LX-800

TECHNICAL MANUAL

EPSON

NOTICE

- **The contents of this manual are subject to change without notice.**
- **All efforts have been made to ensure the accuracy of the contents of this manual. However, should any errors be detected, SEIKO EPSON would greatly appreciate being informed of them.**
- **The above notwithstanding, SEIKO EPSON can assume no responsibility for any errors in this manual or their consequences.**

PRECAUTIONS

Precautionary notations throughout the text are categorized relative to: 1) personal injury, and 2) damage to equipment.

DANGER **Signals a precaution which, if ignored, could result in serious or fatal personal injury. Great caution should be exercised in performing procedures preceded by DANGER headings.**

WARNING **Signals a precaution which, if ignored, could result in damage to equipment.**

The precautionary measures itemized below should always be observed when performing repair/maintenance procedures.

DANGER

1. **ALWAYS DISCONNECT THE PRODUCT FROM BOTH THE POWER SOURCE AND THE HOST COMPUTER BEFORE PERFORMING ANY MAINTENANCE OR REPAIR PROCEDURE.**
2. **NO WORK SHOULD BE PERFORMED ON THE UNIT BY PERSONS UNFAMILIAR WITH BASIC SAFETY MEASURES AS DICTATED FOR ALL ELECTRONICS TECHNICIANS IN THEIR LINE OF WORK.**
3. **WHEN PERFORMING TESTING AS DICTATED WITHIN THIS MANUAL, DO NOT CONNECT THE UNIT TO A POWER SOURCE UNTIL INSTRUCTED TO DO SO. WHEN THE POWER SUPPLY CABLE MUST BE CONNECTED, USE EXTREME CAUTION IN WORKING ON POWER SUPPLY AND OTHER ELECTRONIC COMPONENTS.**

WARNING

1. **REPAIRS ON EPSON PRODUCT SHOULD BE PERFORMED ONLY BY AN EPSON-CERTIFIED REPAIR TECHNICIAN.**
2. **MAKE CERTAIN THAT THE SOURCE VOLTAGE IS THE SAME AS THE RATED VOLTAGE, LISTED ON THE SERIAL NUMBER/RATING PLATE. IF THE EPSON PRODUCT HAS A PRIMARY AC RATING DIFFERENT FROM THE AVAILABLE POWER SOURCE, DO NOT CONNECT IT TO THE POWER SOURCE.**
3. **ALWAYS VERIFY THATTHE EPSON PRODUCT HAS BEEN DISCONNECTED FROM THE POWER SOURCE BEFORE REMOVING OR REPLACING PRINTED CIRCUIT BOARDS AND/OR INDIVIDUAL CHIPS.**
4. **IN ORDER TO PROTECT SENSITIVE μP CHIPS AND CIRCUITRY, USE STATIC DISCHARGE EQUIPMENT, SUCH AS ANTI-STATIC WRIST STRAPS, WHEN ACCESSING INTERNAL COMPONENTS.**
5. **REPLACE MALFUNCTIONING COMPONENTS ONLY WITH THOSE COMPONENTS RECOMMENDED BY THE MANUFACTURER; INTRODUCTION OF SECOND-SOURCE ICS OR OTHER NONAPPROVED COMPONENTS MAY DAMAGE THE PRODUCT AND VOID ANY APPLICABLE EPSON WARRANTY.**

PREFACE

This manual describes functions, theory of electrical and mechanical operations, maintenance, and repair of the LX-800.
The instructions and procedures included in this document are intended for the experienced repair technician, who should pay attention to the precautions on the preceding page. The chapters are organized as follows:

Chapter 1 — Provides a general product overview, lists specifications, and illustrates the main components of the printer

Chapter 2 — Describes the theory of printer operation

Chapter 3 — Discusses the options

Chapter 4 — Includes a step-by-step guide for product disassembly, assembly, and adjustment

Chapter 5 — Provides Epson-approved techniques for troubleshooting

Chapter 6 — Describes preventive maintenance techniques and lists lubricants and adhesives required to service the equipment

•The contents of this manual are subject to change without notice.

REVISION SHEET

REVISION	DATE ISSUED	CHANGE DOCUMENT
A	Feb. 28, 1987	1st issue
B	July 14, 1987	1-1, 5, 8, 12 through 18 2-2,11, 13,28,30,38 through 42 4-1, 13, 17, 19 5-1, 2, 6 6-1 A-2, 17, 18

TABLE OF CONTENTS

CHAPTER 1
GENERAL DESCRIPTION

LIST OF FIGURES

LIST OF TABLES

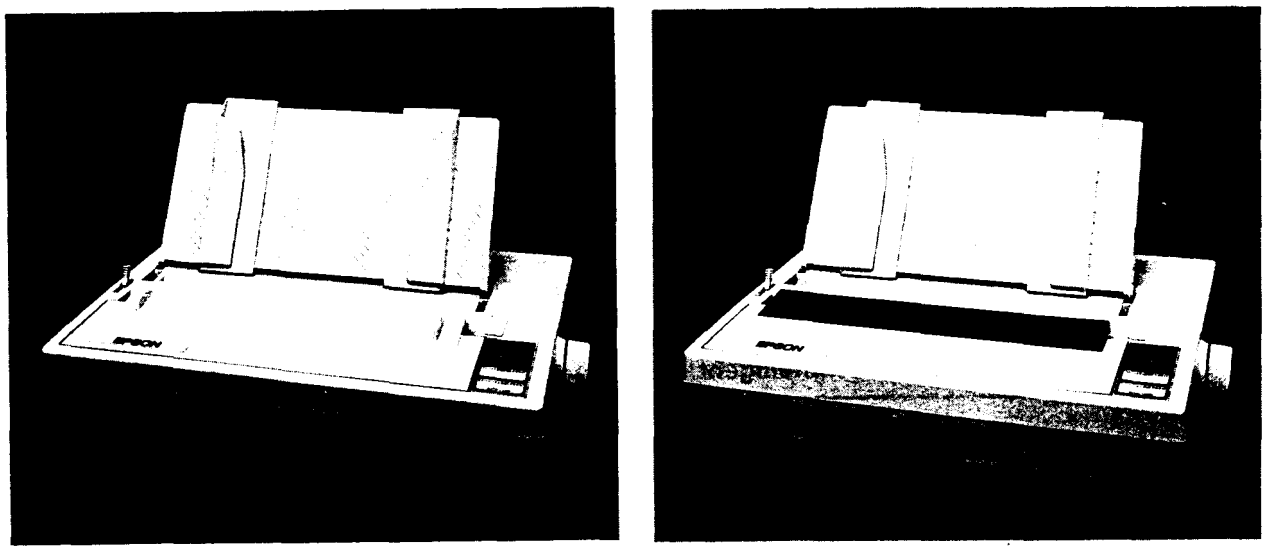
1.1 FEATURES

The LX-800 is a multifunctional and high speed serial dot impact printer with a compact body and the low price.

