

Note: In some locations, the power cord may be attached to the printer.

## Printer Specifications

### Printing

Printing method: 24-pin impact dot matrix

### Printing speed:

Quality	Characters/inch	Characters/second/line
Draft	10	167
	12	200
LQ	10	60
	12	72

### Printing direction:

Bidirectional logic-seeking for text and graphics. (Unidirectional for graphics can be selected with the default-setting mode or the proper software command.)

### Line spacing:

1/6 inch, 1/8 inch, or programmable in 1/360-inch increments.

### Paper feed speed:

91 ms per 1/6-inch line; 2.22 inches/second with continuous feed

### Input buffer

11KB when download default setting OFF  
1.75KB when download default setting ON

### Printable columns:

Character sizes	Maximum printed characters
10 cpi	80
10 cpi condensed	137
12 cpi	96
12 cpi condensed	160
15 cpi	120

### Resident fonts:

Font	10 cpi	12 cpi	15 cpi	Proportional
Epson Draft	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Epson Roman	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Epson Sans Serif	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Epson Courier	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
Epson Prestige	<input type="radio"/>	<input type="radio"/>		
Epson Script	<input type="radio"/>	<input type="radio"/>		

You can also select other font/pitch combinations using ESC/P2 commands.

### Scalable fonts:

Font	Min pt	Max pt	Increments
Epson Roman	8	32	2 pt
Epson Sans Serif	8	32	2 pt

### Character tables:

One italic and 15 graphics character tables for European version  
One italic and 5 graphics character tables for non-European version

### Character sets:

14 international character sets and one legal character set

### Paper

#### Single sheets (Paper cassette):

##### Size

US model: Letter (8.5 x 11 inches)

Other models: A4 (210 x 297 mm)

##### Thickness

0.065 to 0.14 mm (0.0026 to 0.0055 inches)

##### Weight

64 to 90 g/m<sup>2</sup> (17 to 24 lb)

- Use 90 g/m<sup>2</sup> (24 lb) paper under normal conditions.

##### Input paper supply

50 sheets for 82 g/m<sup>2</sup> (22 lb)

60 sheets for 64 g/m<sup>2</sup> (17 lb)

Total thickness of paper stack should be less than 5 mm (0.2 inches).

## Single sheets (Manual insertion):

Width	148 to 257 mm (5.8 to 10.1 inches)
<b>Length</b>	<b>92 to 364 mm (3.6 to 14.3 inches)</b>
Thickness	0.065 to 0.14 mm (0.0026 to 0.0055 inches)
Weight	52 to 90 g/m <sup>2</sup> (14 to 24 lb)

## Continuous paper:

Width	101 to 254 mm (4 to 10 inches)
Copies	Two sheets (one original plus one copy)
Thickness	0.065 to 0.18 mm (0.0026 to 0.0071 inches) total
Weight	52 to 82g/m <sup>2</sup> (14 to 22 lb) for one sheet 40 to 58g/m <sup>2</sup> (12 to 15 lb) per sheet in multi-part forms

- Use only two-part carbonless multi-part forms and use them only with the optional push tractor.

Note: You can use recycled paper under normal conditions. If you notice increases in ribbon consumption and paper jamming, use a higher grade of paper.

## Labels:

<b>Size</b>	101 to 254 mm (4 to 10 inches) width for backing sheet 63.5 x 23.8 mm (2 1/2 x 1 5/16 inches) minimum for a label
<b>Thickness</b>	0.07 to 0.09 mm (0.0028 to 0.0035 inches) for backing sheet 0.16 to 0.19 mm (0.0063 to 0.0075 inches) total 68 g/m <sup>2</sup> (17 lb)
<b>Weight</b>	<ul style="list-style-type: none"> <li>• Use continuous type labels only with the optional push tractor.</li> <li>• Use labels only under normal temperature and humidity conditions.</li> </ul>

