EPSON®

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TM-U220-i

User's Manual

Important Safety Information

This manual presents important information intended to ensure safe and effective use of this product. Read this manual carefully and store it in an accessible location.

For information on development of a system with this product and setup, see also *Technical Reference Guide*. You can access *Technical Reference Guide* from the included *Manual CD*.

Key to Symbols

The symbols in this manual are identified by their level of importance, as defined below. Read the following carefully before handling the product.

⚠ *WARNING:*

Warnings must be observed carefully to avoid serious bodily injury.

⚠ *CAUTION:*

Cautions must be observed to avoid minor injury to yourself, damage to your equipment, or loss of data.

✐ *Note:*

Notes have important information and useful tips on the operation of your product.

Safety Precautions

⚠ *WARNING:*

❏ **If this product produces smoke, a strange odor, or unusual noise, immediately unplug the AC cable, and then contact your dealer or an Epson service center for advice. Continued use may lead to fire or electric shock.**

❏ **Do not use this product with any voltage other than the specified one. Doing so may lead to fire or electric shock.**

❏ **Do not connect the cables in ways other than those specified in the manuals. Different connections may cause equipment damage or fire.**

❏ **Do not use this product where inflammable fumes of gasoline, benzine, thinner, or other inflammable liquids may be in the air. Doing so may cause an explosion or fire.**

❏ **Do not use aerosol sprayers containing flammable gas inside or around this product. Doing so may cause fire.**

❏ **If water or other liquid spills into this product, immediately unplug the AC cable, and then contact your dealer or an Epson service center for advice. Continued use may lead to fire or shock.**

❏ **Do not allow foreign objects to fall into this product. Penetration by foreign objects may lead to fire or electric shock.**

❏ **Never attempt to repair this product yourself. Improper repair work can be dangerous.**

❏ **Never disassemble or modify this product. Tampering with this product may result in injury, fire, or electric shock.**
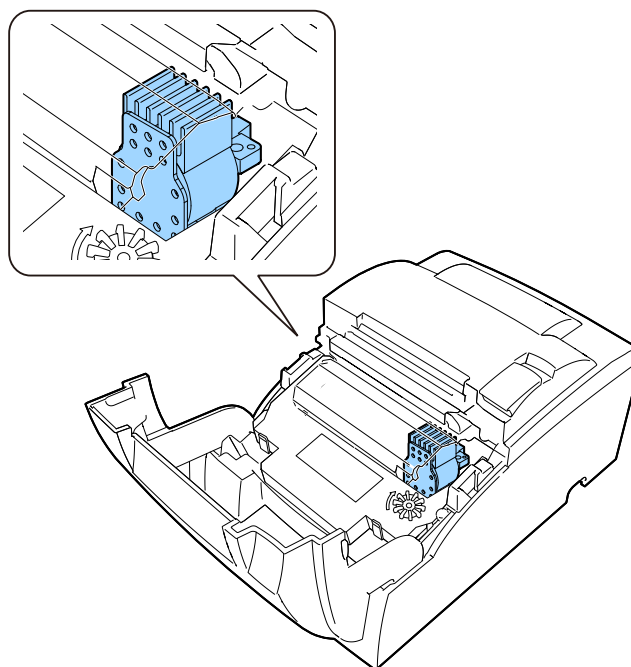
⚠ CAUTION:

❑ Do not use this product in locations subject to high humidity or dust levels. Excessive humidity and dust may cause paper jams and other problems, such as fire, or electric shock.

❑ Be sure to set this product on a firm, stable, horizontal surface. The product may break or cause injury if it falls.

❑ Do not stand on or place heavy objects on top of this product. Equipment may fall or collapse, causing breakage and possible injury.

❑ The print head can be very hot during and immediately after printing. If you need to touch it, such as for cleaning, wait until it cools down. Touching it before that may cause burns.

❑ Do not connect a telephone line to the drawer kick connector. There is a risk of the telephone line or product being damaged.

❑ To ensure safety, unplug this product before leaving it for an extended period.

Caution Labels

The caution label on the product indicates the following precautions.

⚠ ⚠ CAUTION:

Do not touch the print head during printing or immediately after printing. It may be very hot after printing.

⚠ CAUTION:

When connecting external devices to the USB ports, follow the precautions below.

❑ Confirm the rated current of the external devices by checking the descriptions on the devices or manuals. Connect the external devices only when those total rated current is less than 600 mA. Do not use a device whose rated current is unclear.

❑ Use UL-approved external devices (only for North American users).

