

**EPSON<sup>®</sup>**  
**LX-90<sup>™</sup> PRINTER**  
**User's Manual**

## **FCC COMPLIANCE STATEMENT FOR AMERICAN USERS**

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver
- Plug the computer into a different outlet so that the computer and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems."

This booklet is available from the U.S. Government Printing Office, Washington, DC 20402. Stock No. 004-000-00345-4.

### WARNING

The connection of a non-shielded printer interface cable to this printer will invalidate the FCC Certification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment.

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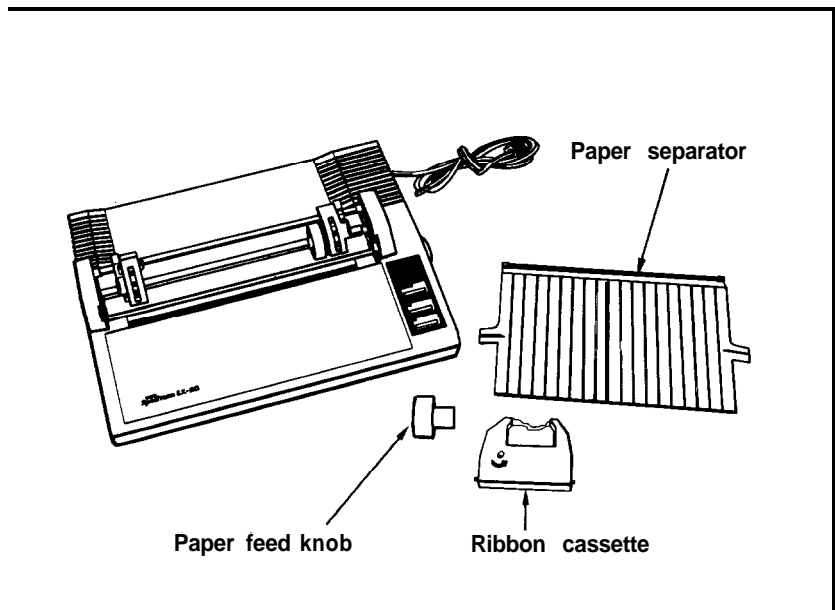
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## Setting Up Your LX-90™ Printer

Setting up your LX-90 printer is easy, even if you've never used a printer before. By following the instructions in this manual, you'll have your new printer ready to go in just a few minutes.

### Do You Have All the Parts You Need?

When you unpack your printer, be sure that the box contains all of the items shown:

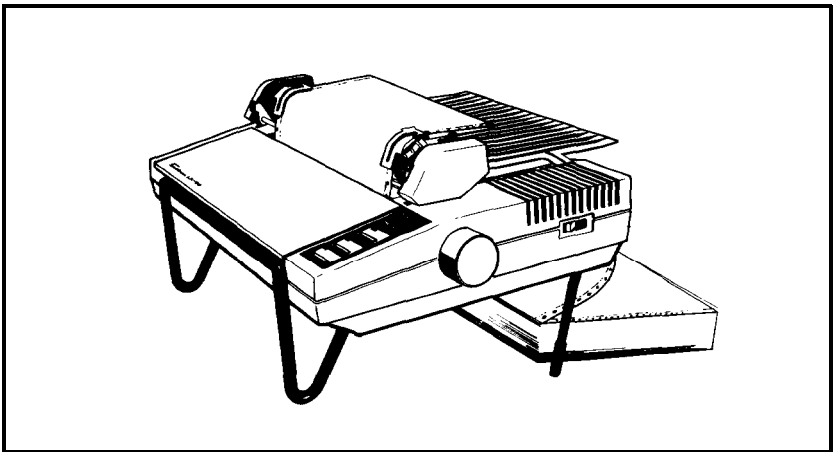


Also be sure that you have an Epson Printer Interface Cartridge (PIP<sup>®</sup>) specifically designed for use with your computer. The PIC is sold separately and comes with its own operation. manual.

