

# TM-U220II B-i

## Technical Reference Guide

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### Product Overview

Describes features for the product.

### Setup

Describes setup and installation of the product and peripherals.

### Application Development Information

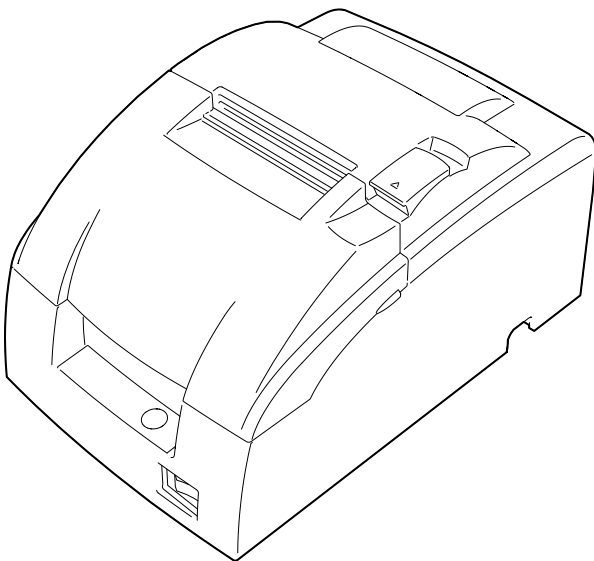
Describes how to control the printer and necessary information when you develop applications.

### Handling

Describes how to handle the product.

### Appendix

Describes general specifications and character code tables.



## Cautions

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## ESC/POS Command System

Epson ESC/POS is a proprietary POS printer command system that includes patented or patent-pending commands.

ESC/POS is compatible with most Epson POS printers and displays.



ESC/POS is designed to reduce the processing load on the host computer in POS environments. It comprises a set of highly functional and efficient commands and also offers the flexibility to easily make future upgrades.

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# For Safety

## 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.

|   |  |
|---|--|
| <br><b>WARNING</b> | You must follow warnings carefully to avoid serious bodily injury.   |
| <br><b>CAUTION</b> | Provides information that must be observed to prevent damage to the equipment or loss of data. <ul style="list-style-type: none"><li>• Possibility of sustaining physical injuries.</li><li>• Possibility of causing physical damage.</li><li>• Possibility of causing information loss.</li></ul> |
| <b>CAUTION</b>  | Provides information that must be observed to avoid damage to your equipment or a malfunction.   |
| <b>NOTE</b>   | Provides important information and useful tips.  |

## Warnings



- **To avoid risk of electric shock, do not set up this product or handle cables during a thunderstorm**
- **Never insert or disconnect the power plug with wet hands.**  
Doing so may result in electric shock.
- **Handle the power cable with care.**  
Improper handling may lead to fire or electric shock.
  - \* Do not modify or attempt to repair the cable.
  - \* Do not place any heavy object on top of the cable.
  - \* Avoid excessive bending, twisting, and pulling.
  - \* Do not place the cable near heating equipment.
  - \* Check that the plug is clean before plugging it in.
  - \* Be sure to push the plug all the way in.
- **Do not use this product with any voltage other than the specified one.** Doing so may lead to fire or electric shock.
- **Do not place multiple loads on the power outlet.**  
Overloading the outlet may lead to fire.
- **Shut down your equipment immediately if it produces smoke, a strange odor, or unusual noise.**  
Continued use may lead to fire. Immediately unplug the equipment and contact qualified service personnel.
- **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 or fire.
- **Do not allow foreign matter to fall into the equipment.**  
Penetration by foreign objects may lead to fire.
- **If water or other liquid spills into this equipment, do not continue to use it.**  
Continued use may lead to fire. Unplug the power cord immediately and contact qualified service personnel.
- **Do not use aerosol sprayers containing flammable gas inside or around this product.**  
Doing so may cause fire.

## Cautions



- **Do not connect cables in ways other than those mentioned in this manual.**  
Different connections may cause equipment damage or fire.
- **Be sure to set this equipment on a firm, stable, horizontal surface.**  
The product may break or cause injury if it falls.
- **Do not use this product in locations subject to high humidity or dust levels.**  
Excessive humidity and dust may cause equipment damage or fire.
- **Do not place heavy objects on top of this product. Never stand or lean on this product.**  
Equipment may fall or collapse, causing breakage and possible injury.
- **Take care not to injure your fingers on the manual cutter**
  - \* When you remove printed paper
  - \* When you perform other operations such as loading/replacing roll paper
- **Do not open the roll paper cover without taking the necessary precautions, as this can result in injury from the autocutter fixed blade.**
- **To ensure safety, unplug this product before leaving it unused for an extended period.**
- **Do not knock or strike the printer. This may cause defective print.**
- **Do not catch cables or place foreign matter under the printer.**
- **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.**
- **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).
- **Using in the presence of silicon gas (silicon adhesive, silicon oil, silicon powder, etc.) including siloxane and of malignant gas (nitric acid, hydrosulfuric, ammonia, chlorine, etc.) may cause contact failure at contact points in a mechanical switch and a DC motor etc. in a short time because of adhesion or oxidization of the insulation film.**

## *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.

# About this Manual

## Aim of the Manual

This manual aims to provide all the information necessary for the development, design, and installment of POS systems, order entry systems, and other receipt issuing systems that use TM-U220IIB-i.

## Manual Content

The manual is made up of the following sections:

|           |  |
|-----------|--|
| Chapter 1 | <a href="#">Product Overview</a>   |
| Chapter 2 | <a href="#">Setup</a>  |
| Chapter 3 | <a href="#">Application Development Information</a>  |
| Chapter 4 | <a href="#">Handling</a>   |
| Appendix  | <a href="#">Product Specifications</a><br><a href="#">Option Specifications</a><br><a href="#">Character Code Tables</a> |

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# Product Overview

This chapter describes features of the product.

## *Features*

TM-U220IIB-i is a receipt printer which can print directly from a smart device application or Web application.

This product supports ePOS-Device <sup>\*1</sup> and ePOS-Print <sup>\*2</sup> and are capable of controlling POS peripherals or network compatible TM printers.

\*1: ePOS-Device: Epson original technology to control TM printers or POS peripherals via a smart device application or Web application. This technology is realized by ePOS-Device Service running on the products.

\*2: ePOS-Print: Epson original printing function that has a high compatibility with a variety of systems supported by XML and Web services. This technology is realized by the ePOS-Print Service running on the products.

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## Functions

- Enables connection to peripherals (customer displays, barcode scanners, etc) via a USB or serial interface.
- The Epson ePOS SDK is provided for iOS, Android and Windows application, and Web application development.

The Epson ePOS SDK is a software development kit that integrates the ePOS-Print SDK and the ePOS-Device SDK. It is recommended that application software developed with the ePOS-Device SDK is migrated to the Epson ePOS SDK. For detail, refer to the Migration Guide included with the Epson ePOS SDK.

- Uses the communication box <sup>\*1</sup> function to enable communications between applications. This function allows for communications, etc. between tablet terminals. (ePOS-Device SDK, ePOS-Device XML)
- Supports Server Direct Print that sends a request for print data from the product to the Web server at regular intervals.
- Since print data can be saved in the spooler, applications can be released from processing print jobs regardless of the printer status.
- When a network printer is registered, print forwarding process can be realized. Also, if the printer is not ready to print, you can print from another printer.
- Device data notification function is realized, allowing for notifications to be sent from devices such as barcode scanners to Web servers to trigger applications.
- Equipped with Web server that supports the scripting language "PHP" and database "SQLite3".
- Enables HTTPS communication.
- Supports TLS1.2. SSL3.0 is not supported.

\*1: For more information on the communication box, see the Epson ePOS SDK User's Manual, and the ePOS-Device XML User's Manual.

|             |
|-------------|
| <b>NOTE</b> |
|-------------|

For information on how to use these functions. ([↗ "Controlling the Printer" on page 83](#))

# Product Configurations

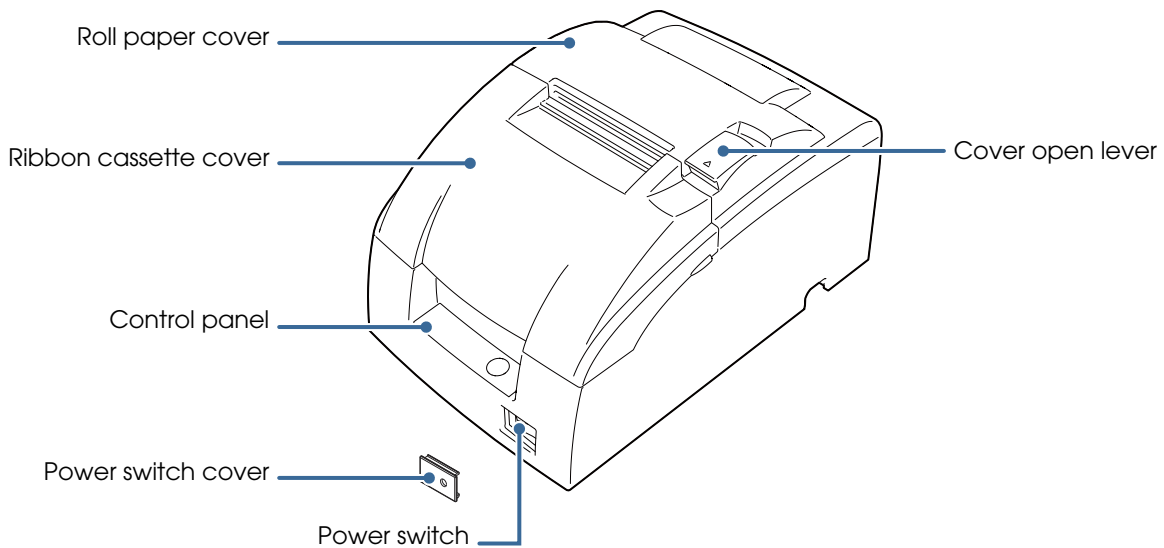
## Bundled items

- AC adapter (Model: PS-180)
- AC cable
- Roll paper (for operation check)
- Ribbon cassette (Model: ERC-38)
- Start Here
- Manual CD
- Power switch cover


## Options

- Roll paper near-end sensor (Factory option)
- Affixing tape for fixing the printer (Model: DF-10)
- Wall-hanging bracket (Model: WH-10)
- Power supply box (Model: OT-BX220)
- Wireless LAN cable set (Model: OT-WL01)
- Customer display (Model: DM-D110)

# Part Names and Functions



## Power Switch

Turns the printer on or off. The marks on the switch: (  : OFF/ | : ON)



**Before turning on the product, be sure to check that the AC adapter is connected to the power supply.**



After the product is turned on, it requires about 30 seconds until it is ready to print.

## Power Switch Cover

Install the power switch cover that comes with the TM-U220IIB-i onto the printer to prevent inadvertent changing of the power switch, to prevent tampering, and to improve the appearance of the printer.

To operate the power switch, insert an object with a pointed tip such as a ballpoint pen into the hole on the power switch cover.

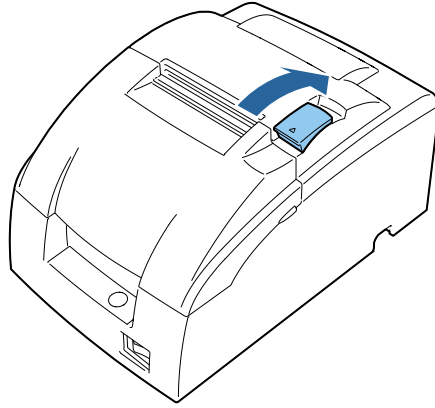


**If an accident occurs with the power switch cover attached, unplug the power cord immediately.**

Continued use of the printer may cause fire or electric shock.

## Roll paper cover / Cover open lever

When setting or replacing the roll paper, use the cover open lever to open the roll paper cover. Pull the cover open lever to open the roll paper cover.

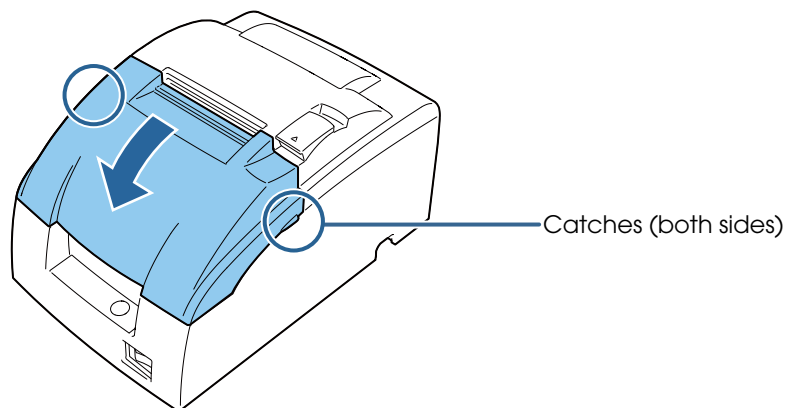
**NOTE**

Do not open the roll paper cover during printing or while the autocutter is operating.

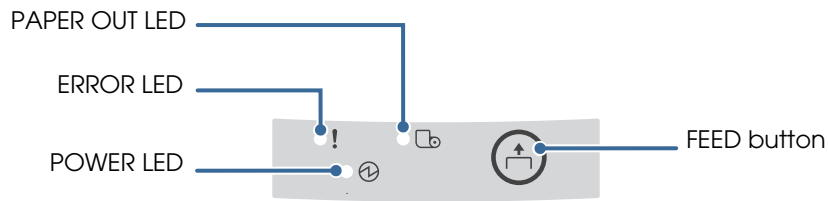
## Ribbon cassette cover

When installing or replacing the ribbon cassette, open the ribbon cassette cover by lifting up the catches on both sides of the 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.



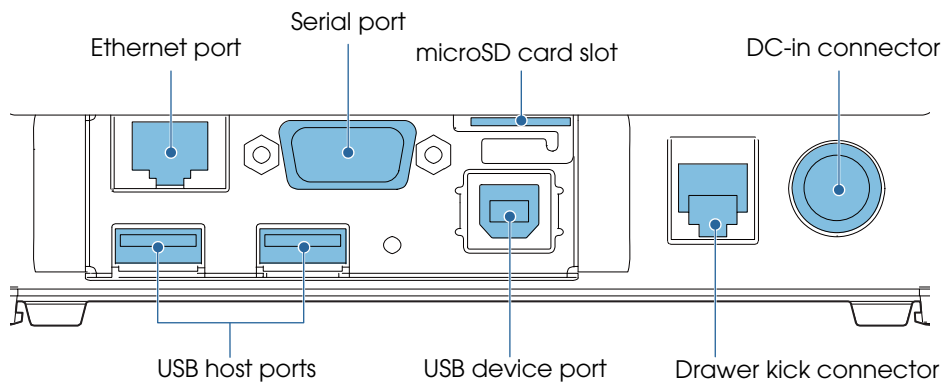
## Control Panel



| Name          | Status   | Description  |
|---------------|----------|--|
| POWER LED     | On       | Power is being supplied.   |
|               | Off      | Power is not being supplied.   |
| ERROR LED     | Off      | Normal operation (online)  |
|               | On       | <ul style="list-style-type: none"> <li>Immediately after the power is turned on or immediately after a reset (offline). Automatically goes off after a while to indicate that the printer is ready.</li> <li>The end of the roll paper is detected, and when printing has stopped (offline). If this happens, replace the roll paper.</li> </ul> |
|               | Flashing | An error has occurred (☞ "Error Status" on page 22)  |
| PAPER OUT LED | Off      | There is a sufficient amount of roll paper remaining.  |
|               | On       | There is little or no roll paper remaining.  |
|               | Flashing | A self-test printing standby state and macro execution standby state   |
| FEED button   |          | Pressing this button once feeds the roll paper by one line. Holding this button down feeds the roll paper continuously.  |



## Interfaces



| Name                     | Description   |
|--------------------------|---|
| Drawer kick connector    | Connects a cash drawer.                               |
| Ethernet port            | Connect the LAN cable here to connect to the network. |
| USB host port (Type A)   | Connects peripherals via a USB interface.             |
| USB device port (Type B) | Connects a computer.                                  |
| DC-In connector          | Connects a AC adapter.                                |
| microSD card slot        | Used when using the PHP function.                     |
| Serial port              | Connects a serial communication device.               |

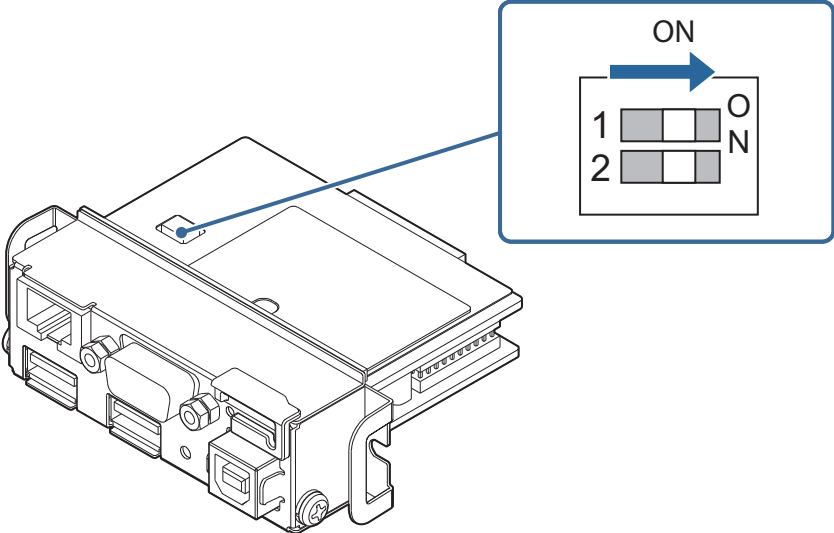


- When connecting **USB interface devices**, make sure to check the devices or manuals, etc. for current consumption. The total value should be 600 mA or less. Never use devices that provide no information on current consumption.
- When connecting the **USB cables**, pass the cables through the cable band to prevent them from coming off.
- Make sure that the protective cover is securely fit into place while the product is operating.
- For **Ethernet ports**, make sure that the outdoor aerial LAN cables are connected through a surge protector. Failure to do so may lead to device error resulting from indirect lightning.

