches (101.6 to 559 mm)

Thickness	
Backing sheet	0.0028 to 0.0035 inches (0.07 to 0.09 mm)
Total thickness	0.0063 to 0.0075 inches (0.16 to 0.19 mm)

Weight	17 lb (68 g/m ²)
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Envelopes:

Size	No. 6 6.5 × 3.6 inches (165 × 92.1 mm)
	No. 10 9.5 × 4.1 inches (241 × 105 mm)
Thickness	0.0063 to 0.0197 inches (0.16 to 0.52 mm) Any differences in thickness within the printable area must be less than 0.0098 inches (0.25 mm).
Weight	12 to 24 lb (45 to 91 g/m ²)
Quality	Bond envelopes, plain envelopes, and airmail envelopes without glue on the flap

Postcards:

Width	4.13 to 5.83 inches (105 to 148 mm)
Length	4.1 to 5.83 inches (105 to 148 mm)
Thickness	0.0087 inches (0.22 mm)
Weight	51 lb (192 g/m ²)
Quality	Plain paper and recycled paper

Roll paper:

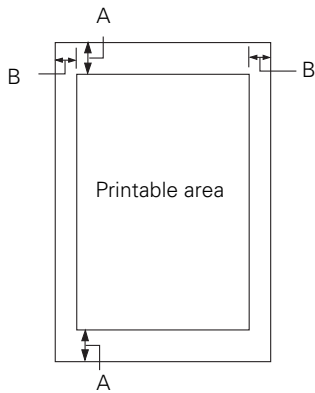
Width	8.5 inches (216 mm)
Thickness	0.0028 to 0.0035 inches (0.07 to 0.09 mm)

Weight 14 to 22 lb (52.8 to 82 g/m²)

Labels

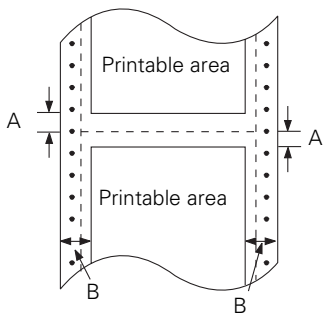
Printable area:

Single sheets

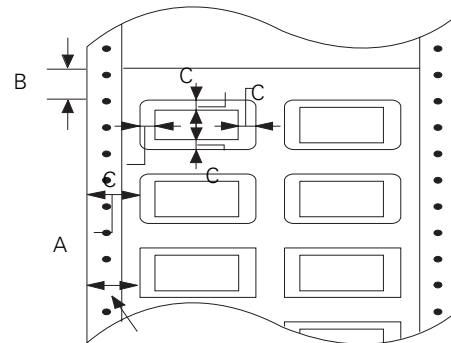


- A The minimum top and bottom margins are 0 inches (0 mm).
- B The minimum left and right margins are 0.12 inches (3.0 mm). The maximum printable width is 10.6 inches (297 mm).

Continuous paper

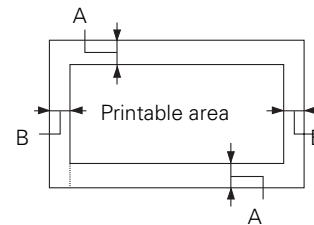


- A The minimum top and bottom margins (above and below the perforation) are 0.17 inches (4.2 mm).
- B The minimum left and right margins are 0.51 inches (13 mm). The maximum printable width is 10.6 inches (269 mm).



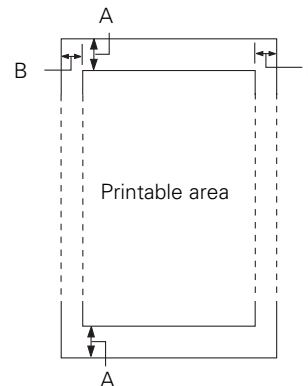
- A 0.47 inches (12 mm) or more
- B 0.047 inches (1.2 mm) or more
- C 0.12 inches (3 mm) or more

Envelopes and postcards



- A The minimum top and bottom margins are 0 inches (0 mm).
- B The minimum left and right margins are 0.12 inches (3.0 mm).

Roll paper



- A The minimum top and bottom margins are 0 inches (0 mm).
- B The minimum left and right margins are 0.12 inches (3.0 mm).

Mechanical

Paper feed methods:

Friction feed from front
 Built-in push tractor
 Cut-sheet feeder (optional)
 Roll paper holder (optional)

Ribbon:

Black ribbon cartridge (S015016)
 Ribbon life 2 million characters (at 10 cpi in letter-quality mode with 48 dots/character)

Total print amount:

6.5 million lines (except print head)

Print head life:

200 million strokes/wire

MTBF:

5000 POH

Dimensions and weight (with paper guide):

Height: 10.1 inches (256 mm)
 Width: 18.5 inches (469 mm)
 Depth: 16.9 inches (429 mm)
 Weight: Approx. 19.8 lb (9.0 kg)

Electrical

Rated voltage AC 120 V
 Input voltage range AC 103.5 to 132 V
 Rated frequency range 50 to 60 Hz
 Input frequency range 49.5 to 60.5 Hz
 Rated current 0.7 A
 (maximum 2.2 A depending on the character type)
 Power consumption Approx. 30 W (ISO/IEC 10561 Letter pattern)

Environmental

Temperature:

Operation (without condensation):
 41° to 95°F (5° to 35°C)
 59° to 77°F (15° to 25°C)
 for multi-part forms, envelopes, postcards,
 and labels
 Storage: -22° to 140°F (-30° to 60°C)

Humidity (without condensation):

Operation: 10% to 80% RH
 30% to 60% RH (for envelopes and labels)
 Storage: 0% to 85% RH

Safety approvals

Safety standards UL1950 with D3
 CSA C22.2 No.950 with D3
 EMI FCC part 15 subpart B class B
 CSA C108.8 class B

Acoustic noise:

Approx. 55 dB (A) (ISO 7779 pattern)

Parallel Interface Specifications

The printer comes with a bidirectional, 8-bit, parallel interface and an optional interface slot.

Forward channel

Transmission mode: 8-bit parallel, IEEE-1284 compatible mode
 Adaptable connector: 57-30360 (Amphenol) or equivalent
 Synchronization: $\overline{\text{STROBE}}$ pulse
 Handshaking: BUSY and $\overline{\text{ACKNLG}}$ signals
 Signal level: TTL compatible (IEEE-1284 level 1 device)

Reverse channel

Transmission mode: IEEE-1284 Nibble Mode
 Adaptable connector: 57-30360 (Amphenol) or equivalent
 Synchronization: Refer to the IEEE-1284 specification
 Handshaking: Refer to the IEEE-1284 specification
 Signal level: IEEE-1284 Level 1 device
 Data transmission timing: Refer to the IEEE-1284 specification
 Extensibility request: The printer responds to the extensibility request in the affirmative when the request is 00H or 04H, which means:
 00H: Request nibble mode of reverse channel transfer
 04H: Request device ID in nibble mode of reverse channel transfer

Optional Cut-Sheet Feeder Specifications

The specifications below apply to both the high-capacity cut-sheet feeder (C806781, bin 1) and the second-bin cut-sheet feeder (C806791, bin 2).



Note:
You can load the same types of single sheets, multi-part forms, envelopes, and postcards in the high-capacity cut-sheet feeder as you load in the printer's paper guide. You can load only single-sheet paper in the second-bin cut-sheet feeder.

Capacity of bin 1:

Single sheets

- A3 size paper Up to 110 sheets of 22 lb (82 g/m²) paper
Up to 135 sheets of 17 lb (64 g/m²) paper
- Other paper Up to 150 sheets of 22 lb (82 g/m²) paper
Up to 185 sheets of 17 lb (64 g/m²) paper

Single-sheet multi-part

Up to 40 sheets of 12.5 lb (47 g/m²) paper forms

Envelopes

Up to 25 plain or bond envelopes
Up to 30 airmail envelopes

Postcards

Up to 50 plain paper cards



Note:
The total thickness of the paper stack can be up to 0.59 inches (15 mm). If the weight of your paper differs from the values above, the total thickness of the paper stack should be less than 0.59 inches (15 mm).