Part Names and Functions

Roll paper cover

Ribbon cassette cover

Cover open lever

Control panel
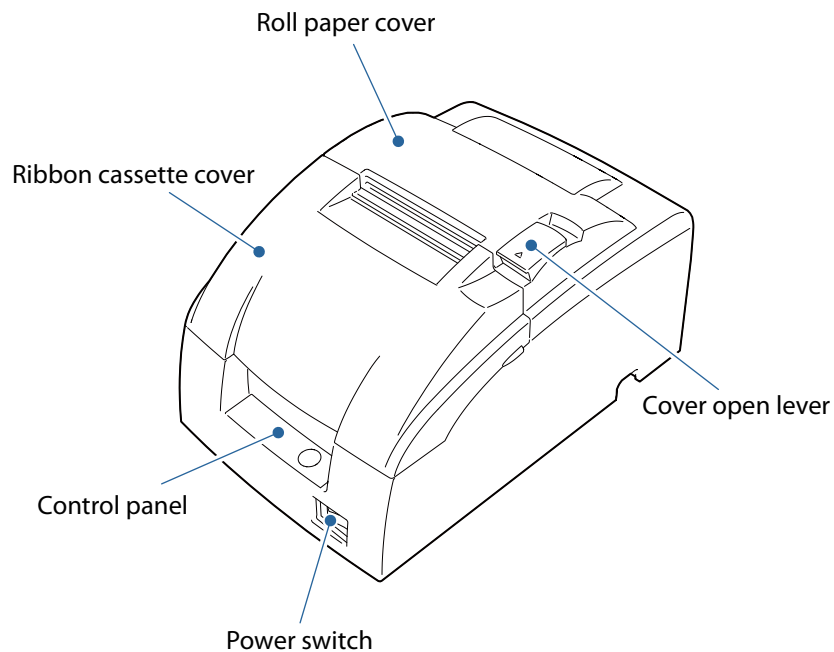
Power switch

Roll paper cover

Open this cover to install/replace the roll paper.

Ribbon cassette cover

Open this cover to install/replace the ribbon cassette.

Power switch

Use this switch to turn on or off the printer.

Cover open lever

Use this lever to open the roll paper cover.

Control panel

POWER LED: This LED is on when the printer is on.

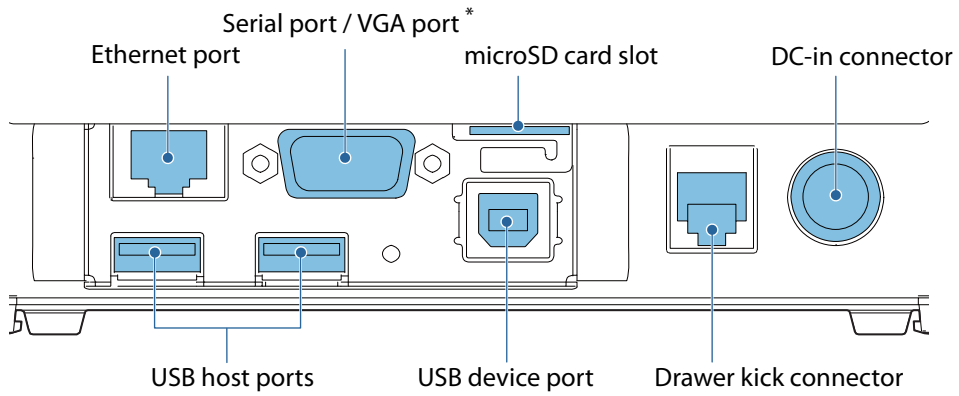**ERROR** LED: This LED indicates an error. (☞ "ERROR LED is on" on page 18 or "ERROR LED is flashing" on page 18)

PAPER OUT LED: This LED is on when the paper is out. This LED flashes when the printer is in standby.

FEED button: This button feeds paper.

Interface

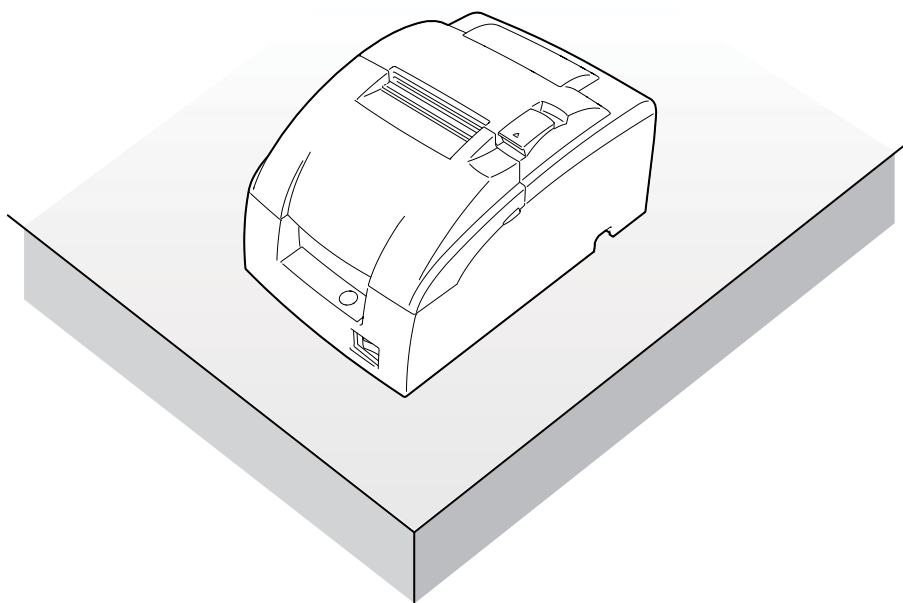All the ports and connectors are located on the back of the printer.

