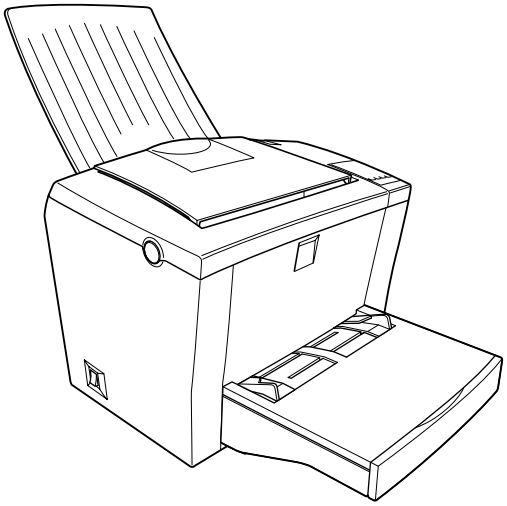
SERVICE MANUAL



A4 Monochrome Laser Printer

EPSON EPL-5800

SEPG99012

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 not withstanding SEIKO EPSON CORPORATION can assume no responsibility for any errors in this manual or the consequences thereof.

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PRECAUTIONS

Precautionary notations throughout the text are categorized relative to 1) Personal injury and 2) Damage to equipment.

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

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 THE POWER SOURCE AND PERIPHERAL DEVICES PERFORMING ANY MAINTENANCE OR REPAIR PROCEDURES.
2. NOWORK 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 VOLTAGES 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 AVAILABLE POWER SOURCE, DO NOT CONNECT IT TO THE POWER SOURCE.
3. ALWAYS VERIFY THAT THE 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 MICROPROCESSORS AND CIRCUITRY, USE STATIC DISCHARGE EQUIPMENT, SUCH AS ANTI-STATIC WRIST STRAPS, WHEN ACCESSING INTERNAL COMPONENTS.
5. REPLACE MALFUNCTIONING COMPONENTS ONLY WITH THOSE COMPONENTS BY THE MANUFACTURE; INTRODUCTION OF SECOND-SOURCE ICs OR OTHER NONAPPROVED COMPONENTS MAY DAMAGE THE PRODUCT AND VOID ANY APPLICABLE EPSON WARRANTY.

PREFACE

This manual describes basic functions, theory of electrical and mechanical operations, maintenance and repair procedures of EPL-5800. The instructions and procedures included herein are intended for the experienced repair technicians, and close attention should be given to the precautions on the preceding page. Chapters are organized as follows:

CHAPTER 1. PRODUCT DESCRIPTIONS

Provides a general overview and specifications of the product.

CHAPTER 2. OPERATING PRINCIPLES

Describes the theory of electrical and mechanical operations of the product.

CHAPTER 3. TROUBLESHOOTING

Provides the step-by-step procedures for troubleshooting.

CHAPTER 4. DISASSEMBLY AND ASSEMBLY

Describes the step-by-step procedures for disassembling and assembling the product.

CHAPTER 5. ADJUSTMENT

Provides adjusting procedures.

CHAPTER 6. MAINTENANCE

Provides preventive maintenance procedures.

APPENDIX

Provides the following addition information for reference:
- Connector Pin Diagram
- Circuit Board Component Layout
- Parts Lists & Exploded Diagrams
- Circuit Schematics

Revision Status

Revision	Date of Issue	Description
A	January 7, 2000	First Release
B	February 15, 2000	[Chapter 7 : Appendix] The parts list is added.

Contents

Product Description

Operating Principles

Troubleshooting

Disassembly and Assembly

Adjustment

Maintenance

Appendix

CHAPTER

1

PRODUCT DESCRIPTION

1.1 Outline

EPSON EPL-5800 is non-impact page printer with semi-conductor laser and electrophotographic technology.

1.1.1 Features

ENGINE FEATURES

- ☐ Compact and lightweight, A4 support engine
- ☐ Resolution/ printing speed: See table below.

Table 1-1. Resolution and Printing Speed

Resolution	Printing Speed
300dpi / 600 dpi	10ppm
1200 dpi	5ppm

- ☐ Standard paper supply includes cassette-like universal paper tray (150 sheets) and manual feed tray (one sheet)
- ☐ Option support for 500-sheets lower cassette (A4, Letter size)

CONTROLLER FEATURES

- ☐ High-speed controller, employing new CPU
  - ■ CPU = VR4310 / Clock = 133MHz
  - ■ 16 MB fitted as standard RAM and Expandable up to 256MB Max.
- ☐ Two standard interfaces
  - ■ IEEE1284 parallel interface
  - ■ USB interface (Windows 2000 supported)
- ☐ One Type B interface slot equipped (Level 3 supported)
- ☐ Euro Symbol supported
- ☐ EnhancedMicroGray installed (available only in 600dpi and 300dpi. automatically Off at 1200dpi)
- ☐ RITech installed (available only in 600dpi and 300dpi. Automatically switched Off when 1200dpi is selected.)

SOFTWARE FEATURE

- ☐ The following modes and resolution are supported.

Table 1-2. Supporting Modes

Mode	1200dpi	600dpi	300dpi	Note
ESC/Page	O	O	O	
PCLXL	O	O	O	
PCL5e	x	O	O	
ESC/P2	x	O	O	
FX	x	O	O	
1239X	x	O	O	
PostScript	O	O	O	Optional

- ☐ NLSP is included in the main unit font ROM
- ☐ The number of built-in font added
  ESC/Page: 49 → 84 fonts
  PCL: 45 → 80 fonts
- ☐ USB Revision 1.1 supported (for Widows 2000 USB PnP)

1.1.2 Differences from EPL-5700

Table 1-3. Differences from EPL-5700

Item	EPL-5700	EPL-5800	Note
Engine speed	8ppm	10ppm	
Real 1200dpi support	x	O	5ppm when 1200dpi is selected.
CPU performance	R4300-100MHz	R4310-133MHz	
RAM capacity (Standard / Maximum)	4MB / 36MB	16MB / 256 MB*1	
RAM type	EDO RAM SIMM	SDRAM DIMM	
Expansion ROM	ROM DIMM x 2	ROM DIMM*2 x 1	For Adobe PS 3 kit
Serial I/F	RS232C	USB	Support USB Revision 1.1.
NLSP	ROM DIMM	Standard	
PCL mode level	PCL5e	PCL6	
Built-in fonts	45	80	For PCL
	49	84	for ESC/Page
NLSP Bitmap3	Option	Standard	Included in the main unit font ROM.
PostScript (Optional)	Clone PS2	Adobe PS3	

*1: Maximum RAM capacity is possible when 256 MB SDRAM DIMM is implemented. Even when 256 MB SDRAM DIMM is implemented, the maximum RAM capacity is limited up to 256MB.