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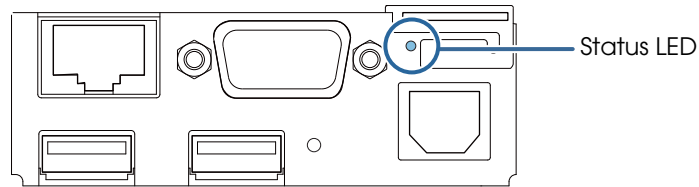
# DIP switch

Turn both DIP switches SW-1 and SW-2 of the intelligent I/F board ON.



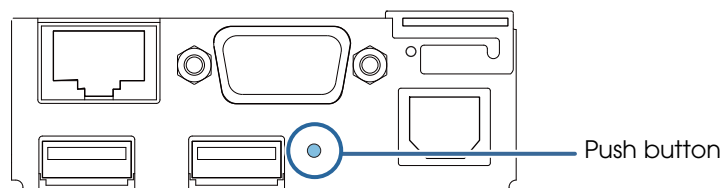
## Status LED

With the status LED on the rear of the product, you can check the interface board status.



| LED         | Description   |
|-------------|---|
| On (Green)  | Operating normally.   |
| On (Orange) | Starting up.<br>If the status LED is on in orange even after 30 seconds have passed since the printer is turned on, repair is required. |
| Off         | Power is not turned on.<br>If the status LED is off even if the printer is turned on, repair is required.                               |

## Push Button



Press the push button with a thin object such as a tweezers.

The push button has the following functions:

- **Status sheet printing:**  
Make sure the product is turned on, press the push button for approximately 3 seconds. When you release the button, a status sheet on which network parameters are printed will be ejected.  
([↗ "Confirming with a status sheet" on page 67.](#))
- **Initialization:**  
Make sure the product is turned on, press the push button for approximately 10 seconds. When you release the button, network setting (Wired LAN/ Wireless LAN) will be initialized.  
([↗ "Initializing the Network Setting" on page 68.](#))

### CAUTION

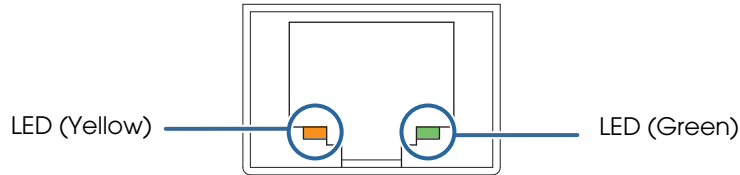
To print a status sheet, release the push button within 10 seconds. If the button is kept down for 10 seconds or more, the network setting will be initialized.

### NOTE

- Press the push button after the status LED color has changed from orange to green. After the printer is turned on, it takes about 20 to 30 seconds until the status LED color changes to green.
- Even if the button is pressed while the status LED is on in orange, the button will not operate.

## Wired LAN Status LED

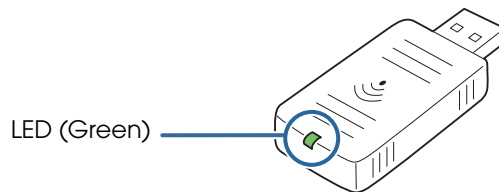
With the Wired LAN Status LED on the rear of the product, you can check the communication status of the product.



| LED    | Status   | Description                 |
|--------|----------|-----------------------------|
| Green  | On       | Link established            |
|        | Flashing | Transmitting/receiving data |
|        | Off      | Link not established        |
| Yellow | On       | 100BASE-TX                  |
|        | Off      | 10BASE-T                    |

## Wireless LAN cable set (optional) LED

With the LED on the wireless LAN unit, you can check the communication status of the product.



| LED              | Description   |
|------------------|---|
| Off              | The wireless LAN unit is not connected to the product. Or the product power is OFF.                                 |
| Flashing         | This wireless LAN unit is connected to the product and is in operation.   |
| Flashing rapidly | This wireless LAN unit is connected to the product and is in operation.<br>This unit is communicating on a network. |

## Online and Offline

### Online

When no events to go offline have occurred, the printer is online and ready for normal printing.

### Offline

The printer automatically goes offline under the following conditions:

- During power on (including resetting with the interface) until the printer is ready
- During the self-test
- When the roll paper cover is open.
- When the ribbon cassette cover is open.
- While roll paper is fed using the FEED button.
- When printing stops due to end of paper. (When the roll paper end sensor detects the end of paper or the printer is set so that printing stops upon detection of roll paper near-end.)
- Macro execution standby state
- When an error has occurred

# Error Status

There are three possible error types: automatically recoverable errors, recoverable errors, and unrecoverable errors. Check the error LED flash code.

When connection to peripherals fails, check the status LEDs at the lower rear of the product.

## Automatically Recoverable Errors

Printing is no longer possible when automatically recoverable errors occur. They can be recovered easily, as described below.

| Error   | Error description   | Error LED flash code | Recovery measure  |
|---|---|----------------------|---|
| Roll paper cover open error (when recoverable error is selected) (*1) | The roll paper cover was opened during printing.                        |                      | Recovers automatically when the roll paper cover is closed. |
| Print head temperature error(*2)                                      | A high temperature outside the head drive operating range was detected. |                      | Recovers automatically when the print head cools.           |

(\*1) This conditions are selected by MSW 8-5, 8-8. When MSW 8-5 (mapping of the cover open status) is off, the error has not occurred but there is a "paper end error" instead. If MSW 8-8 is off, this error is handled as an automatically recoverable error.

(\* 2) Print head temperature error is not abnormal.

## Recoverable Errors


Printing is no longer possible when recoverable errors occur. They can be recovered easily by turning the power on again after eliminating the cause of the error.


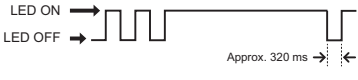


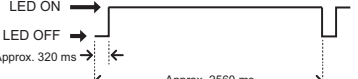
| Error  | Error description                                       | Error LED flash code | Recovery measure   |
|--|---|----------------------|--|
| Paper roll cover open error (*1)                           | The roll paper cover is opened when printing.           |                      | Recovers by error recovery command with the cover closed   |
| Autocutter error   | Autocutter does not work correctly.                     |                      | Remove the jammed paper or foreign matter in the printer, close the roll paper cover, and then turn the power on to recover. |
| Home position detection error (This is "Mechanical error") | The home position cannot be detected due to a paper jam |                      | Recovers by error recovery command   |

(\*1) These conditions are selected by MSW 8-5 and 8-8. When MSW 8-5 (mapping of the cover open status) is OFF, the error does not occur and a "paper end error" occurs instead. If MSW 8-8 is ON, this error is handled as a recoverable error.

## Unrecoverable Errors

If the same error occurs again even after turning the power back on, contact qualified service personnel.

|   |  |
|---|--|
| <br><b>CAUTION</b> | <b>Turn off the power immediately when unrecoverable errors occur.</b> |
|---|--|

| Error                             | Error description  | Error LED flash code  |
|-----------------------------------|--|---|
| Memory R/W error                  | After R/W checking, the printer does not work correctly. |    |
| High voltage error                | The power supply voltage is extremely high.              |    |
| Low voltage error                 | The power supply voltage is extremely low.               |    |
| CPU execution error               | The CPU is executing an incorrect address.               |   |
| Internal circuit connection error | Internal circuits are not connected correctly.           |  |





# Setup

This chapter describes the installation and setup procedure of the product and peripherals required to use the product.

You can utilize "Easy Setup", which enables settings to the TM-i to be made in a simple manner using a USB memory that contains a file of EPSON TMNet WebConfig setting values.

For detail, refer the "TM-i series Easy Setup Guide".

## Flow of Setup

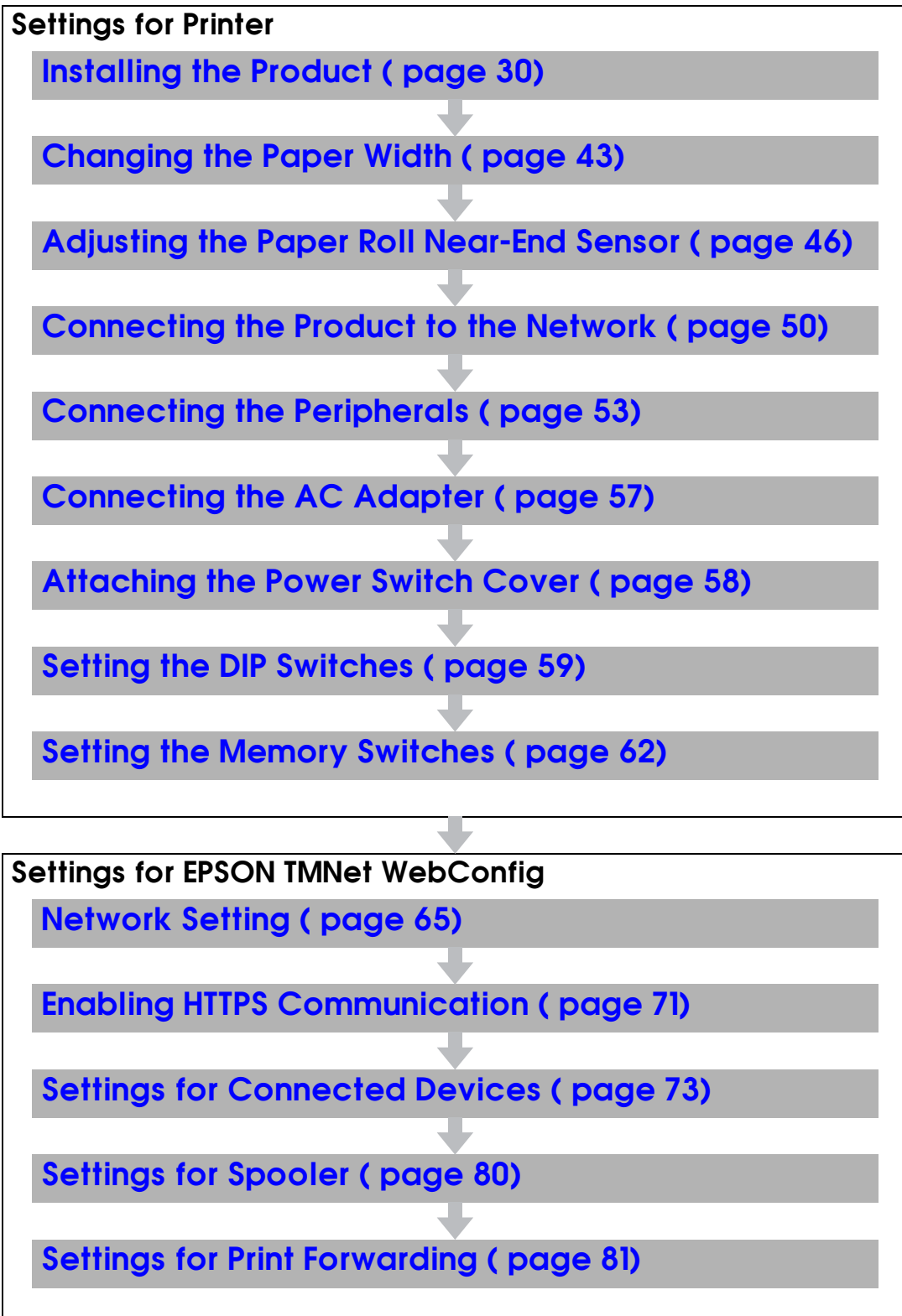
The setting items are different depending on the system to be used. Check the items by referring to "[Controlling the Printer](#)" on page 83.

- Epson ePOS SDK, ePOS-Device XML, ePOS-Print XML ([↗ page 26](#))
- Server Direct Print ([↗ page 27](#))
- Device Data Notification ([↗ page 28](#))
- Using This Product as a Web Server ([↗ page 29](#))

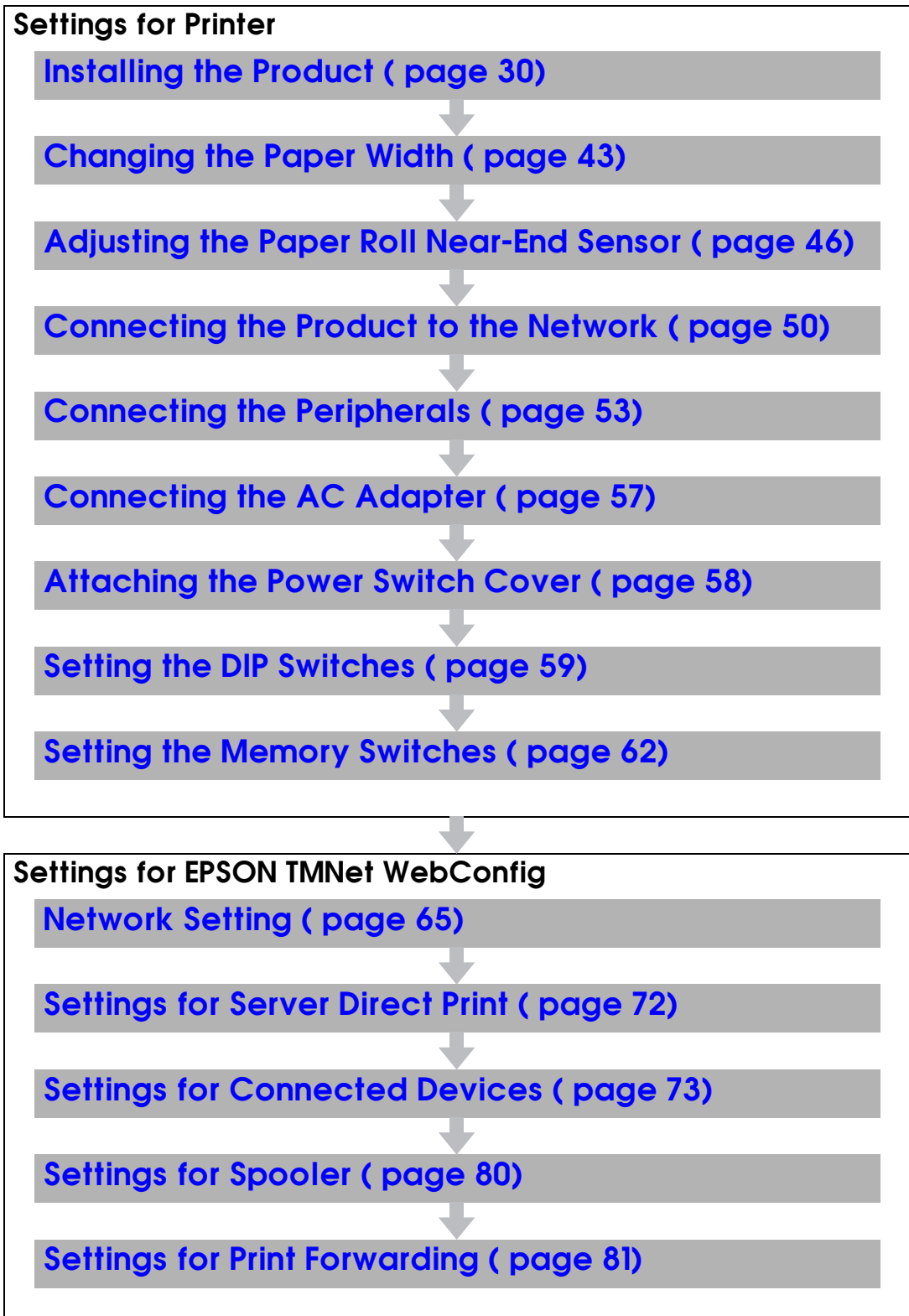
This chapter consists of the following sections along with the setup flow of the product and peripherals.

**NOTE**

In this setup flow, necessary items are in a frame with a solid line. Optional items are explained in an frame with a dotted line.