Serial port / VGA port *

Ethernet port   microSD card slot   DC-in connector

USB host ports   USB device port   Drawer kick connector

*: Mounted interfaces vary by the printer model.

Setup

Installing the Printer

Install the printer horizontally on a flat surface.

✎ *Note:*

❏ *Take measures to prevent the printer from moving by vibration during paper cutting and when using a drawer. Affixing tape (DF-10) is provided as option.*

❏ *The printer can also be hung on a wall using the optional wall hanging bracket (WH-10).*

Connecting the AC Adapter

Follow the steps below to connect the AC adapter.

1. Firmly insert the DC connector of the AC adapter all the way into the DC-in connector on the printer.
2. Firmly insert the connector of the AC cable all the way into the AC inlet on the AC adapter.
3. Firmly insert the plug all the way into the grounded wall outlet.
4. Set the AC adapter so that its label side is facing down.
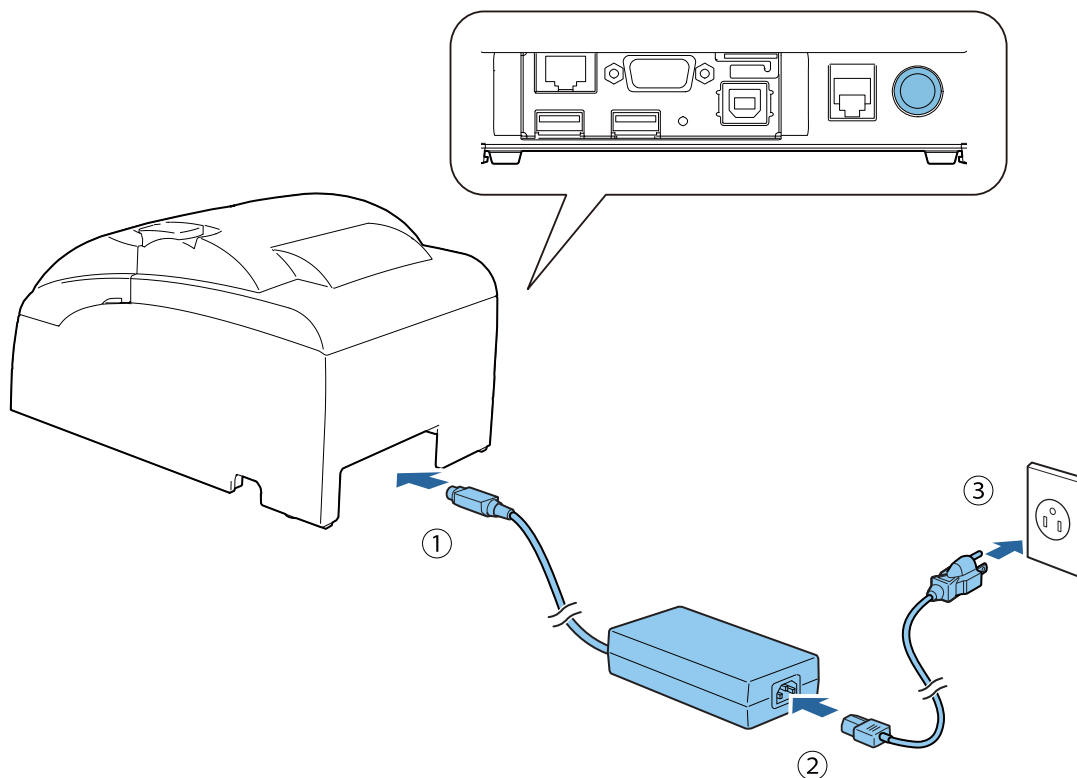
Note:
You can also use the optional power supply box (OT-BX220) to store the AC adapter under the printer.