Features include:

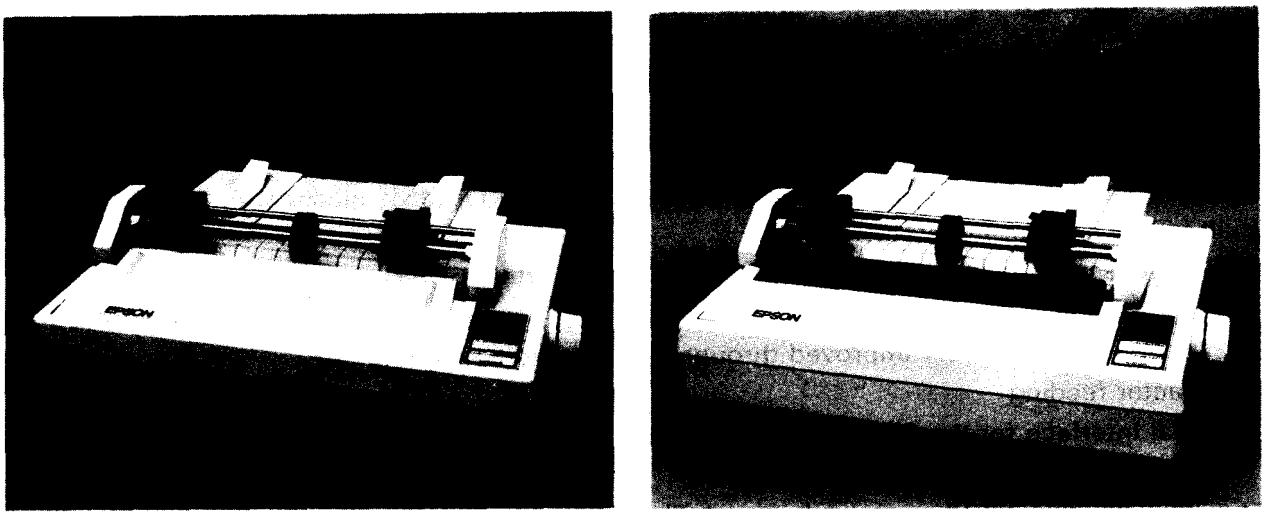
- 180 cps maximum speed (draft-elite), 150 cps (draft-pica)
- Upward compatibility with the LX-86
- Built in two NLQ fonts (Roman and Saris-serif)
- Direct selection of NLQ/Draft modes, and easy selection of 4 typestyle modes with SelecType controls
- Built in IBM graphics characters
- Super/Subscript, Italics, and Elite modes can be supported in NLQ
- Automatic sheet loading function
- A 3K-byte input buffer for improved throughput from the host computer
- Pull tractor feeding
- Optional interface for the EPSON #81 XX series

Two models of the LX-800 are manufactured. The model for the U.S and Australia uses printer cover A and the model for all countries except the U.S. and Australia uses printer cover B.
Figures 1-1 and 1-2 show the external view of the LX-800. Table 1-1 lists the options.



(Printer cover A) (Printer cover B)

Fig. 1-1. Exterior View of LX-800



(Printer Cover A) (Printer Cover B)

Fig. 1-2. Exterior View of LX-800 with Tractor Unit

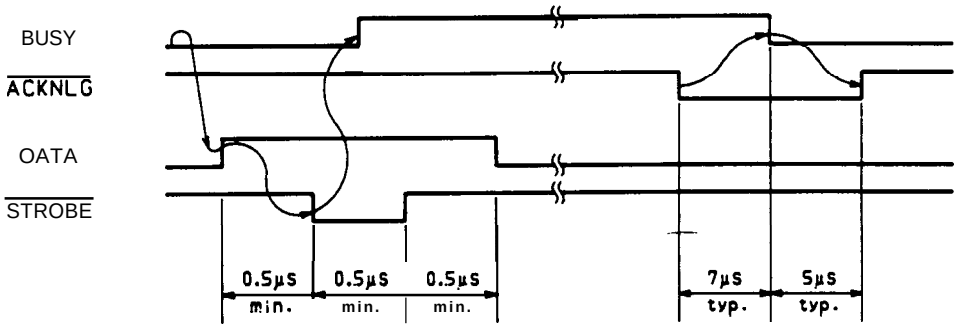
Table 1-1. LX-800 Options

Option No.	Description
#83 10	Roll Paper Holder
#81 33	APPLE II Intelligent Interface
#8 143	New Serial Interface
#8 145	RS-232C/Current Loop Type 2 InterFace
#81 48	Intelligent Serial Interface
#8 165	Intelligent IEEE-488 Interface

1.2 INTERFACE

The LX-800 has a 8-bit parallel interface as a standard. The specifications for the 8-bit parallel interface are as follows:

Data Format:	**8-bit parallel**
Synchronization:	**By $\overline{\text{STROBE}}$ pulse**
Hand Shaking:	**By both $\overline{\text{ACKNLG}}$ and BUSY, or either of them**
Logic Level:	**TTL (LS type) compatible**
Data transmission timing:	**See Figure 1-3.**
Connector:	**57-30360 (AMPHENOL) or equivalent (See Figure 1-4.)**



NOTE: Transmission time (rising and falling time) of every input signal must be less than 0.2μs.