Capacity of bin 2:

- Single sheets Up to 50 sheets of 22 lb (82 g/m²) paper
Up to 60 sheets of 17 lb (64 g/m²) paper



Note:
The total thickness of the paper stack can be up to 0.20 inches (5 mm).

Environmental:

Temperature

- Operation: 41° to 95°F (5° to 35°C)
- Storage: -22° to 140°F (-30° to 60°C)

Humidity (without condensation)

- Operation: 10% to 80% RH
- Storage: 0% to 85% RH

Dimensions and weight (including the printer):

With only bin 1 installed

- Height: 17.6 inches (446 mm)
- Width: 18.5 inches (469 mm)
- Depth: 26.0 inches (660 mm)
- Weight: 24.3 lb (11.0 kg)

With bin 1 and bin 2 installed

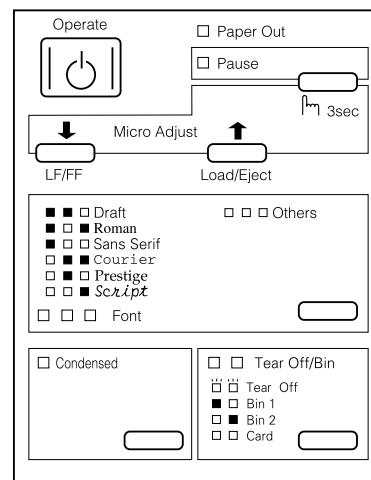
- Height: 17.6 inches (446 mm)
- Width: 18.5 inches (469 mm)
- Depth: 28.9 inches (733 mm)
- Weight: 26.0 lb (11.8 kg)

Using the Control Panel

This section explains how you can use the control panel to control the basic operation of the printer and to perform more advanced operations, such as making changes to default settings or activating the printer's quiet mode.

Basic Control Panel Functions

The indicator lights on the control panel let you monitor the current status of the printer, and the buttons let you control many printer operations.



Lights

Paper Out (red)

On when the printer runs out of paper. Flashes when the paper is jammed.

Pause (orange)

On when the printer is not ready to print data, paper is out or jammed, or you press the Pause button to pause printing. Flashes when the printer is in micro-adjust mode or the print head is too hot.

Font (three lights, green)

The printer uses the three Font lights to indicate the selected font as follows:

o o n	Draft
o n o	Roman
o n n	Sans Serif
n o o	Courier
n o n	Prestige
n n o	Script
n n n	Others*

n = On, o = Off

* This light pattern means that a font other than those indicated on the control panel has been selected using the default-setting mode or the EPSON Remote! utility. (The fonts available in the default-setting mode or EPSON Remote! are: OCR-B, Orator, Orator-S, Script C, Roman T, or Sans Serif H.)

Condensed (green)

On when you press the Condensed button to print condensed characters.

Tear Off/Bin (two lights, green)

The printer uses the two Tear Off/Bin lights to indicate the following:

f f	The perforation of your continuous paper is at the tear-off position.
o n	The optional high-capacity cut-sheet feeder (bin 1 of the double-bin feeder) is selected.
n o	The optional second-bin cut-sheet feeder (bin 2 of the double-bin feeder) is selected.
n n	Card mode is selected (for printing on postcards).

f = Flashing, n = On, o = Off

Buttons

Operate

Press this button to turn the printer on or off.

Pause

Press this button to temporarily stop printing, and press it again to resume printing. To turn on the micro-adjust mode, stop printing and hold down this button for at least 3 seconds. Press it again to turn off the micro-adjust mode.

Load/Eject

Press this button to advance single-sheet or continuous paper to the loading position. (The printer normally loads paper automatically.) If a single sheet is already in the loading position, press this button to eject it. If continuous paper is in the loading or tear-off position, press this button to feed it backward to the standby position. This button also executes micro-adjust mode

LF/FF (line feed/form feed)

Press this button briefly to feed the paper forward one line. Hold it down to eject a single sheet or advance continuous paper to the top of the next page. You can also use this button to load a single sheet of paper from the optional cut-sheet feeder or to feed continuous paper from the standby position to the loading position. This button also executes micro-adjust mode.

Font

Press this button to select one of the following fonts: Draft, Roman, Sans Serif, Courier, Prestige, Script, or Others. Others means a font other than those indicated on the control panel has been selected using the default-setting mode or the EPSON Remote! utility.

Printing with the Draft font requires fewer dots per character, which significantly increases the printing speed. However, printing with this font also reduces print quality. When you need letter-quality printing, select a font other than Draft.



Note:
The typestyle samples on the control panel are meant as guides only; printed results may differ slightly.

Condensed

Alternates between condensed characters and normal characters.

Tear Off/Bin

Press this button to move continuous paper to the tear-off position. Press it again to move the next page to the top-of-form position.

When the optional cut-sheet feeder is installed, press this button to select the cut-sheet feeder bin you want to use. Select Bin 1 to use the high-capacity cut-sheet feeder, and select Bin 1 or Bin 2 to use the double-bin cut-sheet feeder.

To print on postcards, select Card mode by pressing this button until both Tear Off/Bin lights are on. (Card mode is available only when the paper thickness lever is set to "2" or higher on the scale.)



Note:
Paper source settings (such as bin 1 or bin 2) made in your software override bin settings made with the Tear Off/Bin button, so use your software to make this setting whenever you can.

Advanced Control Panel Functions

Besides giving you control of the basic operation of the printer, the control panel allows you to enter the printer's default-setting and quiet modes, and to access several features helpful when troubleshooting.

To use the functions below (in italics), turn on the printer while pressing the corresponding control panel button(s).

Letter-quality self test = Load/Eject

Performs a letter-quality self test, which helps you determine the source of some printing problems. See "Printing a Self Test" for details.

Draft self test = LF/FF

Performs a draft self test, which helps you determine the source of some printing problems. See "Printing a Self Test" for details.

Bidirectional adjustment = Pause

Turns on the bidirectional adjustment mode, which allows you to correct printing alignment problems.

Hex dump = Load/Eject + LF/FF

Prints the data sent to the printer in hexadecimal code, which helps experienced users determine the source of some printing problems.

Default setting = Font

Turns on the default-setting mode, which allows you to change the printer's default settings. For more information, see "Using the Default-Setting Mode."

Quiet mode = Font + Condensed

Turns on the printer's quiet mode, which lowers the noise level during printing. For more information, see "Using Quiet Mode."

Reset buffer = Condensed + Tear Off/Bin

Resets the printer to its factory settings.

Using the Default-Setting Mode

The default settings control many printer functions. While you can often set these functions through your software or printer driver, you may sometimes need to change a default setting from the printer's control panel using the default-setting mode.

For a detailed description of the settings you can change in the default-settings mode, see the next section. For instructions on changing the settings, see "Changing the default settings."

Default-setting Mode Options

This section describes the options and settings available in the default-setting mode. Use the table below for quick reference when changing default settings. The options are explained in more detail after the table.

Option	Settings
Page length for tractor	3, 3.5, 4, 5.5, 6, 7, 8, 8.5, 11*, 70/6, 12, 14, 17 inches
Skip-over-perforation	On, Off*
Auto tear off	On, Off*
Auto line feed	On, Off*
Print direction	Auto, Bi-d*, Uni-d
I/F (interface) mode	Auto*, Parallel I/F, Option I/F
Auto I/F (interface) wait time	10 seconds*, 30 seconds
Software	ESC/P 2*, IBM 2390 Plus
Character table	Standard model: Italic, PC437*, PC850, PC860, PC863, PC865, PC861, BRASCII, Abicomp, ISO Latin 1, Roman 8 All other models: Italic, PC437, PC437 Greek, PC850, PC852, PC853, PC855, PC857, PC864, PC866, PC869, ISO Latin 1T, ISO 8859-7, MAZOWIA, Code MJK, Bulgaria, Estonia, PC774, ISO 8859-2, PC866 LAT.
International character set for Italic table	Italic U.S.A.*, Italic France, Italic Germany, Italic U.K., Italic Denmark, Italic Sweden, Italic Italy, Italic Spain
0 slash	On, Off*
High speed draft	On*, Off
Input buffer	On*, Off
Buzzer	On*, Off
Auto CR (IBM 2390 Plus) ***	On, Off*
AGM (IBM 2390 Plus) ***	On, Off*
Font **	OCR-B, Orator, Orator-S, Script C, Roman T*, Sans Serif H

* Default setting

** Fonts selected in the default-setting mode correspond to Others on the control panel. The following additional fonts are available only by pressing the Font button on the control panel: Draft, Roman, Sans Serif, Courier, Prestige, and Script.