Connecting External Devices

If you connect external devices, connect each cable to the port/connector on the back of the printer. (☞ "Interface" on page 5)

⚠ *CAUTION:*

❏ *When connecting external devices to the USB ports, follow the precautions below.*

- *Confirm the rated current of the external devices by checking the descriptions on the devices or manuals. Connect the external devices only when those total rated current is less than 600 mA. Do not use a device whose rated current is unclear.*
- *Use UL-approved external devices (only for North American users).*

❏ *When connecting the USB cables, pass the cables through the cable band to prevent them from coming off.*

Cable band
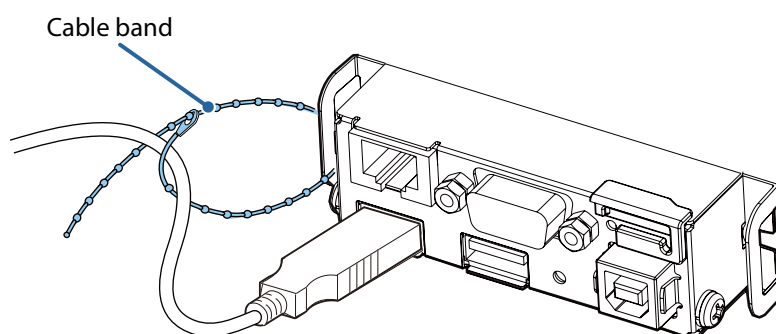
❏ *When using the printer, make sure the protective cover fits firmly into place.*
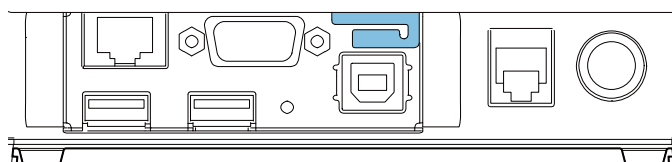
❏ *When Ethernet cables are installed outdoors, make sure devices without proper surge protection are cushioned by being connected through devices that do have surge protection. Otherwise, the devices can be damaged by lightning.*

📝*Note:*

Connecting the optional Wireless LAN Cable Set (OT-WL01) to the USB port enables the wireless LAN connection. While connecting via wireless LAN, keep the Ethernet cable unconnected to the printer.

Attaching the Power Switch Cover

Attaching the enclosed power switch cover prevents inadvertent changing of the power switch and tampering. You can turn the power switch on and off by inserting a sharp-pointed object in the holes in the power switch cover.

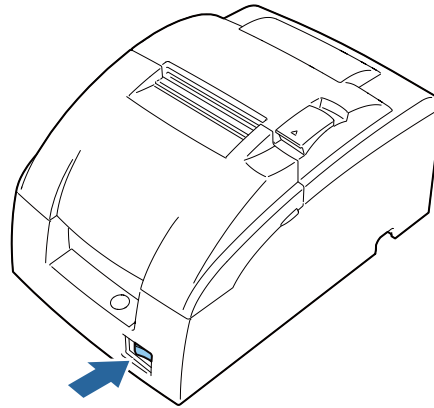To detach these covers, also use a sharp-pointed object.
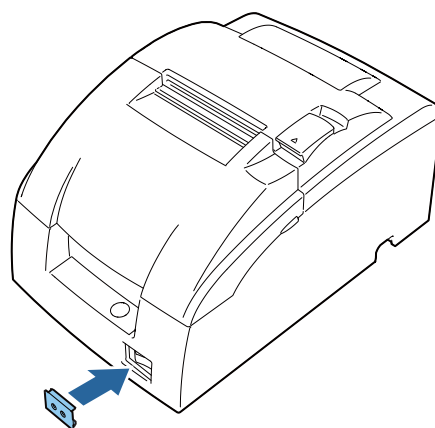
Power switch cover

⚠ *WARNING:*

If an accident occurs with the power switch cover attached, unplug the AC cable immediately. Continued use may lead to fire or electric shock.

Basic Operations

Turning Power On/Off

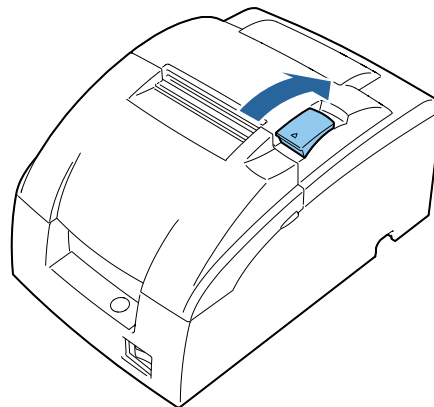Press the power switch to turn on or off the power.

✐ *Note:*
It takes approximately 30 seconds after the printer is turned on until it is ready for printing.

Opening the Covers

Opening the roll paper cover

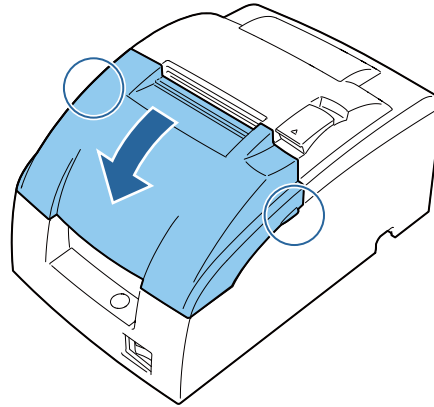Pull the cover open lever to open the roll paper cover.