*2: When PS option is implemented, other extension DIMMs (font etc.) cannot to be implemented.

1.2 Basic Specifications

1.2.1 Printer Basic Specifications

Printing Method: Electrophotographic process using semiconductor laser beam scanning and dry mono-component toner

Resolution: 600dpi / 1200dpi
(1200dpi is half speed control)

Printing Speed: See table below.

Table 1-4. Printing Speed

Paper Size	600dpi		1200dpi	
	Main Unit	Lower Cassette Unit*1	Main Unit	Lower Cassette Unit*1
A4 or LT	10PPM minimum	10PPM minimum	5PPM minimum	5PPM minimum
LGL	8.4PPM minimum	--	4.2PPM minimum	--
B5	10PPM minimum	--	5PPM minimum	--
A5	10PPM minimum	--	5PPM minimum	--

*1: Printing speed is lower when printing custom paper size because the automatic cleaning is carried out.

First Print: See table below.

Table 1-5. First Print

Paper Size	600dpi		1200dpi	
	Main Unit	Lower Cassette Unit*1	Main Unit	Lower Cassette Unit*1
A4 or LT	18sec maximum	19sec maximum	27sec maximum	29sec maximum
LGL	19sec maximum	--	29sec maximum	--
B5	18sec maximum	--	26sec maximum	--
A5	18sec maximum	--	24sec maximum	--

*1: Printing speed is lower when printing custom paper size because the automatic cleaning is carried out.

Warm-up Time: [At 23°C, rated voltage]

- 22sec Max.
  (From when powered on until "Ready" is displayed)
- 10sec Max.
  (Recovering from Standby mode)

Paper Supply: See table below.

Table 1-6. Paper Supply

Paper Feed Method	Capacity	Paper Size	Paper Thickness
Paper Tray (Fixed)	150 sheets*1	Standard or custom paper sizes within the following ranges; 76.2x127 to 215.9x355.6mm (A4, JIS-BIDS, A5, Letter, Government Letter, Executive, Legal, Government Legal, F4, Half Letter)	Plain paper 60 to 90 g/m^2 (16 to 24 lb)
	10 sheets	Envelops (Monarch, C10, DL, C5, C6, International-B5, Labels, Transparencies, Thick Papers)	Plain paper 60 to 90 g/m^2 (16 to 24 lb) Thick paper 90 to 163 g/m^2 Special paper (Labels, Transparencies)
Manual feed slot*2	1 sheet	Standard or custom paper sizes within the following ranges; 100x148 to 215.9x355.6mm	Plain paper 60 to 90 g/m^2 (16 to 24 lb) Thick paper 90 to 163 g/m^2 Special paper (Labels, Transparencies)
Lower Cassette Unit*1,*3	500 sheets*1	A4 or LT	Plain paper 60 to 90 g/m^2 (16 to 24 lb)

*1: Using 75 g/m^2 (20lb) paper

*2: Feed one sheet at a time from the top of the paper tray when manual feed.

*3: The fixe size cassette (A4 or LT) can be installed. Maximum paper capacity including the paper tray is 650 sheets.

Paper Size: See table below.

Table 1-7. Paper Size

Paper	Size	Paper Size (mm / inch)	Paper Tray	Manual Feed Slot	Lower Cassette Unit*1
Plain paper	A4	210x297	O	O	O
	A5	148x210	O	O	
	JIS-B5	182x257	O	O	
	LT	215.9x279.4 (8.5x11")	O		O
	HLT	139.7x215.9 (5.5x8.5")	O	O	
	LGL	215.9x355.6 (8.5x14")	O	O	
	EXE	184.15x266.7 (7.25x10.5")	O	O	
	GLG	215.9x330.2 (8.5x13")	O	O	
	GLT	203.2x266.7 (8x10.5")	O	O	
	F4	210x330	O	O	
	3"x5"	76.2x127 (3x5")	O		
Special paper	MON	98.43x190.5 (37/8x7 1/2")	O	O	
	C10	104.78x241.3 (41/8x9 1/2")	O	O	
	DL	110x220	O	O	
	C5	162x229	O	O	
	C6	114x162	O	O	
	I-B5	176x250	O	O	
	16MO	198x275	O	O	

*1: Supported size differs according to the market destination

Consumables:

- Toner cartridge (user replaceable)
- Photoconductor unit (user maintenance item)

Applicable paper sizes:

- Paper tray:
  paper width 76.2mm (3 inch) to 215.9mm (8.5 inch)
  paper length 127mm (5 inch) to 355.6mm(14 inch)
- Manual feed slot:
  paper width 110mm (3.9 inch) to 215.9mm (8 inch)
  paper length 148mm (5.8 inch) to 355.6mm(14 inch)
- 2nd cassette: Supported paper size = A4, Letter

Paper-feed reference: Center line reference for each paper size

Output paper capacity: [Face-down]
Max. 100 sheets
(with standard paper immediately after unpacked)

[Face-up]
Max. 20 sheets
(with standard paper immediately after unpacked)

* Switching between face-up/face-down is made by manually operating the lever on the top of the printer.

Dimensions: 387W x 475D x 338 H (mm)
(Main unit only)

Weight: Approx. 7kg
(excluding consumables or options)

Power Supply:

- 100V model (compatible with 100/120V supply)
  120V±10% 50/60Hz 3Hz
- 200V model (compatible with 100/120V supply)
  220V~240V±10% 50/60Hz 3Hz

Power Consumption: See table below.

Table 1-8. Power Consumption

			100V model	200V model	220V to 240V model
Max. rated current (TBD)			7.0A	5.9A	3.2A
Power Consumption	Maximum		660W	690W	700W
	Continuous printing, average		270W	270W	270W
	Standby actual value (TBD)	Heater ON	50W	50W	50W
		Heater OFF	15W	15W	15W

Life: 180,000 sheets or 5 years, whichever comes first.

Noise: [During standby]
30 db(A) max. (4-directional average)
[During operation]
48 db(A) max. (4-directional average) (T.B.D)

Ozone Concentration: 0.02 ppm max.

Toxicity: OPC, toner, and plastic materials are all non-toxic.

