ELLIX 30/40 | Receipt Printer |

SAM4S
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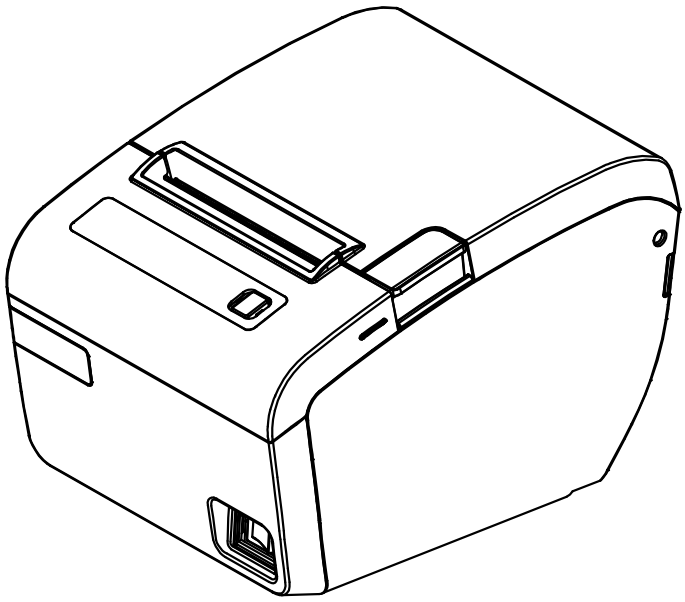


OPERATOR'S Manual

All specifications are subject to change without notice

Warning - U.S.

This equipment has been tested and founded to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. In case, Operation of this equipment in a residential area is likely to cause harmful interference to radio communications. the user will be required to correct the interference at his own expense.

Notice - Canada

This Apparatus complies with class “A” limits for radio interference as specified in the Canadian department of communications radio interference regulations.

Get appareil est conforme aux normes class “A” d’interference radio tel que specifier par ministre canadien des communications dans les reglements d’interference radio.

Warning

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC compliance Information(for WLAN)

This device complies with part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Information to the user

[NOTE] This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation.
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful 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 or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

[IMPORTANT NOTE]

FCC RF Radiation Exposure Statement:
This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Caution

Some semiconductor devices are easily damaged by static electricity. You should turn the printer “OFF”, before you connect or remove the cables on the rear side, in order to guard the printer against the static electricity. If the printer is damaged by the static electricity, you should turn the printer “OFF” and contact your dealer for assistance.

INTRODUCTION

The ELLIX 30/40 Roll Printer is designed for use with electronic instruments such as system ECR, POS, banking equipment, computer peripheral equipment, etc.

The main features of the printer are as follows:

1. High speed printing : 220mm/s(ELLIX40), 180mm/s(ELLIX30),
   52 lines per second(12X24 Font, 220m/s)
2. Low noise thermal printing.
3. Support a variety of interfaces : USB default
   ELLIX30: USB+RS-232(Serial) / USB+IEEE1284
   ELLIX40: USB Only / USB+RS-232(Serial) / USB+IEEE1284 /
   USB+Ethernet / USB+WLAN / USB+Bluetooth
4. Jam free (Implementation of automatic return of Cutter Jam)
5. Characters can be scaled up to 64 times compared to it’s original size.
6. The data buffer allows the unit to receive print data even during printing.
7. Bar code printing is possible by using a bar code command.
8. Different print densities can be selected by DIP switches.
9. Peripheral units drive circuit enables control of external devices such as cash drawer.
10. 2-dimantional bar code(PDF-417) and Two color printing.

Please be sure to read the instruction in this manual carefully before using ELLIX30/40.

NOTES

The power outlet shall be near the equipment and it should be easily accessible.

LEGISLATION AND WEEE SYMBOL

2002/96/CE Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.

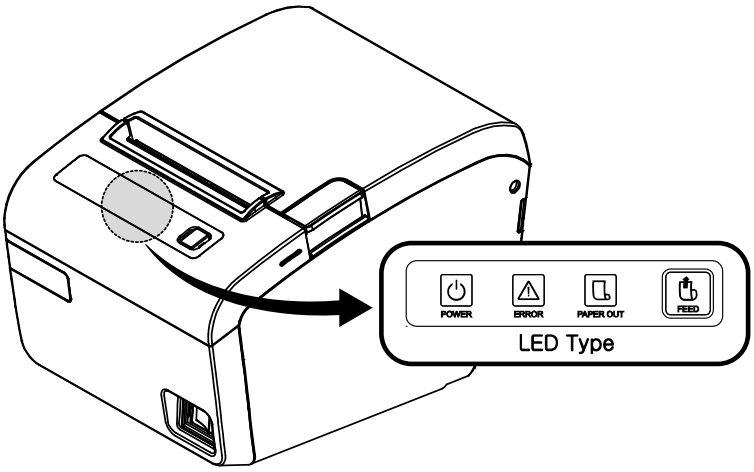
The crossed dustbin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centres for activation of the treatment, collection, recycling and disposal procedure.
To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take item for environmentally safe recycling.

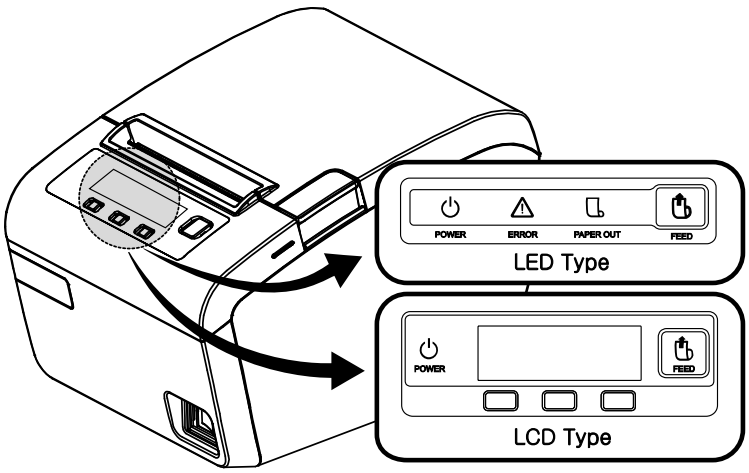
Business users should contact their supplier and check the terms and conditions of the purchase contract.
This product should not be mixed with other commercial wastes for disposal