⚠ *CAUTION:*
Do not open the roll paper cover during printing. Doing so may cause an injury or the product to no longer work properly.

Opening the ribbon cassette cover

Put your fingers under the catches on both sides and lift the ribbon cassette cover in the direction of the arrow to open it.

Installing/Replacing the Ribbon Cassette

⚠🔥CAUTION:

Do not touch the print head during printing or immediately after printing. The print head may be very hot after printing so wait a while for it to cool down before beginning the work.

⚠CAUTION:

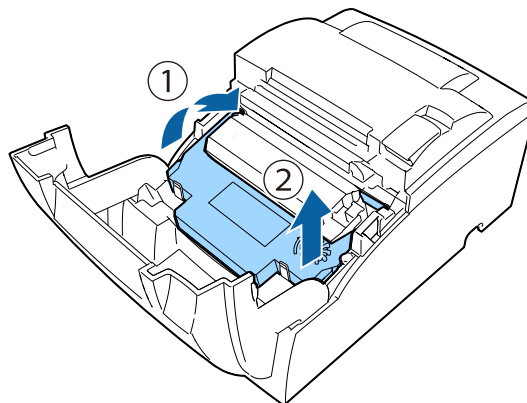*Be sure to use the specified ribbon cassette. (☞ "Specifications" on page 20)*

1. Open the ribbon cassette cover. (☞ "Opening the ribbon cassette cover" on page 11)

2. Turn the knob on the ribbon cassette two or three times in the direction of the arrow.
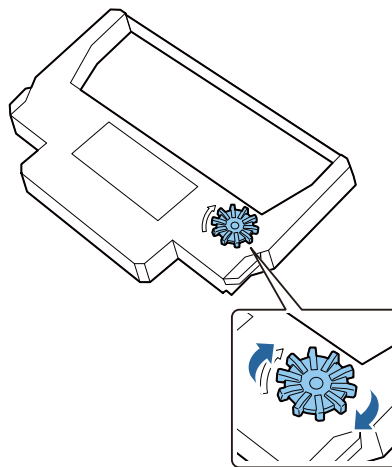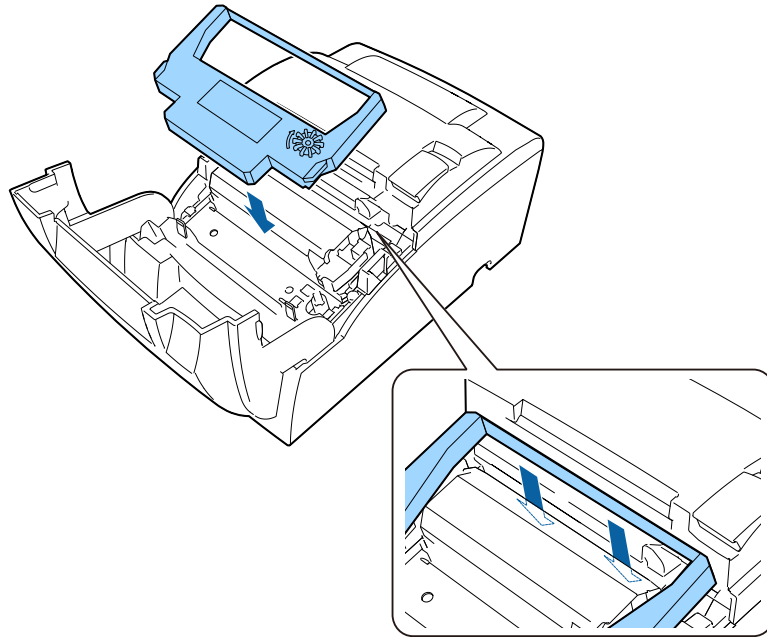
⚠CAUTION:

Confirm the direction of the arrow indicated on the ribbon cassette and then make sure you turn the knob in the same direction. Turning the knob in the opposite direction may damage the ribbon cassette.
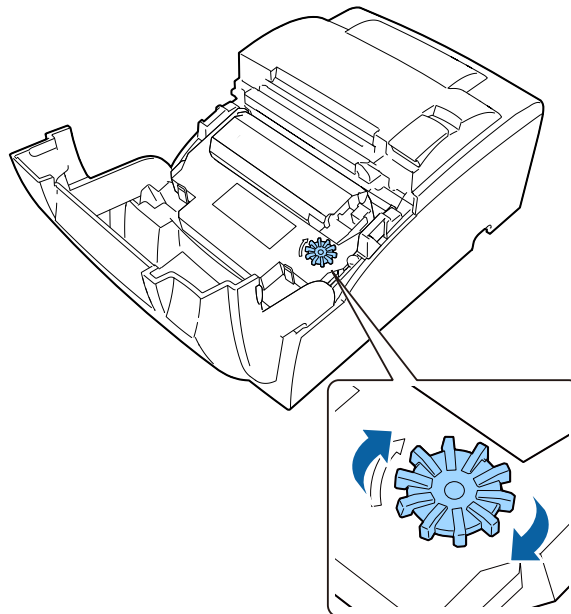
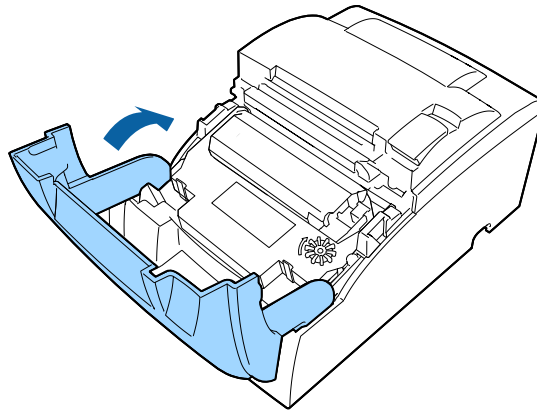3. Remove the used ribbon cassette if there is one.

4. Install the ribbon cassette so that the ribbon enters between the print head and platen and then push down on the ribbon cassette until it clicks. Check that the ribbon is not wrinkled or creased.

5. Turn the knob on the ribbon cassette two or three times in the direction of the arrow.

6. Close the ribbon cassette cover.

Installing/Replacing the Roll Paper

Follow the steps below to install/replace the roll paper.

⚠ CAUTION:

Be sure to use the specified roll paper. ()