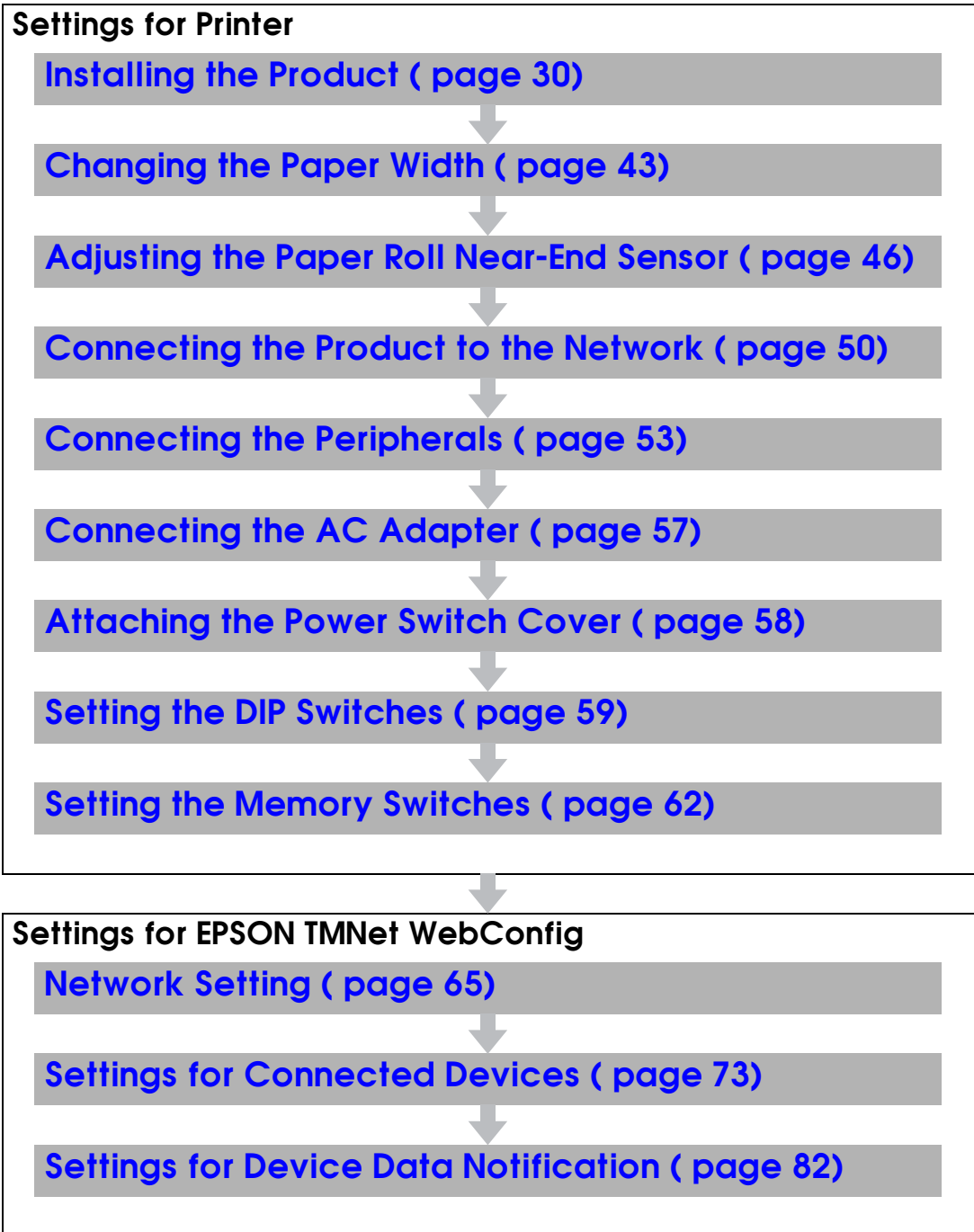


## Server Direct Print



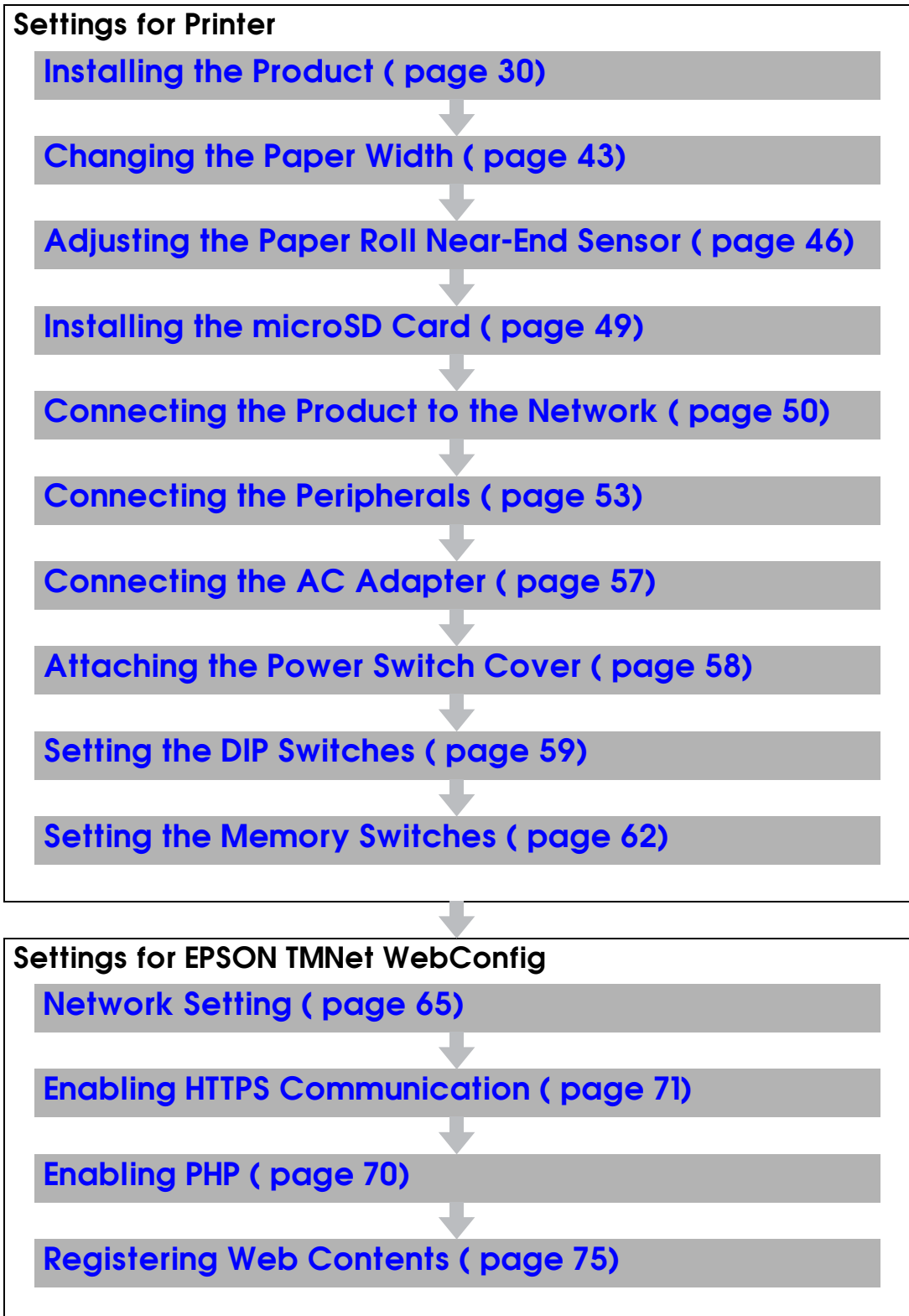
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## Device Data Notification



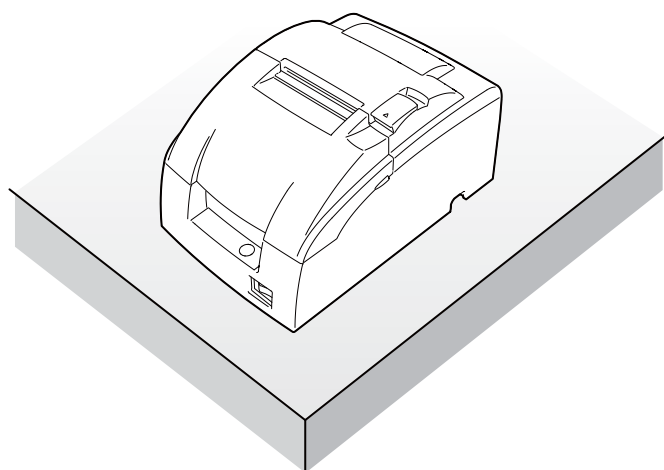
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## Using This Product as a Web Server

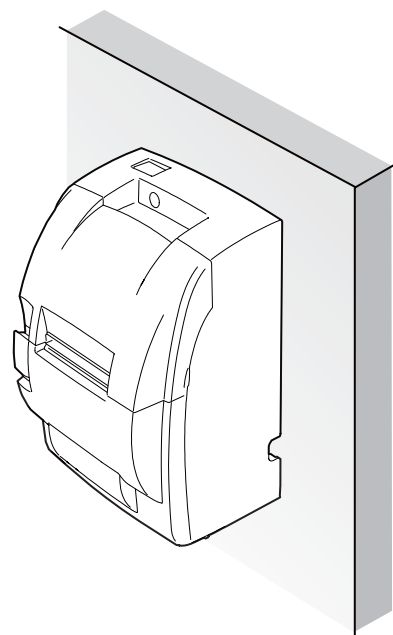


## Installing the Product

You can install the printer horizontally on a flat surface (with the paper exit on top). Also, you can hang it on a wall using the included accessories.



**Horizontal Installation**



**Hanging Installation**

### CAUTION

- Take measures to prevent the printer from moving by vibration during paper cutting and when using a drawer. Affixing tape (Model: DF-10) is provided as an option.
- Do not place the printer in dusty locations.
- Do not knock or strike the printer. This may cause defective print.
- Do not catch cables or foreign matter under the printer.

## Hanging the Printer on a Wall

To hang the printer on the wall, follow the steps below.

Before installation, be sure that the printer and all equipment connected to the printer is turned off. Detach all cables from the body of the printer.

### CAUTION

Static electricity may cause cut paper to adhere to the printer case. This static electricity will not affect the operation of the printer.

## Changing the roll-paper detector position

Two types of screws are used with the WH-10: 3×6 and 3×10. The longest screw (3×12) will not be used.

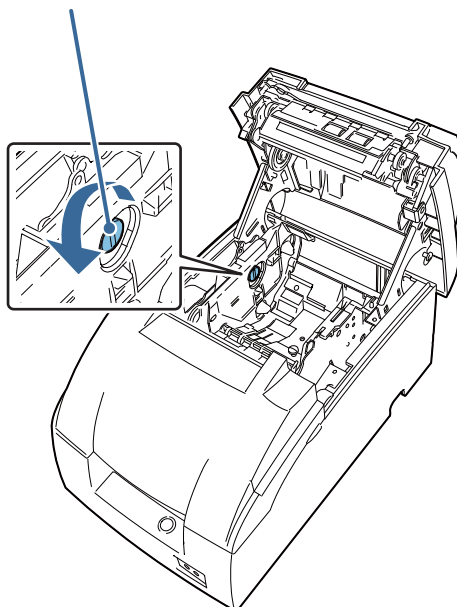
- 1 Open the roll paper cover.

### NOTE

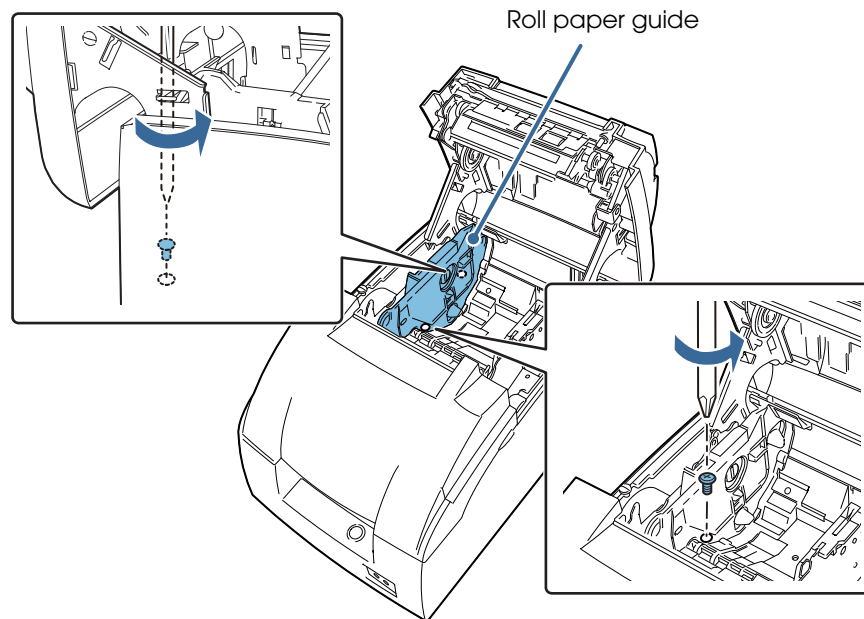
For a model that does not have a roll-paper near-end detector and does not need a change in paper width, jump to step 7. For a model that does not have a roll-paper near-end detector and needs a change in paper width, jump to step 3

- 2 Loosen the detector adjustment screw a little bit by using a tool such as a coin and then loosen the screw gently by hand as until it stops. It must not be removed completely.

Detector adjustment screw



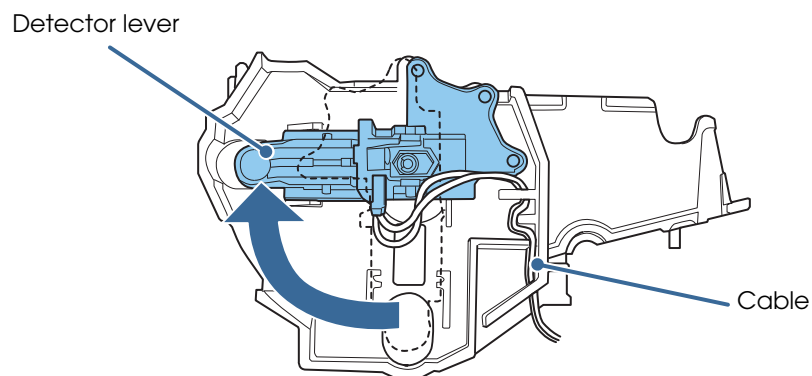
- 3** Remove the two screws of the roll paper guide.



**NOTE**

For a model that does not have a roll-paper near-end detector, jump to step 6.

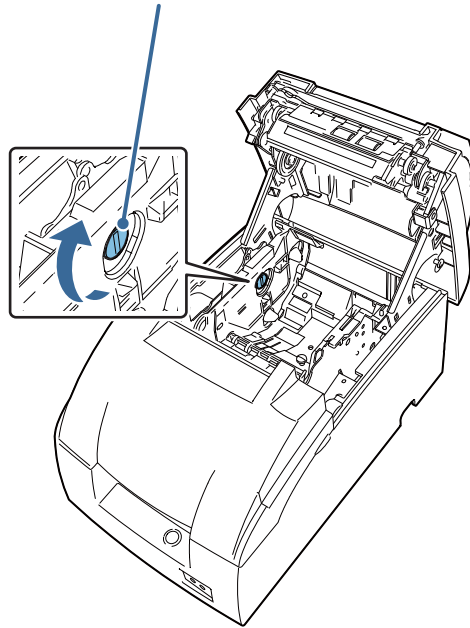
- 4** Rotate the detector lever on the roll paper guide to change its direction.  
After the direction of the detector lever is changed, be sure that the cable is connected to the connector firmly.



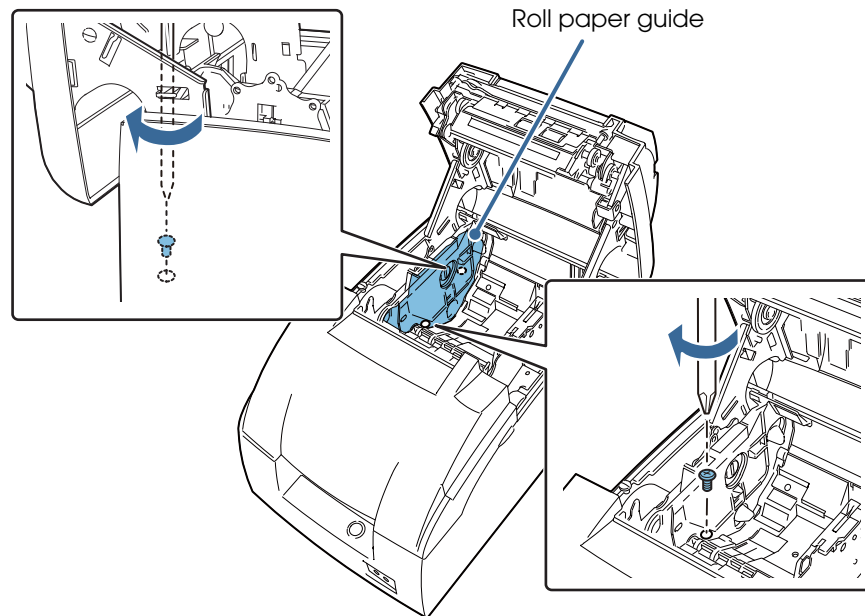


**5** Tighten the detector adjustment screw.

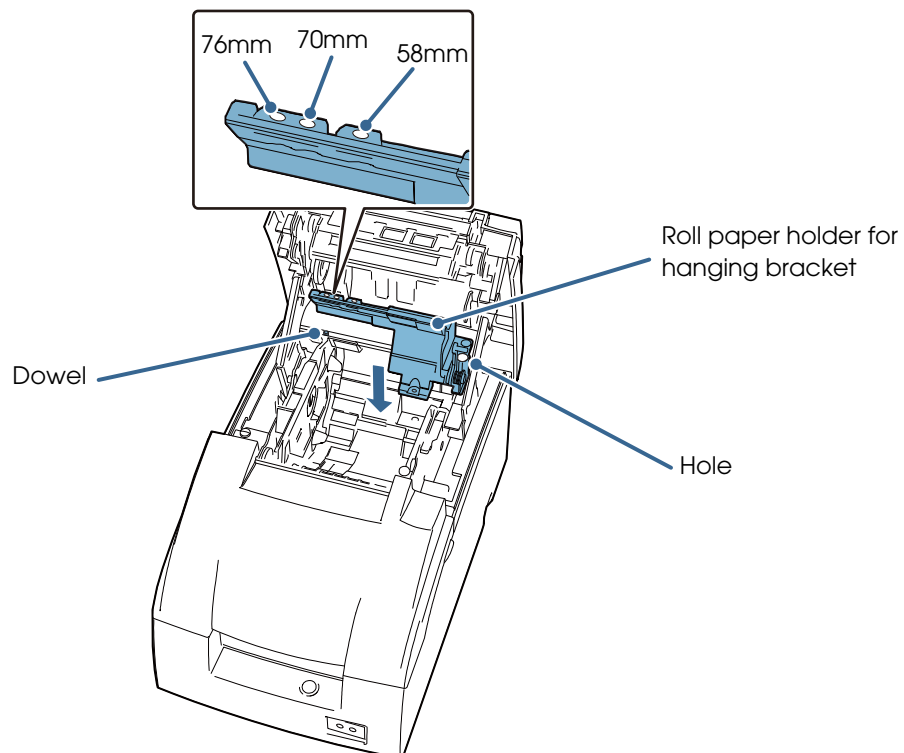
Detector adjustment screw



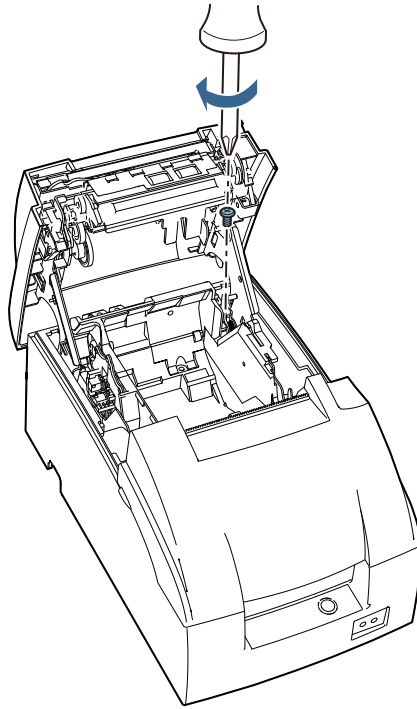
- 6** Align the hole on the roll paper guide with the hole on the roll paper holder to match your roll paper width and then tighten the screw (3×10).  
You will not use one of the two screws that have been removed when the roll paper guide is removed. Please store it as an extra screw in case you need it.