Classification of Printer

1.ELLIX 30



2.ELLIX 40



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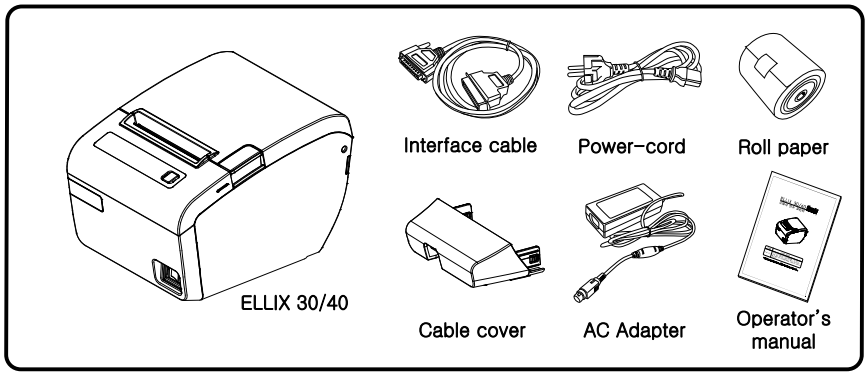
Chapter 1. Setting Up the Printer

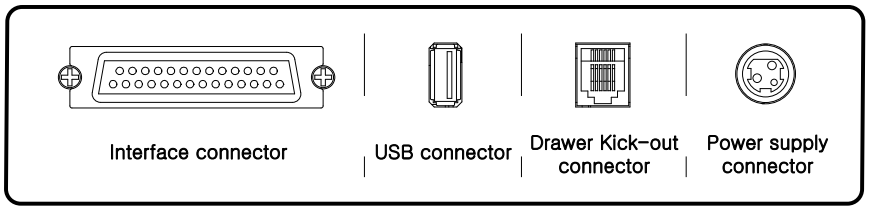
1-1. Unpacking

Your printer box should include these items. If any items are damaged or missing, please contact your dealer for assistance.



1-2. Connecting the Cables

You can connect up to three cables to the printer. They are all connected to the connector panel on the back of the printer, which is shown as below:



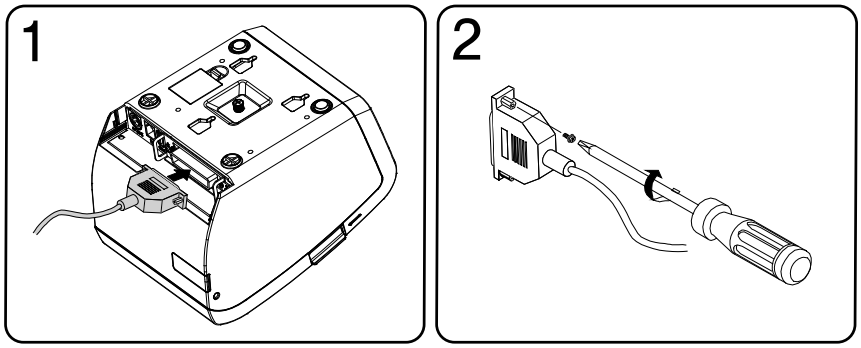
NOTES

Before connecting any of the cables make sure that both the printer and connecting device are turned off.

1-3. Connecting the computer

You need the appropriate interface cable.

1. Plug the cable connector securely into the printer's interface connector.
2. Tighten the screws on both sides of the cable connector.
3. Attach the other end of the cable to the computer.



1-4. Connecting the Drawer

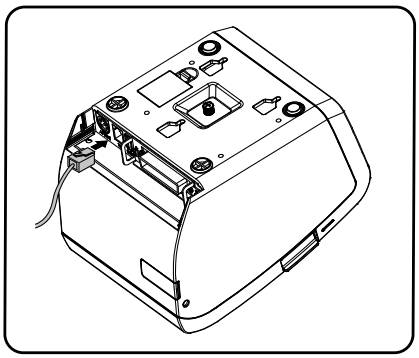
WARNING

Use a drawer that matches the printer specification.
Using an improper drawer may damage the drawer as well as the printer.

CAUTION

Do not connect a telephone line to the drawer kick-out connector; otherwise the printer and the telephone line may be damaged.
Plug the drawer cable into the drawer kick-out connector on the back of the printer next to the power supply connector.

To use the drawer, you can connect the cable to the connector.



1-5. Connecting the Power Supply

Use the optional Power supply for your printer.

WARNING

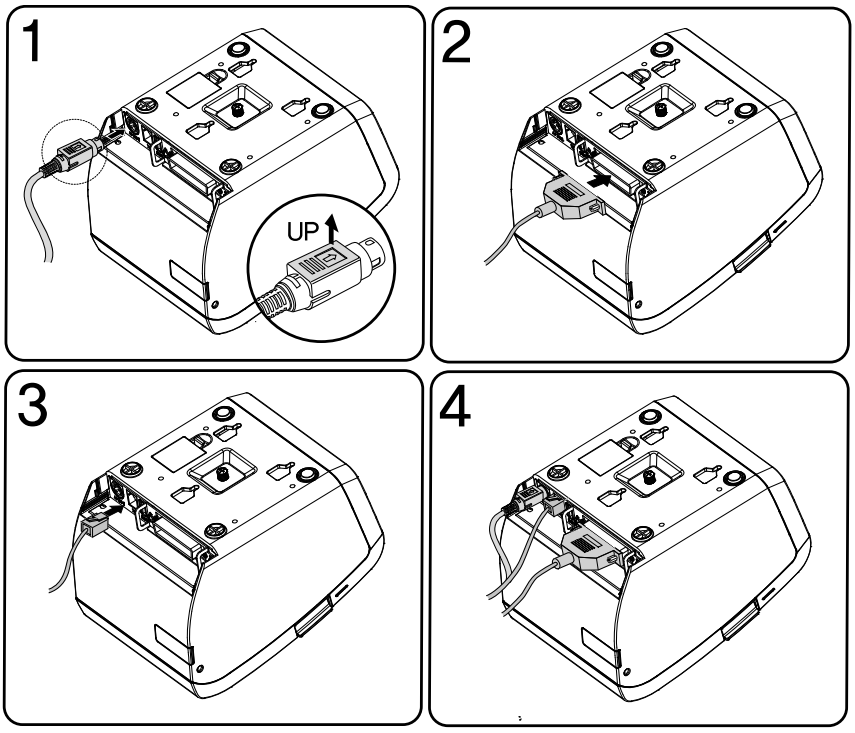
Make sure that you use the attached power supply or equivalent. Using an incorrect power supply may cause fire or electrical shock.