1.2.2 Process Specification

Method: Electrophotographic method using dry mono-component developing

Light source: Semiconductor laser

Exposure: OPC (organic photoconductor) drum

Charging: Rotary-brush charging method

Developing: Exposed area development

Toner: Mono-component non-magnetic toner

Transfer method: Roller Transfer

Fusing: Heat and pressure roller system

Density adjustment: Bias variable adjustment by user is possible

1.2.3 Paper Specification

1.2.3.1 Paper Type

Standard paper: Xerox 4024 DP paper 20 lb (75 g/m^2)

Plain paper: 60 ~ 90 g/m^2 (16 ~ 24 lb)
Photocopier paper, bond paper, recycled paper

Special paper:

- Labels
- Transparencies
- Colored paper
- Thick paper (90 to 163 g/m^2)
- DTP paper
- Letter-head

NOTE: *lb: Ream weight= lb/500 sheets/17"x22"*
g/m^2: 1 g/m^2 =0.2659763 lb

CAUTION

Do not use any of the paper types listed below with this printer.
They may cause defective printing, paper jams, or damage to the printer.

- *Carbon paper, non-carbon paper, thermal paper, pressure-sensitive paper, acidic paper.*
- *Paper previously printed in a thermal printer or inkjet printer.*
- *Extra thick or extra thin paper.*
- *Damp paper.*
- *Surface-coated paper or surface-treated color paper.*
- *Extra smooth or glossy paper. Extra rough paper. Paper with significantly different roughness on each surface.*
- *Paper with punched holes or perforations.*
- *Folded, curled, or torn paper.*
- *Irregularly shaped paper or paper with non-perpendicular corners.*
- *Sheets of labels that peel off easily.*
- *Paper with glue, staples, or clips attached.*
- *Special inkject paper superfine paper, glossy film, etc.*
- *OHP film for color laser printers or photocopiers.*
- *Sheets already printed on other color or black/white laser printers or photocopiers.*
- *Sheets of paper stuck together.*

NOTE: *When printing on pre-printed papers, the paper may not feed correctly due to paper particles adhering to the paper-feed roller. If this occurs, clean the printer as described in 6.1.1 "User Maintenance on Main Unit".*

1.2.3.2 Paper Feeding

Table 1-9. Paper Feeding

Paper source	Standard paper	Plain paper (60 to 90 g/m^2)	Special paper			
			OHP	Labels	Thick paper (90 to 163 g/m^2)	Envelops (MON, C10, DL, C5, C6)
Paper tray	○	□	Δ	Δ	Δ	Δ
Lower cassette unit*	○	□	x	x	x	x

○: Paper feeding reliability and image quality guaranteed.
□: Paper feeding reliability and image quality guaranteed.
Restricted to normally used paper types only.
○: Paper feeding and printing are possible.
Restricted to normally used paper types only.
x: Paper feeding not possible.
*: Option

1.2.3.3 Printable Area (Engine)

Guaranteed print area: Entire paper area except for a 4 mm margin at each edge.
(See Figure 1-1, "Guaranteed print Area").

NOTE: *The printable area may depend on the printer mode.*

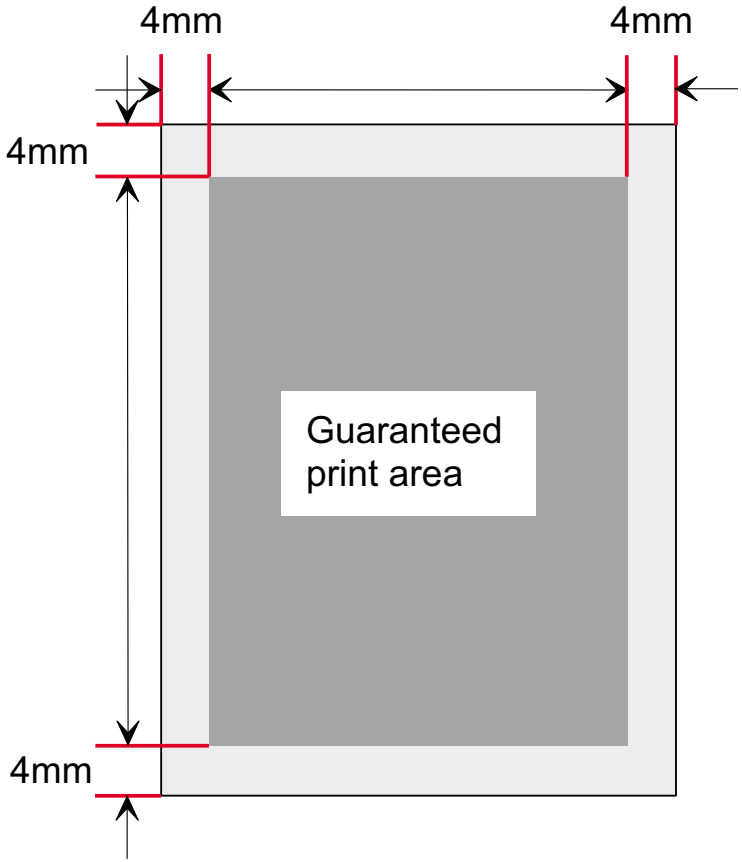

Figure 1-1. Guaranteed print Area

1.2.4 Reliability, Durability, Serviceability

MPBF: 25, 000 sheets min. one-sided printing

Note:
This figure indicates the mean pages until a failure requiring part replacement or a failure that the user cannot remedy.

MTBF: 3,000 hours (10 month) minimum

Paper Feeding: See table below.
Applicable conditions for the following figures is using standard paper under standard environmental conditions.

Table 1-10. Paper Feed Reliability

Error type	Paper Tray	Lower Cassette Unit
Paper-jam rate*1	1/2000 max.	←
Paper misfeed	1/2000 max.	←
Multiple-sheet feed rate	1/500 max.	←
Paper creasing	1/1000 max.	←
Leading edge folded	1/1000 max. for 1C or more. Less than 1C not included.*2	←

*1: Not including multiple-sheet feed.

*2: 1C indicates 1mm corner fold.

Printing start position accuracy:

- Main scan direction: Reference position (c) ± 2.0 mm
- Sub scan direction: Reference position (a) ± 2.5 mm

See Figure 1-2, "Paper Skew".

Paper skew: With A4 landscape;

- Main scan direction (|c-d|): ± 2.0 mm
- Sub scan direction (|a-b|): ±1.5 mm

See Figure 1-2, "Paper Skew".