*** These settings are effective only when IBM 2390 Plus emulation is selected.

Changing the Default Settings

Follow the steps below to enter the default-setting mode and change the printer's default settings.



Note:

To print the language selection sheet and the default-setting mode instruction sheets, you need four sheets of A4 or letter size single-sheet paper or 11-inch or longer continuous paper.

If you use single-sheet paper to print the default-setting mode instruction sheets, be sure to load a new sheet of paper each time the printer ejects a printed sheet. Otherwise, you cannot proceed to the next step.

1. Make sure paper is loaded, then turn off the printer. While holding down the FONT button, press the Operate button to turn on the printer. The printer enters the default-setting mode and prints the language selection sheet.
2. Press the FONT button until the FONT lights indicate the language you want, as described on the language selection sheet.
3. Press the Tear Off/Bin button to print the default-setting mode instruction sheets (three pages) in the language you want.



Note:

The arrows on the instruction sheets indicate the printer's current settings.

4. Press the Font button until the FONT lights indicate the option you want to change, as described on the default-setting mode instruction sheets.
5. Press the Tear Off/Bin button until the Condensed and Tear Off/Bin lights indicate the setting you want, as described on the instruction sheets.
6. Repeat steps 4 and 5 to make any other settings you want. Each time you press the Tear Off/Bin button, the printer saves the settings you selected.
7. When you finish changing the settings, press the Operate button to turn off the printer and exit the default-setting mode.

Using Quiet Mode

In quiet mode, the printer makes less noise when it prints. However, printing in quiet mode reduces the printing speed.

To turn on quiet mode, hold down the Font and Condensed buttons and press the Operate button to turn on the printer. To turn off quiet mode, press the Operate button to turn off the printer.

Printing a Self Test

Running the printer's self test helps you determine whether the problem comes from the printer or the computer:

- If the self test results are satisfactory, the printer is working properly and the problem is probably caused by your printer driver settings, application settings, computer, or interface cable. (Be sure to use a shielded interface cable.)
- If the self test does not print properly, there is a problem with the printer.

You can run the self test with either single sheets or continuous paper. This section describes how to run the test with single-sheet paper.

To perform a self test, follow these steps:

1. Make sure paper is loaded in the paper guide or on the tractor, and the paper release lever is set to the correct position for your paper. Then turn off the printer.



Caution:

Whenever you turn off the printer, wait at least five seconds before turning it back on; otherwise you may damage the printer.

2. To run the test using the Draft font, hold down the LF/FF button while you press the Operate button to turn on the printer. To run the test using the printer's letter-quality fonts, hold down the Load/Eject button while you turn on the printer. Either self test can help you determine the source of your printing problem; however, the draft self test prints faster than the letter-quality test.

After a few seconds, the printer loads the paper automatically, and then begins printing the self test. A series of characters is printed.



Note:

To temporarily stop the self test, press the Pause button. To resume the test, press the Pause button again.

3. To end the self test, press the **Pause** button to stop printing. If paper remains in the printer, press the **Load/Eject** button to eject the printed page. Then turn off the printer.



Caution:
Do not turn off the printer while it is printing. Always press the **Pause** button to stop printing, and the **Load/Eject** button to eject the printed page before you turn off the printer.

Printer Driver Settings

For Windows 95 Users

Before printing, check that the printer driver settings on the **Paper** and **Graphics** menus are appropriate for the kind of document you want to print, and change settings as needed. When you are finished making changes, click **OK** to apply the settings, or click **Restore Defaults** to return the settings to their factory defaults.

Paper menu

- Paper size** Select the size of the paper loaded in the printer. If you don't see your paper size, use the scroll bar to scroll through the list. If your paper size is not included in the list, click **Custom** and enter the paper size in the dialog box that appears.
- Orientation** Select **Portrait** or **Landscape**.
- Paper source** Click the paper source you want to use.

Graphics menu

- Resolution** Click the printing resolution you want.
- Dithering** You can leave this option set to **Fine**, which is the default setting, or select another dithering pattern, depending on the kind of printout you want. The display to the left of the dithering options shows the effect of your setting.
- Intensity** Move the slider to make your printout lighter or darker.

Once you've checked your printer driver settings, you are ready to print.

For Windows 3.1 Users

Before printing, check that the printer driver settings are appropriate for the kind of document you want to print, and change settings as needed. When you are finished making changes, click **OK** to apply the settings, or click **Cancel** to cancel your changes.

If you accessed the printer driver from your application, some of the settings below may appear in your application's **Page Setup** dialog box. If you accessed the driver from the **Control Panel**, these settings appear in the printer driver settings window.

- Resolution** Click the printing resolution you want.
- Paper Size** Select the size of the paper loaded in the printer. If you don't see your paper size, use the scroll bar to scroll through the list. If your paper size is not included in the list, click **User Defined Size** and enter the paper size in the dialog box that appears.
- Paper Source** Click the paper source you want to use.
- Orientation** Select **Portrait** or **Landscape**. The diagram on the screen changes according to the orientation you select.

To access the following settings from your application, you may need to click **Printer**, **Setup**, **Options**, or some combination of these buttons. If you accessed the driver from the **Control Panel**, click **Options** to access these settings.

- Dithering** You can leave this option set to **Coarse**, which is the default setting, or select another dithering pattern depending on the kind of printout you want.
- Intensity Control** Move the slider to make your printout lighter or darker.

Once you've checked your printer driver settings, you are ready to print.

For DOS Program Users

To install a printer driver in most DOS applications, you must select the printer you are using during the installation or setup procedure.

Choose the EPSON LQ-670 printer at the appropriate step in the procedure. If the list in your application does not include the LQ-670 printer, choose the first available printer from this list:

LQ-2070
LQ-2170
LQ-870/1170
LQ-570/1070/570+/1070+
DLQ-3000
DLQ-2000
LQ-1060
LQ-1050
LQ-2550
LQ-2500

If none of these printers is listed, choose the first one available from the following:

- LQ
- EX
- FX
- LX
- RX
- MX
- EPSON printer
- Standard printer
- Draft printer



Note:
If your application does not list a suitable alternative, contact the software manufacturer to see if an update is available.

Using the EPSON Remote! printer utility

The EPSON Remote! utility is included with the printer. This utility allows you to change the printer's default settings from your computer.

Installing the printer utility

Follow the steps below to install the EPSON Remote! utility.

1. Insert the printer driver disk in a disk drive.
2. At the DOS prompt, type A:\SETUP (or B:\SETUP) and press Enter.
3. At the next screen, select your printer and press Enter. The default directory C:\EPUTIL appears.
4. Press Enter. The printer utility is copied into the EPUTIL directory on drive C.

Accessing the printer utility

When you want to access the EPSON Remote! utility, follow these steps:

1. Change the current directory to drive C.
2. Type PRNSET, and press Enter. Follow the on-screen instructions to use the utility.

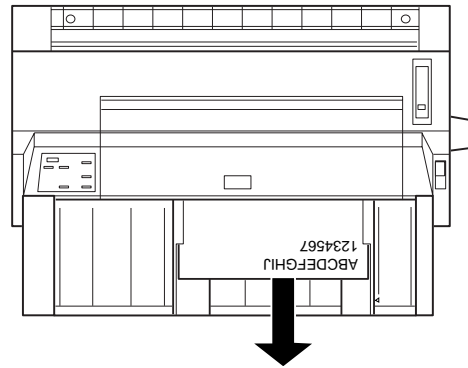
Paper Handling

Your printer can print on a wide variety of paper types, including single sheets, continuous paper, multi-part forms, labels, envelopes, postcards, and roll paper. This chapter explains how to use these paper types with your printer.