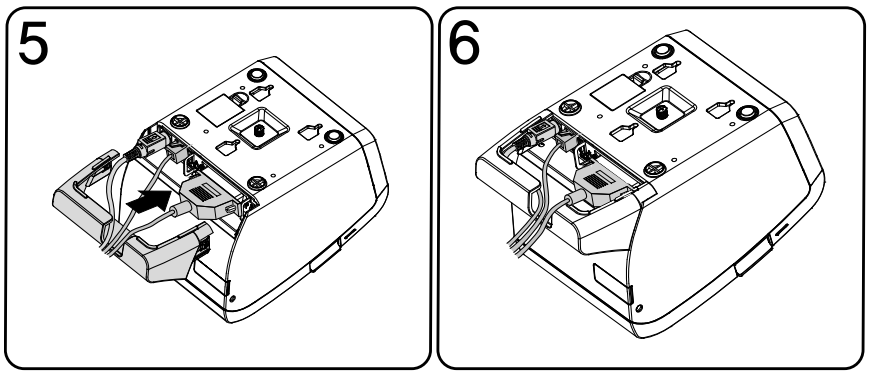
CAUTION

When connecting or disconnecting the power supply from the printer, make sure that the power supply is not plugged into an electrical outlet. Otherwise you may damage the power supply or the printer.

If the power supply's rated voltage and your outlet's voltage do not match, contact your dealer for assistance. Do not plug in the power cord. Otherwise, you may damage the power supply or the printer.

1. Make sure the printer is turned off.
2. If it is necessary to connect the interface, plug the interface connector into the interface port on the printer.
3. Plug the DC cord connector into the power jack on the printer.
4. If it is necessary to connect the drawer, plug the drawer connector into the drawer port on the printer.

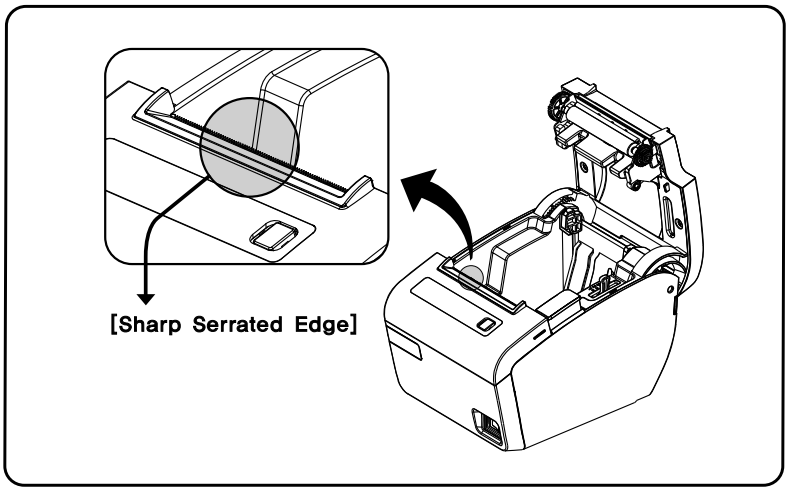




NOTES

To romove the DC cable connector, make sure the power supply's power cord is unplugged and then grasp the connector at the arrow and pull it straight out.

1-6. Installing or Replacing the Paper Roll



CAUTION

When the printer lid is raised, the serrated edge of the paper tear bar is exposed. Care should be taken to avoid injury.

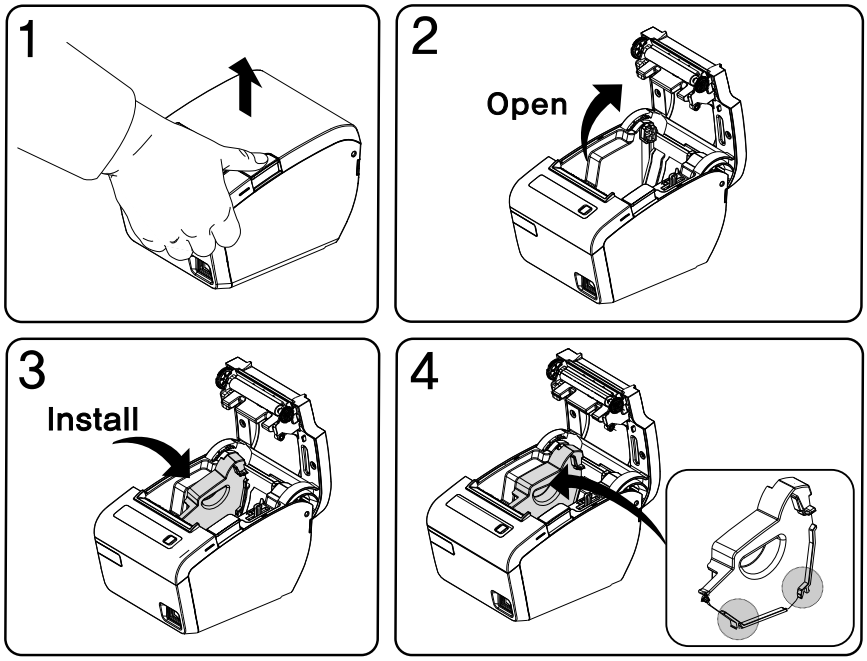
1-6-1. Partition Installation

NOTES

The Paper partition is dealer option item.

You can install the partition for 58mm paper printing on ELLIX30/40.

1. Push the Open-Button and open the Cover-Open.
2. Insert the Partition into the Paper-Supply as shown.
3. Push the Partition until it locks firmly in place.