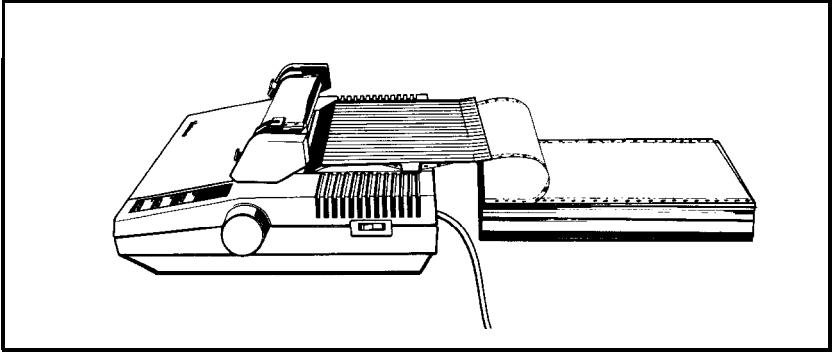
## Where to Place Your Printer

Now that your printer is unpacked, you need to find the best place to put it. Keep the following tips in mind:

- Place the printer close enough to the computer for the PIC cable to reach between them.
- Place the printer on a stable surface. Avoid setting the LX-90 on carpeting or chairs.
- Use a grounded outlet, and do not use an adapter plug.
- Avoid using outlets that are controlled by wall switches-if you accidentally turn off a switch, you could wipe out valuable information in your computer's memory and stop your printing.
- Try not to use an outlet on the same circuit breaker with large electrical machines or appliances-they can disrupt the flow of power to your printer.
- Protect your printer from direct sunlight, and keep it away from excessive heat, moisture, and dust.
- In order to use the tractor and continuous paper, put your LX-90 where the paper can flow freely in and out of the printer. See the illustrations for suggestions.



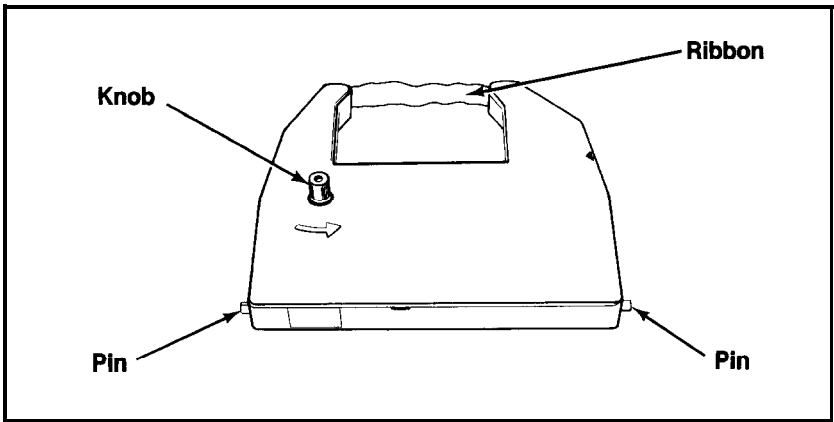
Many types of printer stands are available; the previous illustration shows one type. The next illustration shows a setup that does not require a stand. These are only two examples; you can use any arrangement that allows you to put the paper underneath or behind the printer.



Once you've found the right location for your new LX-90, you're ready to start putting the printer together.

### **Installing the Ribbon**

The ribbon for your LX-90 is enclosed in a cassette that makes installation a clean and easy job. The parts of this cassette are labelled below.



To install or replace the ribbon, just follow these steps:

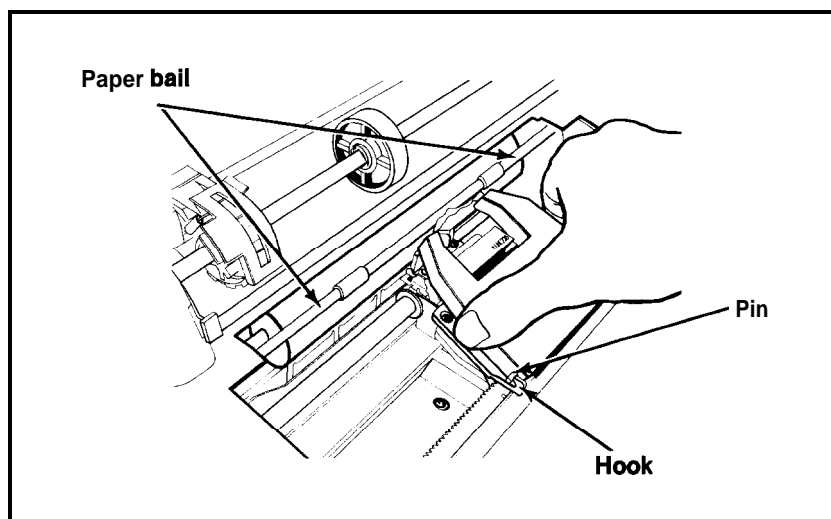
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### Caution