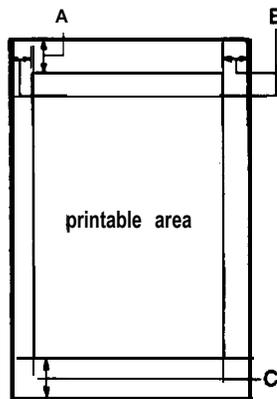
## Envelopes:

Size No.6	166 x 92 mm (6.5 x 3.6 inches)
No. 10	240 x 104 mm (9.4 x 4.1 inches)
<b>Thickness</b>	0.16 to 0.48 mm (0.0063 to 0.0197 inches)
<b>Weight</b>	45 to 75g/m <sup>2</sup> (12 to 20 lb)

- Use envelopes only under normal temperature and humidity conditions.
- Load envelopes with the longer side inserted into the rear slot by manual insertion only.

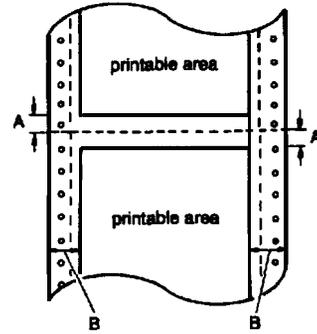
## Printable area:

Single sheets (paper cassette and manual insertion) and envelopes



- A** The minimum top margin is 8.5 mm (0.33 inches).
- B** The minimum left margin is 3 mm (0.12 inches).  
The minimum right margin is:  
3.8 mm (0.15 inches) for the A4-size paper cassette  
9.7 mm (0.38 inches) for the letter-size paper cassette  
3 mm (0.12 inches) for manual insertion  
However, the maximum printable width is 203 mm (8 inches).
- C** The minimum bottom margin is 13.5 mm (0.53 inches).

## Continuous paper



- A** The minimum top and bottom margins above and below the perforation are 9 mm (0.35 inches).
- B** The minimum left and right margins are 13 mm (0.51 inches).  
The maximum printable width is 203 mm (6 inches).

## Mechanical

Paper-feed methods: Friction (paper cassette and manual insertion)  
Push tractor (optional)

**Ribbon:** Black ribbon cartridge S015032  
Life expectancy : 2 million character at 48 dots/character

**MTBF:** 4000 power-on hours (10% duty)

**Print head life:** 100 million strokes/wire

**Dimensions and weight:**

Height	130 mm (5.1 inches)
Width	375 mm (14.8 inches)
Depth	252 mm (9.9 inches)
<b>Weight</b>	<b>4.5 kg (10 lb)</b>

## Electrical

### 120 V model:

**Rated voltage:** AC 120 V  
**Input voltage range:** AC 103.5 to 132 V  
**Rated frequency range:** 50 to 60Hz  
**Input frequency range:** 49.5 to 60.5 Hz  
**Rated current:** 1.1 A  
**Power consumption:** 30 W (during self-test printing in draft mode at 10 cpi)  
**Dielectric strength:** AC 1 kV rms, 1 second (between AC line and chassis)

### 220-230 V model:

**Rated voltage:** AC220-230V  
**Input voltage range:** AC 198 to 244 V  
**Rated frequency range:** 50 to 60 Hz  
**Input frequency range:** 49.5 to 60.5 Hz  
**Rated current:** 0.6 A  
**Power consumption:** 30 W (during self-test printing in draft mode at 10 cpi)  
**Dielectric strength:** AC 1.5 kV rms, 1 second (between AC line and chassis)

### 240 v model:

**Rated voltage:** AC 240V  
**Input voltage range:** AC 216 to 264V  
**Rated frequency range:** 50 to 60 Hz  
**Input frequency range:** 49.5 to 60.5 Hz  
**Rated current:** 0.6 A  
**Power consumption:** 30 W (during self-test printing in draft mode at 10 cpi)  
**Dielectric strength:** AC 1.5 kV rms, 1 second (between AC line and chassis)