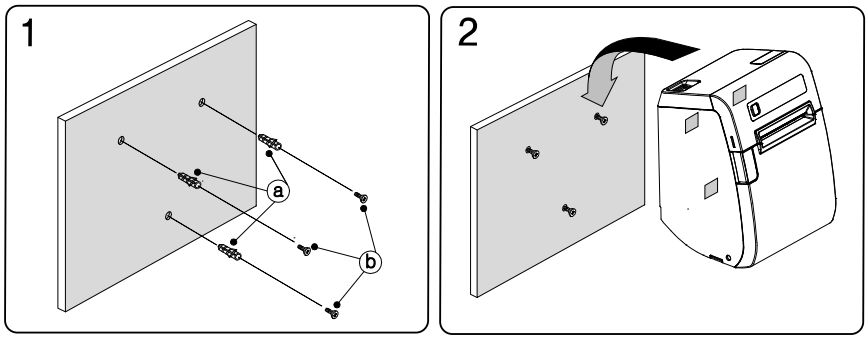


1-6-2. Wall Mount Installation

NOTES

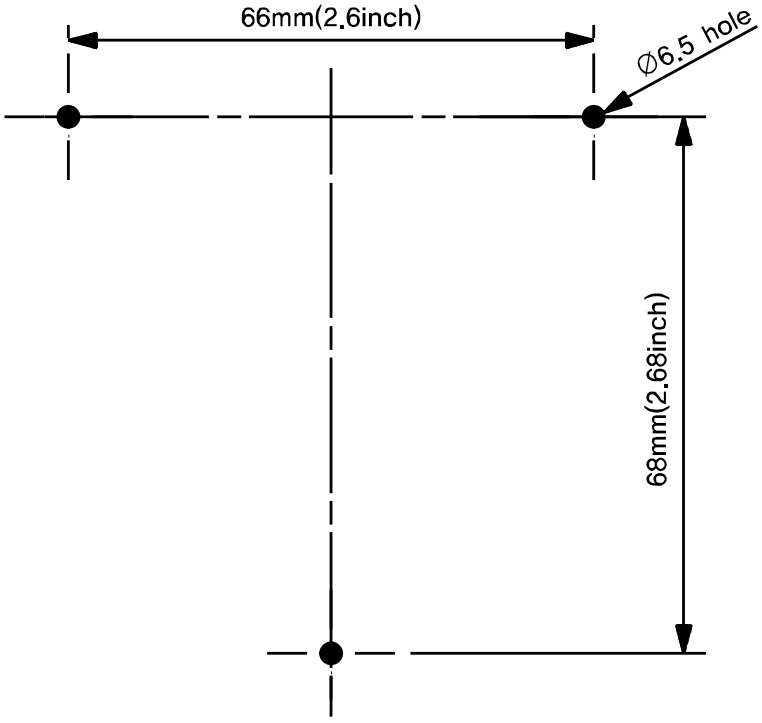
Wall mount bracket is dealer option item.

1. Drill the wall to make the three holes ϕ6.5mm, depth over 35mm and put the three anchors ⓐ into the each hole. (Notice the position of the holes.)
2. Tighten the three screws ⓑ into the each anchor to fix the BRKT-Wall to the wall as shown.
3. Hang the printer on the three hooks and fix it down.



Cut it for the fix wall mount bracket.

#. Wall mounting hole data



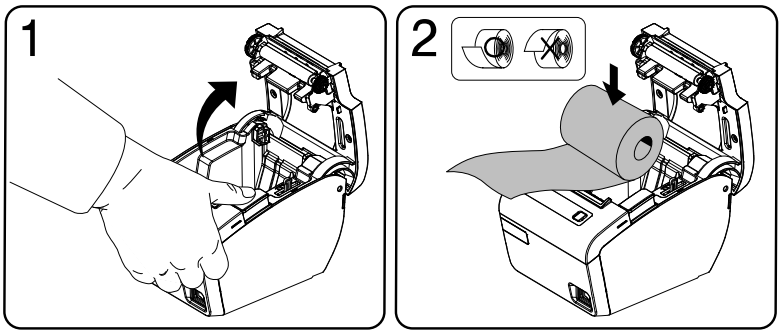
MEMO

1-6-3. Paper Roll Installation

NOTES

Be sure to use paper rolls that meet the specifications. Do not use paper rolls that have the paper and glued to the core.

1. Open the paper roll cover by pressing the cover-open button.

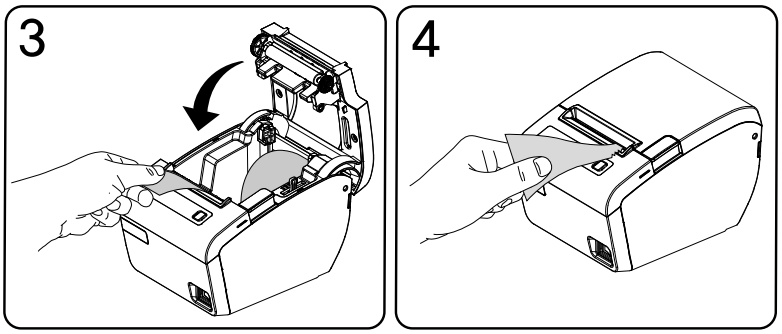


NOTES

To avoid printer damage, do not open the printer cover during printing.

2. Remove the used paper roll core if there is one.
3. Insert the paper roll as shown.
4. Pull out a small amount of paper, as shown. Then close the cover. Tear off the paper as shown.

.



1-7. Adjustments and Settings

The ELLIX 30/40 is set up at the factory to be appropriate for most users. It does, however, offer some settings for users with special requirements.