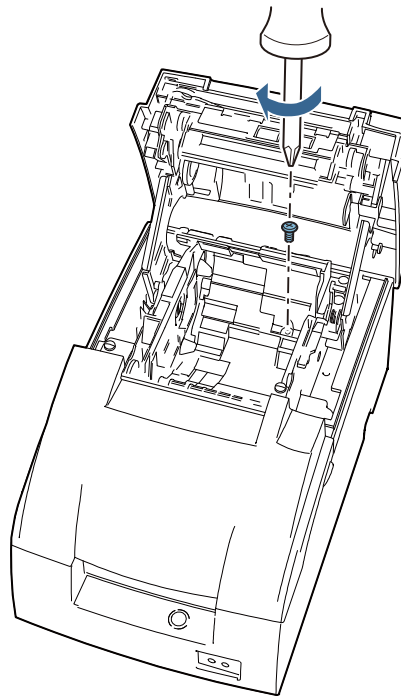
- 7** Align the hole on the roll paper holder for hanging bracket with the dowel on the roll paper guide. (For a model that needs a change of paper width, the hole to be used will be different to match your roll paper width.)  
Putting the screw (3×6) in the hole on the roll paper holder for hanging bracket makes it easier for you to tighten the screw in the next step.



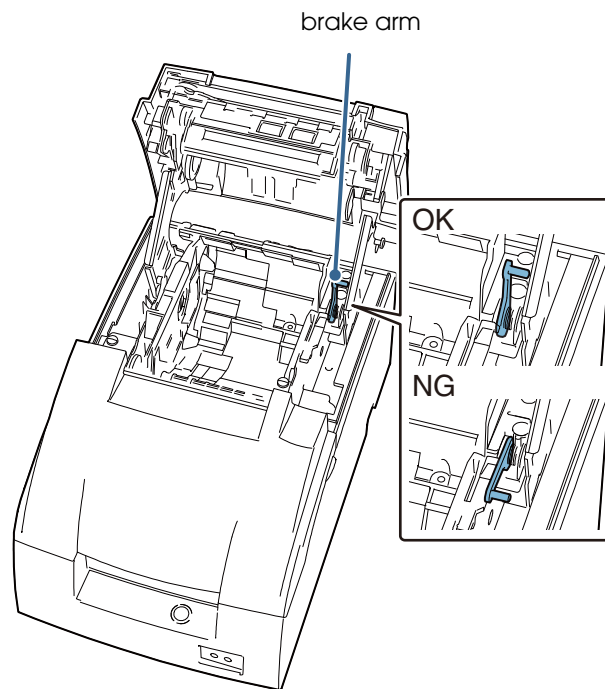
- 8** Tighten the screw (3×6) to fix the roll paper holder for hanging bracket and the base frame.



- 9** Tighten the screw (3×10) to fix the roll paper holder for hanging bracket and the roll paper holder.



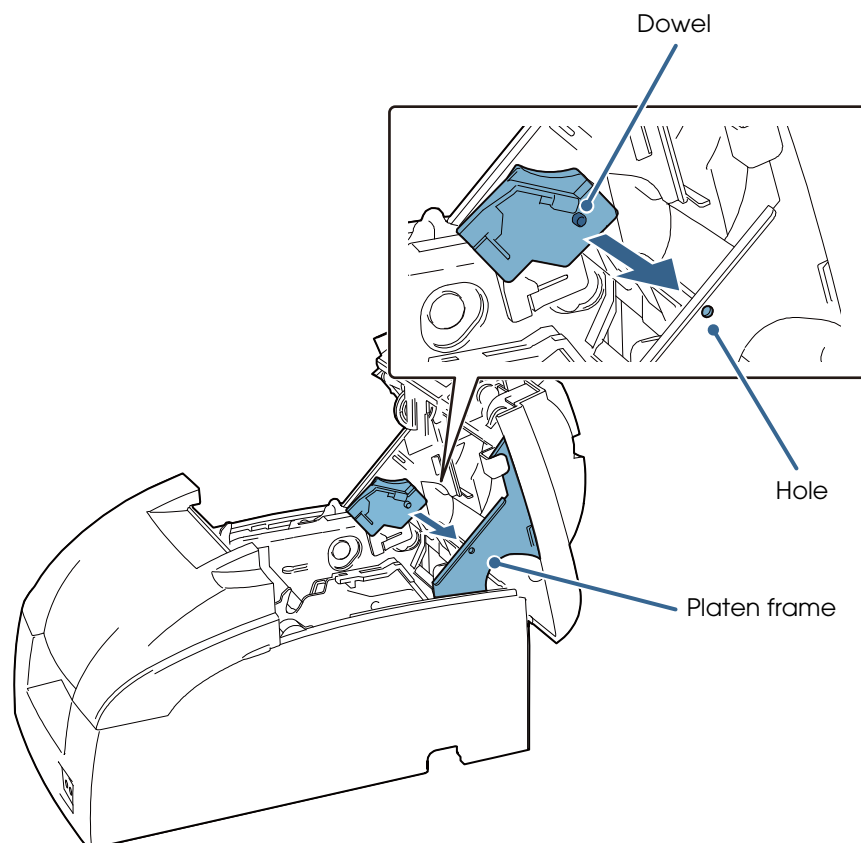
**10** Check that the brake arm is up.



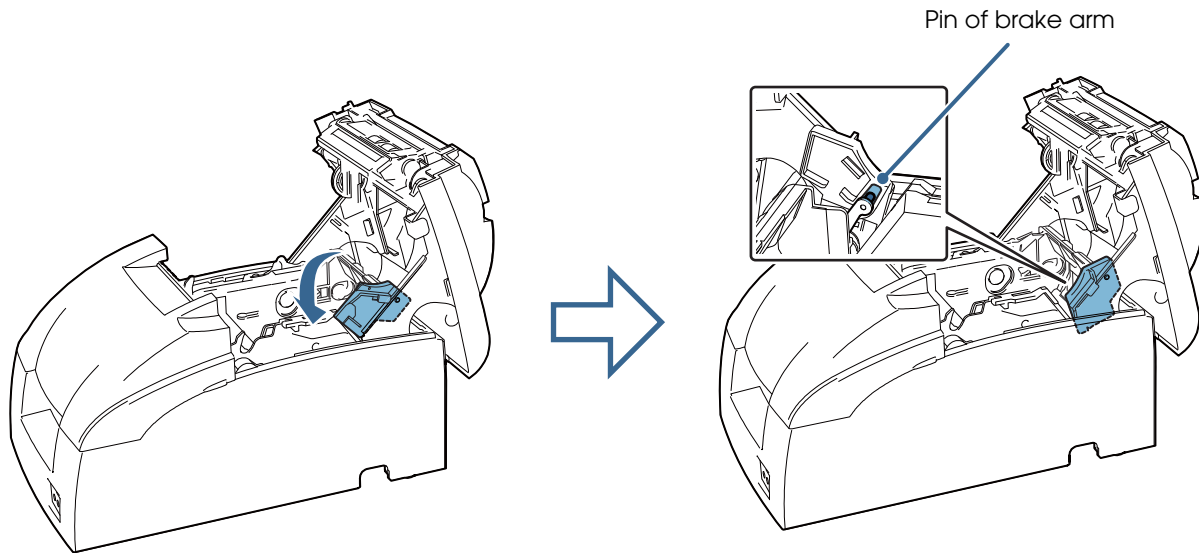
**CAUTION**

Do not move the brake arm until the roll paper holder for hanging bracket is attached onto the base frame. Otherwise the arm part will be damaged.

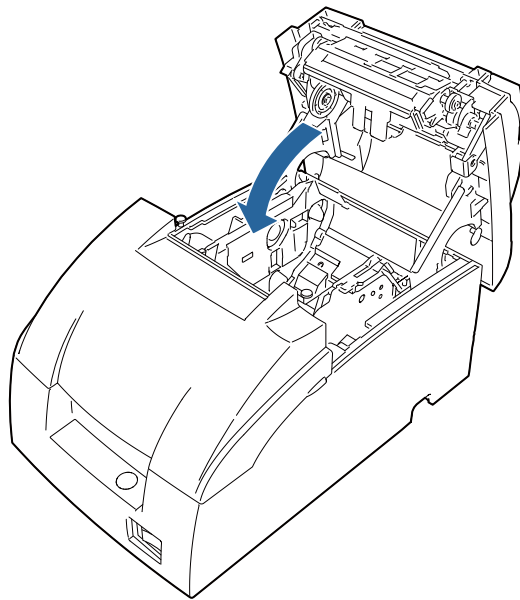
**11** Insert the dowel of the cam into the hole of the platen frame.



- 12** While you make sure the pin of the brake arm is in the groove on the inner side of the cam, rotate the cam along with the surface of the platen frame in the direction indicated by the arrow until it clicks into position.

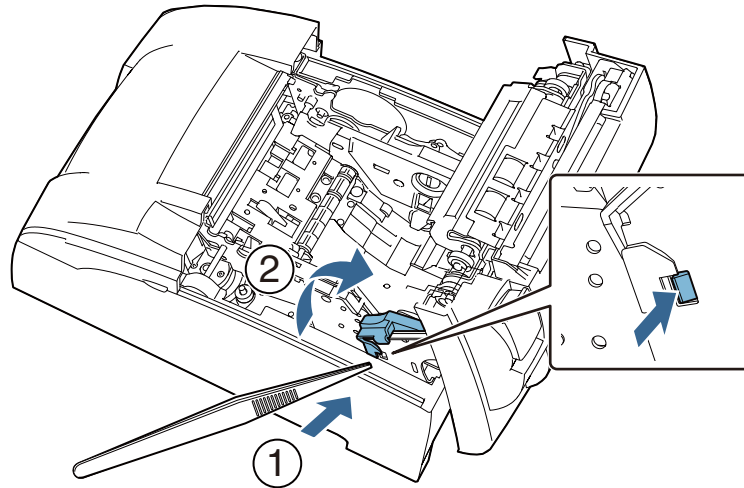


- 13** Close the printer cover.



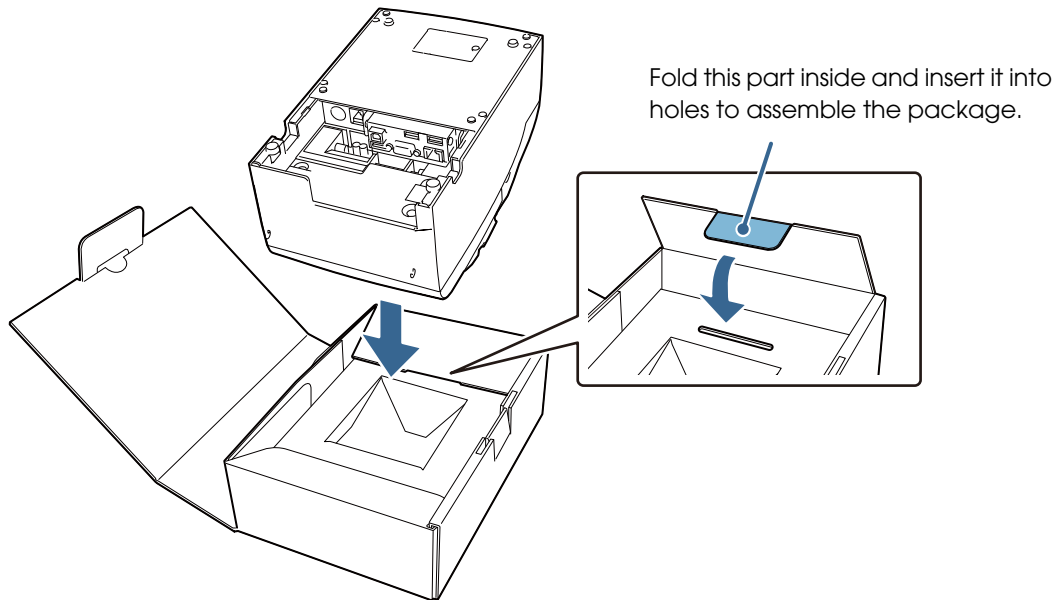
## Removing the cam

While you push the cam through the hole on the platen frame with a pointed tool such as tweezers, rotate the cam in the upper direction to remove it.

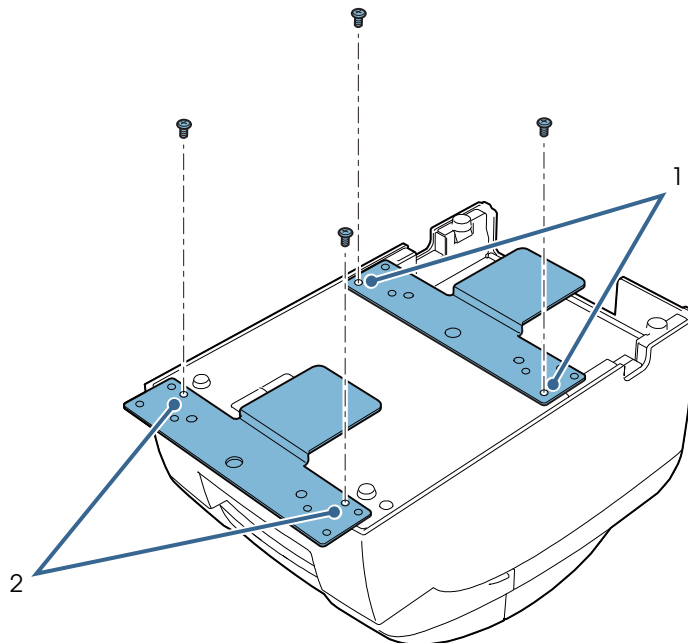


## Installing the brackets

- 1 Turn the printer over and then put it on a packing box as a platform horizontally.

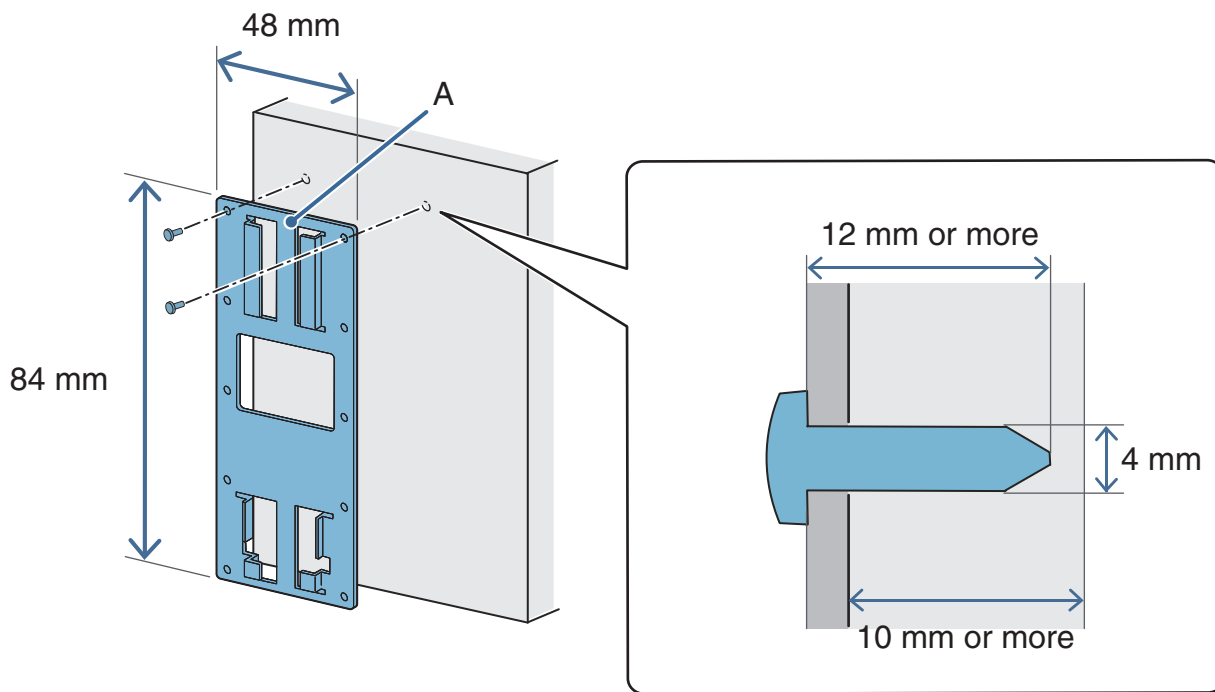


- 2 Attach the upper bracket to the holes numbered "2" and the lower bracket to the holes numbered "1" using the screws (3×6).  
Four different sets of screw holes are found on each bracket. Each hole is identified by a number; be sure to use the holes indicated in the instructions.



## Installing the wall-mount

Attach the wall-mount to the wall in the position illustrated to the right (with the area marked A at the top), and fasten securely with ten screws. These screws are not included; please use screws appropriate to the type of wall being used.