Selecting a Paper-Feeding Method

Your printer can accommodate a variety of paper types through four paper-feeding methods: paper guide, tractor, optional cut-sheet feeder, or optional roll paper holder. The paper-feeding method you select depends on the type of paper you want to use.

For all four paper-feeding methods, the printer prints on the paper and then ejects it as shown below.



Note:
When using any type of paper, make sure you load it printable side up.

Paper-feeding methods and paper types





The table below shows which paper-feeding method to select for each paper type. You use the paper release lever to select the paper-feeding method:



for tractor feeding or



for single-sheet feeding, as described in the next section

Paper type	Paper-feeding method			
	Tractor 	Paper guide 	Optional cut-sheet feeder 	Optional roll paper holder** 
Single sheets	-	○	○	-
Continuous paper	○	-	-	-
Single-sheet multi-part forms	-	○	○* (bin 1 only)	-
Continuous multi-part forms	○	-	-	-
Labels	○	-	-	-
Envelopes	-	○	○ (bin 1 only)	-
Postcards	-	○	○ (bin 1 only)	-
Roll paper	-	-	-	○

○ : You can use this paper type with this paper-feeding method.
 - : You cannot use this paper type with this paper-feeding method.
 * You can use only single-sheet multi-part forms that are glued at the top of the forms.
 ** The optional roll paper holder is available only in some countries.

Setting the paper release lever

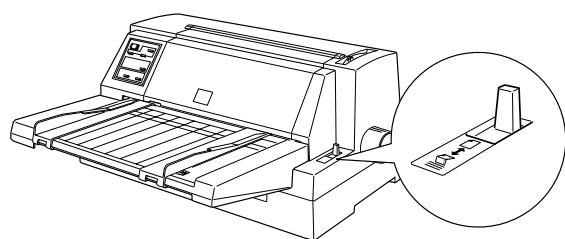
You use the paper release lever to set the paper path you want the printer to use. The paper release lever has two positions:



for tractor feeding and



for single-sheet feeding, as explained below.



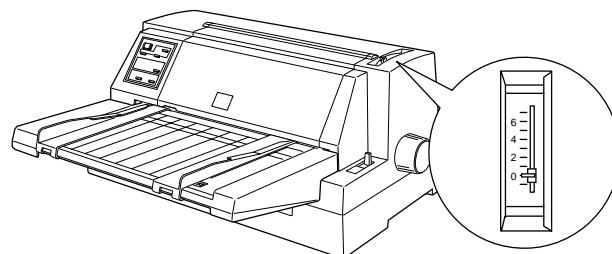
Single-sheet feeding position - for loading single sheets (including envelopes and postcards) from the paper guide, the optional cut-sheet feeder, or the optional roll paper holder.



Tractor feeding position - for loading continuous paper from the tractor.

Adjusting the Paper Thickness Lever

You need to set the paper thickness lever to match the thickness of your paper. When you print on ordinary single-sheet or continuous paper, set the lever to the “0” position on the scale as shown below.



The following table provides guidelines for selecting the appropriate lever position for the type of paper you are using.

Paper type	Paper thickness lever position
Thin paper	0 or 1
Ordinary paper (single sheets or continuous paper)	0
Multi-part forms (carbonless) 2 parts (original plus + 1 copy) 3 parts (original plus + 2 copies) 4 parts (original plus + 3 copies) 5 parts (original plus + 4 copies)	1 2 3 5
Labels and postcards	2
Envelopes*	2 to 6

* For thin envelopes, such as airmail envelopes, select position 2 or 3; for regular envelopes, select position 4; for thick envelopes, select position 4, 5, or 6.



Caution:
Always set the paper thickness lever back to the “0” position before you print on ordinary paper again.

Using Single Sheets

Your printer can print on single sheets of paper from 3.6 to 11.7 inches (92 to 297 mm) wide.

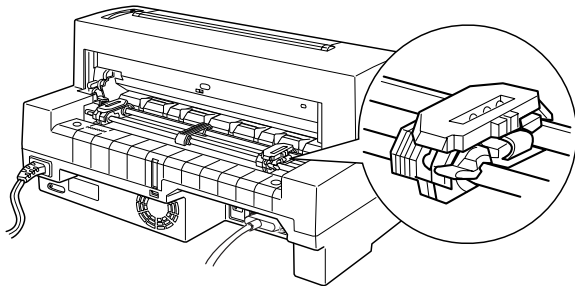
You can load one sheet of paper at a time into the paper guide at the front of the printer, or you can load a stack of paper in the optional cut-sheet feeder.



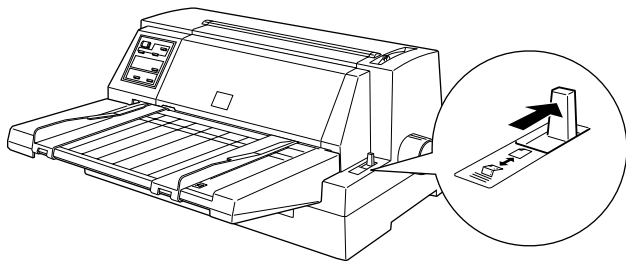
Note:
If you load long paper (for example, legal size paper), leave enough space at the back of the printer so that the paper is not obstructed.

Follow these steps to load single sheets:

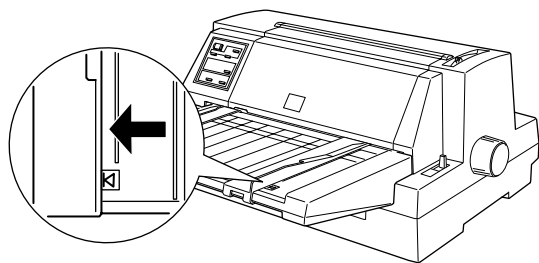
1. Make sure that the printer is off and the paper guide is attached. Then close the sprocket covers and push down the sprocket lock levers to lock the sprocket units in place.



2. Set the paper release lever to the single-sheet position as shown below. Also make sure the paper thickness lever is set to "0" if you are using ordinary single-sheet paper.



3. Press the Operate button to turn on the printer.
4. Slide the right edge guide until it rests against the guide mark, as shown below.

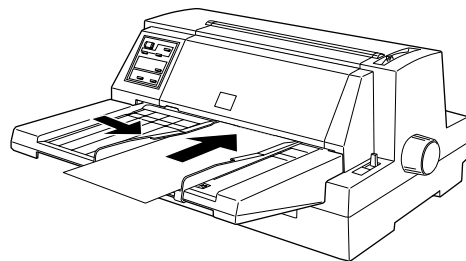


5. While adjusting the left edge guide to match the width of your paper, insert a sheet of paper between the edge guides until it meets resistance. Be sure to load your paper printable side up.

After a few seconds, the printer automatically advances the paper to the loading position. The printer is ready to accept data from your computer and print.



Note:
If the platen rotates but the printer does not load the paper, completely remove the paper and then insert it all the way into the printer again.



After printing a sheet, the printer ejects the printed sheet onto the paper guide and the Paper Out and Pause lights come on. If you are printing a multiple-page document, remove the printed sheet and insert a new sheet into the paper guide. The printer automatically advances the paper and resumes printing.



Note:
If the printer does not eject the printed sheet, press the Load/Eject button.