**Note: Check the label on the back of the printer for the voltage of your printer.**

**Environmental**

**Temperature Operation:** 5 to 35°C (41 to 95°F)  
**Storage:** -20 to 55°C (4 to 131°F)

**Humidity (without condensation):**  
**Operation:** 30 to 80% RH  
**storage:** 5 to 85% RH

**Safety approvals**

**Safety Standards:**  
**US model:** UL1950 with D3, CSA22.2 #220  
**European model:** EN 60950 (TUV), IEC 950 (SEMKO, DEMKO, NEMKO, SETI)

**RFI:** **US model:** FCC class B  
**European model:** VDE0871, CISPR PUB.22

**Interface specifications**

Your printer is equipped with an 8-bit parallel interface with the following characteristics:

Data format: 8-bit parallel

**Synchronization:** STROBE pulse

**Handshake timing:** BUSY and ACKNLG signals

**Signal level:** TTL compatible

**Connector:** 36-pin 57-30360 Amphenol connector or equivalent

**Default settings**

The table below shows the default settings that take effect when the printer is initialized.

Item	Default setting
Top of form position	Current paper position or setting in the default setting mode.
Page length	Single sheets: 65 lines for A4-size paper, 61 lines for letter-size paper, 22 inches for manual insertion Continuous paper: Subject to control panel setting in the default-setting mode
Left and right margins	Canceled
Line spacing	1/6-inch tine spacing
Character size	10.5 point
Horizontal tab positions	Every eight characters
Font selection	Last font selected on control panel
Special printing effects	Canceled (except condensed printing)
Download character set	Hardware initialization: cleared Software initialization: deselected only

In addition, hardware initialization clears the data buffer.

**Character Tables**

These character tables are selected with the default-setting mode or by wing a software command. AU the tables are the same for hex codes 00 through 7F. Therefore, only first table is shown completely. The rest of the tables show only the characters for hex codes 80 through FF.

For all character tables except the italic character table, the ESC 6 and ESC 7 software commands let you select whether hex codes 80 to 9F are characters (EX 6) or control codes (ESC 7).

**PC 437 (USA, standard Europe)**

CODE	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	NUL	SP	0	1	2	3	4	5	6	7	8	9	A	B	C	D
1		!	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
2		DC2	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
3		DC4	"	#	\$	%	&	'	(	)	*	+	,	-	.	/
4		"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
5		"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
6		"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
7		"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
8		"	#	\$	%	&	'	(	)	*	+	,	-	.	/	
9	HT	EM	)	9	I	Y	i	y	e	ö	ö	ö	ö	ö	ö	ö
A	LF	*	:	J	Z	j	z	e	ü	ü	ü	ü	ü	ü	ü	ü
B	VT	ESC	+	; K	{	k	{	{	ç	ç	ç	ç	ç	ç	ç	ç
C	FF	,	<	L	\	l	l	l	é	é	é	é	é	é	é	é
D	CR	-	=	M	}	m	}	}	ê	ê	ê	ê	ê	ê	ê	ê
E	SO	.	>	N	^	n	^	^	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ	ÿ
F	SI	/	?	O	_	o	_	_	À	À	À	À	À	À	À	À

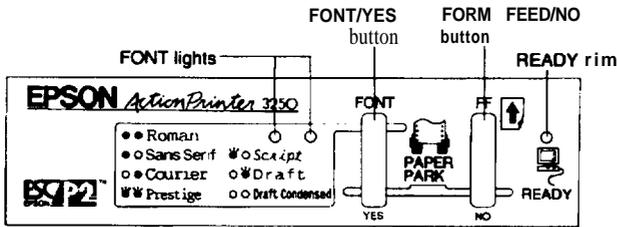
**Character available with ESC (^)**

To print the characters in the table below, you must first send the ESC (^ command).