Fig. 1-3. Data Transmission Timing for 8-Bit Parallel Interface

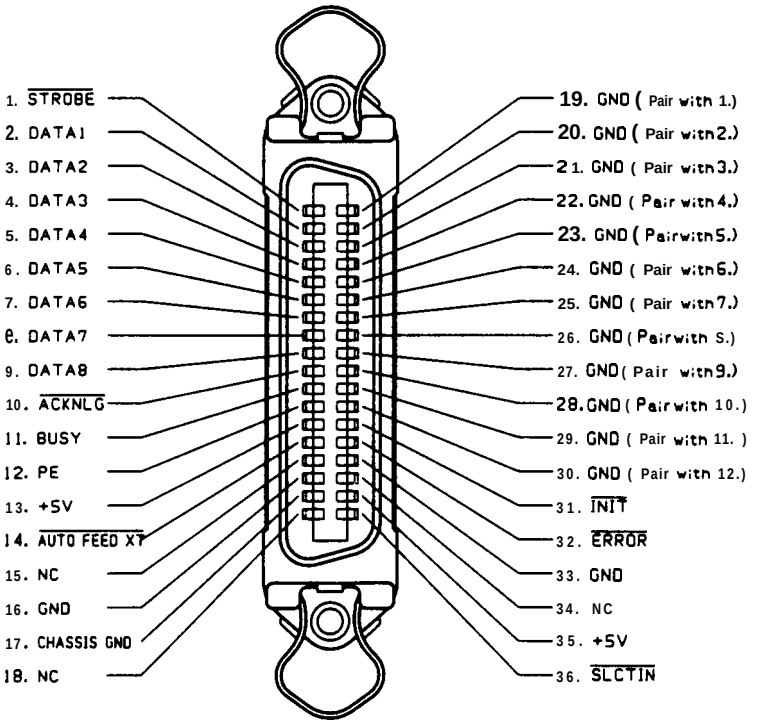


Fig.1-4. 57-30360 36-Pin Connector

Table 1-2 shows the connector pin assignments and signal functions of the 8-bit parallel interface.

Table 1-2. Connector Pin Assignments and Signal Functions

Pin No.	Signal Name	Return Pin No.	DIR	Functional Description
1	$\overline{\text{STROBE}}$	19	In	Strobe pulse to read the input data. Pulse width must be more than 0.5μs. Input data is latched after falling edge of this signal.
2	DATA 1	20	In	Parallel input data to the printer.
3	DATA2	21	In	"HIGH" level means data " 1".
4	DATA3	22	In	"LOW" level means data "O".
5	DATA4	23	In	
6	DATA5	24	In	
7	DATA6	25	In	
8	DATA7	26	In	
9	DATA8	27	In	
10	$\overline{\text{ACKNLG}}$	28	out	This pulse indicates data are received and the printer is ready to accept next data. Pulse width is approx. 12 μs.
11	BUSY	29	out	HIGH indicates printer can not accept next data.
12	PE	30	out	HIGH indicates paper-out. This signal is effective only when $\overline{\text{ERROR}}$ signal is "LOW".
13	SLCT	—	out	Always "HIGH" output. (Pulled up to +5V through 3.3 K ohms register.)
14	$\overline{\text{AUTOFEED-XT}}$	—	In	If the signal is "LOW" when the printer is initialized, a line feed is automatically performed by input of "CR" code. (Auto LF)
15	—	—	—	Not used.
16	GND	—	—	Ground for twisted-pair grounding.
17	Chassis GND	—	—	Chassis ground level of printer
18	—	—	—	Not used.
9 to 30	GND	—	—	Ground for twisted-pair grounding.
31	INIT	16	In	Pulse (width: 50μs min., active "LOW") input for printer initialization.
32	$\overline{\text{ERROR}}$	—	out	LOW indicates that some error has occurred in the printer.
33	GND	—	·	Ground for twisted-pair grounding
34	—	—	—	Not used.
35	—	—	out	Always "HIGH". (Pulled up to +5V through a 3.3k-ohm register.)
36	$\overline{\text{SLCT-IN}}$	—	In	If the signal is "LOW" when printer is initialized, the DC I/DC3 control is disabled.

NOTES 1. "Return" denotes a twisted pair return line connected to signal ground. When interfacing the printer to the host, use twisted pairs for each signal. Shield the twisted pairs, and connect the shield to GND in order to reduce interface.

2. All interface conditions are based on TTL levels. Both the rise and fall times of all signals must be less than 0.2μs.
3. Refer to the Parallel Interface Timing Chart for the timing of the signals.
4. Data transfer protocol must not ignore the $\overline{\text{ACKNLG}}$ or BUSY signal. (Data can be transferred either after recognizing the $\overline{\text{ACKNLG}}$ signal or when the BUSY signal is LOW.)
5. The $\overline{\text{AUTO FEED XT}}$ and $\overline{\text{SLCT IN}}$ signals are valid when they are not fixed to LOW level by the DIP switch or jumper.
6. Printing tests, including those of the interface circuits, can be performed without using external equipment: set interface connector data lines 1-8 to the desired code (a floating signal will be a logical 1, and a grounded signal will be a O) connect the $\overline{\text{ACKNLG}}$ signal to the $\overline{\text{STROBE}}$ signal.
7. The PE signal is valid when the $\overline{\text{ERROR}}$ signal is LOW.

Table 1-3. Printer Select/Deselect (DC1/DC3) Control

$\overline{\text{SLCT IN}}$ Signal State at Initialization	DC1/DC3	Printer Select/Deselect	Data entry
HIGH	DC 1	Select	Enable
	DC3	Deselect	Enable (Waits for a DC1. Input data is ignored until a DC 1 code is received.)
LOW	DC1	Select	Enable
	DC3	Select	Enable

1.3 SPECIFICATIONS

This chapter describes the specifications of the LX-800 printer.

● General Specifications

Printing method:	Serial impact dot matrix
Pin configuration:	9 wires (see Figure 1-5)
Pin diameter:	0.29 mm
Dot Pinch:	0.35 mm (1/72 inch)

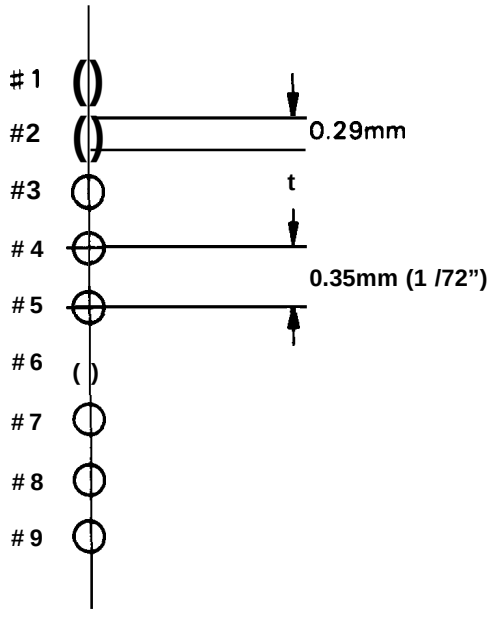


Fig. 1-5. Printhead Pin Configuration

Printing direction:	
Text mode:	Bi-directional with logic seeking
Bit-image mode:	Uni-directional (left to right)
Dot matrix:	9 X 9 (Draft)
	11 X 18 (NQL)
	6 X 8 (Graphics)
Character sets:	96 ASCII characters
	96 Italic characters
	32 International characters
	32 International Italic characters
	32 Graphics characters
	96 IBM Graphics characters
Fonts:	Draft, NLQ-Roman, Saris-serif
Printing speed:	See Table 1-4
Character size:	See Table 1-4
Column width:	See Table 1-4
	480 dots/line at 60 dots/inch (Bit-image)