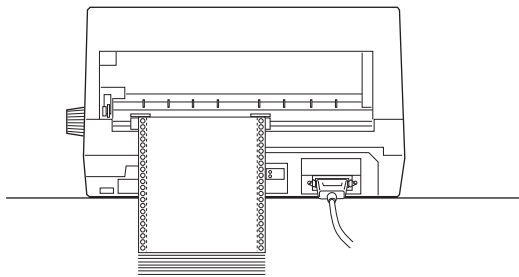
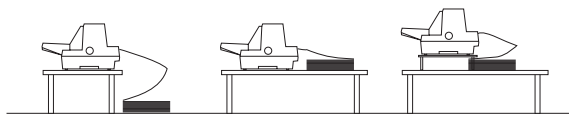
Caution:
Use the knob on the right side of the printer only to clear paper jams when the printer is off. Otherwise, you may damage the printer or cause it to lose the top-of-form position.

Using Continuous Paper

Your printer can print on continuous paper from 4.0 to 12.0 inches (101 to 304.8 mm) wide. You can load continuous paper from the built-in tractor unit.

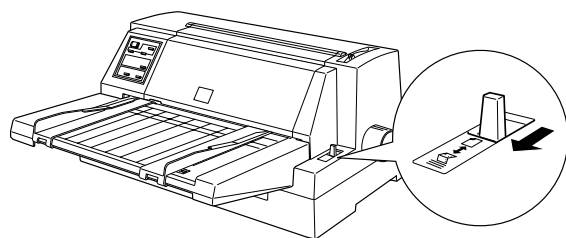
Positioning your continuous paper supply

When you load continuous paper, make sure you align your paper supply with the tractor so the paper feeds smoothly into the printer, as shown below.

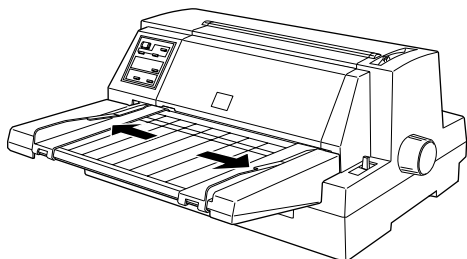


Loading continuous paper with the tractor

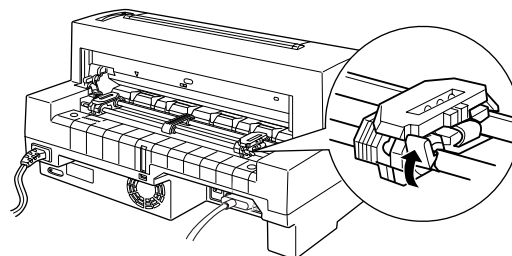
1. Make sure the printer is turned off. Set the paper release lever to the tractor position, as shown below. Also make sure the paper thickness lever is set to "0" if you are using ordinary continuous paper.



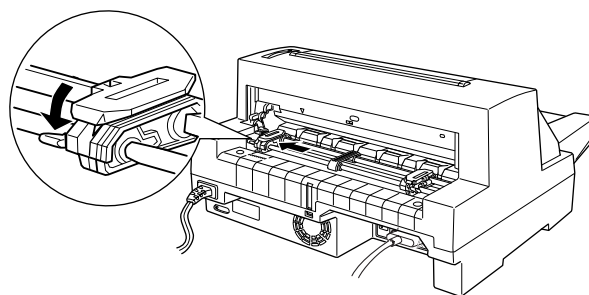
2. Slide the edge guides as far apart as they go.




3. Release the sprocket lock levers by pushing them up.

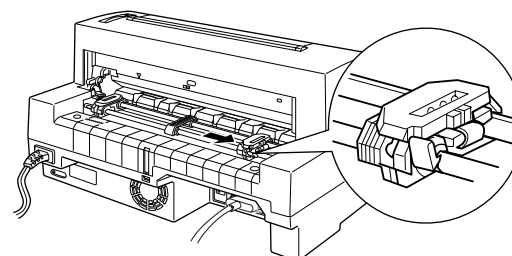


4. Facing the back of the printer, position the left sprocket unit so that the sprocket pins are to the left of the "0" on the scale and the arrow mark on the printer. Then push down the lock lever to lock the sprocket in place.

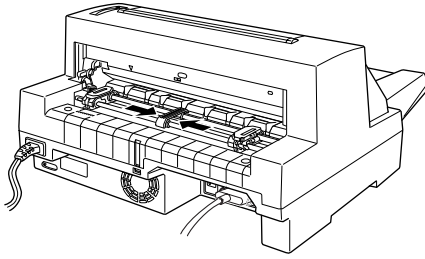


Note:
 Printing starts at the arrow mark on the printer and the "0" mark on the scale. The unprintable area is to the left of the arrow mark and the "0".

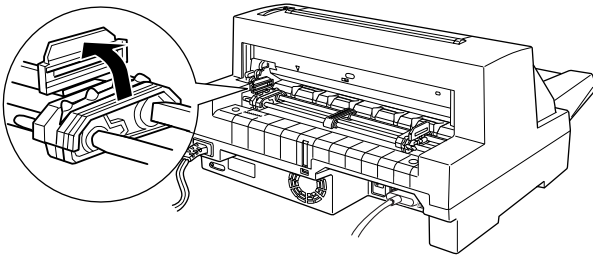
5. Slide the right sprocket unit to roughly match the width of your paper, but do not lock it.



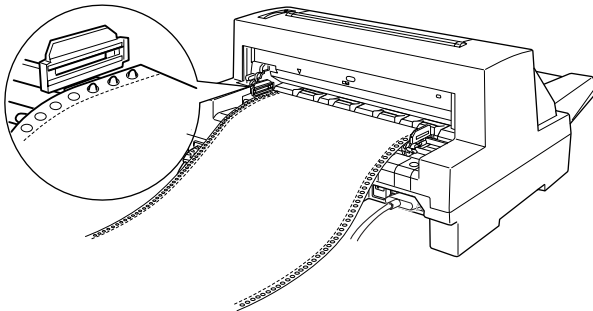
6. Slide the paper support midway between the two sprocket units.



7. Open the sprocket covers.

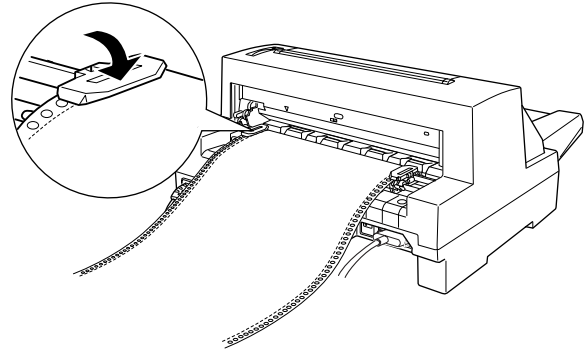


8. Fit the first three holes of the continuous paper over the sprocket pins on both sides. Be sure to load your paper printable side up.

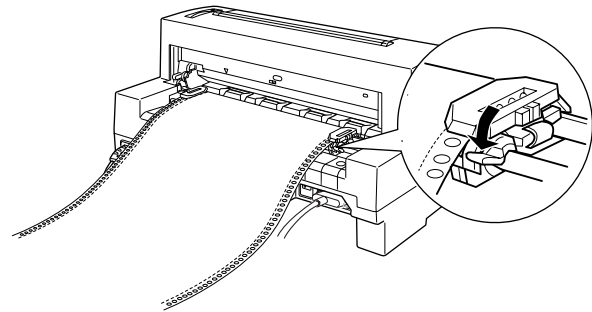


Caution:
Make sure the first sheet of your continuous paper has a clean, straight edge so that it can feed smoothly into the printer.

9. Close the sprocket covers. If necessary, unlock and reposition the left sprocket unit so that the perforation aligns with the arrow mark on the printer. Then lock the sprocket in place.



10. Slide the right sprocket unit to remove any slack in the paper. Then push down the sprocket lock lever to lock the sprocket in place.



11. Press the Operate button to turn on the printer. When the printer receives data, it automatically loads the paper before printing.

When using continuous paper, you can use the tear-off function to tear off printed pages and save the blank pages that are usually wasted between print jobs. For more information, see the next section.



Note:
You can advance the paper to the loading position by pressing the Load/Eject button.

Always make sure there is at least one more sheet than required, because continuous paper may not feed properly if it is not fed through the sprocket.