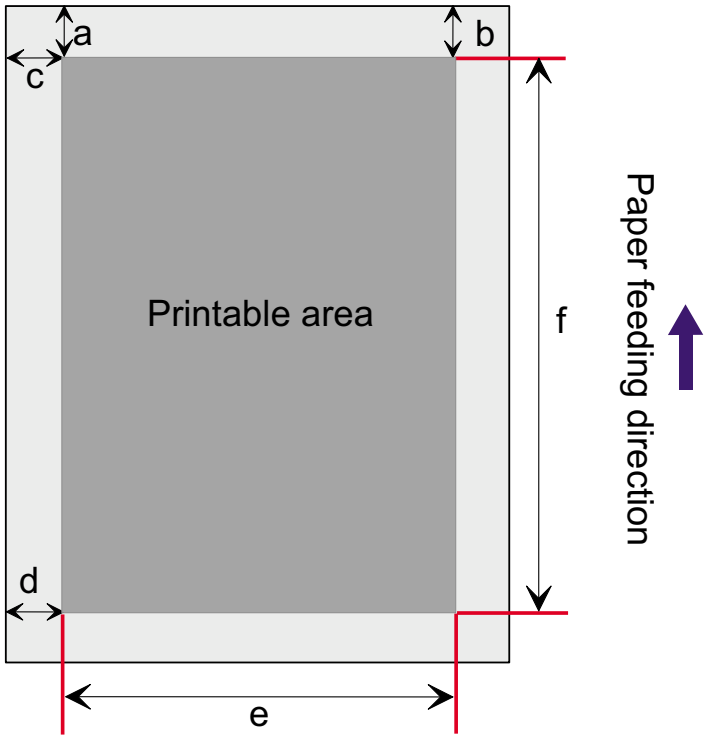

Figure 1-2. Paper Skew

Durability: 5 years or 180,000 sheets, whichever comes first. Including parts replaced by service technicians. (See 6.1.3 "Maintenance by Service Technicians")

Serviceability: MTTR = 30 minutes max. (Time for service technician to locate and repair a failure.)

Output paper curl height:

- Plain paper: ±30mm max.
- OHP: ±20mm max.

1.2.5 Operating Conditions Including Consumables

Temperature: 10 to 35 °C

Humidity: 15 to 85% RH (without condensation)

Barometric pressure (altitude):
760 hPa min. (2500 meters max.)

Horizontality: Max. 1° tilt front -rear or left-right

Illumination: 3,000 lx max. (no direct sunlight)

Surrounding space: Keep the space shown in the figures below around the printer to ensure normal printer operation. (Units: mm)

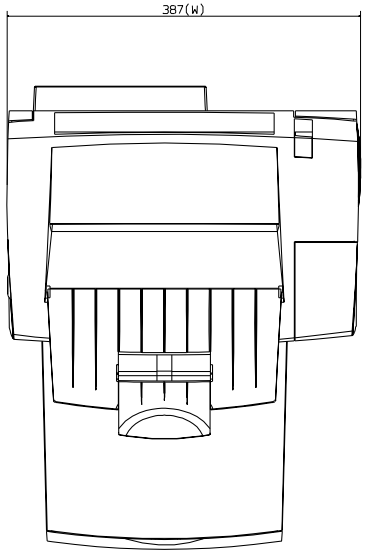

Figure 1-3. Top View

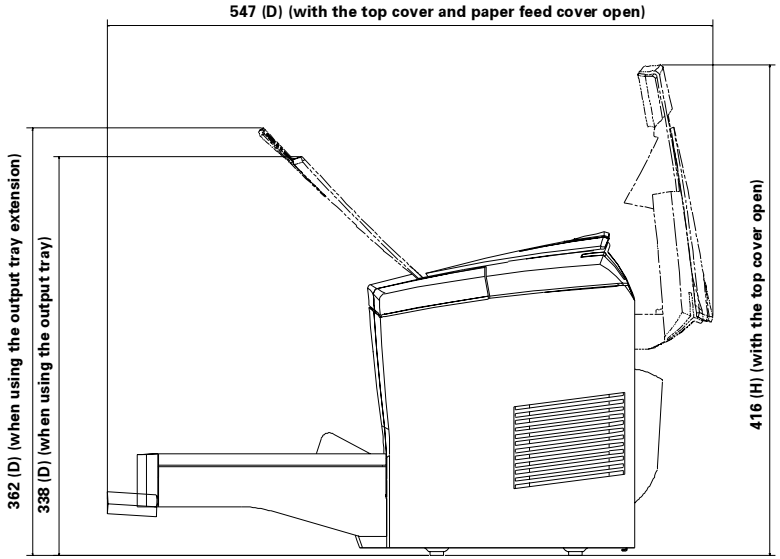

Figure 1-4. Right View

NOTE: *Additional space of 150mm is necessary on the backside of the printer when the Face-up tray is installed.*

NOTE: *Additional space of 125mm is necessary over the printer when the Lower cassette unit is installed.*

1.2.6 Storage and Transport Environments Including Consumables

Temperature and humidity:See table below.

Table 1-11. Temperature and Humidity Conditions

Conditions			Main Unit
Temperature	Normal conditions		0 to 35 °C
	Severe conditions (1/30 of total storage period)	High temperature	0 to 40 °C
		Low temperature	-20 to 0 °C
Humidity	Normal Conditions		30 to 85% RH
	Severe conditions (1/30 of total storage period)	High humidity	85 to 95% RH
		Low humidity	10 to 30% RH
Storage period			18 months from manufacture

Barometric pressure: 460 to 760 hPa

Dropping: No abnormalities according to JIS Z0200-1994 Level 1.
Free drop directions: 1 corner, 6 faces, 3 edges

Vibrations:

- Frequency 5 to 100 Hz, 100 to 5 Hz
- Acceleration 1G
- Sweep time 10 minutes (each way)
- Direction of vibrations 3 directions
- Vibration time 60 minutes in X, Y, Z directions (total 180 minutes)

1.2.7 Electric Characteristics

These items do not include the options.

AC line noise:

- Pulse width: 50 to 1000 ns
- Pulse polarity: +/–
- Repetition: asynchronous
- Modes: common/normal
- Voltage: 1kv (no component damage to 2kv)

Transient outage: DIP 100% (at rated voltage-10%) for one cycle with normal print quality.

Electrostatic tolerance:

- Up tp ±10 kv: No hardware error
- Up tp ±15 kv: No component damage

Surge current: 1/2 cycle, 50A max.

Insulation resistance: 10 M Ω min.

Dielectric strength: No breakdown when the following voltages are applied for one minute.

- 100V model: AC 1000V (Primary to chassis)
- 200V model: AC 1500V (Primary to chassis)

Leakage current:

- 100 V model, 100 V input: 0.25mA or less
- 100V model, 100 V input: 3.5mA or less
- 200V model: 3.5mmA or less

1.2.8 Applicable Standards and Regulations

The engine specification meets the following standards and regulations. According to their intended destination, some standards and regulations apply to a product with controller.