CODE	0	1	7
0	▶		
1	◀		
2	◀	▶	
3	◀	▶	
4	◀	▶	
5	◀	▶	
6	◀	▶	
7	◀	▶	
8	◀	▶	
9	◀	▶	
A	◀	▶	
B	◀	▶	
C	◀	▶	
D	◀	▶	
E	◀	▶	
F	◀	▶	◀

## The Control Panel

You can control the basic printer operations--form feeding, paper loading and ejecting, and font selection--with the buttons on the control panel. The indicator lights help you monitor the status of the printer.



### Lights

The two panel lights provide information on certain printer conditions and settings.

#### READY

The **READY** light is on when the printer is ready to receive data from the computer. It flashes briefly each time you turn on the printer. The **READY** light also flashes under the following conditions:

- The printer is out of paper.
- The printer is in the tear-off mode (when the optional push tractor is installed).

when an error occurs, the **READY** light goes off.

#### FONT

The two **FONT** lights indicate the **current** font setting. These lights change when you press the **FONT** button. Look at the font menu on the control panel to determine which font is selected.

### Buttons

The two buttons on the control panel perform different functions, depending on the printer mode.

#### FONT/YES

Press the **FONT** button during normal operation to cycle through the font choices on the font menu. The two **FONT** lights indicate the **current** selections.

When you are in the default-setting mode, use this button to enter a positive response to a printer question or to select a new default setting.

#### FORM FEED/NO

Press the **FORM FEED** button during normal operation to load a single sheet of paper or to advance continuous paper to the next top-of-form. You can also press **FORM FEED** to eject a page.

When you are in the default-setting mode, use this button to enter a **negative response to a printer question** or to skip to the next setting.

### PAPER PARK

If you are using continuous paper, you can press the **FORM FEED** and **FONT** buttons at the same time to move the paper back to the paper-park position.



**CAUTION:** Never feed labels backward through the printer; they may peel off their backing sheet and damage it. Use the **FORM FEED** button to feed them forward.

### Other control-panel features

The control panel **also** gives you **access** to three special features:

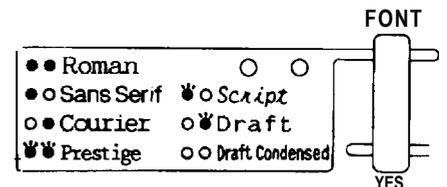
**Self Test** The self test lets you check whether your printer is operating properly.

**Hex dump** The hex dump allows advanced users to pinpoint communications problems between the printer and computer.

**Demonstration** The demonstration page is a printout of text and type enhancements that shows you the unique capabilities of your printer.

### Selecting Character Fonts

To choose one of the fonts available with your printer, press the **FONT** button.



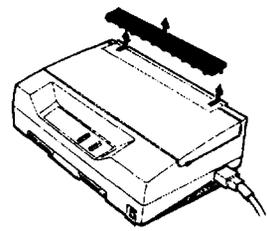
The two **FONT** lights come on (●), go off (○), and flash (◐) to indicate the current selection. The table below lists the fonts and shows how the **FONT** lights appear for each selection.

Font	FONT Lights	Sample
Epson Roman	● ●	ABCDEFGHIJKLM0123456789
Epson Sans Serif	● ○	ABCDEFGHIJKLM0123456789
Epson Courier	○ ●	ABCDEFGHIJKLM0123456789
Epson Prestige	◐ ◐	ABCDEFGHIJKLM0123456789
Epson Script	◐ ○	ABCDEFGHIJKLM0123456789
Epson Draft	○ ◐	ABCDEFGHIJKLM0123456789
Draft condensed	○ ○	ABCDEFGHIJKLM0123456789

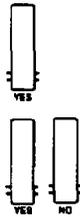
● on ○ off ◐ flashing

The Roman and Sans Serif fonts can be scaled (or sized) from 8 to 32 points in 2-point increments, using your application software or **ESC/P2** commands.

## Changing Printer Settings



1. Make sure the printer is turned off and paper is loaded.
2. Remove the narrow cover from the printer.
3. To enter the default settings mode, hold down the YES button while you turn on the printer.