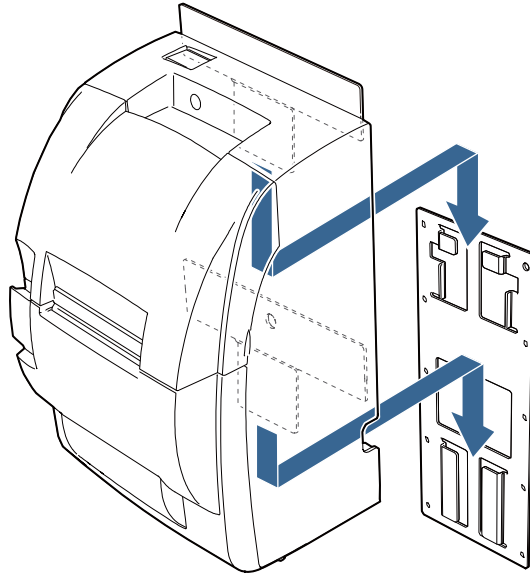
### CAUTION

- Before attaching the wall-mount, make sure enough space remains around the printer.
- To fix the printer securely, install the wall hanging bracket on a wall made of wood, concrete, or metal. The thickness of the wall should be 10 mm {0.4"} or more.
- In order to insure that the wall-mount can properly support the weight of the printer, please secure it with screws appropriate to the type of wall the wall-mount is installed on.
  - \* A screw with 4 mm diameter and length of 12 mm or more is recommended. The thickness of the wall should be 10 mm or more.
  - \* Be sure to use metallic screws.
  - \* The screws on the wall side must have a pull-out strength of 150 N (15.3 kgf) or more.
- Be sure to fasten the wall-mount securely to the wall with a screw in each of the ten holes.



## Mounting the printer on the wall

Slide the brackets into the slots of the wall-mount, starting with the top bracket.

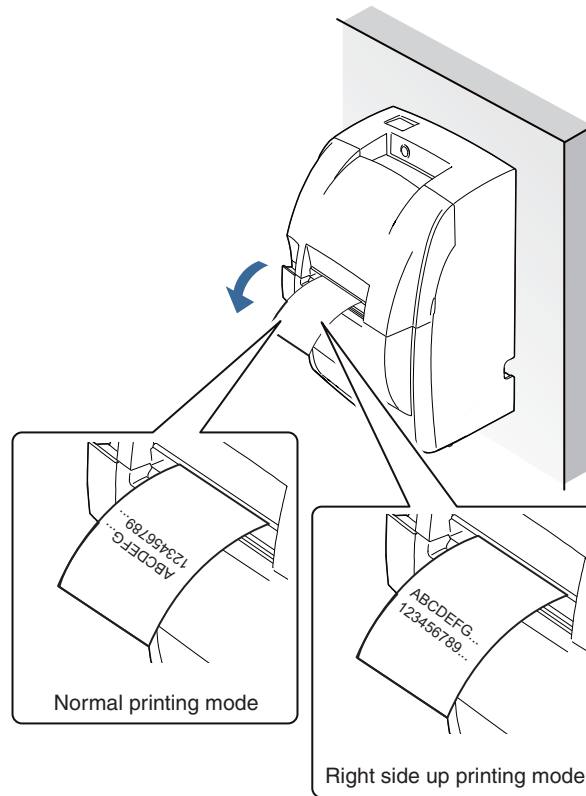
**CAUTION**

- When mounting the printer, make sure that the wall-mount is securely fastened to the wall.

## Setting the "Right side up printing"

"Right side up printing" is a printing mode used for printers installed on a wall.

Turn on the setting for DIP switch 1-1 ([☞ "Setting the DIP Switches" on page 59](#)).



### NOTE

- When you install the right side up mode printer into your system (application program), you may need to modify the program.
- The right side up printing mode requires DIP switch 1-2 (receive buffer: 4KB) to be turned off. ([☞ "Setting the DIP Switches" on page 59](#))

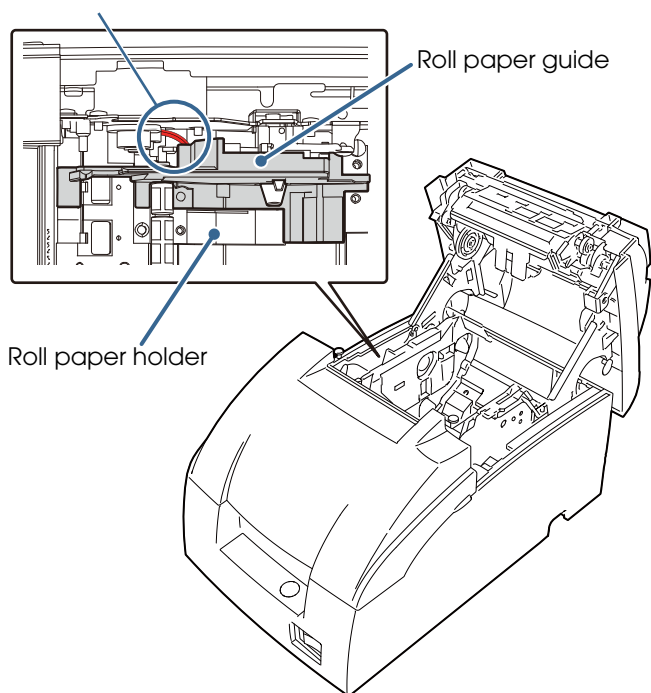
## Changing the Paper Width

The TM-U220IIB-i accommodates 76 mm {3"}, 69.5 mm {2.74"}, 57.5 mm {2.26"} wide paper rolls. Follow the steps below to change the paper width.

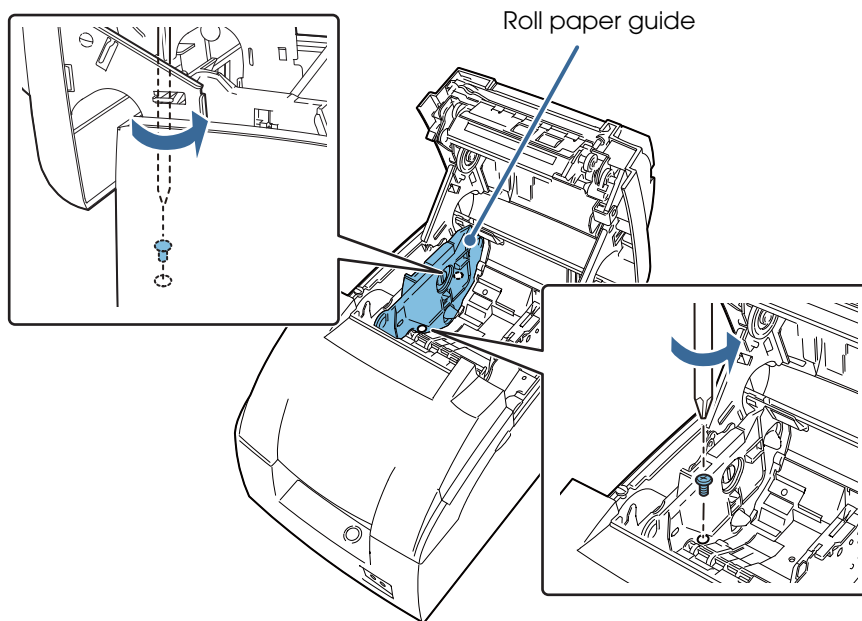
### CAUTION

- Since it is possible for some areas of the printer head and the auto cutter blades to become worn through direct contact with the platen, it is not possible to change from a narrow width to a wider width once operation has started.
- When changing the paper width, be sure to make the setting for the paper width with the memory switch. (☞ "Setting the Memory Switches" on page 62)
- When you use a near-end detector equipped model, be sure not to pinch the lead wires of the near-end detector between the roll paper guide and the roll paper holder, and to push the lead wires inside so that the lead wire of the paper-end detector does not contact the motor gear.

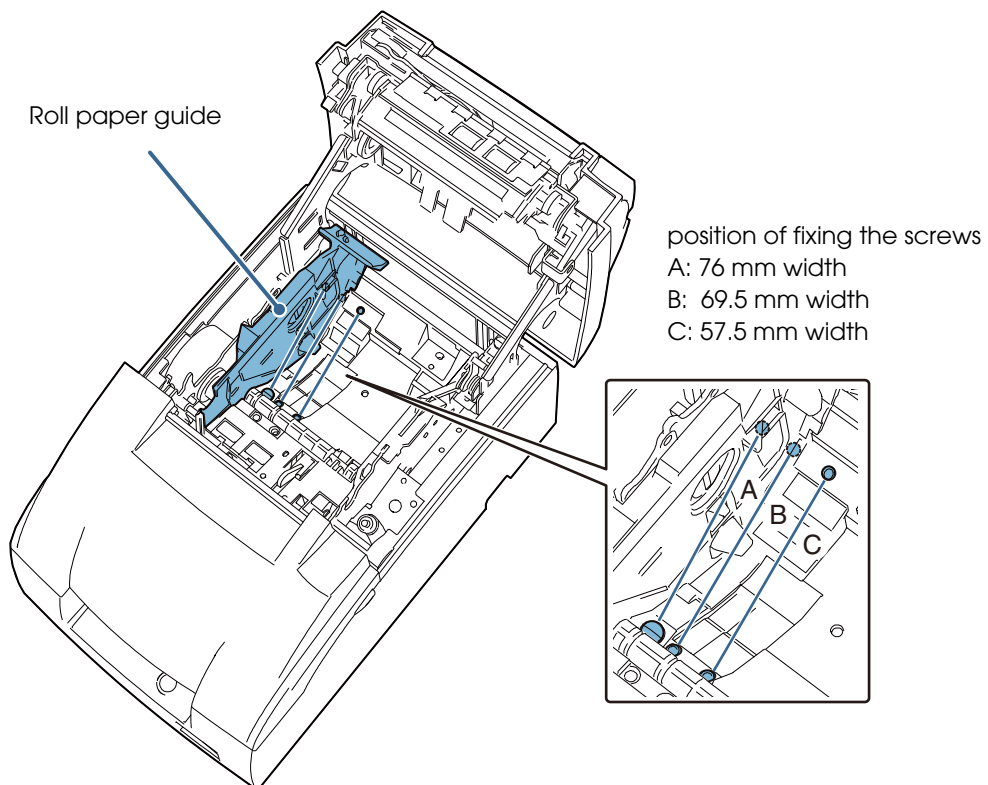
Leading the wires between the holder and frame



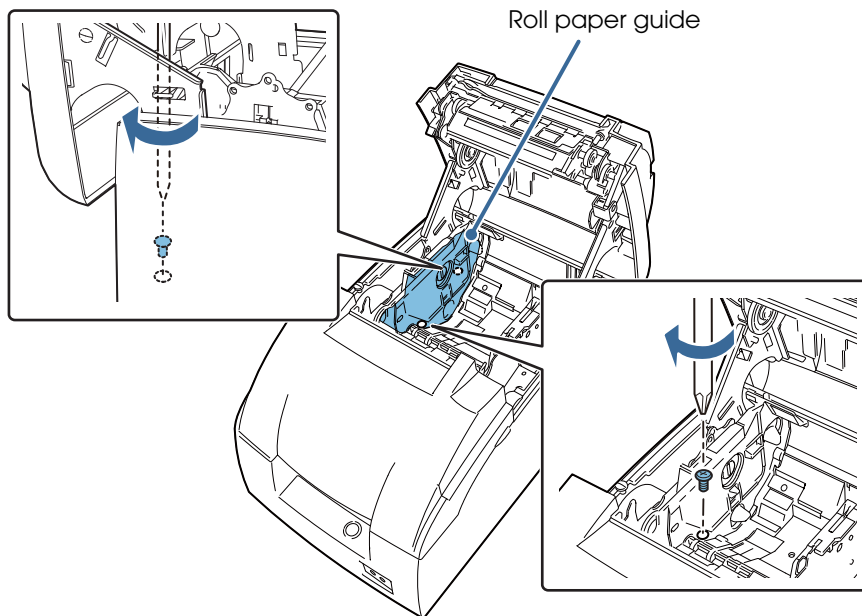
- 1** Make sure the power supply is disconnected.
- 2** Open the roll paper cover.
- 3** Take off the roll paper guide from the printer by loosening the two screws.



- 4** Push the roll paper guide on the appropriate width.



- 5** Tighten the spacer with two screws included with the guide.



- 6** Set the memory switch (customize value) for the paper width. (🔗 ["Setting the Memory Switches" on page 62](#)).

# Adjusting the Paper Roll Near-End Sensor

Below are two situations where a paper near-end sensor adjustment is required.

- To adjust the detection position to suit the diameter of the roll paper core used.
- To adjust the detection position of the remaining amount of roll paper.

## CAUTION

- Since roll paper cores vary slightly in shape, depending on paper roll design and manufacturing tolerances, it is impossible to detect the remaining paper exactly.
- In order for the near end detector to correctly detect the amount of roll paper remaining, use roll paper with a core inner diameter of 10.5 to 12.5 mm {0.41 to 0.49"}

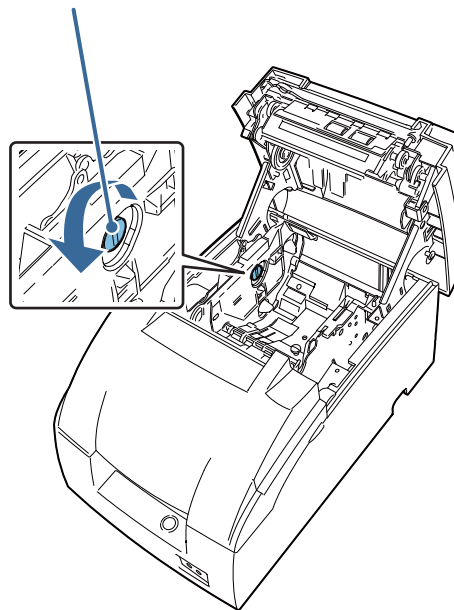
## NOTE

When the printer is installed on a wall, the position of the near-end detector must be adjusted. ([🔗 "Hanging the Printer on a Wall" on page 31](#))

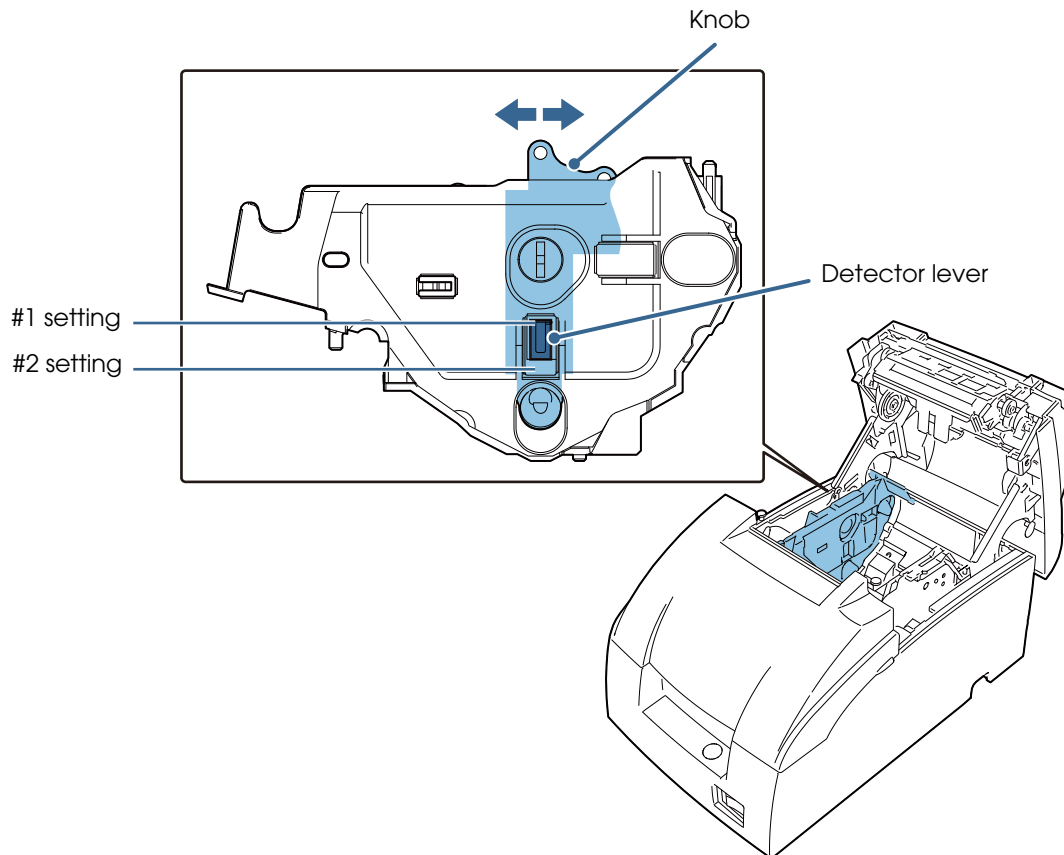
Follow the steps below to adjust the roll paper near-end detector.

- 1** Make sure the power supply is disconnected.
- 2** Open the roll paper cover, and remove the roll paper.
- 3** Loosen the detector adjustment screw with a coin or similar tool.

Detector adjustment screw



#### 4 Adjust the detector by sliding the lever in the direction shown below.

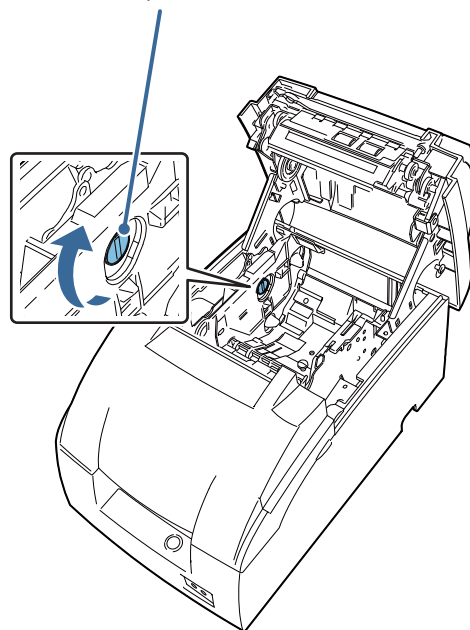


The table below shows the point at which the near-end detector is triggered. Note that this figure is a calculated value, and there may be some variations, depending on the printer.

| Detector position<br>(attaching point of the<br>detector adjustment lever) | Trigger point<br>(included the thickness of paper roll core) |
|--|--|
| #1 setting   | Approx. 8 mm {0.315"}  |
| #2 setting   | Approx. 5 mm {0.197"}  |

- 5** Tighten the detector adjustment screw.