SAFETY STANDARDS

Table 1-12. Safety Standards

Model Name	Applicable Standard
100V model	UL 1950 3rd CSA 22.2 No.950
200V model	TÜV-GS (EN60950) CCIB, Russian Safety Standards, Singapore Safety Standards, Hong Kong Safety Standards (IEC950)

SAFETY REGULATIONS (LASER RADIATION)

Table 1-13. Safety Regulations (Laser Radiation

Model Name	Applicable Standard
100V model	FDA (NCDRH) Class1
200V model	TÜV-GS (EN60825-1)

EMC

Table 1-14. EMC

Model Name	Applicable Standard
100V model	CNS 13438 (Taiwan) FCC Part 5 Subpart B Class B/CSA C108.8 Class B
200V model	EC, EMC Directive 89/336/EEC EN61000-3-2 EN61000-3-3 EN50082-1 CiSPR 24 AS/NZS 3548 Class B (Australia) GB9254 (ClSPR 22) (China)

Power consumption: Complies with International Energy Star Program standards.

Others:

- Toner: No effects on human health (OSHA, TSCA, INECS, Labor Safety Law, CSCL.)
- OPC: No effect on human health (OSHA)
- Ozone: UL478 (5th edition)
- Materials: SWISS environmental laws (not including Cds)

1.2.9 Consumable Specifications

1.2.9.1 Specifications

Table 1-15. Consumable Specifications

Name	Contents	Life*1	Weight
Developer and Toner cartridge	-Developer -Black, one-component, non-magnetic toner	Average 6,000 sheets	approx. 0.5 kg
Photoconductor unit	-OPC drum (organic photoconductive conductor) -Charger	Average 20,000sheets	approx. 0.3 kg

*1: These figures for printed sheets are based on continuous printing of A4 size sheets with 5% image coverage. Actual usage will vary depending on image coverage and printing conditions such as continuous printing, intermittent printing, saturated printing and toner save.

1.2.9.2 Storage and Transport Environments

Temperature and humidity conditions:

Table 1-16. Temperature and Humidity Conditions

Conditions			Toner Cartridge and Photoconductor Unit
Temperature	Normal conditions		0 to 35 °C
	Severe conditions (1/30 of total storage period)	High temperature	35 to 40 °C
		Low temperature	-20 to 0 °C
Humidity	Normal Conditions		30 to 85% RH
	Severe conditions (1/30 of total storage period)	High humidity	85 to 95% RH
		Low humidity	10 to 30% RH
Barometric pressure			61.3 to 101.3 kPa
Storage period			18 months from manufacture (Packed)

Dropping: No abnormalities according to JIS Z0200-1994 Level 1.
Free drop directions: 1 corner, 6 faces, 3 edges

Vibrations:

- Frequency: 5 to 100 Hz, 100 to 5 Hz
- Acceleration: 1G
- Sweep time: 10 minutes (each way)
- Direction of vibrations: 3 directions
- Vibration time: 60 minutes in X, Y, Z directions total 180 minutes

1.3 External Appearance and Parts Name

The following illustrations are top, right and left, and back views of the unit.