4. The printer prints a series of questions about your printer settings. Press the YES and NO buttons to respond and make your changes. All new settings remain in effect until you change them again.

Note:

To skip a question and move on to the next without making a change, press NO.

5. Turn off the printer at any time to exit the default settings mode; then replace the narrow cover.

You can change the printer settings listed here:

Setting	Options
Character table	437,850,860,863,865
Page length	11", 12", 8.5", 70/6"
Skip over perforation	on, on
Tear-off position	On cutter, Above cutter
TOF position	-3, -2, -1, +0, +1, +2, +3
Graphic print direction	Unidirectional, Bidirectional
Download	On, Off
Auto line feed	On, Off
Hex dump/Demonstration	Hex dump, Demonstration

\* Available only if optional push tractor is installed.

## Printing a Self Test

You can print a self test to make sure your printer operates properly.

1. Make sure the printer is turned off and paper is loaded.
2. Hold down the FORM FEED button while you turn on the printer. It loads a sheet of paper automatically and begins to print characters in the current font and character table.
3. To stop the self test, turn off the printer.



## Application Software

Most application programs let you specify the type of printer you use so that the program can take full advantage of the printer's features. Many programs provide an installation or setup m&u that presents a list of printers.

To take full advantage at your printer's features, including ESC/P2, choose one of the first three printers on the list below. If none of these is listed, contact your software manufacturer for an update that includes one of the three. Until you receive an update, choose another printer as close to the top of the list as possible.

LQ-100	}	ESC/P2
LQ-570		
LQ870		
LQ-510/550	↑	ESC/P
LQ-860		
LQ-850	}	ESC/P
LQ-200		
LQ-500		
LQ-2550		
LQ-2500		
LQ-800		
LQ-1500		

If none of these printers is listed among your program's options, select the first available of the following: EX, FX, LX, RX, MX, Epson printer, Standard printer, Draft printer. Because these are 9-pin printers, however, your graphics printing may not be correct.

## Paper Handling

### Printing on Single Sheets

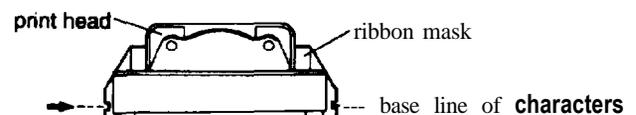
You can load standard-sized single sheets with the paper cassette and you can load single sheets of paper from 148 mm (5.8 inches) to 257 mm (10.1 inches) wide with the manual insertion slot.

### Tips for using the paper cassette

The tips below help you get the best performance when printing with the cassette.

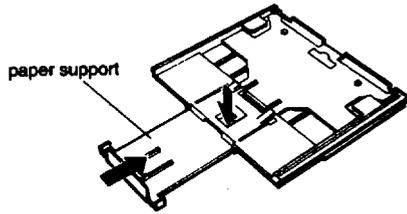
- Load paper in the paper cassette before you turn on the printer and send data. When the printer receives data from the computer, it loads a single sheet automatically and begins to print.
- If the printer runs out of paper during a print job, reload the paper cassette and press the FORM FEED button to load the paper.
- Press the FORM FEED button to eject a sheet of loaded paper.

You can adjust the top-of-form position with the gear under the printer cover. It is marked by + and - signs. Open the printer cover and turn the gear to adjust the position. The notches on the ribbon mask indicate the base line of printed characters. The gear adjustment affects only the loaded page. If you want to change the top-of-form position permanently, you can adjust it in the default-setting mode. However, most application software programs take care of the top and bottom margins. You usually don't need to set the top-of-form position on the printer.



# ActionPrinter 3250

- When you want to push the paper support **back into the paper cassette**, first remove paper from the paper cassette. Then push the paper support in while pushing **down on the locking tab**.