1. Open the roll paper cover. ()

2. Remove the used roll paper core, if there is one.

3. Insert the roll paper in the correct direction.
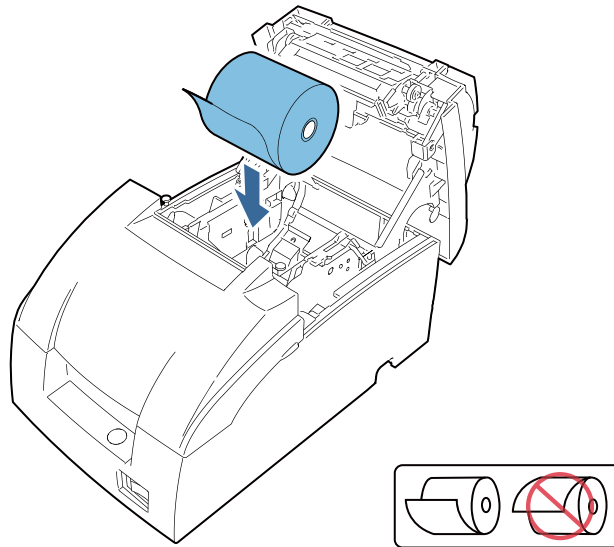
Note:

When using 2-ply roll paper, make sure that the top and bottom sheets are aligned at the paper exit.
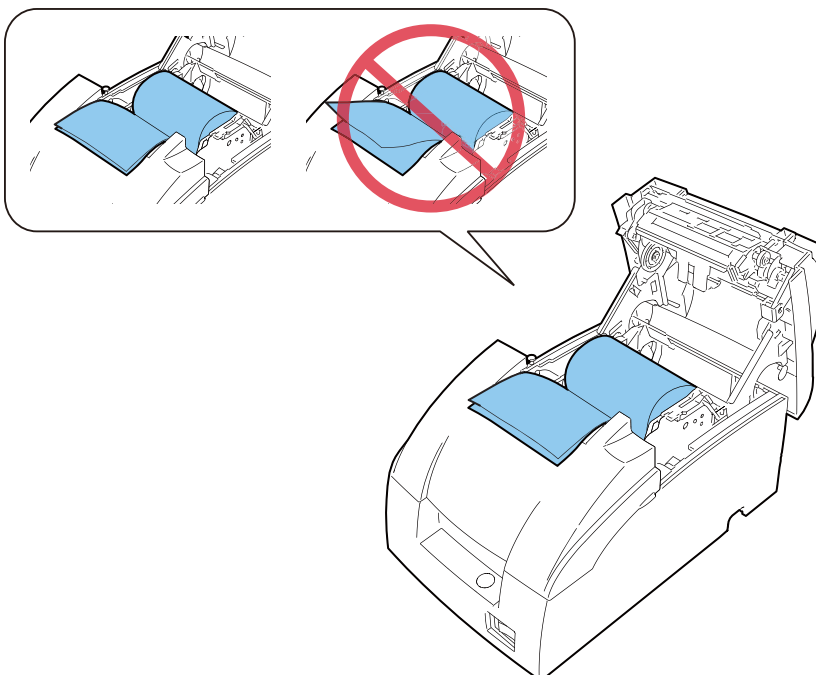
4. Pull out some paper, and close the roll paper cover.
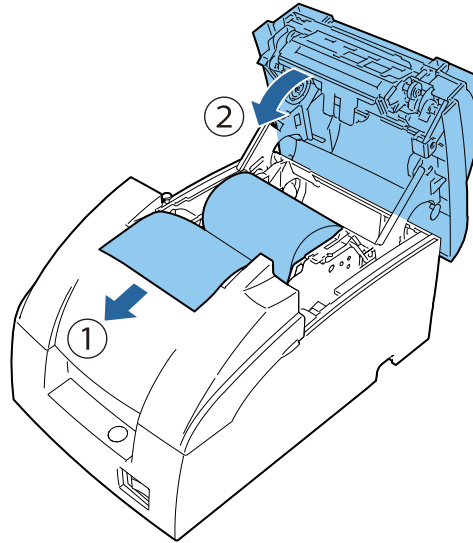
5. Cut the paper you pulled out.
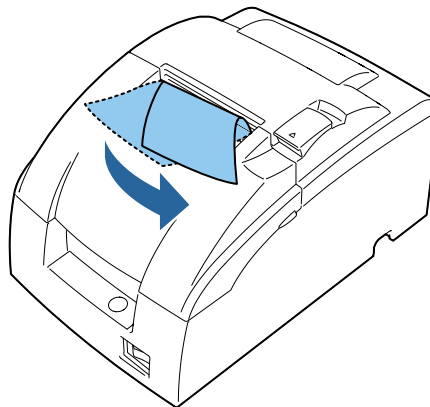
Cleaning

Cleaning the Printer Case

Be sure to turn off the printer, and wipe the dirt off the printer case with a dry cloth or a damp cloth.

⚠*CAUTION:*

Never clean the printer with alcohol, benzine, thinner, or other such solvents. Doing so may damage or break the parts made of plastic and rubber.
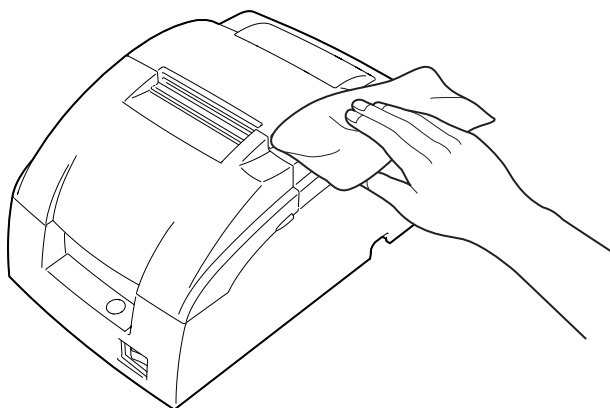
Troubleshooting

POWER LED does not light

Check whether the AC adapter is correctly connected. (☞ *"Connecting the AC Adapter" on page 7*)

ERROR LED is on

❏ Check whether the roll paper cover is correctly closed.

❏ If the **PAPER OUT** LED is on, check whether the roll paper is correctly installed and any roll paper remains. (☞ *"Installing/Replacing the Roll Paper" on page 15*)

ERROR LED is flashing

❏ Check whether paper is jammed. If it is jammed, remove it. (☞ *"Paper is jammed" on page 18*)

❏ Check the position of the auto cutter blade. If the auto cutter blade has locked up without returning to the standby position, return it to the correct position. (☞ *"Auto cutter blade does not return to the standby position" on page 19*)

❏ Printing stops if the print head overheats but it will be resumed automatically when the print head cools down.

❏ For other cases, turn the printer off, and after 10 seconds, turn it back on.

Paper is jammed

When paper is jammed, never pull out the paper forcibly. Open the roll paper cover (☞ *"Opening the roll paper cover" on page 10*), and then remove the jammed paper.

Auto cutter blade does not return to the standby position

The auto cutter blade may lock up without returning to the standby position as a result of a paper clip or other object entering inside the printer or a paper jam. Turn off the printer, wait 10 seconds, and then turn the printer back on. The auto cutter blade should automatically return to the correct position.

If it does not, follow the steps below to manually return the auto cutter blade to the correct position.

1. Turn off the printer. (☞ "Turning Power On/Off" on page 10)
2. Open the roll paper cover. (☞ "Installing/Replacing the Roll Paper" on page 15)
3. Turn the knob in the direction of the arrow until you see a shaft in the opening.