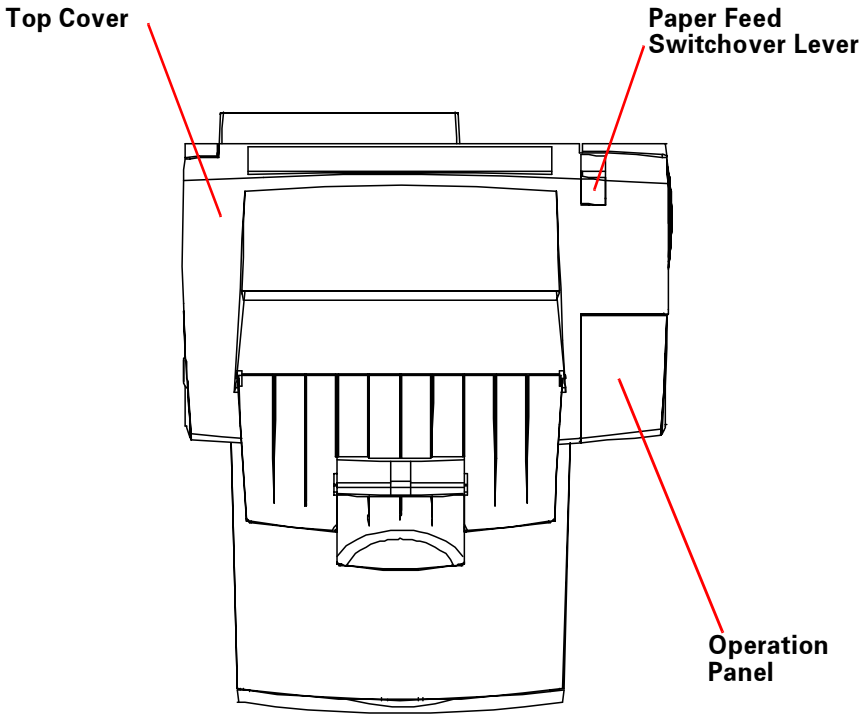

Figure 1-5. Top View

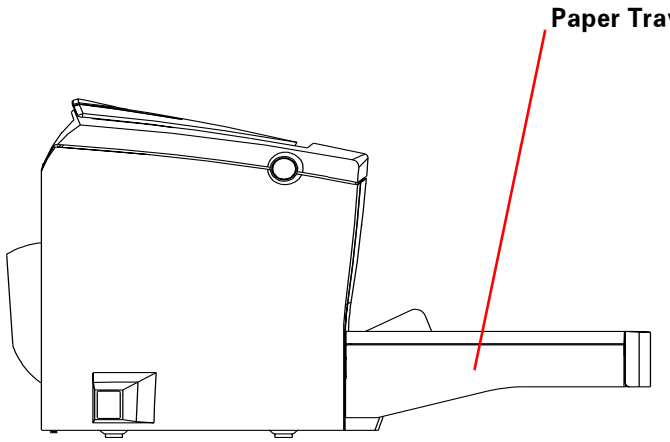

Figure 1-6. Left View

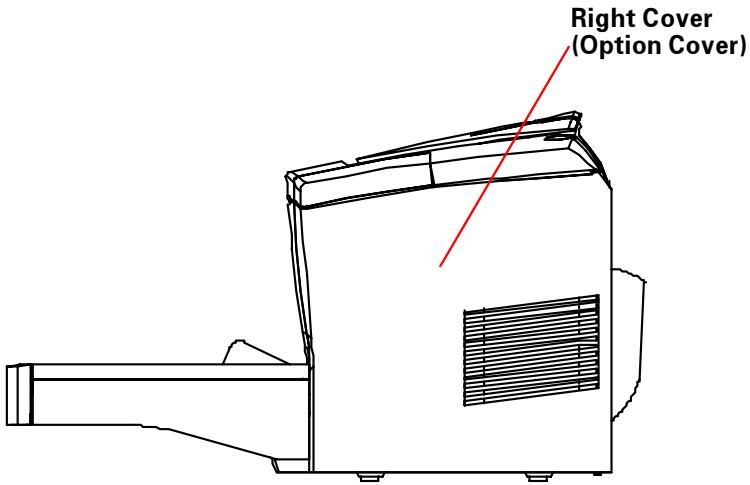

Figure 1-7. Right View

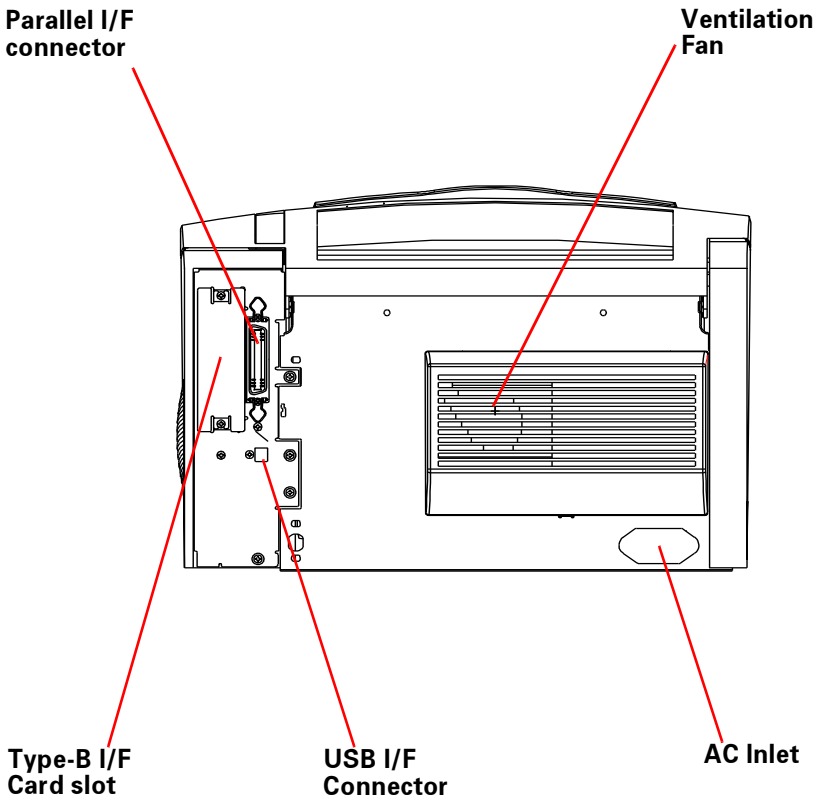

Figure 1-8. Back View

1.4 Controller Specification

1.4.1 Controller Basic Specification

CPU: VR 4310 133MHz

RAM:

- Standard: 16MB (SDRAM)
- SIMM Option: 32MB, 64MB, 128MB (SDRAM, one slot)
  Maximum 256MB
  (when 256MB SDRAM DIMM mounted)

ROM:

- Font: 4Mbyte (mounted on main board)
- Program: 4Mbyte (mounted on ROM DIMM board)
- Expansion ROM: one ROM DIMM slot (for PS option)

Host I/F:

- Parallel: IEEE1284 compliant, bidirectional,
  B-type connector, Compatibility, Nibble, ECP
- Serial: USB
- Option: Type B slot (one slot)

Control Panel: 4 switches, 6 LED

Miscellaneous: Embeded engine controller

Installed emulations: PCLXL, PCL5e, GL/2, FX, ESCP2, 1239X, ESC/Page*1, PostScrtipt3*2

*1: The IES does not support ESC/Page. Only the ESC/Page driver can print ESC/Page.

*2: PostScript3 is an option.

1.4.2 Controller Configuration

EPL-5800 controller allows the following settings to be configured according to the market destination. The settings are made with jumpers, and must thus be set at the factory.

JUMPER SETTING

- ☐ Packaged resistance
  RJ2, RJ3, RJ5, RJ7, RJ10, RJ12, RJ13
- ☐ Unpackaged resistance
  RJ1, RJ4, RJ6, RJ8, RJ9, RJ11, RJ14
- ☐ Packaged
  JP7
- ☐ Unpackaged
  SWD1, JP6
- ☐ JP7
  1-2 side

DESTINATION SETTINGS A4/LETTER SELECTION

- ☐ For North and South America/ 120V model: Letter setting
- ☐ Other destinations: A4 setting

1.4.3 External I/F specification

EPL-5800 has the following host interfaces as standard.

- ☐ IEEE1284 parallel interface
- ☐ USB interface
- ☐ Optional Type-B I/F Card slot

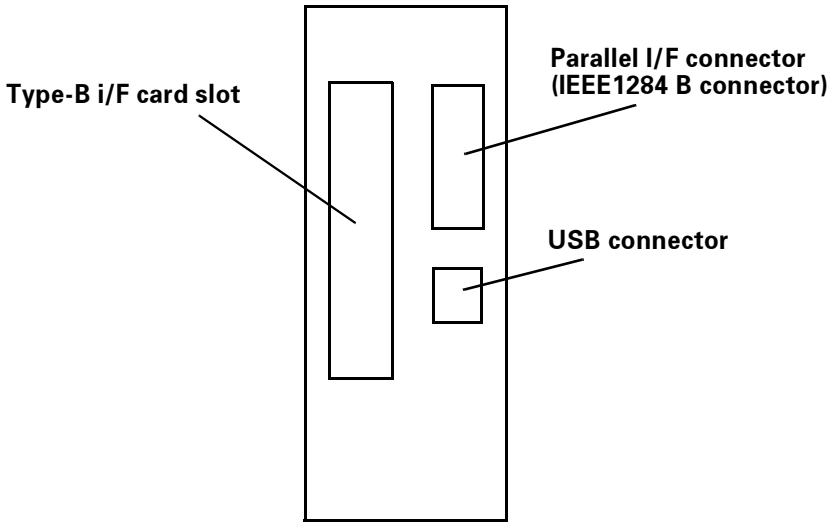

Figure 1-9. Rear View (Interface bracket)

1.4.3.1 Parallel Interface

Interface type:	IEEE1284 bi-directional high-speed parallel I/F
Supported modes:	Compatibility, Nibble, ECP
Connector Type:	57RE-40360-830B(D7A) DDK or equivalents
Compatible plug:	Amphenol or equivalents

The default device ID setting for EPL-5800 is as follows.

```
**[*1];
MFG:EPSON;
CMD:PJL,EJL,ESCPL2,PRPXL24-01,PCL,HPGL2-01,ESCPAGE-
04,PCLXL**[*2];
MDL:**[*3];
CLS:PRINTER;
DES:**[*4];
```

MFG, MDL, CID of Device ID are re-definable. (this must not be included in the manual.) And CID field does not respond with the default value, but responds with the defined character string only when redefined.