Caution:
Use the knob on the right side of the printer only to clear paper jams when the printer is off. Otherwise, you may damage the printer or cause it to lose the top-of-form position.

Using the tear-off function

After you have finished printing, you can use the tear-off function to advance continuous paper on the tractor to the tear-off edge of the printer. You can then easily tear off printed sheets. When you resume printing, the printer automatically feeds paper back to the loading position so you can save paper that would normally be lost between documents.

You can use the tear-off function in two ways: by pressing the Tear Off/Bin button on the control panel, or by using the control panel's default-setting mode or the EPSON Remote! utility to select auto tear-off.

If the perforation between pages is not aligned with the tear-off edge, you can adjust the tear-off position using the micro-adjust feature as described later.

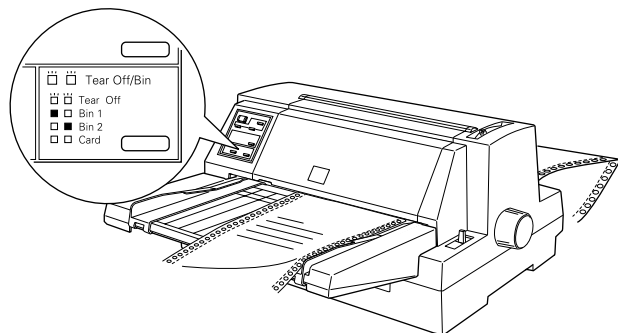


Caution:
Never use the tear-off function to feed labels backwards; they may come off their backing and jam the printer.

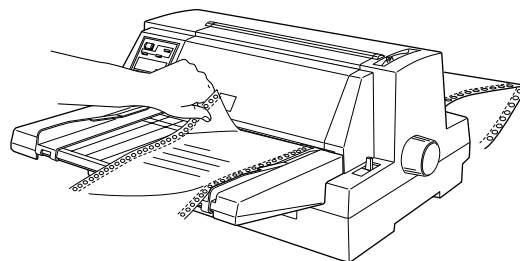
Using the Tear Off/Bin button

When using the tractor, you can use the Tear Off/Bin button to advance continuous paper to the tear-off position by following the steps below:

1. Make sure printing has finished. Then press the Tear Off/Bin button until the two lights on the control panel start flashing. The printer advances the paper to the tear-off edge.



2. Tear off all printed pages. If the perforation is not aligned with the tear-off edge, adjust the tear-off position using the micro-adjust feature. See "Adjusting the tear-off position" later.



3. When you resume printing, the printer feeds the paper back to the top-of-form position and begins printing. (You can also manually feed the paper back to the top-of-form position by pressing the Tear Off/Bin button.)

Using auto tear-off mode

When you turn on the auto tear-off function in the printer's default-setting mode or the EPSON Remote! utility, the printer advances continuous paper to the tear-off position when you finish printing.

The printer advances paper to the tear-off position only when it receives a full page of data or a form-feed command and then receives no more data for three seconds.

While using the default-setting mode or the utility, make sure the page length is set correctly for your continuous paper. If you make these settings in the default-setting mode, be sure to turn off the printer then turn it on again to apply your settings.

The steps below describe how to use auto tear-off.

1. When you finish printing on continuous paper, the printer advances the perforation of the final printed page to the tear-off position.
2. Tear off all printed pages. (If the perforation is not aligned with the tear-off edge, you can adjust the tear-off position using the micro-adjust feature. See "Adjusting the tear-off position" later.)
3. When you resume printing, the printer automatically feeds the paper back to the top-of-form position and begins printing. (You can also manually feed the paper back to the top-of-form position by pressing the Tear Off/Bin button.)

You can leave auto tear-off mode on even when you are using single sheets because the mode is disabled when you move the paper release lever to the single-sheet position.

Removing continuous paper

1. After you finish printing, press the Tear Off/Bin button. The printer advances the paper to the tear-off position.



Note:
When the auto tear-off function is on, the printer advances the paper perforation to the tear-off position automatically. You can turn on the auto tear-off function by using the printer's default-setting mode or the EPSON Remote! utility.

2. Tear off the printed pages.
3. Press the Load/Eject button to feed the continuous paper backward out of the printer and into the standby position.
4. To completely remove continuous paper from the printer, open the sprocket covers. Remove the paper from the tractor unit, and then close the sprocket covers.

Using Multi-part Forms

Your printer can print on both single-sheet and continuous multi-part forms. It can use multi-part forms with up to five parts including the original.



Caution:
Use only carbonless multi-part forms.

Before printing, set the paper thickness lever to the correct position for your multi-part forms

You can load single-sheet multi-part forms from the paper guide or with the optional cut-sheet feeder. You can load continuous multi-part forms in the same way as you load ordinary continuous paper. For instructions, see "Using Continuous Paper" earlier.



Caution:
When printing on multi-part forms, make sure that your software settings keep the printing entirely within the printable area of the forms. Printing on the edge of a multi-part form can damage the print head.

Load single-sheet multi-part forms glued at the side of the form only from the paper guide, not from the optional cut-sheet feeder.

Using Labels

When selecting labels for printing, always choose labels mounted on continuous backing sheets with sprocket holes for use with a tractor. Do not use labels on shiny single-sheet backing, because the backing sheet tends to slip and may not feed properly.

You load labels in the same way as you load continuous paper, except that you set the paper thickness lever to "2." For instructions on loading continuous paper, see "Using Continuous Paper" earlier.



Caution:
When printing on labels, make sure that your software settings keep the printing entirely within the printable area. Printing on the edge of a label can damage the print head.

Because labels are especially sensitive to temperature and humidity, use them only under normal operating conditions.

Do not leave labels loaded in the printer between print jobs; they tend to curl and may come off their backing and jam the printer when you resume printing.

Never feed labels backward with the Load/Eject or Tear Off/Bin buttons. Labels can easily peel off their backing and jam the printer.

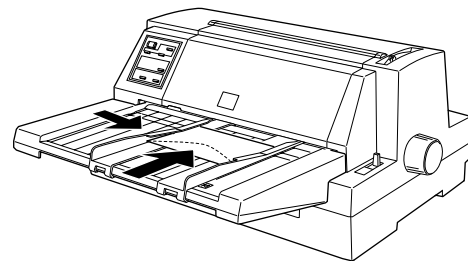
To remove labels from the paper path after you finish printing, first tear off the labels at a point before the paper slot. Then use the LF/FF button to advance the remaining labels out of the printer.

Using Envelopes

You can print on a variety of envelopes, loading them in the same way as you load single sheets: from the paper guide or with the optional cut-sheet feeder.

Before printing, set the paper thickness lever to the correct position for your envelopes.

Load envelopes face up, long edge first. Make sure that the right edge guide is aligned with the arrow on the paper guide, and position the left edge guide to match the width of your envelope.



Caution:
When printing on envelopes, make sure that your software settings keep the printing entirely within the printable area. Printing on the edge of an envelope can damage the print head.

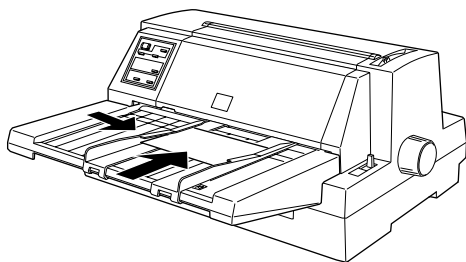
Use envelopes only under normal operating conditions.

Using Postcards

You can print on a variety of postcards, loading them in the same way as you load single sheets: from the paper guide or with the optional cut-sheet feeder.

Before printing, set the paper thickness lever to “2.” Then select Card mode by pressing the Tear Off/Bin button until both Tear Off/Bin lights are on.

Load postcards printable side up. Make sure that the right edge guide is aligned with the arrow on the paper guide, and position the left edge guide to match the width of your postcard.



Caution:
Card mode is available only when the paper thickness lever is set to “2” or higher on the scale.

When printing on postcards, make sure that your software settings keep the printing entirely within the printable area. Printing on the edge of a postcard can damage the print head.