Detector adjustment screw



- 6** Check to be sure that the detecting lever moves freely.



## Installing the microSD Card

Install the microSD card into the microSD card slot on the rear of the product.

**CAUTION**

Use a microSD card that has wear leveling functions

**NOTE**

- The microSD card can only be used if the PHP function is enabled.
- The spooler cannot be used if PHP is enabled.

---

### Installing the microSD Card

- 1 Open the protective cover on this product. Check the insertion direction of the microSD card and insert it into the microSD card slot.

**NOTE**

- Insert the microSD card with its metal side facing down.
- Push the microSD card to the bottom until it clicks.

- 2 Close the protective cover.

---

### Removing the microSD Card

- 1 Open the protective cover on this product and gently push the microSD card into the slot.

**NOTE**

Push the microSD card to the bottom until it clicks.

- 2 When the microSD card is slightly ejected, pull it out carefully.
- 3 Close the protective cover.

# Connecting the Product to the Network

## For Wired LAN connection

Connect the product to a network by a LAN cable via a hub.

Insert a 10BASE-T/100BASE-TX LAN cable into the LAN connector until it clicks.



- **When LAN 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.
- **Never attempt to connect the customer display cable, drawer kick cable, or a standard telephone line cable to the LAN connector.**

## For Wireless LAN Interface

The optional wireless LAN cable set (OT-W01) enables you to use the product with a wireless LAN connection.

Be sure not to connect a LAN cable when you use the wireless LAN cable set.



This product cannot be used with the wired LAN connection and wireless LAN connection at the same time. When the product is set and installed for both of them, only the LAN connection works.

Check whether the following items are included.

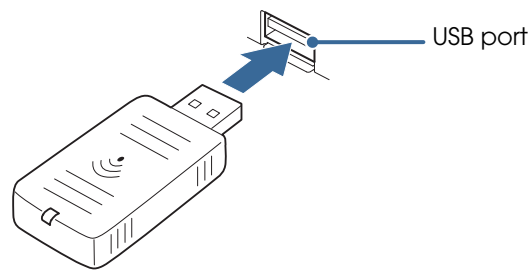
- Wireless LAN unit
- USB extension cable
- Affixing tape (1 pair, 2 pieces)
- Rubber cover
- Caution label
- User's manual

To connect the wireless LAN unit to the product, you can connect directly or use the USB extension cable.

If connecting the wireless LAN unit directly causes interference with other cables or bad communication, use the included USB extension cable.

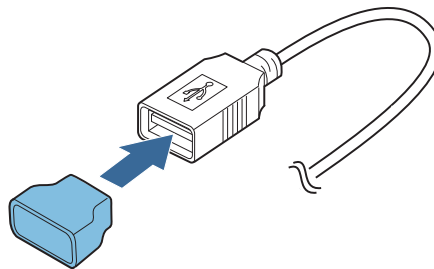
## Connecting the unit directly with the product

Install the wireless LAN unit to a USB port of the product.

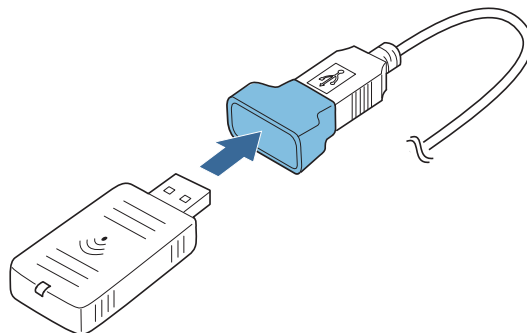


## Using the USB extension cable

- 1 Attach the included rubber cover to the connector of the USB extension cable into which the wireless LAN unit will be inserted, to prevent the unit from coming off.

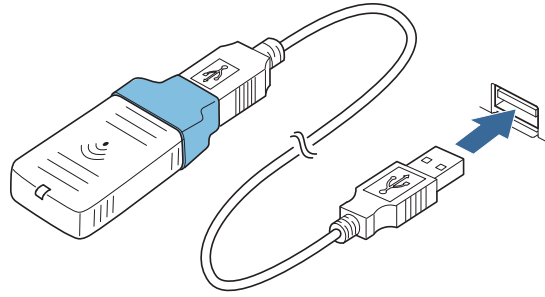


- 2 Insert the wireless LAN unit into the connector of the cable.

**CAUTION**

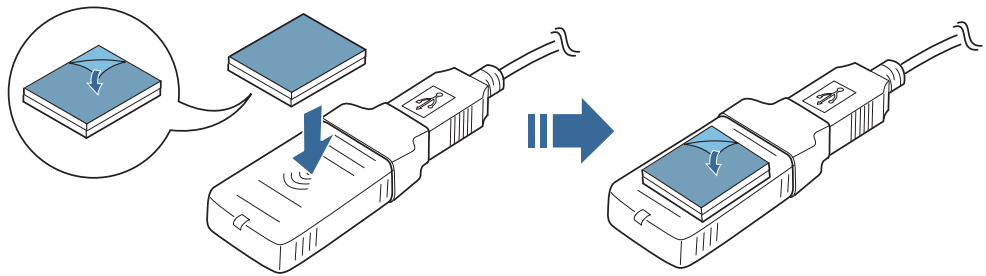
Adjust the position of the rubber cover so that the description on the label on the back side of the wireless LAN unit is not covered.

- 3** Connect the USB extension cable to the USB port of the product.



**NOTE**

If you want to fix the wireless LAN unit, cut the included affixing tape to fit and put on the unit, and fix the unit in a place with good communication.



## Connecting the Peripherals

Connect each cable of a peripheral to a port or connector at the rear of the product.



- When connecting USB interface devices, make sure to check the devices or manuals, etc. for current consumption. The total value should be 600 mA or less. Never use devices that provide no information on current consumption.
- Make sure that the protective cover is securely fit into place while the product is operating.

### Connecting the Customer Display

For details on connecting the customer display, refer to the "DM-D110/DM-D210 Technical Reference Guide". ([🔗 "Software and Manuals" on page 95](#))

Use EPSON TMNet WebConfig to configure customer display settings and perform display tests. ([🔗 "Settings for Connected Devices" on page 73](#))

## Connecting the Serial Communication Device

Use a serial cable to connect a device to the serial port of this product.

To communicate with a serial communication device, communication conditions of the device should match those of this product.

Refer to the manual for the serial communication device to check the following conditions.

- Communication Speed
- Data bit
- Parity
- Stop bit
- Flow control

The communication conditions of this product are configured using EPSON TMNet WebConfig.

([↶](#) "Settings for Connected Devices" on page 73)

## Key Input Device via a USB Interface

For key input devices such as barcode scanners and keyboards, connect a USB cable of a device to the USB port at the rear of this product.

Use EPSON TMNet WebConfig to select a device control script and perform communication tests.

([↶](#) "Settings for Connected Devices" on page 73)

## Connecting the Cash Drawer

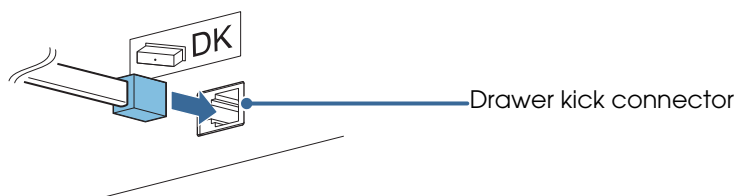
Using the optional product for TM printer is recommended.

If the optional external buzzer is used, you cannot use a cash drawer.

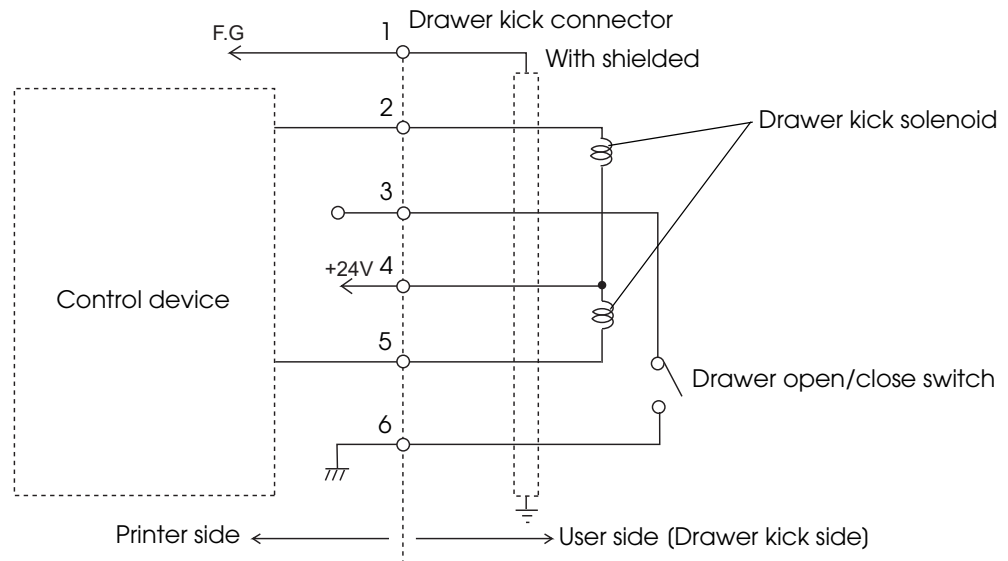


- **Specifications of drawers differ depending on makers or models. When you use a drawer other than specified, make sure its specification meets the following conditions.**  
Otherwise, devices may be damaged.
  - \* The load, such as a drawer kick solenoid, must be connected between pins 4 and 2 or pins 4 and 5 of the drawer kick connector.
  - \* When the drawer open/close signal is used, a switch must be provided between drawer kick connector pins 3 and 6.
  - \* The resistance of the load, such as a drawer kick solenoid, must be  $24\ \Omega$  or more or the input current must be 1A or less.
  - \* Be sure to use the 24V power output on drawer kick connector pin 4 for driving the equipment.
- **Use a shielded cable for the drawer connector cable.**
- **Two driver transistors cannot be energized simultaneously.**
- **Leave intervals longer than 4 times the drawer driving pulse when sending it continuously.**
- **Be sure to use the product power supply (connector pin 4) for the drawer power source.**
- **Do not insert a telephone line into the drawer kick connector.**  
Doing so may damage the telephone line or product.

Connect the connector of the drawer kick cable to the product.



## Drawer Connection Circuitry





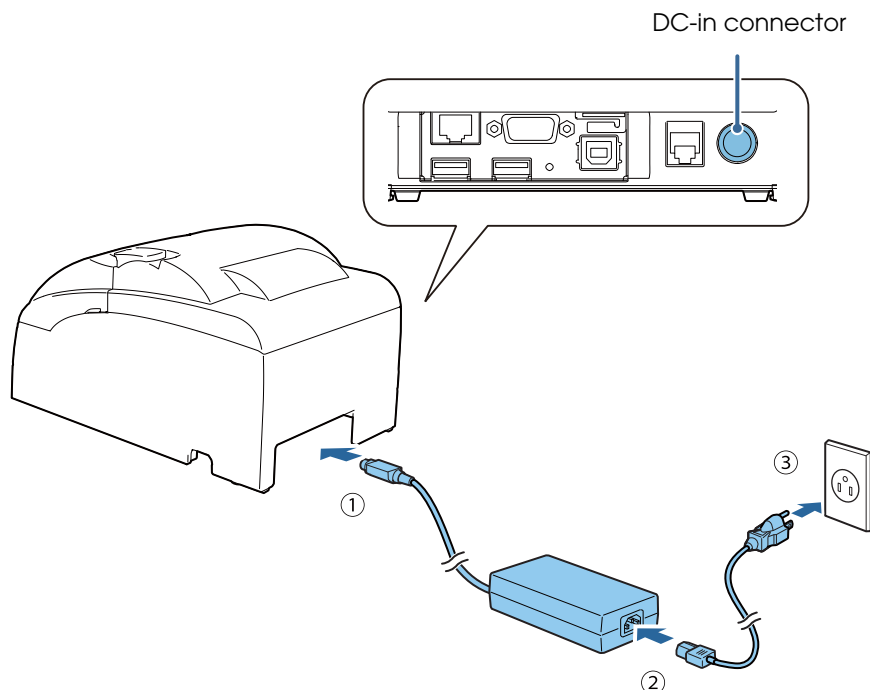
## Connecting the AC Adapter



- **Do not use this product with any voltage other than the specified one.** Doing so may lead to fire or electric shock.
- **Make sure the wall socket power supply satisfies the rated voltage requirements of the power supply unit. Never insert the power supply cable plug into a socket that does not meet the rated voltage requirements of the power supply unit.**  
Doing so may result in damage to both the power supply and the product.
- **Should a fault ever occur in the included AC adapter, immediately turn off the power to the product and unplug the power supply cable from the wall socket.**
- **Be sure to unplug the power supply unit's cable from the wall socket whenever connecting or disconnecting the power supply unit to the product.**  
Failure to do so may result in damage to the power supply unit or the product.

Make sure that the power is turned off, and connect the AC adapter in the following steps.

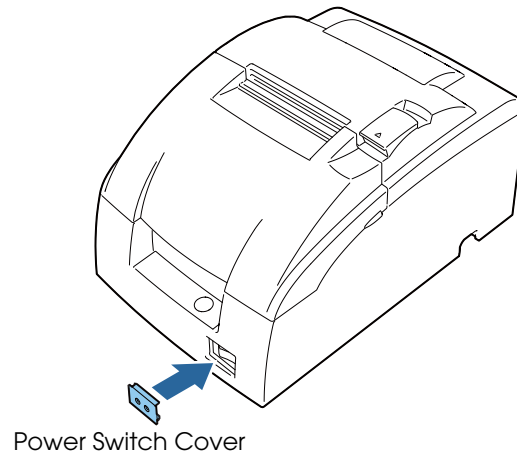
- 1** Push the DC connectors of the AC adapter all the way into the DC-In connectors of the product.
- 2** Push the connector of the power code all the way into the AC inlet of the AC adapter.
- 3** Push the power plug all the way into the grounded outlet.
- 4** Place the AC adapter with the label facing down.



## 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.



**If an accident occurs with the power switch cover attached, unplug the power cord immediately.**

Continued use of the product may cause fire or electric shock.


## Setting the DIP Switches

Various functions can be changed with the DIP switch settings.

When you adjust the items, we recommend to confirm the new setting. The confirmation is performed by running a self-test. (☞ ["Self-test Mode" on page 124](#)).

### Functions

#### DSW1 (DIP Switch 1)

 : default values

| SW | Function                | On                          | Off                            |
|----|-------------------------|-----------------------------|--------------------------------|
| 1  | Printing mode           | Right side up printing mode | Normal printing mode           |
| 2  | Receive buffer capacity | 40 bytes                    | 20 KB                          |
| 3  | Reserved                | -                           | Fixed to Off                   |
| 4  | Reserved                | -                           | Fixed to Off                   |
| 5  | Reserved                | -                           | Fixed to Off                   |
| 6  | Reserved                | -                           | Fixed to Off                   |
| 7  | Reserved                | -                           | Fixed to Off                   |
| 8  | BUSY condition *        | Receive buffer full         | Receive buffer full or Offline |

\*: Be sure to use the device with DIP switches 1-8 ON.

## DSW2 (DIP Switch 2)

: default values

| SW | Function                               | On    | Off          |
|----|--|-------|--------------|
| 1  | Print column                           | 42/35 | 40/33        |
| 2  | Reserved (Auto cutter enable/ disable) | On    | Off          |
| 3  | Reserved                               | -     | Fixed to Off |
| 4  | Pin 25 reset signal *                  | Used  | Not used     |
| 5  | Reserved                               | -     | Fixed to Off |
| 6  | Reserved                               | -     | Fixed to Off |
| 7  | Reserved                               | -     | Fixed to Off |
| 8  | Reserved                               | -     | Fixed to Off |

\*: Be sure to use the device with DIP switches 2-4 ON.

### NOTE

- When the printer has a data receive error, the printer prints "?."
- Usually DIP switch 1-1 should be turned off. The right side up printing mode is a mode used for a printer that is hanging on a wall (☞ ["Setting the "Right side up printing" on page 42](#)). Regardless of the setting of DIP switch 1-1, if you want to perform right side up printing, DIP switch 1-2 must be fixed to off.