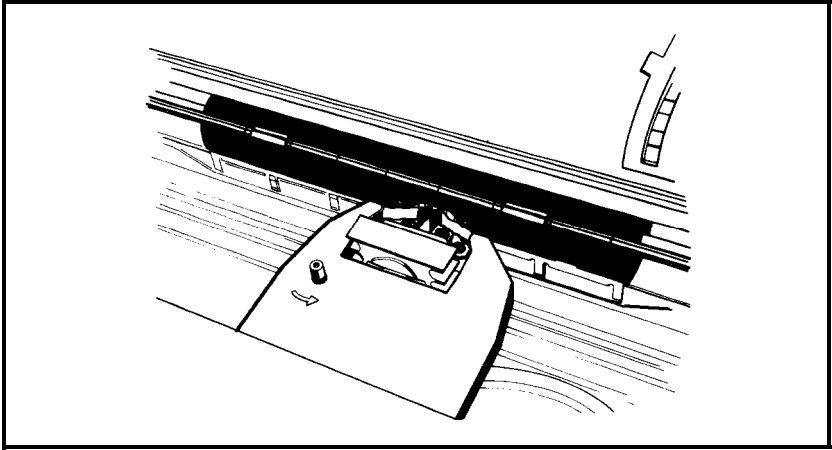
If you've been using your printer just before you change ribbon cassettes, be careful not to touch the print head because it becomes hot during use. Also remember never to move the ribbon carriage manually when the printer is turned on, because you may damage your printer.

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1. Make sure the printer is turned OFF. Remove the front lid of the printer so that you can see the ribbon carriage.
2. Slide the ribbon carriage manually to the center of the printer so that the other parts of the printer do not get in your way. Also be sure that the paper bail is against the black roller.
3. If you are changing ribbon cassettes, lift the front of the old cassette and remove it.
4. Hold the new ribbon cassette so that the small knob is on top and the exposed ribbon faces away from you. Fit the cassette onto the ribbon carriage by sliding the pins at the back of the cassette under the small hooks on the carriage.



5. Snap the cassette into place so that the exposed ribbon fits between the print head and the silver ribbon guide.



6. Now turn the knob on the cassette in the direction of the arrow to tighten the ribbon. As you turn the knob, make sure the ribbon slips down into its proper place between the print head and the silver ribbon guide. If it doesn't, guide it with a pen or a pencil.

## Plugging in the Cartridge

In addition to your LX-90, you also need an Epson Printer Interface Cartridge (PIC) that connects your computer to your printer. (These are sold separately because each brand of computer uses a different PIC.) The cartridge slides into the rectangular opening in the back of your LX-90.

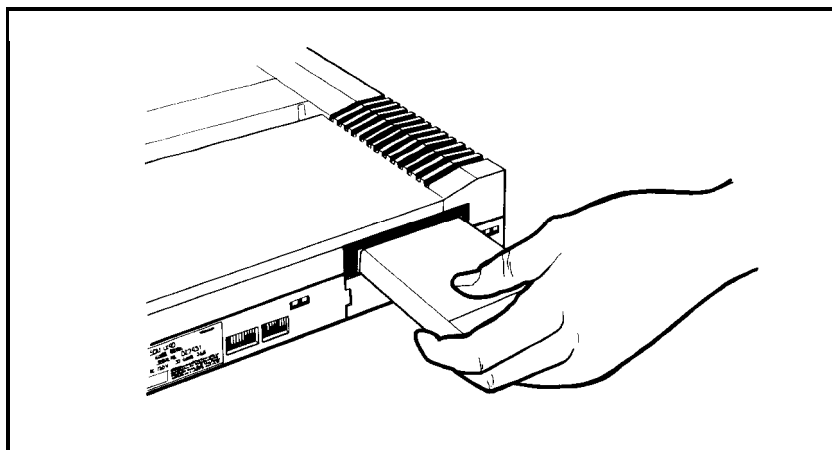
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### Caution

Be sure you turn OFF all your computer equipment and printer before inserting or removing the cartridge.