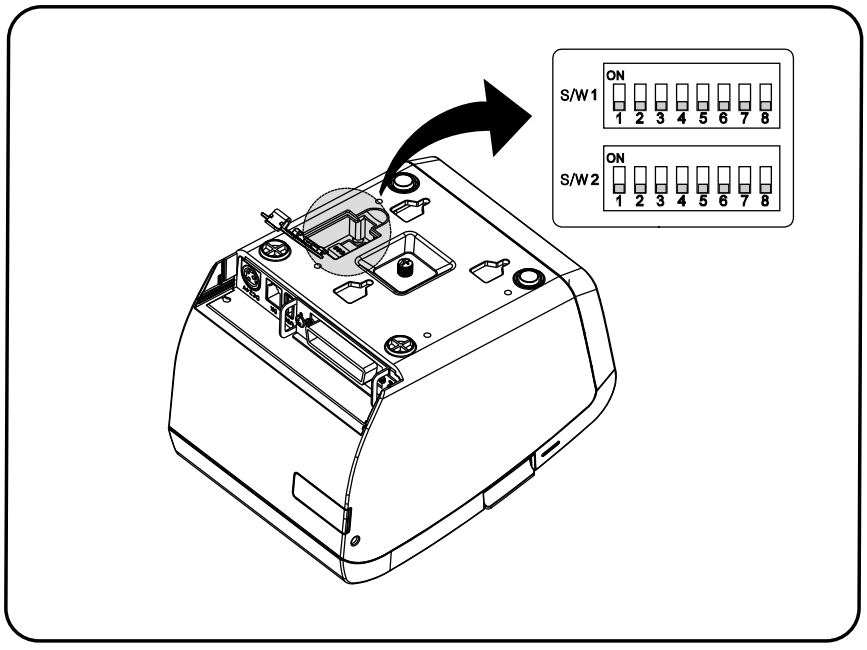
NOTES

The ELLIX40 LCD model does not have DIP switches.

The ELLIX 30 has DIP switches that allow you to change communication settings, such as handshaking and parity check, as well as printing density.

The ELLIX40 has a near-end sensor for the paper. This can give you a warning when the paper is almost out. If you find that there is not enough paper remaining on the roll when the near-end detector is triggered.

See the next page if you need to make any of these changes.



NOTES

Always change DIP switch settings only when the printer is turned off. Change made with the power on have no effect until the powered off and then on again.

1-7-1. Serial Interface(RS-232C) DIP Switch Set

■ DIP Switch Set 1 Functions

S/W	FUNCTION	ON	OFF	DEFAULT
1	Handshaking	XON/XOFF	DSR/DTR	OFF
2	Word Length	7Bit	8Bit	OFF
3	Parity Check	Yes	No	OFF
4	Parity Selection	EVEN	ODD	OFF
5	Baud rate selection	*Refer to the Following Table		OFF
6				
7				
8	USB Mode	VCOM	USB	OFF

◆ Baud rate selection

Transmission speed	SW – 5	SW – 6	SW – 7	Remark
2400 baud	ON	ON	ON	–
4800 baud	ON	ON	OFF	–
9600 baud	ON	OFF	ON	–
14400 baud	ON	OFF	OFF	–
19200 baud	OFF	ON	ON	–
38400 baud	OFF	ON	OFF	–
57600 baud	OFF	OFF	ON	–
115200 baud	OFF	OFF	OFF	–

■ Dip Switch Set 2 Functions

S/W	FUNCTION	ON	OFF	DEFAULT
1	Mode Selection	STAR	EPSON	OFF
2	* Kitchen Bell	Enable	Disable	OFF
3	Auto Cutter	Disable	Enable	OFF
4	Self–Test	Hex Dump	Self–Test Mode	OFF
5	Select Print Density	* Refer to the Following Table		OFF
6				OFF
7	Download Mode	Memory Stick	Interface	OFF
8	Auto Cutter Tuning	Enable	Disable	OFF

*Kitchen Bell is option.

◆ Print Density

Print Density	SW–5	SW–6	Remark
1 (Light)	ON	ON	–
2	OFF	OFF	Default
3	ON	OFF	–
4 (Dark)	OFF	ON	–

1-7-2. Parallel Interface DIP Switch Set

■ **Dip Switch Set 1 Functions**

S/W	FUNCTION	ON	OFF	DEFAULT
1	Busy Control	Long	Short	Short
2	Reserved	–	–	–
3	Reserved	–	–	–
4	Reserved	–	–	–
5	Reserved	–	–	–
6	Reserved	–	–	–
7	Reserved	–	–	–
8	USB Mode	VCOM	USB	OFF

■ **Dip Switch Set 2 Functions**

S/W	FUNCTION	ON	OFF	DEFAULT
1	Mode Selection	STAR	EPSON	OFF
2	* Kitchen Bell	Enable	Disable	OFF
3	Auto Cutter	Disable	Enable	OFF
4	Self–Test	Hex Dump	Self–Test Mode	OFF
5	Select Print Density	* Refer to the Following Table		OFF
6				OFF
7	Download Mode	Memory Stick	Interface	OFF
8	Auto Cutter Tuning	Enable	Disable	OFF

*Kitchen Bell is option.

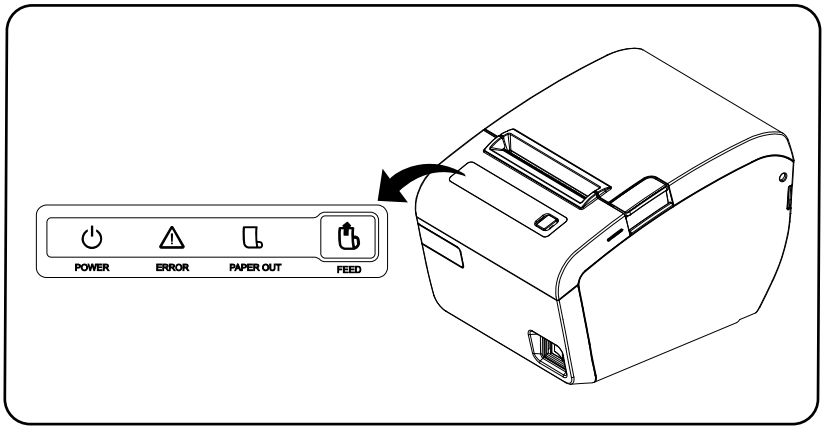
◆ Print Density

Print Density	SW–5	SW–6	Remark
1 (Light)	ON	ON	–
2	OFF	OFF	Default
3	ON	OFF	–
4 (Dark)	OFF	ON	–

1-8. Using the Printer

You can control the basic paper feeding operations of the printer with the button on the control panel. The indicator lights help you monitor the printer's status.