## Notes for DIP switch 2-1

The DIP switch 2-1 defines the print columns as listed in the following table.

| Paper width | Character font | DIP switch 2-1 status |     |
|-------------|----------------|-----------------------|-----|
|             |                | ON                    | OFF |
| 76 mm       | Font A (9 x 9) | 35                    | 33  |
|             | Font B (7 x 9) | 42                    | 40  |
| 69.5 mm     | Font A (9 x 9) | 32                    | 30  |
|             | Font B (7 x 9) | 40                    | 36  |
| 57.5 mm     | Font A (9 x 9) | 27                    | 25  |
|             | Font B (7 x 9) | 33                    | 30  |

Unit: cpl (Character per line)

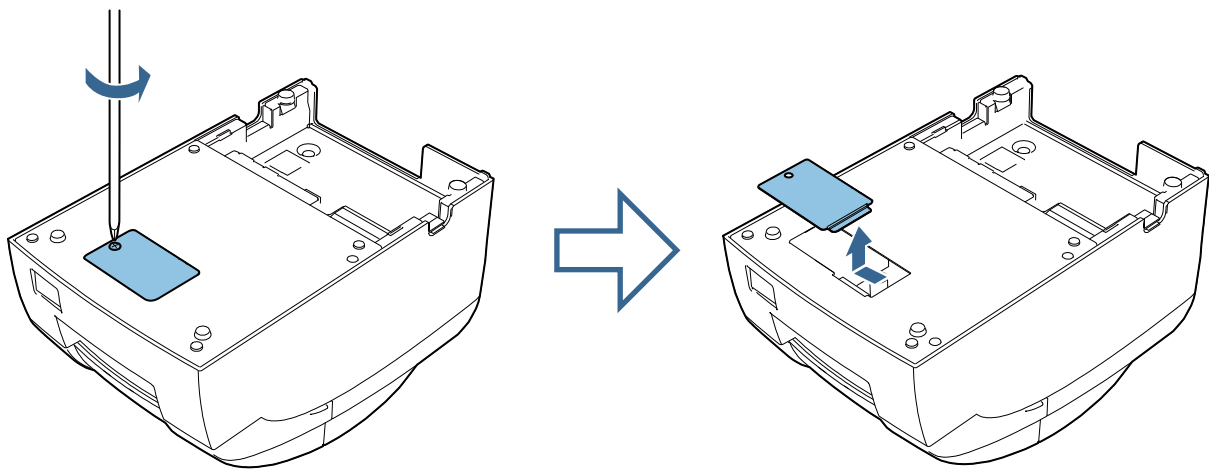
## Setting Procedure

If you need to change settings, follow the steps below to make your changes:

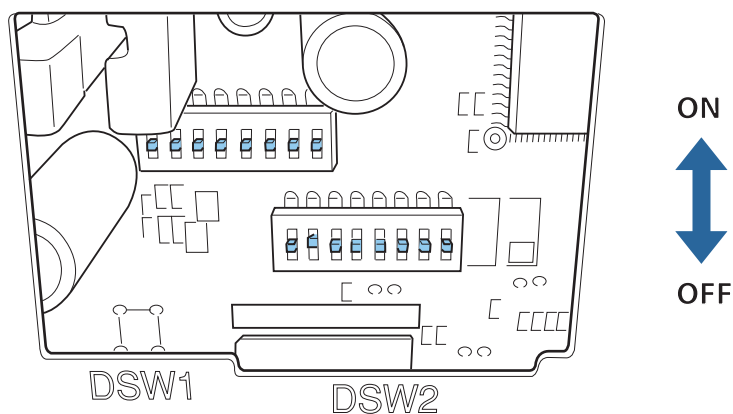
### CAUTION

- Turn off the power while removing the DIP switch cover to prevent an electric short, which can damage the printer.
- Be sure to put back the DIP switch cover before using the printer.

- 1 Make sure the power supply is disconnected.
- 2 Use a crosshead screwdriver to remove the screw holding the DIP switch cover.



- 3 Use a tool, such as tweezers, to set the DIP switches to your liking.



- 4 Attach the DIP switch cover to the base of the printer.

# Setting the Memory Switches

This printer has memory switches as software switches for making a variety of settings.

Memory switches include Msw2, Msw 8, Customized values.

The Memory switch is available to be changed by two methods:

- Memory switch setup mode (☞ ["Memory Switch Setup Mode" on page 64](#))  
You can configure the customized values.
- Memory switch setting utility (☞ ["Software and Manuals" on page 95](#))  
You can change the memory switches set to ON or OFF.

 : default values

## Memory Switch 2

| SW | Function | On | Off          |
|----|----------|----|--------------|
| 1  | Reserved | -  | Fixed to Off |
| 2  | Reserved | -  | Fixed to Off |
| 3  | Reserved | -  | Fixed to Off |
| 4  | Reserved | -  | Fixed to Off |
| 5  | Reserved | -  | Fixed to Off |
| 6  | Reserved | -  | Fixed to Off |
| 7  | Reserved | -  | Fixed to Off |
| 8  | Reserved | -  | Fixed to Off |

## Memory Switch 8

| SW | Function                            | On                               | Off                               |
|----|-------------------------------------|----------------------------------|-----------------------------------|
| 1  | Reserved                            | -                                | Fixed to Off                      |
| 2  | Reserved                            | -                                | Fixed to Off                      |
| 3  | Reserved                            | -                                | Fixed to Off                      |
| 4  | Reserved                            | -                                | Fixed to Off                      |
| 5  | Selection of the cover open status  | Cover open                       | Paper end                         |
| 6  | Reserved                            | -                                | Fixed to Off                      |
| 7  | Reserved                            | -                                | Fixed to Off                      |
| 8  | Printer cover open during operation | Errors that can possibly recover | Errors that automatically recover |

**NOTE**

- Msw 8-5:  
When Off is selected, a bit of the "roll paper end sensor" in each status that is transmitted from the printer is changed every time the roll paper cover is open or closed. When On is selected, a bit of the "roll paper cover open / close" in each status that is transmitted from the printer is changed every time the roll paper cover is open or closed.
- Msw 8-8:  
When Off is selected, a bit of the "automatic recoverable error" in each status that is transmitted from the printer is changed every time the roll paper cover is open. When On is selected, a bit of the "mechanical error" in each status that is transmitted from the printer is changed every time the roll paper cover is open.
- The setting of Msw 8-5 and 8-8 can be set by "Memory switch setup mode". (🔗 ["Memory Switch Setup Mode" on page 64](#)).

## Customize value

| Function  | Select value        |                | Default             |
|---|---------------------|----------------|---------------------|
|   |                     |                |                     |
| Paper width specification   | 57.5 mm             | 69.5 mm        | 76 mm               |
|   | 76 mm               |                |                     |
| Command execution when offline  | Enabled             | Disabled       | Disabled            |
| Automatic paper cutting when cover is closed  | Cutting performed   | No cutting     | No cutting          |
| Automatic paper reduction<br>Reduction of top margin  | No margin reduction | Reduced        | No margin reduction |
| Automatic paper reduction<br>Reduction of bottom margin                                       | No margin reduction | Reduced        | No margin reduction |
| Automatic paper reduction<br>Reduction of line spacing  | No reduction        | Reduced by 25% | No reduction        |
|   | Reduced by 50%      | Reduced by 75% |                     |
| Automatic paper reduction<br>Reduction of line spacing where<br>extra line feeds are included | No reduction        | Reduced by 25% | No reduction        |
|   | Reduced by 50%      | Reduced by 75% |                     |
| Model name  | TM-U220II           | TM-U220II      | TM-U220II           |

**NOTE**

See " Changing the Paper Width" also to adjust roll paper width (🔗 ["Changing the Paper Width" on page 43](#)).

## Memory Switch Setup Mode

You can configure the memory switches (customized values) of the printer.

---

### Entering Memory Switch Setting Mode

Follow the steps below to run this mode.

- 1** Make sure that roll paper is loaded and the printer is turned off.
- 2** Open the roll paper cover.
- 3** Press the FEED button while turning the power on.
- 4** When the ERROR LED comes on, goes out, and then comes on again, release the FEED button.
- 5** Press the FEED button 2 times, and then close the roll paper cover.  
The setting items and operation method guidance are printed. Perform the operations indicated in the guidance information.

When the settings are complete, they are saved. The printer is initialized, and then returns to normal printing status.



# Network Setting

There are following methods for network settings.

- EPSON TMNet WebConfig: Set from the computer's web browser
- Easy Setup: Set from the USB memory where the configuration file is stored.

This section briefly explains how to set from EPSON TMNet WebConfig.

## NOTE

Though Easy Setup requires no network connection during setup, you must specify values for all the setting items available for EPSON TMNet WebConfig.

For about Easy Setup, refer to "TM-i Series Easy Setup Guide".

### 1. Connect via a wired LAN

Connect this product and a PC for setting via a wired LAN.

To use a wireless LAN, connect the wireless LAN unit to the USB port on this product.

### 2. Check the IP address of this product

When this product is turned on and becomes ready for printing, it prints out the automatically acquired IP address.

If no IP address is printed, print a status sheet and check the IP address.

### 3. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig/](http://[This product's IP address]/webconfig/)

When SSL is enabled: [https://\[This product's IP address\]/webconfig/](https://[This product's IP address]/webconfig/)

( [🔗 "Starting EPSON TMNet WebConfig" on page 97](#) )

### 4. Set up TCP/IP


Select the [System Settings] menu and then [Wired] - [TCP/IP] or [Wireless] - [TCP/IP], and set TCP/IP.

After setting, click [Apply] at the bottom of the screen. Then the settings are written to the product. If [Apply] is not clicked, the settings are not applied.

( [🔗 "System Settings - Network - Wired - TCP/IP" on page 110](#) or ["System Settings - Network - Wireless - TCP/IP" on page 112](#) )

## 5. Set up a wireless LAN

For a wireless LAN, select the [System Settings] menu and [Wireless], and set the items such as SSID and Security Mode.

After setting, click [Apply] at the bottom of the screen. Then the settings are written to the product. If [Apply] is not clicked, the settings are not applied. (  ["System Settings - Network - Wireless" on page 111](#))

### NOTE

- Be sure to change the SSID from the default value.
- For security protection, encryption setting is strongly recommended.

## 6. Connect via a wireless LAN

To use a wireless LAN, disconnect the LAN cable from this product after setting is finished.

### NOTE

This product cannot be used with the wired LAN connection and wireless LAN connection at the same time. The wired LAN connection has a priority.

## Confirming Network Setting

You can confirm the network setting with a status sheet or EPSON TMNet WebConfig.

---

### Confirming with a status sheet

Print a status sheet and check the following items.

- Wired TCP/IP
  - \* Get IP Address
  - \* Set using Automatic Private IP Addressing (APIPA)
  - \* IP Address
  - \* Subnet Mask
  - \* Default Gateway
- Wireless
  - \* Communication Standard
  - \* Network Mode
  - \* SSID
  - \* Wireless LAN Frequency Region
  - \* Ad-Hoc Channel
  - \* Authentication Method
  - \* Security Mode
- Wireless TCP/IP
  - \* Get IP Address
  - \* Set using Automatic Private IP Addressing (APIPA)
  - \* IP Address
  - \* Subnet Mask
  - \* Default Gateway

About how to print the status sheet, see ["Status sheet" on page 118](#).

---

### Confirming with EPSON TMNet WebConfig

Refer to the followings.

- ["General Information" on page 98](#)
- ["Information - Wired - TCP/IP" on page 99](#)
- ["Information - Wireless - TCP/IP" on page 99](#)

## Initializing the Network Setting

When network connection fails, follow the steps below to initialize the network setting to the default.

---

### Details of initialization

When initialization is performed, the following EPSON TMNet WebConfig setting items are initialized. For details on EPSON TMNet WebConfig. (🔗 ["EPSON TMNet WebConfig" on page 97](#))

System Settings - Network - Wired - TCP/IP

The IP address is set to DHCP.

System Settings - Network - Wireless

The wireless LAN connection mode is set to Infrastructure mode, and the SSID is initialized to the default value.

System Settings - Network - Wireless - TCP/IP

The IP address for the wireless LAN is set to "192.168.192.168".

System Settings - Time - Time

The time server is disabled and the time difference is initialized to the default value.

Admin Settings - Administrator Information - Password

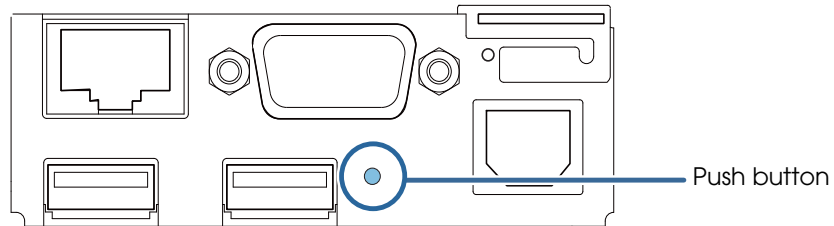
The password required when starting up EPSON TMNet WebConfig is initialized to the default value.

**NOTE**

- EPSON TMNet WebConfig settings other than those listed above are not initialized.
- Files registered to EPSON TMNet WebConfig are saved. (Certificate files, Web contents, PHP, etc.)

## Initialization procedure

- 1 Load the paper on the product and turn on the product.
- 2 Push and hold the push button for 10 seconds or longer.  
The following initialization start message is printed.  
Press the push button with a thin object such as a tweezers.



```
Resetting to Network Setting!
Please Wait...
```

```
WARNING: DO NOT
TURN OFF POWER
```

### CAUTION

Do not turn off the power until the initialization is completed.

- 3 20 to 25 seconds later, the following message is printed, and a status sheet is printed out.

```
Reset to Network Setting Finished!
```

```
*****
```

```
EPSON Status Sheet
```

```
*****
```

## Enabling PHP

To use PHP on this product, enable PHP using EPSON TMNet WebConfig.

**NOTE**

The spooler cannot be used if PHP is enabled.

This section briefly explains the setup procedure.

### 1. Check the microSD card

Make sure that the microSD card is installed in the microSD card slot on this product.

### 2. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig/PHPSetting](http://[This product's IP address]/webconfig/PHPSetting)

When SSL is enabled: [https://\[This product's IP address\]/webconfig/PHPSetting](https://[This product's IP address]/webconfig/PHPSetting)

### 3. Enable PHP

Select [Enable] from "PHP".

After setting, click [Apply] at the bottom of the screen. Then the settings are written to the product. If [Apply] is not clicked, the settings are not applied.

## Enabling HTTPS Communication

To use HTTPS communication on this product, enable the SSL setting using EPSON TMNet WebConfig and register a certificate.

❑ To access the Web server (HTTPS server)

Register the certificate issued by the certification authority (signature source for the Web server SSL certificate) to this product.

❑ To access the Web server (HTTPS server) or to use this product as a Web server (including PHP)

Make sure that the certificate issued by the certification authority (signature source for the SSL certificate to be imported to this product) has been imported to the device.

This section briefly explains the setup procedure.

### 1. Connect this product to a network

Connect this product to a network and turn on the product.

### 2. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig](http://[This product's IP address]/webconfig)

When SSL is enabled: [https://\[This product's IP address\]/webconfig](https://[This product's IP address]/webconfig)

For detail, see "[Starting EPSON TMNet WebConfig](#)" on page 97.

### 3. Set up SSL

Select the [System Settings] menu and then [Security] - [SSL], and set SSL settings.

After setting, click [Apply] at the bottom of the screen. Then the settings are written to the product. If [Apply] is not clicked, the settings are not applied.

For detail, see "[System Settings - Network - Security - SSL](#)" on page 113.

# Settings for Server Direct Print

Set up Server Direct Print using EPSON TMNet WebConfig.  
This section briefly explains the setup procedure.

## 1. Connect this product to a network

Connect this product to a network and turn on the product.

## 2. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig/](http://[This product's IP address]/webconfig/)

When SSL is enabled: [https://\[This product's IP address\]/webconfig/](https://[This product's IP address]/webconfig/)

( [↗ "Starting EPSON TMNet WebConfig" on page 97](#) )

## 3. Set up Server Direct Print

Select the [Web Service Settings] menu and then [Direct Print], and set Server Direct Print settings.

After setting, click [Apply] at the bottom of the screen. Then the settings are written to the product. If [Apply] is not clicked, the settings are not applied.

( [↗ "Web Service Settings - Server Access - Direct Print" on page 107](#) )



## Settings for Connected Devices

The Epson ePOS SDK, ePOS-Device XML, ePOS-Print XML, Server Direct Print, and Device Data Notification systems identify controlled devices by the device ID. The device ID is registered in this product. Set the device ID using EPSON TMNet WebConfig.

This section briefly explains the setup procedure.

### 1. Connect the controlled devices

Physically connect (or connect via network) this product to all devices to be controlled by the product, and turn the power on.

For devices that can be controlled, see ["Software Specifications" on page 141](#).

### 2. Check the information of the controlled devices

Check the type and IP address of devices to be controlled via this product.

In addition, check the device ID to be set for the controlled devices with the system administrator.

### 3. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig/](http://[This product's IP address]/webconfig/)

When SSL is enabled: [https://\[This product's IP address\]/webconfig/](https://[This product's IP address]/webconfig/)

(  ["Starting EPSON TMNet WebConfig" on page 97](#))

### 4. Register the controlled devices

From [Printer], [Customer Display], [Key Input Device], or [Serial Communication Device] in the [Configuration] menu, register and set up the controlled devices.

After setting, click [Apply] or [Add] at the bottom of the screen. Then the settings are written to the product. If [Apply] or [Add] is not clicked, the settings are not applied.

For detail, see the following information.

- Printer: For setting this product and TM printer on the network device IDs and performing test prints. ([page 101](#))
- Customer Display: For setting whether to use the Customer Display and performing test display. The communication settings of this product must be made to match the Customer Display's communication settings. The device ID is set to fixed, "local\_display". ([page 102](#))
- Key Input Device: For setting device IDs for barcode scanners and key input devices, selecting control scripts, and performing operational tests. ([page 103](#))
- Serial Communication Device: For setting whether to use the Serial Communication Device, configuring communication settings, and performing communication tests. Communication settings of this product should match those of a serial communication device. The device ID is set to fixed, "local\_serial".([page 103](#))

## 5. Check the controlled devices

Update the browser and confirm that the devices registered in the Device List are displayed.  
Check if the registered devices operate properly.

---

## Changing Device ID of This Product

To change the device ID of this product, select "local\_printer" from "Model", and enter the device ID to be applied in "Device ID".

This section briefly explains the setup procedure.

### 1. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig/](http://[This product's IP address]/webconfig/)

When SSL is enabled: [https://\[This product's IP address\]/webconfig/](https://[This product's IP address]/webconfig/)

( [🔗 "Starting EPSON TMNet WebConfig" on page 97](#) )

### 2. Change the device ID

From [Printer] in the [Web Service Settings] menu, change the device ID of this product.

Select [local\_printer] from "Model" and enter the device ID to be applied in [Device ID].

After setting, click [Add] at the bottom of the screen. Then the settings are written to the product. If [Add] is not clicked, the settings are not applied.