Device ID when redefined is as follows. “xxxxx” is user-defined character string.

```
**[*1];
MFG:xxxxx;
CMD:PJL,EJL,ESCPL2,PRPXL24-01,PCL,HPGL2-01,ESCPAGE-
04,PCLXL**[*2];
MDL:xxxxx;
CLS:PRINTER;
DES:xxxxx;
CID:xxxxx;
```

NOTE:

*1: The hexadecimal value “the total number of Device ID characters + 2” is input.

*2: Following text string is added when Adobe PS 3 kit ROM DIMM option is installed.

“,POSTSCRIPT”

*3: The model name **EPL-5800**

*4: DES is the text string that MFG and MDL is connected by a spcace.

“EPSON EPL-5800” for EPSON EPL-5800.

1.4.3.2 USB Interface

Supports Windows USB PnP.

Supports the 18-digit USB ID as follows:

****P++YYMMDDhhmmssR**

**:	A number of 00 to 99 and "01" is assigned for this model. Acquired in serial order for each model.
P:	Identifier. "P" indicates a page printer. Always "P" for page printers.
++:	PC number of assembly line. (00~99)
YY:	The year of assembled date. (lower two digits; 00~99)
MM:	The month of assembled date. (1~12)
DD:	The assembled date (1~31)
hh:	Hour of assembled time. (0~23)
mm:	Minute of assembled time. (0~59)
ss:	Second of assembled time. (0~59)
R:	Reserved and always "0" in this model.

Device ID in Printer Class conforms to 1.4.3.1 "Parallel Interface"..

The USB ID is stored on EEPROM of the main board, and you have to re-assign the ID when you replace the main board to new one in repair.
Refer to Chapter 5 "Adjustment" for the details.

1.4.3.3 Type B Interface

EPL-5800 is equipped with one Type-B option I/F slot as standard.

Main System Type:	MTP1200dpi, PW10200dt1200dpi, PRG(****)rev, AP500ma, SPD0fast, D4 ****: ROM version
Printer Name:	Factory default setting is the same as one of Product Name.
Product Name:	EPL-5800
Emulation Type:	See the Table 1-17.
Entity Type:	See the Table 1-17.

Table 1-17. Emulation Type and Entity Type

Emulation	Emulation Type	Entity Type
PCLXL	PCLXL	EPSONPCLXL
LJ4	PCL5E-00	EPSONPCL5
GL/2	HPGL2-01	EPSONHPGL2
PS	POSTSCRIPT-00	LaserWriter
FX	ESCP9-84	EPSONFX
ESCP2	ESCPL2-00	EPSONLQ2
1239X	PRPXL24-01	EPSONPRPXL24
ESC/Page	ESCPAGE-04	EPSONPAGE4

- When Emulation is set to "Auto", the following Entity Type will be returned.
  - If PS is not installed;
    EPSONPAGE4, EPSONCL5, EPSONLQ2, EPSONHPGL2, EPSONFX, EPSONPRPXL24
  - If PS is installed;
    LaserWriter, EPSONPAGE4, EPSONPCL5, EPSONLQ2, EPSONHPGL2, EPSONPRPXL24
- When Emulation is fixed, the following Entity Type will be returned.
  - Default Emulation: EPSONPAGE4

NOTE: *The number of entity types returned to the host depends on the specification of Type B interface.*

- Emulation Type
  - If Emulation is set to Auto;
    If PS3 is OFF: AUTO (Emulation Type 1, 2, 3...)
    If PS3 is ON: EJL (POSTSCRIPT-00, other Emulation Type 1, 2, 3...)
  - If Emulation is fixed;
    EJL (Default Emulation, other Emulation Type 1, 2, 3...)

1.5 Control Panel

1.5.1 Button/LED Arrangements on Control Panel

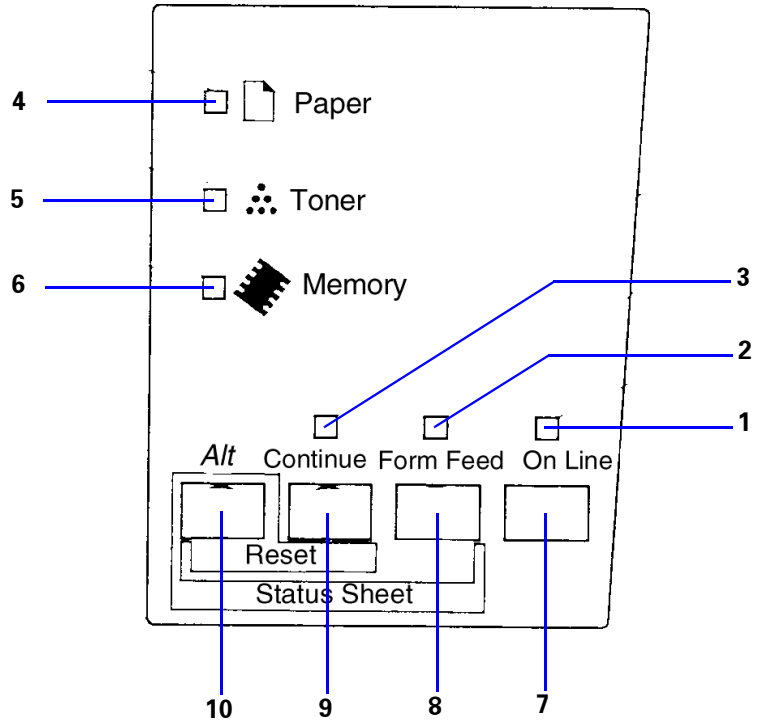

Figure 1-10. Control Panel

NOTE: *For Taiwan and China, the panel sheet is written in each language.*

Table 1-18. Buttons and LEDs

No.	Name	Note
1	On line LED	Color: Green
2	Data LED	Color: Yellow
3	Continue LED	Color: Red
4	Paper LED	Color: Yellow
5	Toner LED	Color: Yellow
6	Memory LED	Color: Yellow
7	On Line switch	
8	Form Feed switch	
9	Continue switch	
10	Alternate switch	

1.5.2 List of Panel Settings

EPL-5800 has no LCD on the control panel, so it is impossible to make function settings from the control panel. Function settings can be made using "RCP". The following tables are lists of the printer setting items. Underline indicates the factory default setting.