1-8-1. Control Panel (LED)



1-8-2. Feed Button

Press the FEED button once to advance paper one line. You can also hold down the FEED button to feed paper continuously.
The button can be disabled by the **ESC c 5** command.

1-8-3. Panel lights : LED (Color)

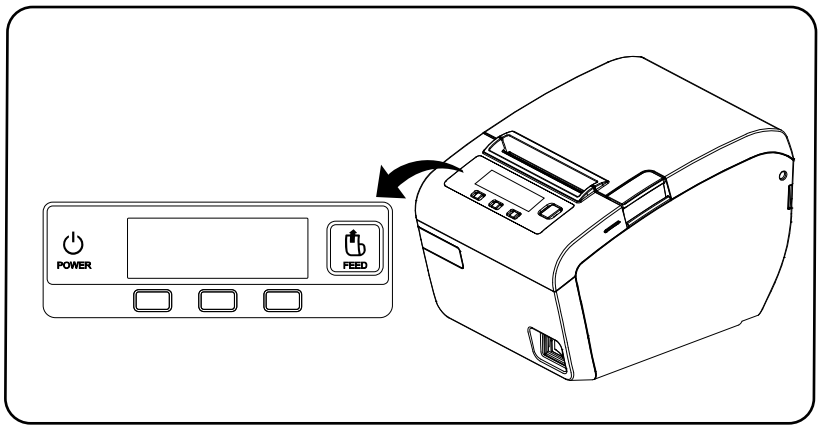
■ **POWER (BLUE)**
The POWER light is "ON" whenever the printer is "ON".

■ **ERROR (RED)**
This indicates an error. See **2-3 Error Status and Error Resolution**<Page 21> for information of what to do when this light comes on.

■ **NO PAPER (RED)**
This light indicates the near end of the paper roll. Install a new paper roll and the printer will continue printing.
When the light blinks, it indicates the self-test printing standby state or macro execution standby state when the macro execution command is used.

■ **SLEEP MODE**
When the standby state is maintained for a period of time, the printer automatically switches to "sleep mode", and the power LED is turned off . However, the printer wake up from "sleep mode", and the power LED is turned on if you press the paper feed button or the printer receive the printing data. (Please refer to the ELLIXSet manual for "sleep mode" setting.)

1-8-4. Control Panel (LCD)



1-8-5. Feed Button

Press the FEED button once to advance paper one line. You can also hold down the FEED button to feed paper continuously.
The button can be disabled by the **ESC c 5** command.

1-8-6. Function Button

LCD screen can be set through the key features.

1-8-7. Display status : LCD

■ **POWER (Blue)**
The POWER light is “ON” whenever the printer is “ON”.

■ **LCD Display**
This indicates status of the printer. If printer has an error state or idle state (Self-Test, Macro execution). The LCD screen will blink red.
See **2-3 Error Status and Error Resolution**
<Page 18> for information of what to do when this LCD light (RED) comes on.

■ **SLEEP MODE**
When the standby state is maintained for a period of time, the printer automatically switches to "sleep mode", and the power LED and LCD display are turned off. However, the printer wake up from "sleep mode", and the power LED and LCD display are turned on if you press the paper feed button or the printer receive the printing data.
(Please refer to the ELLIXSet manual for "sleep mode" setting.)

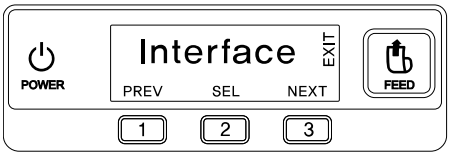
1-8-8. Setting mode for LCD Display

Using the LCD screen, you can customize various printer functions of Interface settings, settings related to printing and default settings.

■ How to run Setup mode

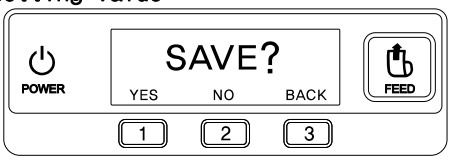
In the “Ready” state, Press a “Menu” Button for at least 1 second. And the “Setup mode” will be executed. (Note: in this mode, Printer does not print a receipt.)

■ Setup mode



- Press button 1(PREV) or button 3(NEXT) to select items to setting.
- Press button 2(SEL) to select a menu item.
- Selected from the list, press button 1 or button 3 to change the setting.
- Press FEED button, to save and return previous menu.