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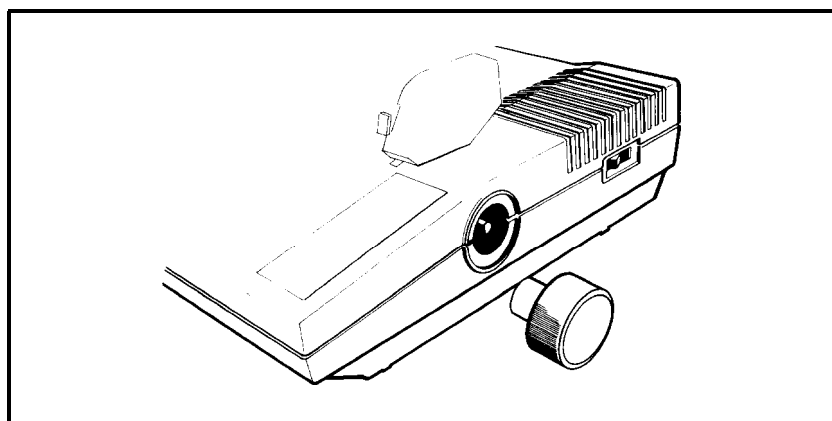


Hold the cartridge with the grooved side facing down. Insert the cartridge into the opening and press gently to secure the connection.

Do not connect the PIC cable to your computer yet. The instructions for this connection are in your PIC manual.

## **Installing the Paper Feed Knob**

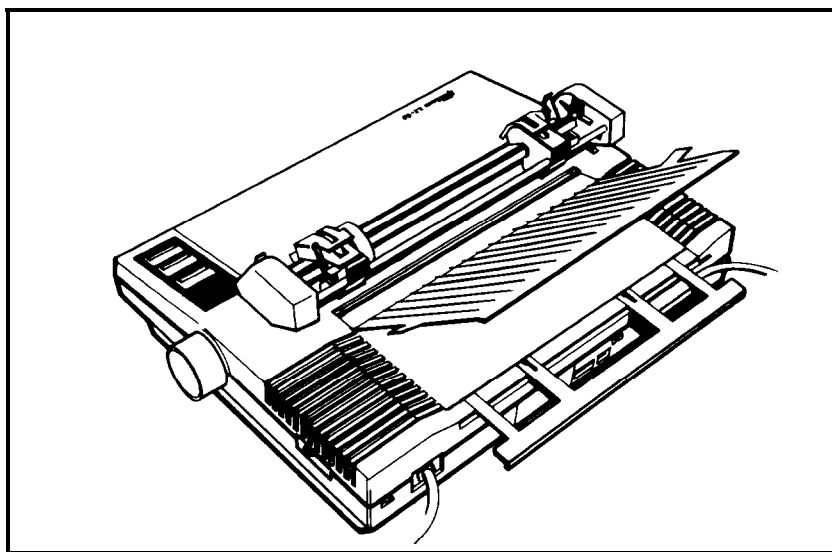
Before you can load paper into your LX-90, you need to install the paper feed knob. Simply push the knob onto the shaft on the right side of the printer. The shaft has one flat side that must be matched with the flat side of the hole in the knob.



With the paper feed knob in place, you're now ready to load paper into your printer. If you plan to use continuous paper, read the next two sections. For instructions on single-sheet paper, skip to the section on loading single-sheet paper.

## **Installing the Paper Separator**

To install the paper separator, fit the notches in the bottom corners of the separator over the pins at the front of the paper slot, as shown below. The separator keeps the paper coming out of the printer from being pulled back in.