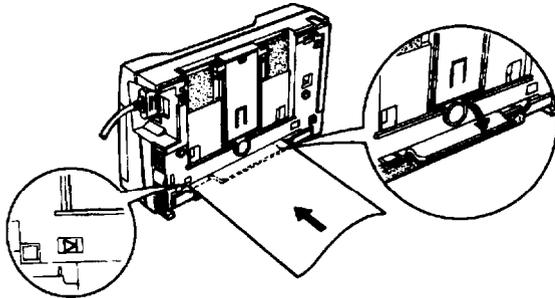


- The default page length for the paper cassette is 65 lines (**A4-size** paper) or 61 lines (letter-size paper). You can change it using your application software or printer commands, if necessary.
- You can switch to manual insertion or to the optional push tractor without removing the paper cassette.

## Loading paper manually

You can load single sheets of paper from the rear manual insertion slot. (If you've installed the optional push tractor, remove it before loading paper manually.)

1. Place the printer in the upright position and turn it on.
2. Next, lower the flap on the rear slot. Then insert a single sheet into the slot, aligning the paper edge with the arrow mark on the printer case. The page loads automatically. When the printer receives data, it begins printing.



Be sure to raise the flap when not using manual insertion.



**CAUTION:** Be sure to turn on the printer **before you insert** the page into the slot. If you turn on the printer **after** paper insertion, the printer prints on the platen without loading the paper.

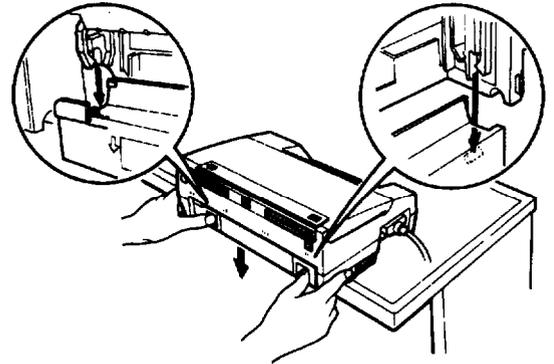
- You can adjust the top-of-form position in the same way  $\blacktriangleleft\blacktriangleright$  you do for paper loaded from the cassette.
- When you want to switch to the paper cassette, press the **FORM FEED** button without inserting a page into the rear slot. The printer loads a page from the cassette.

## Using Continuous Paper with Optional Push Tractor

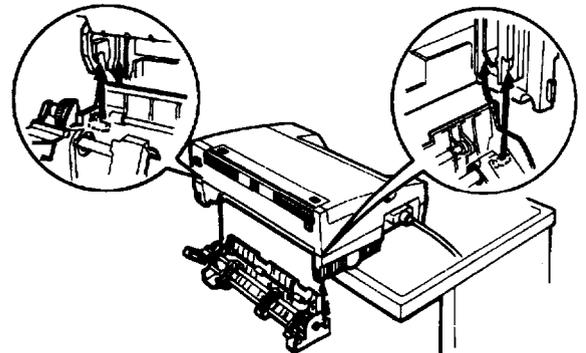
You can use the  $\square\blacktriangleleft\blacktriangleright\blacktriangle\blacktriangleright$  push tractor to print on continuous paper from 101 mm (4 inches) to 254 mm (10 inches) wide.

### Installing the push tractor

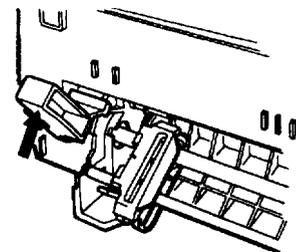
1. Make sure the printer is turned off and is in the flat position. Remove the paper guide.



2. Make sure the paper-release lever is lowered to the single-sheet position.
3. Hold the tractor as shown and fit the edges of both sides into the slots at the back of the printer. Then lift it straight up until you hear the unit snap into place.