Table 1-4. Printing Speed, Character Size, and Column Width

Type Style					Printing Speed (CPS)	Character Size (mm)		Column Width (maximum Characters/Line-CPL)	Pitch (maximum Characters /inch-CPI)
Font	Normal	Double Width	Empha-sized	Con-densed		Width	Height		
Draft (Pica)	0	—	—	—	150	2.1	3.1	80	10
		o	—	—	75	4.2	3.1	40	5
	—	.	0	—	75	2.1	3.1	80	10
		0	0	—	37	4.2	3.1	40	5
	—	—	—	o	128	1.05	3.1	132	17
		0	—	o	64	2.1	3.1	66	8.5
Draft (Elite)	o	—	—	—	180	2.1	3.1	96	12
	—	o	—	—	90	4.2	3.1	48	6
	—	—	—	o	150	1.05	3.1	160	20
NLQ	o	—	—	—	25				
Super-sub-script	0	—	—	—			1.6		

Line spacing: 1/6" or Programmable (n/2 16")
Line feed speed: Approx.95ms/line (Line feed)
(1 line = 1/6") Approx.75ms/line (Form feed)
Paper feed method: Friction feed or Tractor feed
Paper path: From rear of printer

● **Paper Specifications**

Type of paper: See Table 1-5

Table 1-5. Type of Paper

	Cut sheet	Fan-fold paper	Roll paper
Size	(Width) 182 mm to 216 mm 7. 15“ to 8.5” (Length) Max. 305 mm Max. 12“	(Width) 101 mm to 254 mm 4“ to 10”	(Width) 216 ± 3 mm 8.5″ ± 0.12“ (Diameter of roll) Max. 127 mm Max. 5“
Thickness	0.06 mm to 0.1 mm	Max. 0.25 mm	0.07 mm to 0.09 mm
Copies	———	1 original +2	———
Weight	52g/m² to 82g/m²	(1 sheet) 52g/m² to 82g/m² (2 sheets) 35g/m² to 58g/m² (3 sheets) 35g/m² to 58g/m² for 2 sheets + 35g/m² to 47g/m² for 1 sheet	52g/m² to 64g/m²
Feeding method	Friction feed	Tractor feed	Friction feed
Precautions	1. Do not use continuous form or copy paper. 2. Dismount the Tractor unit.	1. Release the friction mechanism using the release lever. 2. Use the pressure sensitive paper for copying. Be sure that perforations have a smooth finsh.	1. Use the Roll paper holder. 2. Dismount the Tractor unit.