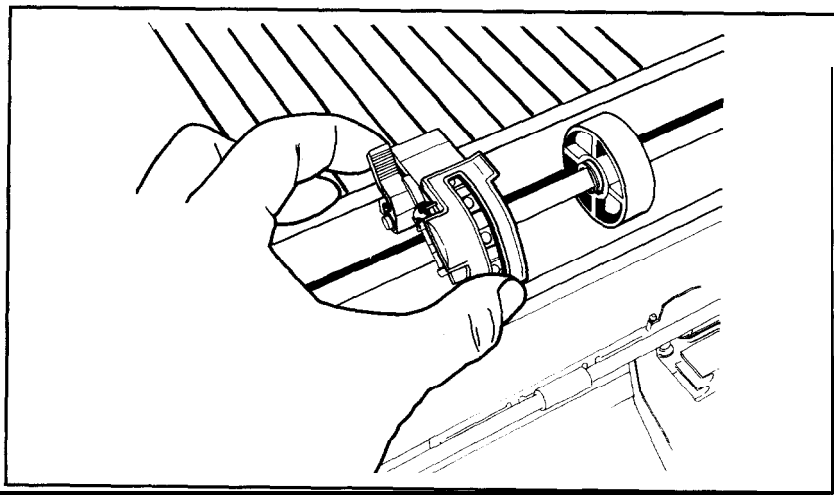


With the separator in place, pull out the paper guide at the back of the printer.

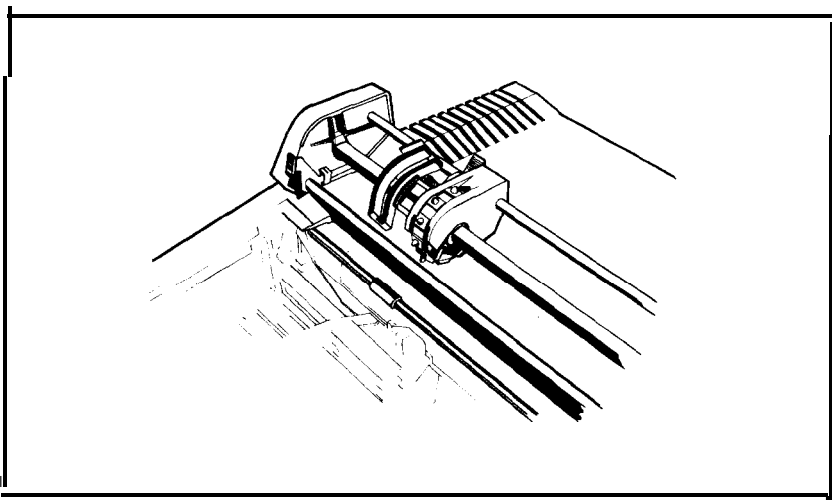
## **Loading Continuous Paper**

When your paper separator and paper guide are ready, you can load continuous paper.

Make sure that the printer is turned off; then open the front lid. Move the print head to the center of the printer, and pull the paper bail away from the platen (the black roller). Using the illustration below as your guide, pull the locking levers forward so that you can move the pin feed holders to the left and right.



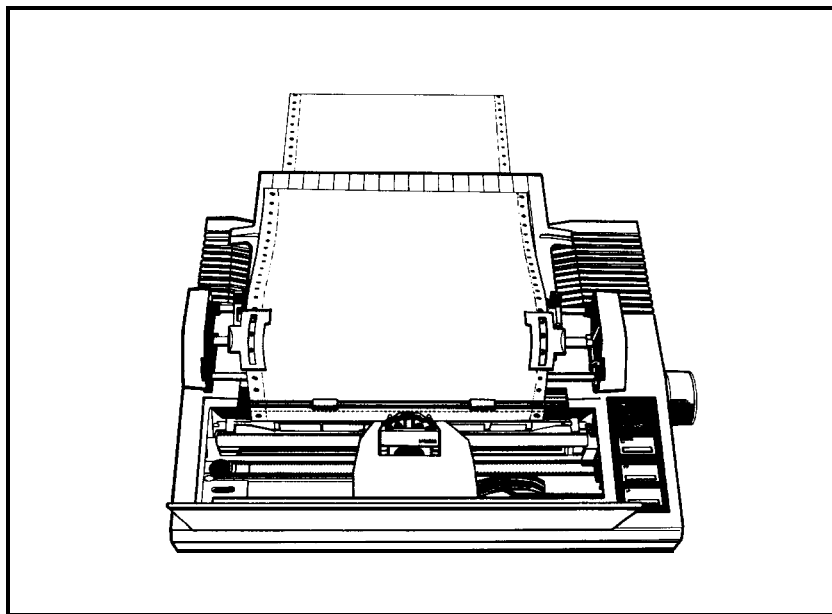
Put the left holder approximately  $3/4$  of an inch from the extreme left position and push the locking lever back to lock the holder in place. Leave the other holder unlocked.