■ Save setting value

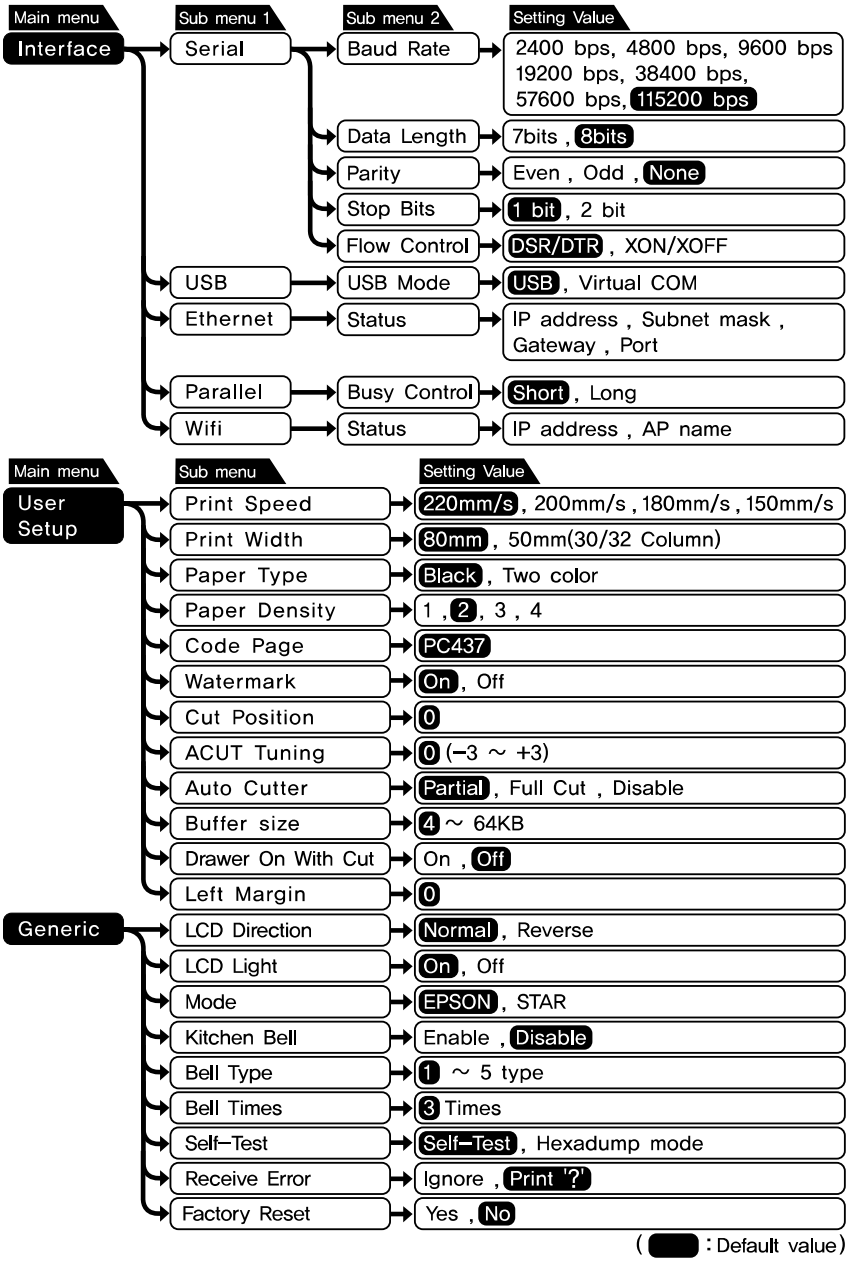


Feed button to return to the previous menu. The first menu button is pressed once more feed will ask whether to save.

- Press button 1(YES) to save the setting values, and then printer will be reset.
- Press button 2(NO) to not save the setting, and then printer will be reset.
- Press button 3(BACK) to return to the setup mode.

■ Setup mode list

In Setup mode, you can change the list are as follows:
(The list may change depending on the firmware version or interface card)



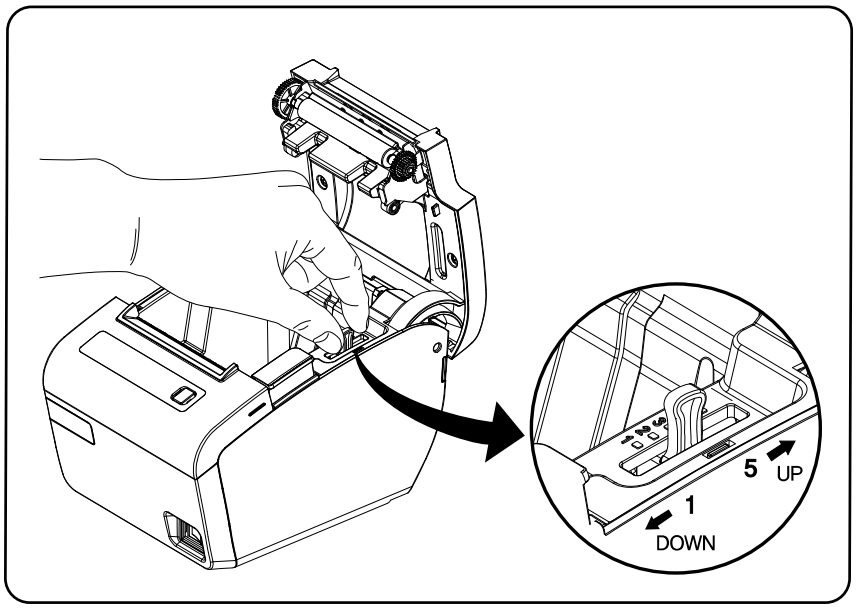
Chapter 2. APPENDIX

2-1. Adjusting the Paper Near-End Sensor Location

The sensor has five sensitivity settings. The factory default setting is at position #3.

1. Push the open button and open the printer cover.
2. If you find there is too much paper remaining when the sensor is triggered, set the near end sensor to position #4 or #5.
3. Decrease the setting if the paper runs out before the sensor is triggered.

The accuracy of the Near-End sensor depends on the adjustment scale setting and the winding core diameter of the roll paper. The Near-End sensor is set at adjustment #3. This is the appropriate scale for the recommended paper thickness.



NOTES

Paper core diameter varies by paper manufacturer.

2-2. Printer Head Cleaning

Paper dust on the heating elements may lower the printing quality. In this case, clean the printer head as follows:

1) Power off the printer.
2) Open the printer cover.
3) Clean the thermal elements of the printer head using a cotton swab moistened with alcohol solvent (ethanol, methanol, IPA)

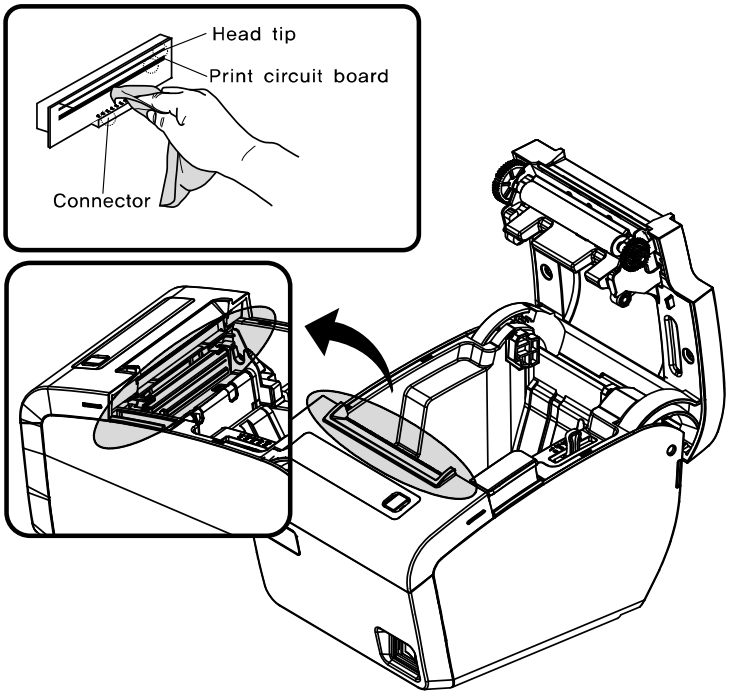
NOTES

Do not touch the print head thermal elements.
Do not scratch the printer head.