☐ Function Setting (1)

Table 1-19. Function Setting (1)

Menu	Item	Value
Test Menu	Status Sheet	
	AUX Status Sheet*3	
	PS3 Status Sheet*1	
	PS3 Font Sample*1	
	ESC/Page Font Sample*2	
	LJ4 Font Sample	
	ESCP2 Font Sample	
	FX Font Sample	
	I239X Font Sample	
Emulation Menu	Parallel	Auto, LJ4, ESCP2, FX, I239X, PS3*1, GL2
	USB	Auto, LJ4, ESCP2, FX, I239X, PS3*1, GL2
	AUX*3	Auto, LJ4, ESCP2, FX, I239X, PS3*1, GL2

Table 1-19. Function Setting (1)

Menu	Item	Value
Printing Menu	Paper Source	Auto, MP, LC*4
	Page Size	A4*5, A5, B5, LT*5, HLT, LGL, GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5, CTM
	Wide A4	Off, On
	Orientation	Port, Land
	Copies	1-999
	Quantity*6	1-999
	Manual Feed	Off, On
	Resolution	600, 1200*7, 300
	Dot Correction	Off, On
	Skip Blank Page*8	Off, On
	Auto Eject Page	Off, On
Tray Menu	MP Mode	Normal, Last
	MP Tray Size	A4*5, A5, B5, LT*5, HLT, LGL, GLT, GLG, EXE, F4, MON, C10, DL, C5, C6, IB5
	LC Size*4	A4, LT
	MP Type	Plain, Preprinted, Letterhead, Recycled, Color, Trnsprncy, Labels
	LC Type*4	Plain, Preprinted, Letterhead, Recycled, Color

Table 1-19. Function Setting (1)

Menu	Item	Value
Config Menu	RITech*9	On, Off
	Toner Save	Off, On
	Density	3, 4, 5, 1, 2
	Top Offset	-99.0 ~ 0.0 ~ 99.0mm (0.5mm increments)
	Left Offset	-99.0 ~ 0.0 ~ 99.0mm (0.5mm increments)
	Size Ignore	Off, On
	Auto Cont	Off, On
	Page Protect	Auto, On
	Image Optimum	Auto, Off, On
	Paper Type*10	Normal, Thick W, Thick N, Trnsprnc
Setup Menu	Time out	0, 5 ~ 60 ~ 300
	Standby	Continue, Stop
	Lang	English, Française, Deutsch, ITALIANO, ESPANOL, SVENSKA, Dansk, Nederl, SUOMI, Português
	Toner	E****F, E***□F, E**□□F, E*□□□F, E□□□□F
	Toner Out	Disable, Enable
	SelecType Unit	0 ~ 99999999
Parallel Menu	Parallel I/F*11	On, Off
	Speed	Fast, Normal
	Bi-D	Nibble, ECP, Off
	Buffer Size*11	Normal, Maximum, Minimum
USB Menu	USB I/F*3	On, Off
	Buffer Size*11	Normal, Maximum, Minimum

Table 1-19. Function Setting (1)

Menu	Item	Value
AUX Menu*12	AUX I/F*11	Use, No Use
	AUX Config*13	No, Yes
	Buffer Size*11	Normal, Maximum, Minimum

NOTE:

*1: This item can be selected only when the optional Adobe PS 3 kit is installed.

*2: Cannot be selected / changed by RCP etc. and is not printed on the Status Sheet.

*3: This item can be selected only when the Type B I/F option is installed.

*4: Displayed only when the optional lower cassette unit is installed. Paper sizes are display only.

*5: LT= default value for Letter-model controller
A4= default value for A4-model controller

*6: Can be set only with the printer driver. Not printed on Status Sheet. Can be to set with EJL or PJL, but it is valid only when the installed RAM is 64MB or more. (The firmware does not verify the installed RAM capacity, but the printer driver does. This must not be stated in the manual.)

*7: Effective only for ESC/Page, PCLXL and PostScript. When other mode is selected, it will be printed in 600dpi.

*8: Valid for PCL5e, ESC/Page, ESC/P2, FX and 1239X.

*9: When resolution is set to 1200dpi by mode setting, RITech becomes OFF regardless of this item.

*10: TBD

*11: When this item is changed, reading with EJL and printing on the Status Sheet are immediately reflected, but become valid after warm boot or at power on again.

*12: Appears only when the optional Type B interface card is installed. Network card configurations cannot be made from the printer side. Use the utility that comes with each card.

*13: Display only when Type B Level 3 card is installed. This value cannot be changed and always set to “No”.

☐ Function setting (2)

Table 1-20. Function Setting (2)

Menu	Item	Value
ESC/Page Menu*1	Auto CR	On, Off
	Auto FF	On, Off
	CR Function	CR, CR+LF
	LF Function	CR+LF, LF
	FF Function	CR+FF, FF
	Error Code	Ignore, Space
	Avoid Error	Off, On
	PGI	On, Off

Table 1-20. Function Setting (2)

Menu	Item	Value
LJ4 Menu	Font Source	Resident, DIMM, Download
	Font Number	0 ~ available (Max 65535)
	Pitch*2	0.44 ~ 10.00 ~ 99.99 cpi (0.01 cpi increments)
	Height*2	4.00 ~ 12.00 ~ 999.75 pt (0.25 pt increments)
	SymSet*10	IBM-US, Roman-8, Roman-9, ECM94-1, 8859-2 ISO, 8859-9 ISO, 8859-10 ISO, 8859-15 ISO, PcBlt775, IBM-DN, PcMultiling, PcE. Europe, PcTk437, PcEur858, Pc1004, WiAnsi, WiE. Europe, WiTurkish, WiBALT, DeskTop, PSText, VeInternati, VeUS, MsPublishin, Math-8, PsMath, VeMath, PiFont, Legal, UK, ANSI ASCII, Swedis2, Italian, Spanish, German, Norweg1, French2, Windows, McText, PcIcelandic, PcLt774, PcTurk1, PcPortugues, PcET850, PcTurk2, PcCanFrench, PcS1437, PcNordic, 8859-3 ISO, 8859-4 ISO, WinBaltic, WiEstonian, WiLatvian, Mazowia, CodeMJK, BpBRASCII, BpAbicomp, PcGk437, PcGk851, PcGk869, 8859-7 ISO, WiGreek, Europe3, PcCy855, PcCy866, PcLt866, 8859-5 ISO, WiCyrillic, Bulgarian, PcUkr866, Hebrew7, 8859-8 ISO, Hebrew8, PcHe862, Arabic8, PcAr864, 8859-6 ISO, OCR A, OCR B
	Form	5 ~ 60*3 ~ 64*3 ~ 128 Lines
	Source SymSet	0 ~ 277 ~ 3199
	Dest Symset	0 ~ 277 ~ 3199
	CR Function	CR, CR+LF
	LF Function	LF, CR+LF
	Tray Assign	4, 4K, 5S