Open the pin feed covers as shown on the previous page and feed the paper under the paper separator and into the paper slot. Push the paper through until it comes up between the ribbon guide and the platen. Pull the paper up until the top is above the pin-feed holders; fit the holes on the left side of the paper over the pins in the left holder; then close the cover.

Fit the right side of the paper in the right holder, moving the holder as needed to match the width of the paper. Close the second cover, making sure the paper has no dips or wrinkles; then lock the right holder in place with the locking lever. Push the paper bail against the paper.

Now you are ready to set the top of page position.



Turn the paper feed knob to advance the paper until a perforation between sheets is approximately 1/8 of an inch below the top of the ribbon guide, as shown in the illustration.

When you turn on your LX-90, it remembers this top of page setting and uses it when any program (or the FF button) tells it to move to the top of the next page.

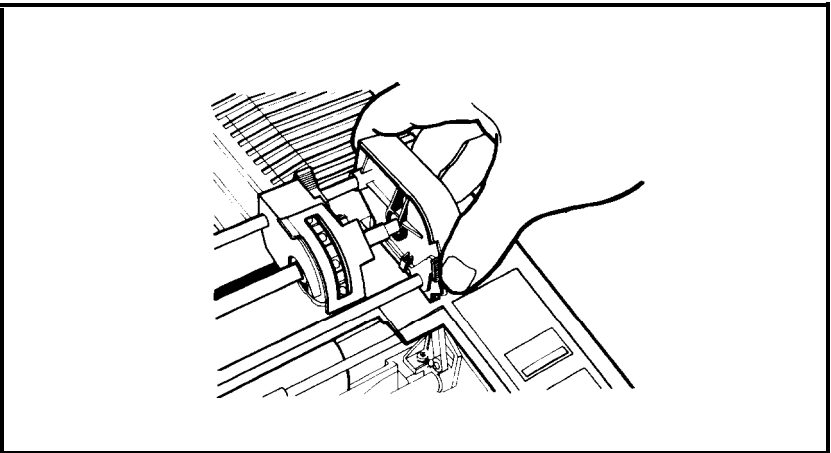
If you are using a word processing or other applications program and your printing is too high or too low on the page, change your top of page setting.

Once you have set the top of page, each time you finish printing a document, push the ON LINE button to put the printer off-line and then push the FF button once to advance the paper so that you can tear off your just-printed pages and the paper will be in the right position to begin the next document.

Unless you want to use single-sheet paper, you're now ready to print with your new LX-90. Your PIC manual tells you how to get the most from your new printer and how to take advantage of your computer's printing capabilities.

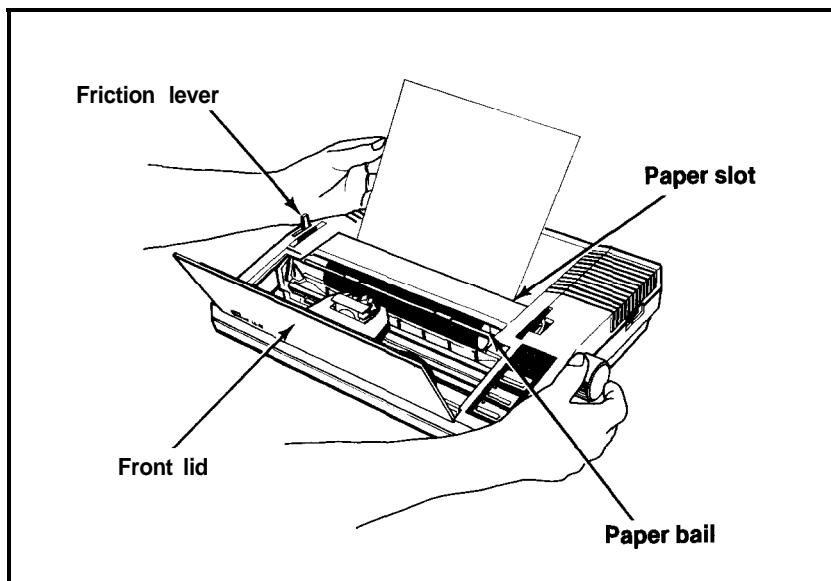
## **Removing the Tractor Unit**

When you want to use single-sheet paper in your LX-90, you can remove the tractor unit quite easily. Just push back the two tractor release levers (one of them is shown below), tilt the unit backward, and lift it up.