Shaft

Knob
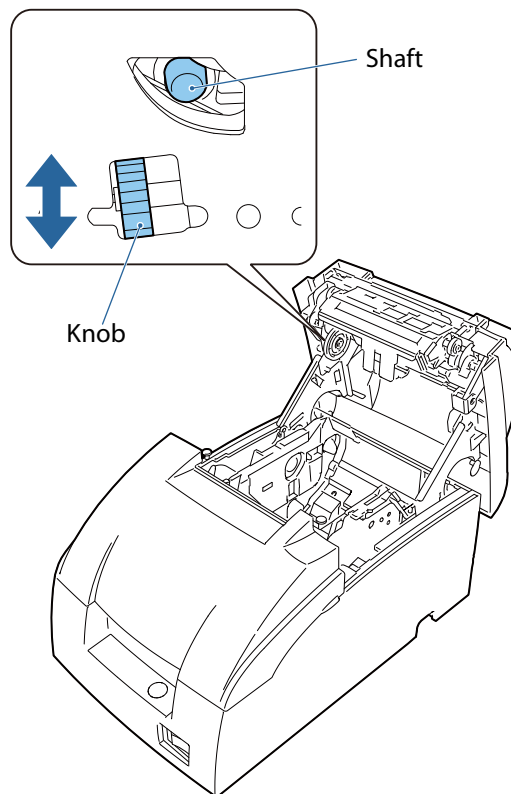
4. Close the roll paper cover.

Specifications

Item		Specification
Printing method		9-pin serial impact dot matrix
Roll paper dimensions	Paper width*1	57.5 mm ±0.5 mm {2.26" ±0.02"}
		69.5 mm ±0.5 mm {2.74" ±0.02"}
		76 mm ±0.5 mm {2.99" ±0.02"}
	Diameter	83 mm {3.27"} maximum
Ribbon cassette	Model	ERC-38
Interface*2	Ethernet	× 1
		10BASE-T/100BASE-TX
	Serial	× 1
		D-sub 9 pin male
	VGA	× 1
		D-sub 15-pin female
		DDC is not supported.
	USB (host)	× 2
		USB 2.0, Type A
		5 V, 500 mA*3
	USB (device)	× 1
		USB 2.0 High speed, Type B
	micro SD card*4	× 1
	Drawer kick	× 1
Power supply*5		24 V DC ±7%
Current consumption (at 24 V)		1.3 A
AC power consumption*6	Operating*7	Serial: 23.3 W
		VGA: 26.5W
	Standby	Serial: 2.9 W
		VGA: 3.3W
Temperature	Operating	0 to 50℃ {32 to 122°F}
	Storage (excluding paper and ribbon)	−10 to 50℃ {14 to 122°F}
Humidity	Operating	10 to 90 %RH
	Storage (excluding paper and ribbon)	10 to 90 %RH
Overall dimensions (W × D × H)		160 mm × 248 mm × 138.5 mm {6.3" × 5.5" × 9.8"}
Mass (excluding paper, ribbon, and AC adapter)		Approx. 2.5 kg {5.51lb}

*1: For information on how to change paper width, see *Technical Reference Guide*.

*2: Mounted interfaces vary by the printer model.

*3: 500 mA at maximum for one port. 600 mA at maximum for total of the two ports.

*4: Available when the PHP function is enabled. For information on how to setup PHP environment, see *TM-i Series PHP Setup Manual*. Be sure to use a micro SD card with the wear leveling function.

*5: Be sure to use a safety-standards-applied power source that meets the following specifications.
Rated output: 24 V, 1.5 to 10.0 A
Maximum output: 240 VA or less

*6: Reference data: In case of using the Epson power supply, PS-180 (Model: M159D)

*7: Based on Epson operating conditions.

Appendix

Downloading Software and Manuals

The latest versions of SDK, utilities, and manuals can be downloaded from one of the following URLs.

For customers in North America, go to the following web site:
http://www.epsonexpert.com/

For customers in other countries, go to the following web site:
http://download.epson-biz.com/?service=pos

Open Source Software License

This product uses open source software in addition to Epson proprietary software.

For information of the open source software used in this product, see the following URL.

http://xxx.xxx.xxx.xxx/licenses/

For "xxx.xxx.xxx.xxx" in the above URL, input your printer's IP address.

Restriction of Use

When this product is used for applications requiring high reliability/safety, such as transportation devices related to aviation, rail, marine, automotive, etc.; disaster prevention devices; various safety devices, etc.; or functional/precision devices, etc.; you should use this product only after giving consideration to including fail-safes and redundancies into your design to maintain safety and total system reliability. Because this product was not intended for use in applications requiring extremely high reliability/safety, such as aerospace equipment, main communication equipment, nuclear power control equipment, or medical equipment related to direct medical care, etc., please make your own judgment on this product's suitability after a full evaluation.

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