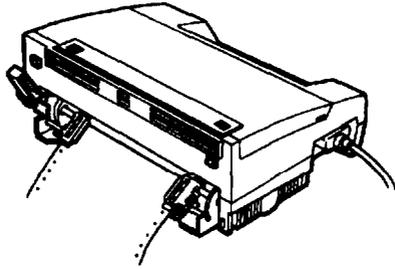
4. Raise the paper-release lever to the continuous-paper position.



### Tips for using continuous paper

- You can adjust the top-of-form position temporarily. Open the printer cover and turn the gear marked by + and - signs to adjust the position. This adjustment is lost when you turn off the printer or feed the paper backward to the paper-park position by pressing the **FORM FEED** and **FONT** buttons at the same time.

paper-park position



- If you want to change the top-of-form position permanently, adjust it with the default-setting mode.
- Each time you turn on the printer with paper loaded, it reverses the continuous paper to the paper-park position and then advances it to the next top-of-form. Always remove your printed sheets before you turn off the printer to keep the top-of-form position accurate.

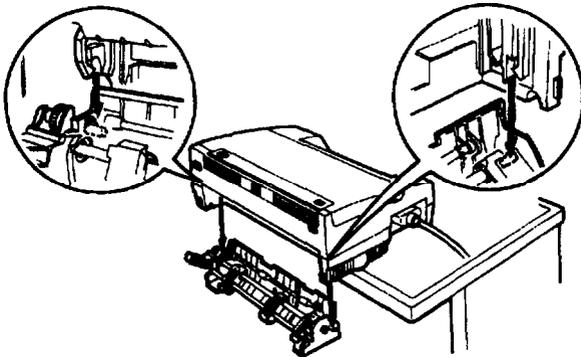
### Removing the push tractor

1. Tear off any printed pages. Press the **FORM FEED** and **FONT** buttons at the same time to feed the remaining paper backward to the paper-park position. Remove the paper from the push tractor.

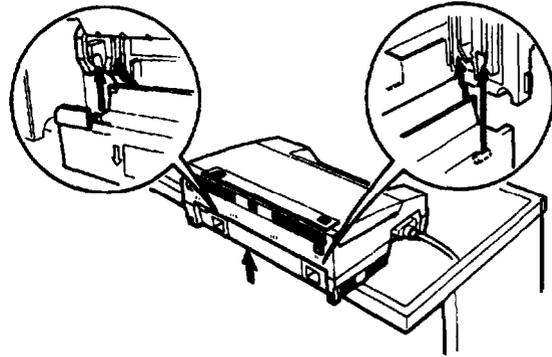


**CAUTION:** Always tear off the printed document and excess paper before feeding paper backward. Never feed more than one page backward through the printer.

2. Turn off the printer.
3. Lower the paper-release lever to the single sheet position. Then pull the push tractor straight down and out of the printer.



4. Replace the paper guide.



### Switching Between Continuous Paper and Single

When you use the push tractor, you can easily switch to single-sheet printing without removing the continuous paper supply.

#### Switching to single sheets

Here's how to switch from continuous paper to single sheets:

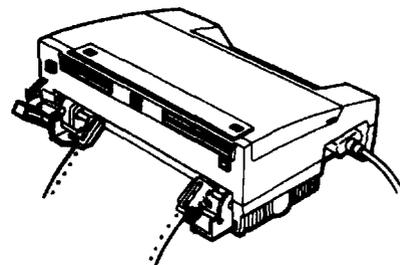
1. If you have a printed document still in the printer, tear off the printed pages and then press the **FORM FEED** and **FONT** buttons at the same time to reverse the remaining paper back to the paper-park position.



#### CAUTION:

- Always tear off printed pages before feeding paper backward; feeding too many sheets backward can cause a paper jam.
- Never feed labels backward. They can easily peel off of their backing and jam the printer.

2. Lower the paper-release lever to the single-sheet position.





**CAUTION:** If you lower the paper-release lever while continuous paper is still loaded, the printer beeps and the READY light goes off. If this happens, raise the paper-release lever and press the FORM FEED and FONT buttons at the same time to reverse the paper to the paper-park position. You can then lower the lever again

- The printer is ready to print. When it receives data, it automatically loads a single sheet from the paper cassette and begins to print.