Printable area: **See Figures 1-6 through 1-8**

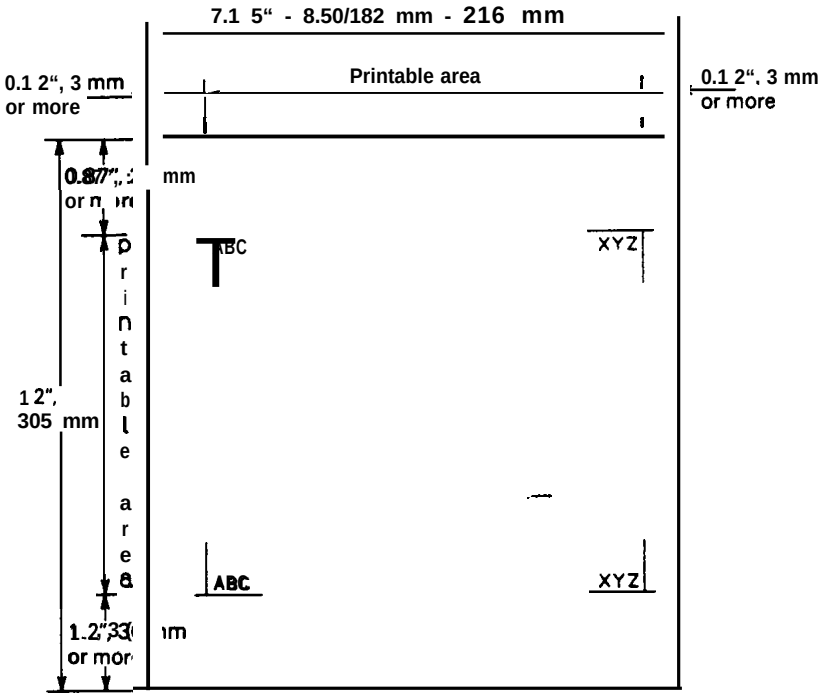


Fig. 1-6. Printable Area for Cut Sheet Paper

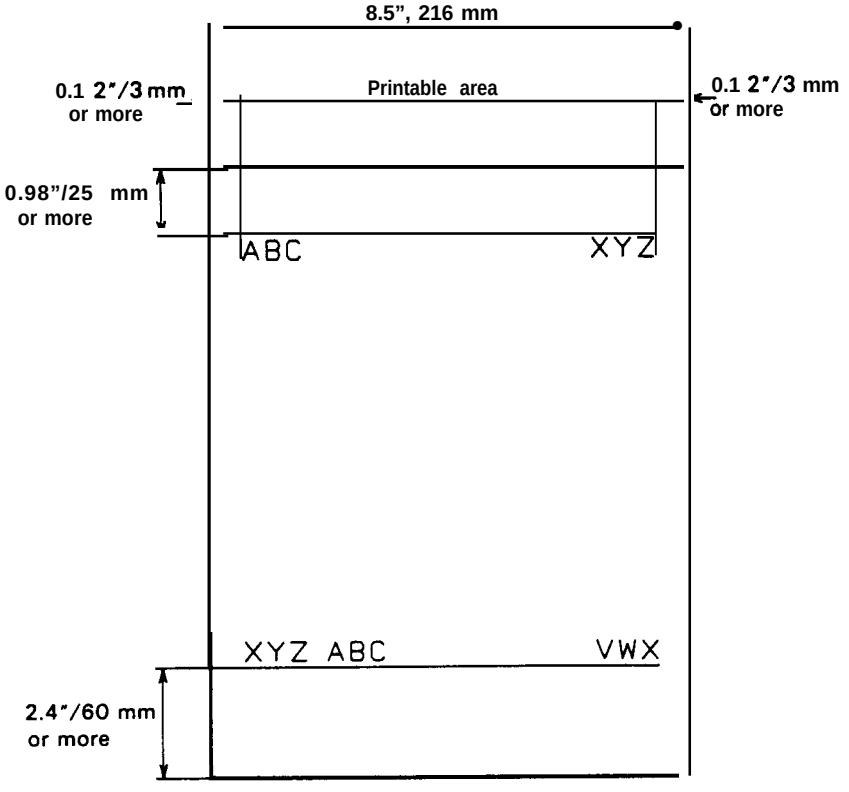
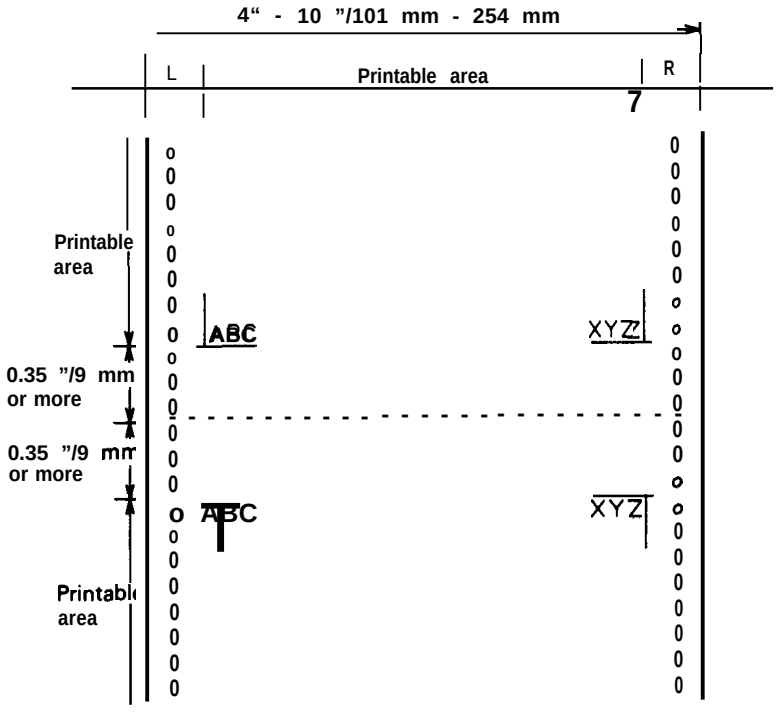


Fig. 1-7. Printable Area for Roll Paper



L: 0.75"/19 mm (Paper width is less than 9.5"/241 mm)
1.02")26 mm (Paper width is more than 9.5 "/241 mm)
R: 0.75"/19 mm (Paper width is less than 9.5 "/241 mm)
0.94"/24 mm (Paper width is more than 9.5 "/241 mm)

Fig. 1-8. Printable Area for Fan Fold Paper

- **Ribbon Cartridge**

Cartridge number:	**#8750**
Color:	**Black**
Life:	**3 million characters (14 dots/character)**

- **Electrical Specifications**

Power Voltage:	**120VAC ± 10%**
	220/240VAC ± 10%
Frequency range:	**59.5Hz to 60.5Hz (120VAC)**
	49.5Hz to 60.5Hz (220/240VAC)
Power consumption:	**Max. 70VA**
Insulating resistance:	**More than 10M ohms**
	(between the AC line and chassis)
Dielectric strength:	**1 KVAC rms/minute or 1.2KVAC rms/second**
	between AC line and chassis (120V)
	1.25 kVAC rms/minute or 1.5 kVAC rms/second
	between AC line and chassis (220/240V)

● **Environmental Specifications**

Temperature:	**−30°C to 60 ”C/–22°F to 149°F (Storage)**
	5°C to 35°C/4 1“F to 95°F (Operating)
Humidity:	**5% to 85%RH, no condensation (Storage)**
	10% to 80%RH, no condensation (Operating)
Resistance to shock:	**2G, 1 ms (Storage)**
	IG, 1 ms (Operating)
Resistance to vibration:	**0.50G, max. 55Hz (Storage)**
	0.25G, max 55Hz (Operating)

● **Reliability**

MCBF:	**3 million lines (Printer mechanism except the printhead)**
MTBF:	**4000 hours**
Life of printhead:	**200 million strokes/needle**

● **Safety Approvals**

. safety Standards:	**UL 478 (U. S.A.)** —
	CSA 22.2 No. 0.154 (Canada)
	VDE 0806 (West Germany)
RFI:	**FCC class B (U. S.A.)**
	VDE 0871 (West Germany)

● **Physical**

Dimensions:	**91 mm (height)**
(Refer to Figure A-19)	**377 mm (width)**
	399 mm (width including paper feed knob)
	308 mm (depth)
Weight:	**5.1 kg**

1.4 OPERATING CONTROLS

This section describes the operating controls of LX-800 printer.

1.4.1 DIP Switch and Jumper Settings

The DIP switches that users can set are SW1 and SW2. These switches are positioned at the rear center of the printer and have the functions shown in Tables 1-6 through 1-8. (Note: the status of the DIP switches is read only when at power on or at input of the INIT signal).

Table 1-6. DIP Switch Settings

DIP SW	Function	ON	OFF
1-1	Typeface select	Condensed	Normal
1-2	ZERO font select	0	0
1-3	Character Table select	Graphic	Italic
1-4	Paper-out detection	Valid	invalid
1-5	Printing quality select	NLQ	Draft
1-6 1-7 1-8	International character set select	See Table 1-7	
2-1	Page length select	12“	1 1“
2-2	Cut sheet feeder mode	Valid	Invalid
2-3	1“ skip over perforation	Valid	Invalid
2-4	$\overline{\text{AUTO FEED XT}}$ control	Fix to LOW	Depends on external signal

Table 1-7. International Character Set

Country	SW 1-6	Sw 1-7	SW 1-8
U.S.A.	ON	ON	ON
FRANCE	ON	ON	OFF
GERMANY	ON	OFF	ON
U.K.	ON	OFF	OFF
DENMARK	OFF	ON	ON
SWEDEN	OFF	ON	OFF
ITALY	OFF	OFF	ON
SPAIN	OFF	OFF	OFF

Table 1-8. DIP Switches Factory Settings

DIP SW No. / Country	1-1	1-2	1-3	1-4	1-5	1-6	1-7	1-8	2-1	2-2	2-3	2-4
U. S.A., Southeast Asia, Middle and Near East	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
Germany, Northern Europe	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
U. K., Australia	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
France, Italy, Spain	OFF	OFF	ON	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF

Jumper J 1 on the ROCX board has the function and factory setting shown in Table 1-9.