Use postcards only under normal operating conditions.

Switching Between Continuous Paper and Single Sheets

When using the tractor, you can easily switch between continuous paper and single sheets (including envelopes or postcards) without removing the continuous paper from the tractor.

Switching to single sheets

To switch from continuous paper to single sheets, follow the steps below.

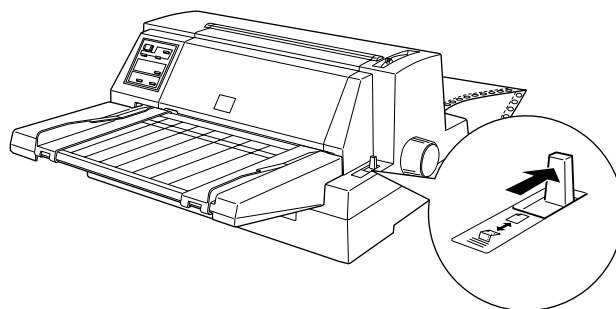
1. When you have finished printing on continuous paper, press the Tear Off/Bin button to advance the paper to the tear-off position. (If you selected auto tear-off in the printer's default-setting mode or the EPSON Remote! utility, the printer advances the paper perforation to the tear-off position automatically.)
2. Tear off the printed pages.



Caution:
Always tear off paper before feeding it backwards; feeding too many sheets backwards can cause a paper jam.

Never feed labels backward with the Load/Eject or Tear Off/Bin buttons. Labels can easily peel off their backing and jam the printer.

3. Press the Load/Eject button to feed the continuous paper back to the standby position. The paper is still attached to the tractor, but no longer in the paper path.
4. Move the paper release lever back to the single-sheet position.

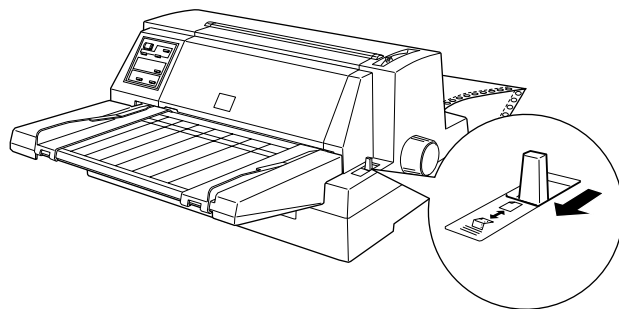


Now you can load single sheets from the paper guide.

Switching to continuous paper

To switch from single sheets to continuous paper, follow the steps below.

1. If necessary, press the Load/Eject button to eject the last printed single sheet.
2. Make sure continuous paper is loaded in the printer.
3. Move the paper release lever forward to the tractor position.



The printer automatically advances the continuous paper from the standby position to the loading position when it receives data.

Using Micro Adjust

The micro-adjust feature allows you to move paper forward or backward in 1/180-inch increments. You can use this feature to adjust the loading, printing, and tear-off positions.

Adjusting the loading position

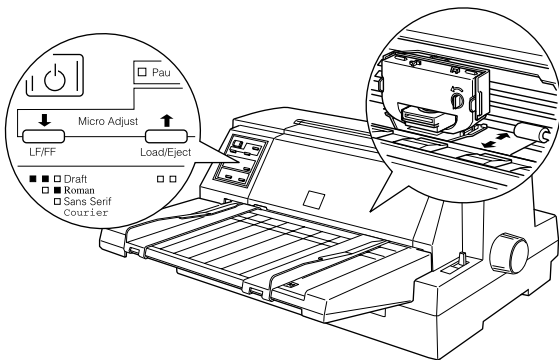
The loading position is the position of the paper after the printer loads it automatically. If your printing appears too high or low on the page, you can change the loading position with the micro-adjust feature as follows:



Note:

Top margin settings made in some application software override adjustments you make to the loading position with the micro adjust feature. If necessary, adjust the loading position in your software.

1. Make sure the printer is turned on. If necessary, lift up the printer cover so you can see the paper position.
2. Load either continuous or single-sheet paper. (Press the Load/Eject button to load continuous paper or a single-sheet from the optional cut-sheet feeder.)
3. Hold down the Pause button for about three seconds. The Pause light starts flashing and the printer enters the micro-adjust mode.
4. Press the LF/FF [D] button to move the loading position down on the page, or press the Load/Eject [U] button to move the loading position up on the page.

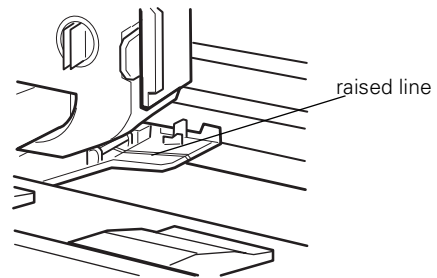


Note:

The printer has a minimum and a maximum loading position. If you try to adjust the loading position beyond these limits, the printer beeps and stops moving the paper.

When the paper reaches the factory-set loading position, the printer beeps and paper feeding pauses briefly. Use the factory setting as a reference point when adjusting the loading position.

If you want to eliminate the top margin and print at the very top of the page, adjust the loading position so that the top of the paper lines up with the raised line on the ribbon mask, as shown below.



5. After you set the loading position, press the Pause button to turn off micro-adjust mode.

For both single-sheet and continuous paper, your loading position setting remains in effect until you change it, even if you turn off the printer.

Adjusting the printing position

The printing position is the position on the page where the print head actually prints during a print job. You can change the current vertical printing position temporarily by using the micro-adjust feature as described in the steps below.

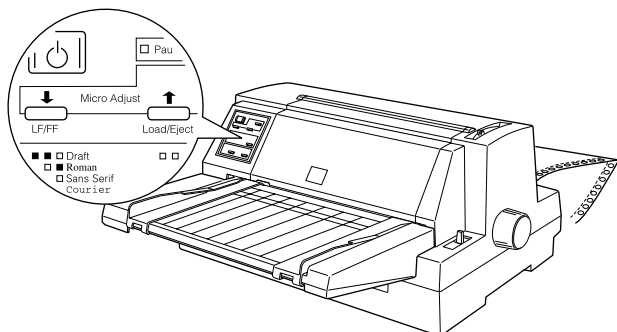


Note:

Your printing position setting is in effect only until the next time you load paper or turn off the printer.

1. Make sure that the printer is not printing. If it is, press the Pause button to stop printing.
2. Hold down the Pause button for about three seconds. The Pause light begins flashing and the printer enters the micro-adjust mode.

3. If necessary, open the printer cover to check the printing position, and press the LF/FF [D] button to feed paper forward or the Load/Eject [U] button to feed paper backward.

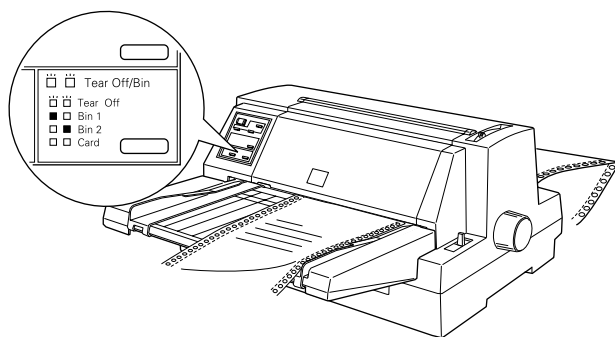


4. When your paper is positioned correctly, press the Pause button to turn off micro-adjust mode and resume printing.

Adjusting the tear-off position

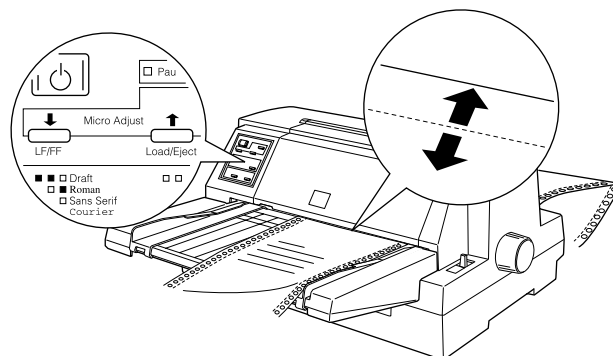
If your paper perforation is not aligned with the tear-off edge, you can use the micro-adjust feature to move the perforation to the tear-off position as follows:

1. Make sure both Tear Off/Bin lights are flashing (the paper is at the current tear-off position). You may need to press the Tear Off/Bin button.