### Switching to continuous paper

To switch from single sheets back to continuous paper, follow these steps:

- If a single sheet is in the paper path, press the FORM FEED button to eject it.
- Raise the paper-release lever to the push-tractor position.



**CAUTION:** If you raise the paper-release lever when a single sheet is in the paper path, the printer beeps and the READY light goes off. In this case, lower the paper-release lever and press FORM FEED to eject the page completely. You can then raise the lever again.

- The printer is ready. When the printer receives data, it loads continuous paper from the push tractor automatically and begins to print.

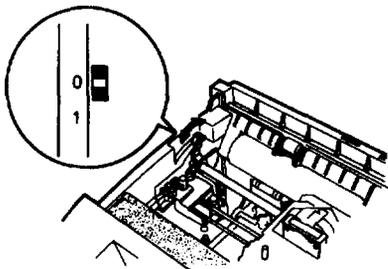
### Printing on Special Paper

In addition to printing on single sheets and continuous paper, your printer can print on a wide variety of other paper types, such as envelopes, labels, and multi-part forms.

### Adjusting the paper-thickness lever

Before you print on special paper, you may need to change the paper-thickness setting for the paper you are using.

- Remove the printer cover and set the paper-thickness lever to match the thickness of your paper. Choose the setting from the table below.



Paper Type	Lever Position
Ordinary (single sheets or continuous)	0
Multi-part forms (carbonless) 2 sheets (original + 1 copy)	0
Labels	1
Envelopes	1

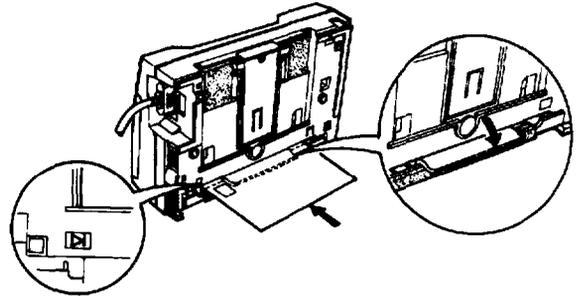
Note: Setting the paper-thickness level to 1 reduces the printing speed.

- Replace the cover.

### Envelopes

You can use the manual insertion slot to print a individual envelopes.

- Always load envelopes manually through the rear slot.
- Before loading an envelope, set the paper-thickness lever to position 1 and lower the flap on the printer's rear.
- Always feed envelopes by inserting the wide edge into the printer first, as shown.



- Use envelopes under normal operating conditions only.
- Printing on the edge of an envelope can damage the print head. Make sure your application program keeps the printing entirely within the printable area of the envelope.

## Installation/Support Tips

### AP-3250 Beep Codes

- 2 Long and 2 Short = Indicates that the printer has completed its power-on initialization process and is ready to print
- 1 Short = The escape code for "BEL" has been received
- 3 Short = Paper out condition
- 5 Long = Illegal paper change condition\* or a printer fatal error\*\*

- \* = 1) The optional pull tractor's paper release lever was set to the TRACTOR position without first ejecting the cut-sheet paper.
- 2) The optional pull tractor's release lever was set to the FRICTION position without first ejecting the continuous paper.

- \*\* = 1) Power supply voltage error
- 2) Internal air temperature error
- 3) Print head temperature error
- 4) Line feed or carriage motor is overheated

Short beep = 100ms beep with 100ms pause between beeps  
Long beep = 500 ms beep with 500ms pause between beeps

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## **Information Reference List**

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### **Engineering Change Notices**

None.

### **Product Support Bulletins**

None.

### **Technical Information Bulletins**

None.

### **Related Documentation**

TM-AP3250      ActionPrinter 3250 Service Manual

PL-AP3250      ActionPrinter 3250 Parts List

4000928 GO1-00      ActionPrinter 3250 User's Guide