Table 1-9. Jumper Setting

Jumper	Function	Open	Close	Factory setting
J1	$\overline{\text{SLCT IN}}$ control	Depends on external signal	Fix to LOW	Open

1.4.2 Control Panel (and Auto Sheet Load Function)

Figure 1-9 shows the control panel of LX-800 printer.

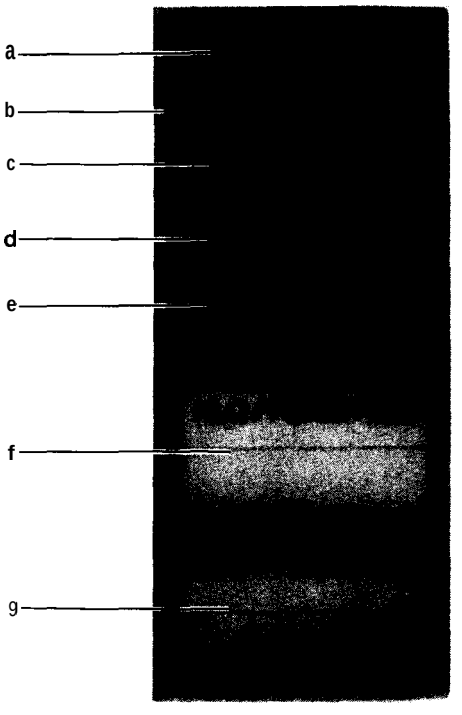


Fig. 1-9. Control Panel

The functions of the LEDs and switches are:

a. POWER LED (green)
   Lights when the power switch is turned on and AC power is applied.
b. READY LED (green)
   Lights when the printer is ready to receive data.
c. PAPER OUT LED (red)
   Lights when the printer runs out of paper.
d. ON LINE LED (green)
   Lights when the printer is ON-LINE.
e. ON/OFF LINE Switch (non-locking push switch)
   Switches between the ON-LINE and OFF-LINE modes.
   The printer is automatically set ON-LINE and becomes ready when power is turned on. If the printer is set OFF-LINE, printing is stopped and the printer enters the busy state.
f. NLQ/FORM FEED Switch (non-locking push switch)
   - When this switch is pressed once in the OFF-LINE mode, the paper is advanced vertically to the top of form on the next page.
   - When this switch is pressed in the ON-LINE mode, the NLQ-Roman or NLQ-Sans-serif fonts are selected, and the buzzer sounds to inform the user which font is selected.

     NLQ-Roman: Two beeps
     NLQ-Sans-serif: Three beeps

g. DRAFT/LINE FEED and AUTO LOAD Switch (non-locking push switch)

- **When this switch is pressed once in the OFF-LINE mode, the paper is advanced vertically one line, and the paper advanced continuously while this switch is pressed.**
- **When this switch is pressed in the ON-LINE mode, the Draft font is selected, and beeps once a buzzer to inform the Draft font is selected.**
- **Cut sheets are automatically loaded when the paper is placed at the sheet guide, printer is paper out, OFF-LINE state and the this switch is pressed.**

1.4.3 Self Test and Hexadecimal Dump Functions

The conditions of LX-800 may be checked via the self test functions. The self test checked:

- **Circuit**
- **Printer mechanism**
- **Printing quality**
- **ROM (firmware) code number**

The code number of ROM is printed on the first line of the self test.

To start the self test in either the Draft mode or NLQ mode, turn the power on while pressing the DRAFT/LINE FEED or NLQ/FORM FEED switch, respectively. In the NLQ self test mode, both Roman font and Saris-serif font are printed every other line. When the DIP switch 1-5 set to on (NLQ mode), only NLQ mode self test is performed, no related switches. To stop the self test, turn the power off by power switch.

The conditions of data transmission between LX-800 and the host computer may be checked via the hexadecimal dump functions. To set the hexadecimal dump mode, turn the power while pressing the both LINE FEED and FORM FEED switches. Then the message "Data Dump Mode" is printed.

The printer prints 16 hexadecimal values, followed by the corresponding ASCII characters. If there is no corresponding printable characters for a value (e.g. a control code), a period (.) is printed. One line is printed for each set of 16 values received, and any remaining data (less than 16 values) can be printed by pushing the ON/OFF LINE switch.

To cancel the hexadecimal dump mode, turn the power off by power switch.

1.4.4 SelecType Function

SelecType is a feature of the LX-800 which permits type style programming via the control panel switches without software assistance.

In the SelecType mode, following 4 type styles can be selected:

- Emphasized
- Double-strike
- Condensed
- Elite

Figure 1-10 shows the operation flow chart of SelecType function:

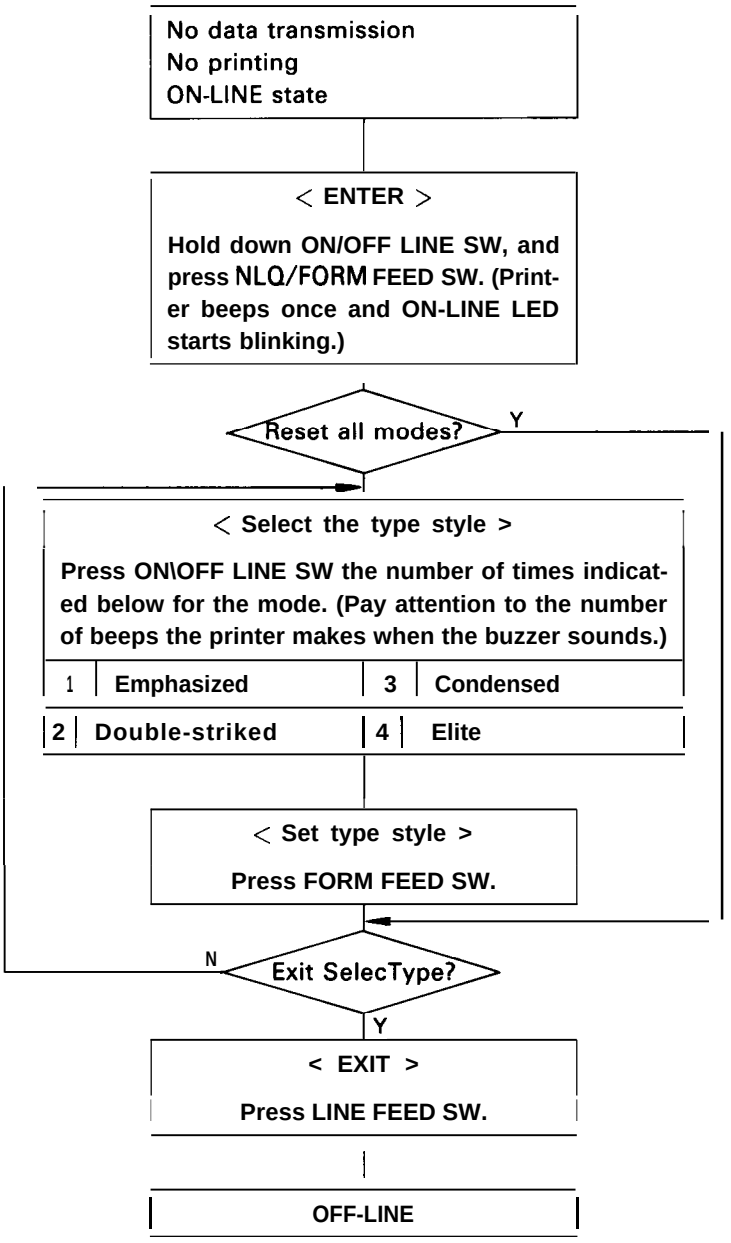


Fig. 1-10. SelecType Flow Chart

1.4.5 Buzzer and Error Functions

The buzzer rings under the following circumstances:

- When a BEL code is sent to the printer, the buzzer rings once (for 0.1 sec.).
- When the NLQ Roman font is set using the FORM FEED switch, the buzzer rings twice (for 0.1 sec. each, with 0.1 sec. pause between rings).
- When the NLQ Saris serif font is set using the NLQ/FORM FEED switch, the buzzer rings three times (for O. 1 sec. each, with O. 1 sec. pause between rings).
- When the Draft font is set using the DRAFT/LINE FEED switch, the buzzer rings once (for O. 1 sec.).
- When the printer enters the SelecType mode, the buzzer rings once (for O. 1 sec.).
- When paper out is detected, the buzzer rings eight times (for 0.5 sec. each, with 0.5 sec. pause between rings).
- When abnormal carriage operation is detected (hardware error), the buzzer rings five times (for 0.5 sec. each, with 0.5 sec. pause between rings).
- When abnormal voltage is detected (hardware error), the buzzer rings five times (for 0.5 sec. each, with 0.5 sec. pause between rings).

When the paper end sensor detects paper out, the state of the interface changes as follows:

$\overline{\text{ERROR}}$ signal → LOW
BUSY signal → HIGH
PE signal → HIGH

The printer enters an error state when any of the following occurs:

a. Home position is not detected after the printer mechanism has been initialized (home position seek).
b. The +24V voltage (which is used to drive the printhead and motors) rises to +27V or more.

When the printer enters an error state, the printer stops the printing, and the state of the interface changes as follows:

$\overline{\text{ERROR}}$ signal → LOW
BUSY signal → HIGH

1.4.6 Printer Initialization and Default Values

The LX-800 initialized when any of the following occurs.

- The power switch is turned on.
- Interface signal INIT goes low.

When the printer is initialized, the following operations are performed:

a. Seek to carriage home position.
b. Set to ON-LINE mode.
c. Clear the all buffers.
d. Set the line spacing to 1/6 inches.
e. Set the page length to 11 or 12 inches, according to the DIP switch.
f. Clear all vertical tab positions.
g. Set the horizontal tab position to every 8 columns.
i. Set the print mode according to the DIP switches.

1.5 MAIN COMPONENTS

The LX-800 consists of the following components:

- Printer Mechanism Model-3A10 (include the Tractor Unit)
- ROC Filter Unit
- ROCX Board Unit
- LCPNL Board Unit
- Housing

1.5.1 Printer Mechanism Model-3A10

The Model-3A10 printer mechanism was developed expressly for use with LX-800 printer: the components include a carriage motor, carriage mechanism, paper feed motor, paper feed mechanism, ribbon feed mechanism, printhead, sensors, and the tractor unit. For the tractor unit, there are two tabs on both side frames to allow the printer cover to float slightly when tractor feeding is performed.

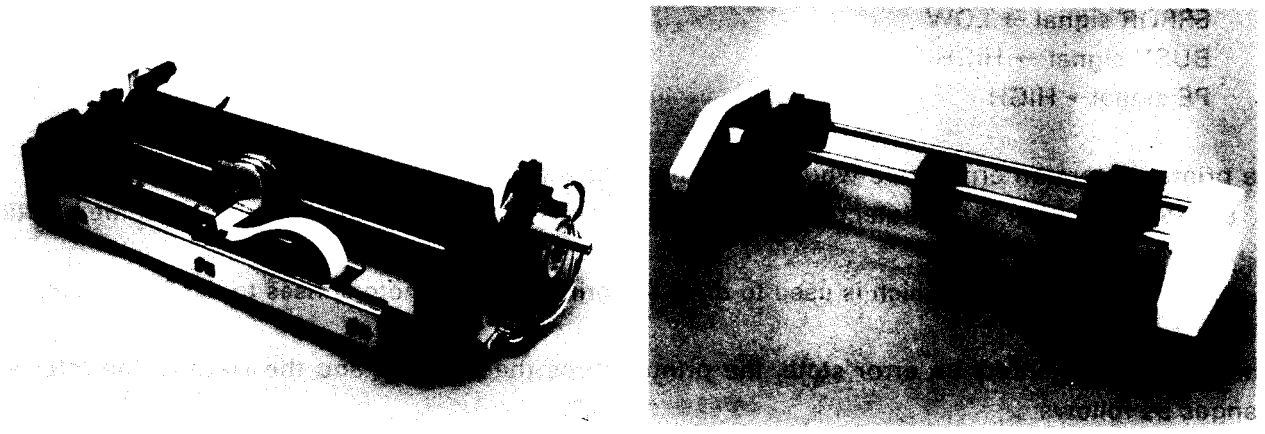


Fig. 1-11. Model-3A10 Printer Mechanism

1.5.2 ROC Filter Unit

The ROC filter unit contains a power cord (120 V version) or AC inlet (220/240 V version), power switch, fuse, filter circuit, and power transformer.