2. Hold down the Pause button for about three seconds. The Pause light begins flashing and the printer enters the micro-adjust mode.

3. Press the LF/FF [D] button to feed paper forward, or press the Load/Eject [U] button to feed paper backward, until the paper perforation is aligned with the tear-off edge.



Note:

The printer has a minimum and a maximum tear-off position. If you try to adjust the tear-off position beyond these limits, the printer beeps and stops moving the paper.

4. Tear off the printed pages.
5. Press the Pause button to turn off micro-adjust mode.

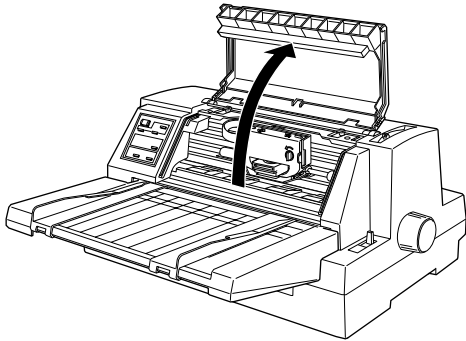
When you resume printing, the printer automatically feeds the paper back to the top-of-form position and begins printing. Your tear-off position setting remains in effect until you change it, even if you turn off the printer.

Replacing the Ribbon Cartridge

If your printing becomes faint, you may need to replace the ribbon cartridge. (If you do need to replace the ribbon, EPSON recommends the use of the EPSON Ribbon Cartridge (S015016) for best results. Genuine EPSON ribbon cartridges are designed for your EPSON printer; their high quality ensures the proper operation and long life of the print head and other printer parts. Other products not manufactured by EPSON may cause damage to your printer not covered by EPSON's warranties.

To replace the ribbon cartridge, follow these steps:

1. Press the Operate button to turn off the printer and then open the printer cover.

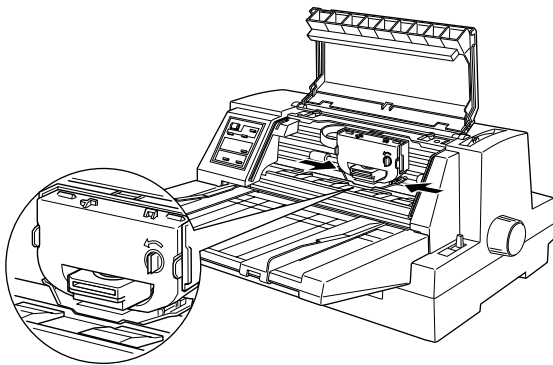


Warning:
If the printer has been used recently, the print head may be hot. Let it cool before attempting to replace the ribbon cartridge.

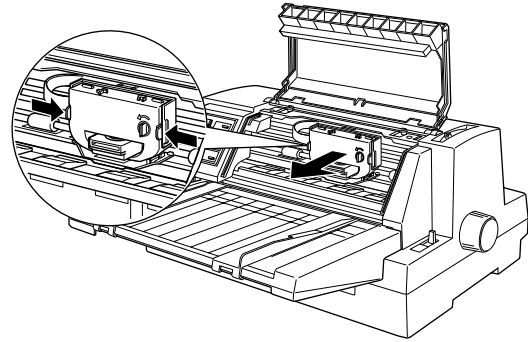
2. Make sure the print head is at the ribbon installation position (the middle position where the front metal plate is indented), as shown below. If the print head is not at this position, move the print head to the correct position.



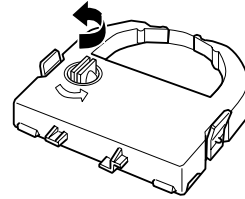
Note:
The print head moves to the ribbon installation position automatically if the printer is on and no data is sent to the printer for several seconds.



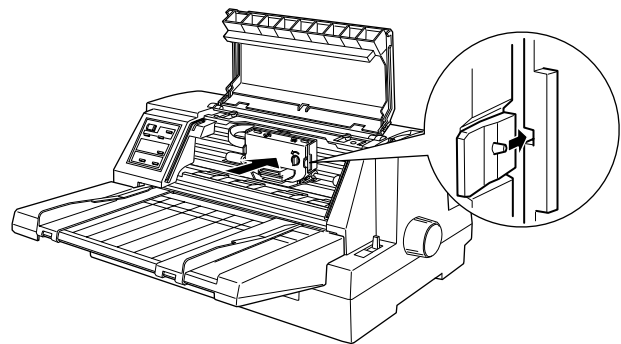
3. Squeeze the tabs on each side of the cartridge, and pull the cartridge out of the printer.



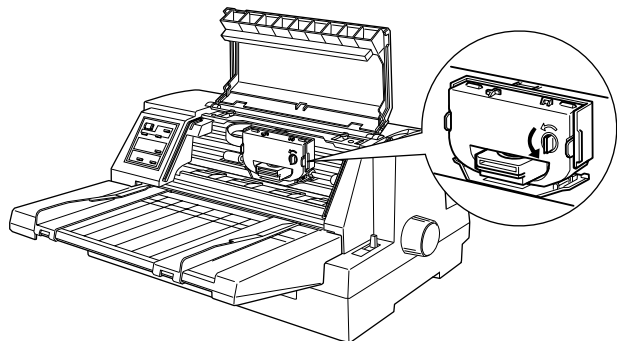
4. Remove the new ribbon cartridge from its package and turn the ribbon-tightening knob in the direction of the arrow to remove any slack in the ribbon.



5. Hold the ribbon cartridge with the exposed ribbon down and the ribbon-tightening knob facing you, and guide the ribbon under the print head. Then snap the cartridge into place so that the tabs on both sides of the cartridge fit into the notches in the cartridge holder.



- Turn the ribbon-tightening knob again to remove any slack in the ribbon and to make sure the ribbon moves freely.



- Close the printer cover.

Cleaning the Printer

To keep your printer operating at its best, you should clean it thoroughly several times a year. Follow these steps:

- Turn off the printer and remove any paper as well as the paper guide. If an optional cut-sheet feeder is installed, remove it.
- Use a soft brush to carefully brush away all dust and dirt from the other case.
- If the outer case and the paper guide are still dirty or dusty, clean them with a soft, clean cloth dampened with mild detergent dissolved in water. Keep the printer cover closed to prevent water from getting inside the printer.



Caution:
Never use alcohol or thinners to clean the printer; these chemicals can damage the printer components as well as the case.

Be careful not to get water on the printer mechanism or electronic components.

Do not use a hard or abrasive brush.

Do not spray the inside of the printer with lubricants; unsuitable oils can damage the printer mechanism. Contact your EPSON dealer if you think lubrication is needed.

Transporting the Printer

If you need to transport your printer some distance, carefully repack it as described below, using the original box and packing materials.

- Turn off the printer and remove any paper loaded in the printer.
- Unplug the power cord from the electrical outlet; then disconnect the interface cable from the printer. If an optional cut-sheet feeder is installed, remove it.



Warning:

If the printer has been used recently, the print head may be hot. Let it cool before attempting to remove the ribbon cartridge.

- Remove the paper guide. Remove the ribbon cartridge as described in steps 1 through 3 of “Replacing the Ribbon Cartridge” earlier in this chapter. Then close the printer cover.
- Repack the printer, ribbon cartridge, paper guide, and power cord in the original packing materials and place them in the printer’s original box.

Information Reference List

Engineering Change Notices

None

Product Support Bulletins

None

Technical Information Bulletins

None

Related Documentation

TM-LQ670	EPSON LQ-670 Service Manual
PL-LQ670	EPSON LQ-670 Parts Price List
4007028	EPSON LQ-670 User’s Guide