4) Insert a paper roll and close the printer cover.

NOTES

The print head is very hot after printing. Power off the printer and allow the print head to cool down before cleaning.



(*) Depending on the paper roll used, paper dust may stick to the platen roller and paper roll end sensor. To remove the paper dust, clean the platen roller and paper roll end sensor with a cotton swab moistened with water.

2-3. Error Status and Error Resolution

The printer buzzer sounds momentarily or continuously and the ERROR LED blinks when the printer indicates an Error status.

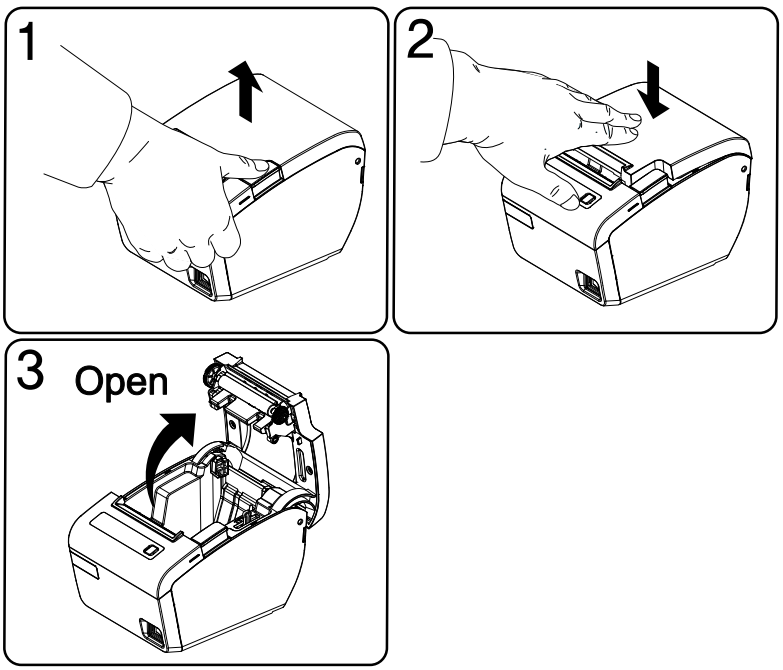
Error Status Indicators include:

■ **Cutter Jam** (Buzzer and ERROR LED status) ⚠

If buzzer and ERROR LED beeps or blinks as like
"Beep Beep ---, Beep Beep--- ...", the printer is on Cutter Jam error status.

↳ Cutter Jam

1. Open and close the cover2~3times.
2. Open the printer cover, remove the roll and jammed paper and load a new paper roll.
3. Power off and on the printer, or send the DLE ENQ n command to reset the printer.



■ **Cutter Not Home** (Buzzer and ERROR LED status)

If the cutter blade is not in home position when the normal waiting time, the printer enters Cutter Not Home error status.
The buzzer and ERROR LED beeps and blinks as like:
(Beep beep beep----, Beep beep beep----, Beep beep beep...)

↳Cutter Not Home

If you want to clear error status above, open and close printer cover 2~3times.

■ **Paper Out Error** (Buzzer, NO PAPER LEC status)

ELLIX30/40 beeps the buzzer as like " Beep---,Beep---,..." and turns on the NO PAPER LED when detecting the paper out. Change the paper roll in the ELLIX30/40 then clear the error status after some motor feeds.

■ **Interface board is not plugged in.**
(Buzzer ,ERROR LED and NO PAPER LED status)

If the ERROR LED and NO PAPER LED blink as below pattern without power LED on, the printer is in the no interface error status. If you do not have interface board, you must contact the dealers.

The buzzer and ERROR LED beeps and blinks as like: (Beep beep beep beep beep ----)

2-4. Specification

2-4-1. General Printer specification

Printing method		Thermal line printing
Dot density		180dpi
Printing Width		72mm
Paper Width		80mm
Characters per line(default)		42/21(Font A) 56/28(Font B)
Printing speed		52 lines/sec(1/6" Feed) 220mm/sec(ELLIX40) 180mm/sec(ELLIX30)
Receive Buffer Size		Max 64Kbytes
NOTE: Printing speed may be slower, depending on the data transmission speed and the combination of control commands.		
Supply voltage	Input voltage	100 ~ 240V AC
	Frequency	50 ~60 Hz
	Output voltage	+24V DC
Environmental conditions	Temperature	5 ~ 45°C (Operating) −10 ~ 50°C (Storage)
	Humidity	10 ~ 90% RH ; except the paper roll.
Lifespan	Printer Mechanism(MCBF*)	70,000,000 lines
	TPH	$1X10^8$ pulse (Approximately 150Km)
	Auto Cutter	1,500,000 Cut

2-4-2 Paper specification

Item	Description	Remark
Paper Type	Hansol HPK−110	Black color
	Mitsubishi PB670	Red/Black color
	Mitsubishi PB770	Blue/Black color
Paper Form	Paper Roll	
Paper Width	80(+0,−1) , 3.14"(+0,−0.039")	
Paper Roll Size	Max 83mm	
Spool Inside Dia	12mm(0.47")	
Spool Outside Dia	18mm(0.71")	

*The Following paper can be used instead of the specified paper above.

- TF50KS-E : Nippon Paper industries Co., Ltd.
- PD 160R : New Oji Paper Mfg, Co.,Ltd.
- F380 : Kansaki Specialty Papers,Inc.(USA)

*Mitsubishi PB670 / PB770 are two color mode papers

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