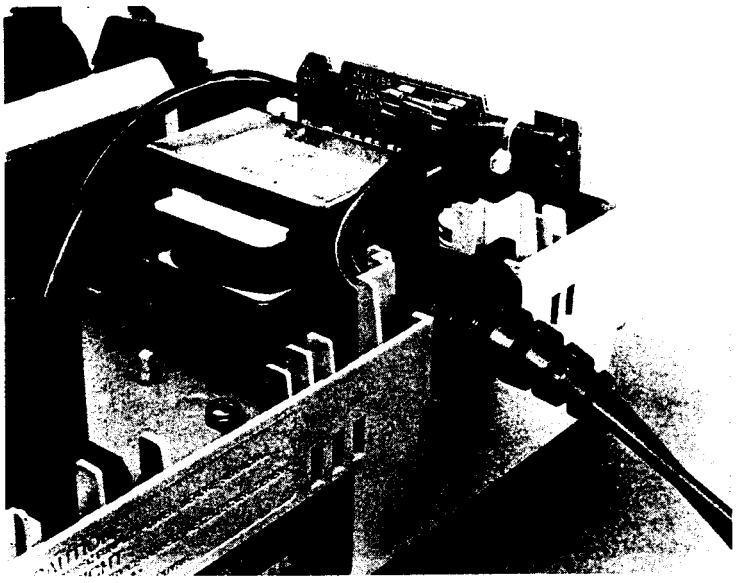


Fig. 1-12. ROC Filter Unit (120V version)

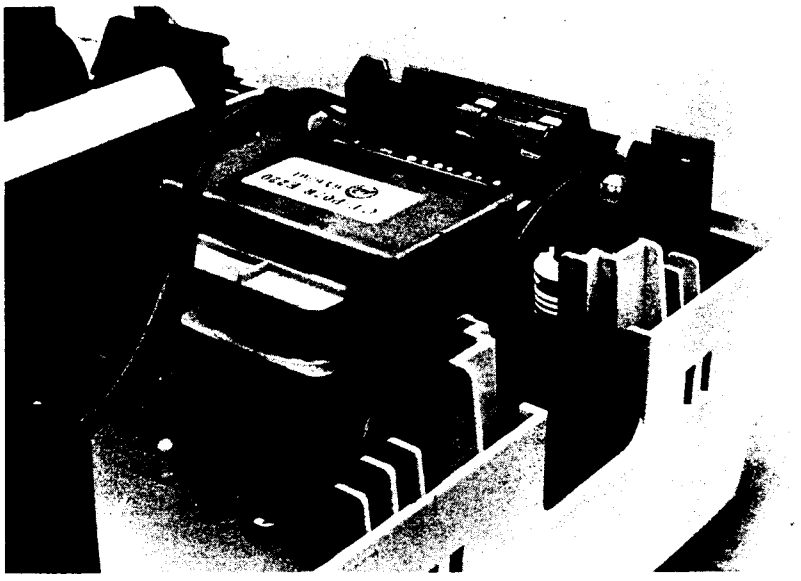


Fig. 1-13. ROC Filter Unit (220 V/240V versions)

1.5.3 ROCX Board Unit

The ROCX board contains the main control circuit, driver circuit, and voltage regulator circuit. The main ICs on the ROCX boards are the μPD78 10HG CPU and the E05A03 gate array which controls everything.

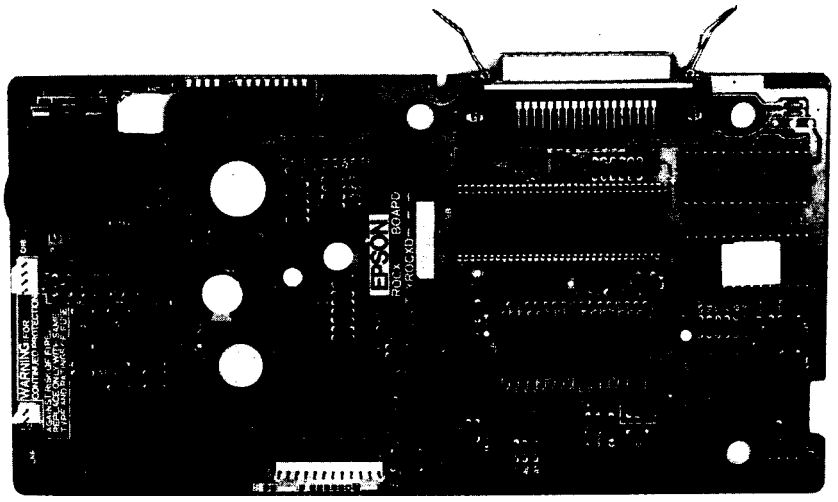


Fig. 1-14. ROCX Board Unit

1.5.4 LCPNL Board Unit

The LCPNL board unit is a control panel of LX-800 which contains the indicator LEDs, switches and buzzer.

Fig. 1-15. LCPNL Board Unit

1.5.5 Housing

The housing is comprised of the upper and lower cases, and paper feed knob, which accommodate the printer mechanism, ROCX board unit, LCPNL board unit, and ROC filter unit.

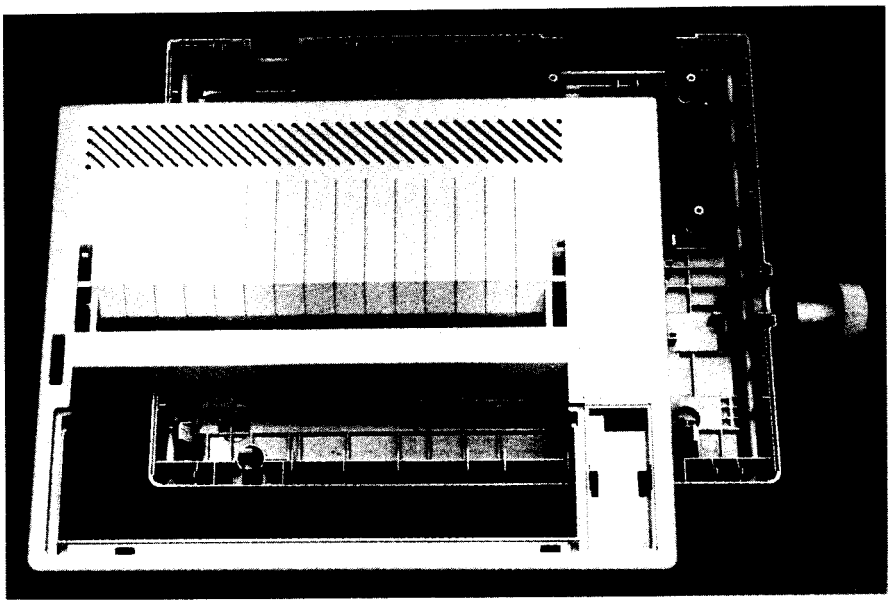


Fig. 1-16. Housing

CHAPTER 2
OPERATING PRINCIPLES