## Loading Single-Sheet Paper

1. First, make sure that the printer is turned OFF. Open the front lid, push the friction lever back, and pull the paper bail forward.
2. Now slide the ribbon carriage manually to the center of the printer and feed the paper into the paper slot in the top of the printer as shown below.



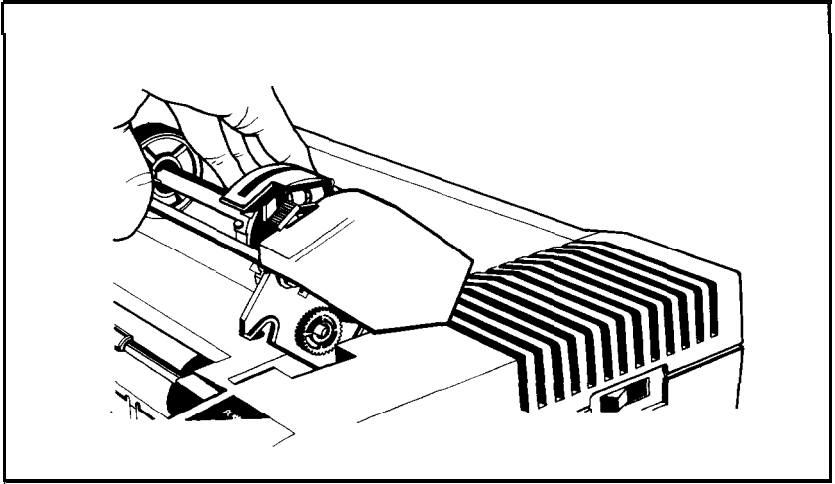
3. When the paper won't go any further, turn the paper feed knob to advance it (just like on a typewriter). Turn the knob until the top of the paper fits under the paper bail, then push the bail against the paper. If the paper becomes crooked, don't worry; just pull the friction-release lever forward, straighten the paper, and push the friction lever back.

And that's all there is to loading single-sheet paper. You're now ready to print with your LX-90 printer. See your PIC manual for further instructions.

## Replacing the Tractor Unit

Replacing the tractor after you have removed it is easy.

Pull the friction lever on the left side of the printer toward you, and hold the tractor with the gears to the right as shown below.



Tilt the tractor back so that the rear notches on the fittings fit over the rear pegs in the tractor slots; then tilt the unit forward until it clicks into place.

That's all there is to it.

## Maintenance

To keep your **LX-90** working like new, always keep it in a safe and clean place. Keep it away from dust, grease, and any heat sources. A safe temperature range is 41°F to 95°F.

To clean the outside of the printer case, use a soft, clean cloth dampened with clear water. Stubborn stains can be removed with non-abrasive household cleaners.

The inside front portion of the printer should also be cleaned periodically to get rid of dust and paper lint. First, turn the power switch OFF and unplug the power cord from the electrical outlet. Then remove the front lid.

Use a small vacuum cleaner and soft brush to clean inside the printer. Be careful not to bend or damage any of the parts inside the printer. With the power OFF, you can move the print head back and forth to clean under it.

Once in a great while your **LX-90** should be lubricated by an authorized Epson dealer.



# Specifications

Printing method	Impact dot matrix
Printing speed	100 characters per second per line in pica draft mode
Printing direction	Bidirectional, logic seeking
Ribbon	Cassette ribbon, black
Height (with tractor)	5.1 inches
Width	16.6 inches
Depth (with paper separator)	12.4 inches
Weight (with tractor)	12.5 pounds
Temperature	Operating 41°F to 95°F Storage -22°F to 149°F
Power requirements	Voltage: 110-130 volts Frequency: 49.6 to 60.5 Hz Consumption: 60 VA maximum
Paper types	Single-sheet, friction feed, 7.25 to 8.5 inches wide. Copies: Original and one sheet

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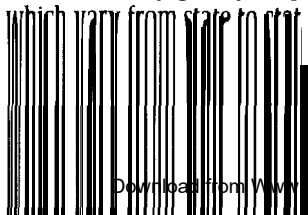
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