( [🔗 "Web Service Settings - Device Admin - Printer" on page 101](#) )

### 3. Check the device ID

Update the browser and confirm that the device ID has been changed.

# Registering Web Contents

Registering Web contents to this product allows the use of a Web server that is accessed from an input terminal for content distribution.

You can periodically update Web contents on this product by using a Web server for distributing Web contents that is separate from this product. You can update certificate files used by this product.

## Creating Web Contents

### Types of contents

- Web contents: HTML files, CSS files, JavaScript files, and Image data
- Certificate files: Server authentication certificate, SSL authentication certificate

### File capacity

Zip the files to be registered all together. The zip file name is arbitrary.

#### NOTE

- Use one-byte alphanumeric characters (ASCII characters) for a zip file name and sub-folder name.
- The maximum size of the files before being zipped is 30 MB. Otherwise, registering fails.
- Save `crossdomain.xml` and `clientaccesspolicy.xml` to the root folder if the user web application path is "/".

### Folder configuration

Configure folders in the following manner.

<Example for sample program>

```
ePOS-Device_UM_E_Sample.zip..... : Zip file
├─ index.html
├─ css
│  └─ * .css
├─ img
│  └─ * .bmp
│  └─ * .jpg
│  └─ * .png
├─ js
│  └─ * .js
├─ sample
│  └─ * .html
├─ ssltrustedcerts ..... : Server authentication certificate
├─ example.pem
├─ sslservercerts..... : SSL authentication certificate
│  └─ ServerCert.crt
│  └─ ServerKey.key
│  └─ ChainCert.crt
```

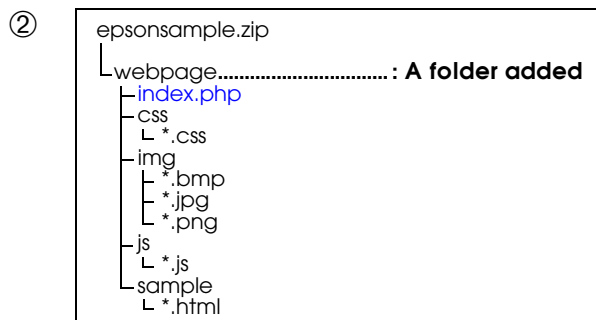
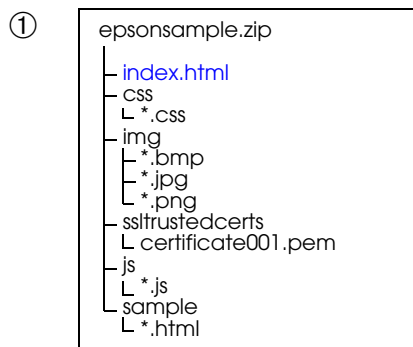
- To access the Web contents registered in this product from an input terminal or other device, the reference URL is different depending on the folder configuration of the zip file as shown below.

When SSL is disabled: ① http://[This product's IP address]/index.html

② http://[This product's IP address]/webpage/index.php

When SSL is enabled: ① https://[This product's IP address]/index.html

② https://[This product's IP address]/webpage/index.php



## Specifications for when PHP is enabled

The specifications for saving Web contents using PHP settings for this product are as follows.

| Item   | Specification                               |                                   |
|--|---|-----------------------------------|
|  | When enabling PHP:                          | When disabling PHP:               |
| Content save location  | microSD card                                | Inside this product               |
| Registering Web contents   | Overwrite *1                                | Replacement with existing file *2 |
| Automatic updating of Web contents                               | Overwrite *1                                | Replacement with existing file *2 |
| Certificate file   | Overwrite *1                                | Replacement with existing file *2 |
| The maximum amount of Web content                                | Depends on the capacity of the microSD card | 30MB                              |
| The maximum amount of Web content that can be registered at once | 30MB  | 30MB                              |

\*1: Overwrites the file with the same file name. Files are not deleted if file names differ.

\*2: Saves a new file after deleting all existing files.

## Verifying the integrity of Web contents with md5 files

You can verify the integrity of auto updating Web contents with md5 files. When this product acquires a Web content file, an md5 file is downloaded to the Web server, if available. The md5 value of the md5 file is compared to the md5 value calculated from the auto updating file and, if the values match, the auto updating file is unpacked and extracted. If these values are inconsistent, the file is not unpacked and extracted.

### Preparation

- Create an md5 file with the same file name as the auto updating file. Only write the md5 value of the auto updating file (zip) in the file.
- Save the md5 file to the same folder as the auto updating file.

### Check Verification

You can check the results of running an automatic update from [Information] - [Web Contents] - [Status of Last Automatic Update] in the EPSON TMNet WebConfig.

For detail, refer to ["Information - Web Contents" on page 100](#).

## Certificate files

You can automatically update Server authentication certificates and SSL authentication certificates using the Web contents automatic update function.

You can download and use Server authentication certificates for this product. For detail, refer to ["System Settings - Network - Security - SSL" on page 113](#).

Make sure to update certificate files, including certificates in use.

#### CAUTION

Make sure to replace certificate files by deleting existing certificate files and saving new certificate files. You will be unable to connect if certificate files currently in use are not included. Make sure to include certificates currently in use in the auto updating file each time.

### File Specifications

Save certificate files to the following folders.

- Server authentication certificate: ssltrustedcerts
- SSL authentication certificate: sslsevercerts

Use the following file names for SSL authentication certificate files.

| Type                   | File name     |
|------------------------|---------------|
| Certificate file       | SeverCr.crt   |
| Private key file       | ServerKey.key |
| Certificate chain file | ChanCr.crt    |

## Registering Web Contents

To register a web content in this product, the following methods are available:

- **Manual Update:** Web contents are registered manually by using EPSON TMNet WebConfig.
- **Automatic Update:** Web contents are saved in the Web server and automatically updated by the product referring to the files periodically.

### CAUTION

You can access the web application even when a web content update is in progress. If you wish to ensure compatibility between programs when linking and running multiple PHP files, be sure to send a maintenance notification in advance or to choose a design that does not require you to stop the PHP application.

---

## Manual Update

### 1. Connect this product to a network

Connect this product to a network and turn on the product.

### 2. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig/](http://[This product's IP address]/webconfig/)

When SSL is enabled: [https://\[This product's IP address\]/webconfig](https://[This product's IP address]/webconfig)

( [🔗 "Starting EPSON TMNet WebConfig" on page 97](#) )

### 3. Register the Web contents

From [Update Settings] in the [Web Service Settings] menu, register the Web contents to this product.

Click [Browse...], specify the zip file to be registered, and then click [Upload].

( [🔗 "Web Service Settings - Web Contents - Update Settings" on page 106](#) )

---

## Automatic Update

### 1. Connect this product to a network

Connect this product to a network and turn on the product.

### 2. Start EPSON TMNet WebConfig

Access the address bar of the Web browser on the PC for setting to start EPSON TMNet WebConfig.

When SSL is disabled: [http://\[This product's IP address\]/webconfig/](http://[This product's IP address]/webconfig/)

When SSL is enabled: [https://\[This product's IP address\]/webconfig/](https://[This product's IP address]/webconfig/)

(  ["Starting EPSON TMNet WebConfig" on page 97](#))

### 3. Set automatic update of Web contents

From [Update Settings] in the [Web Service Settings] menu, set automatic update of Web contents.

Select [Enable] from "Automatic Update".

Configure the settings such as the update frequency and timing of Web contents and the URL of the server where the file to be obtained is stored.

After setting, click [Apply] at the bottom of the screen. Then the settings are written to the product. If [Apply] is not clicked, the settings are not applied.

(  ["Web Service Settings - Web Contents - Update Settings" on page 106](#))

# Settings for Spooler

To use the spooler with this product, you need to enable the spooler using EPSON TMNet WebConfig.

**NOTE**

PHP cannot be used if the spooler is enabled.

This section gives an overview of the setup procedure.

## 1. Connect this product to the network

Connect this product to the network and turn on the power.

## 2. Start EPSON TMNet WebConfig

On the setup computer, enter the following into the address bar of your Web browser to start EPSON TMNet WebConfig.

When SSL is disabled: `http://This product's IP address/webconfig`

When SSL is enabled: `https://[This product's IP address]/webconfig`

( [🔗](#) "Starting EPSON TMNet WebConfig" on page 97)

## 3. Set the Spooler

Make spooler operation settings from [Settings] on the [Web Service Settings] menu.

Select [Enable] from [Spooler].

Set the number of retry times and the retry interval when the printer is not ready to print in [Retry Settings].

After making settings, click [Apply] at the bottom of the screen. The settings are saved to this product. Settings are not enabled unless you click [Apply].

( [🔗](#) "Web Service Settings - Spooler - Settings" on page 104)



## Settings for Print Forwarding

To use print forwarding on this product, you need to register the print forwarding route using EPSON TMNet WebConfig.

**NOTE**

When using print forwarding, make sure you enable the spooler.

This section gives an overview of the setup procedure.

### 1. Connect this product to the network

Connect this product to the network and turn on the power.

### 2. Start EPSON TMNet WebConfig

On the setup computer, enter the following into the address bar of your Web browser to start EPSON TMNet WebConfig.

When SSL is disabled: `http://This product's IP address/webconfig`

When SSL is enabled: `https://[This product's IP address]/webconfig`

( [🔗 "Starting EPSON TMNet WebConfig" on page 97](#) )

### 3. Set the Spooler

Enable the spooler settings, and then set the number of retry times and the retry interval.

( [🔗 "Settings for Spooler" on page 80](#) )

### 4. Set the Print Forwarding Route

Set the print forwarding route from [Print forwarding] on the [Web Service Settings] menu.

In [Message Text], set the notification message printed when print forwarding occurs, and then click [Apply]. The settings for the forwarding message are saved to this product.

From [Print forwarding route to be registered], set the printer and location used for the print forwarding route, and then click [Register]. The settings for the print forwarding route are saved to this product.

After making each setting, click [Apply] or [Register]. Settings are not enabled unless you click [Apply] or [Register].

( [🔗 "Web Service Settings - Spooler - Print forwarding" on page 105](#) )

## Settings for Device Data Notification

To use the device data notification function with this product, you need to make the following settings using EPSON TMNet WebConfig.

- Set the ID for the input device
- Set the target server
- Set the print message output when an error occurs

This section gives an overview of the setup procedure.

### 1. Connect this product to the network

Connect this product to the network and turn on the power.

### 2. Start EPSON TMNet WebConfig

On the setup computer, enter the following into the address bar of your Web browser to start EPSON TMNet WebConfig.

When SSL is disabled: `http://[This product's IP address]/webconfig`

When SSL is enabled: `https://[This product's IP address]/webconfig`

( [🔗](#) "Starting EPSON TMNet WebConfig" on page 97)

### 3. Set the Device Data Notification

Make the necessary settings from [Device Data Notification] on the [Web Service Settings] menu.

After making settings, click [Apply] at the bottom of the screen. The settings are saved to this product. Settings are not enabled unless you click [Apply].

( [🔗](#) "Web Service Settings - Server Access - Device Data Notification" on page 109)

# Application Development Information

This chapter describes how to control the product and gives information useful for product application development.

## Controlling the Printer

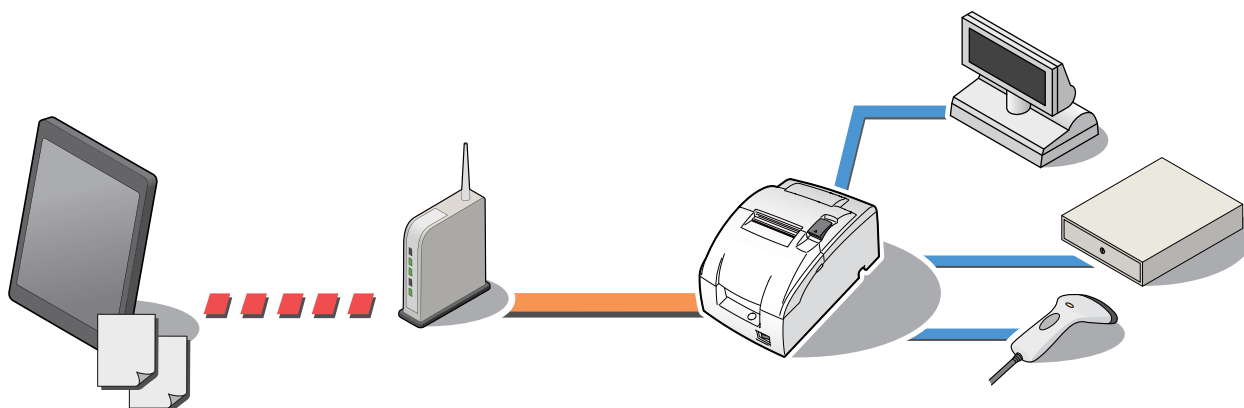
The method for controlling the printer with your print application will depend on the system structure.

| Controlling method  | System  | Page                    |
|---|---|-------------------------|
| Controlling printing and peripherals from iOS, Android and Windows applications, and Web applications.        | Epson ePOS SDK  | <a href="#">page 84</a> |
| Controlling printing and peripheral operations from computer, smartphone, tablet terminals, and other devices | ePOS-Device XML   | <a href="#">page 85</a> |
| Print from devices such as computers, smartphones, or tablets using a Web service                             | ePOS-Print XML  | <a href="#">page 87</a> |
| Notification for data from the device is sent to the Web server which triggers the application                | Device Data Notification  | <a href="#">page 90</a> |
| Web server application prints by including print data in its responses to requests from the product           | Server Direct Print   | <a href="#">page 89</a> |
| Web system using this product as a Web server   | Web Server  | <a href="#">page 91</a> |
| Spooler and Print Forwarding  | <p>This function is available in combination with the following systems.</p> <ul style="list-style-type: none"> <li>• Epson ePOS SDK</li> <li>• ePOS-Device XML</li> <li>• ePOS-Print XML</li> <li>• Device Data Notification</li> <li>• Server Direct Print</li> </ul> | <a href="#">page 92</a> |

## Epson ePOS SDK

The Epson ePOS SDK is an SDK for developing iOS, Android, and Web applications. You can use the Epson ePOS SDK to control the printer with simple code.

Additionally, you can control customer displays, bar code scanners and other POS peripherals connected to this product, and TM printers connected to the network. Further, you can also develop application software using proprietary TM-Intelligent printer functions, such as the spooler function and the communication box.



---

### Operation environment

For more information on the recommended operation environment for application software, refer to the Epson ePOS SDK User's Manuals.

---

### Package

The following packages are provided.

- Epson ePOS SDK for iOS
- Epson ePOS SDK for Android
- Epson ePOS SDK for JavaScript

---

### Web Contents

A Web reference is provided on the following web site.

[https://support.epson.net/publist/reference\\_en/](https://support.epson.net/publist/reference_en/)

---

### How to obtain

Download from our web site.

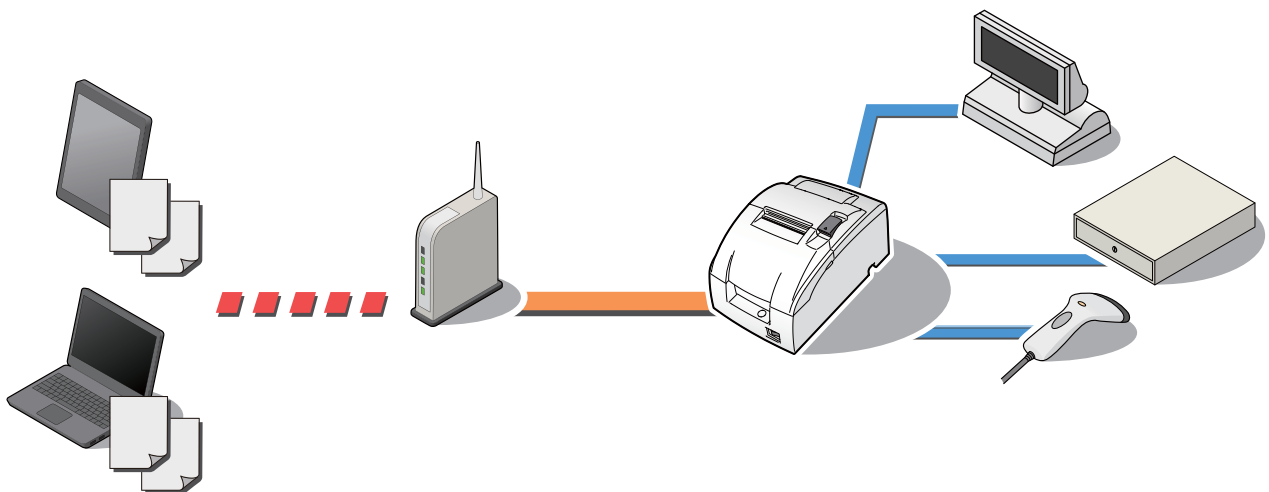
## ePOS-Device XML

ePOS-Device XML is a command system that uses XML to define functions to control various POS peripherals (including this product printer unit) connected to this product. An application creates a request message in XML format and sends it to this product using socket communications.

This product executes control on peripherals and returns a response.

This command system has the following features:

- It enables use of the following devices via this product:
  - Printing to TM printers on the network
  - Displaying to the customer display
  - Barcode scanner of USB interface, input via keyboard, etc.
  - Transmission/reception to/from serial communication device
- Since print data can be saved in the spooler, the application can be released from print processing regardless of the printer status.
- When a network printer is registered, forwarding process can be realized. Also when the printer is unavailable, you can print from another printer.




---

### Operation environment

#### Application

Environment capable of performing socket communications and handling XML documents

#### OS

Example: iOS, Android, Windows, Linux, MacOS, etc.

#### Terminal

Environment connected to the network and capable of performing socket communications

Example: Smartphone, tablet devices, computer, etc.

---

The package includes:

- ePOS-Device XML User's Manual
- Sample program

---

How to obtain

Download from our web site.

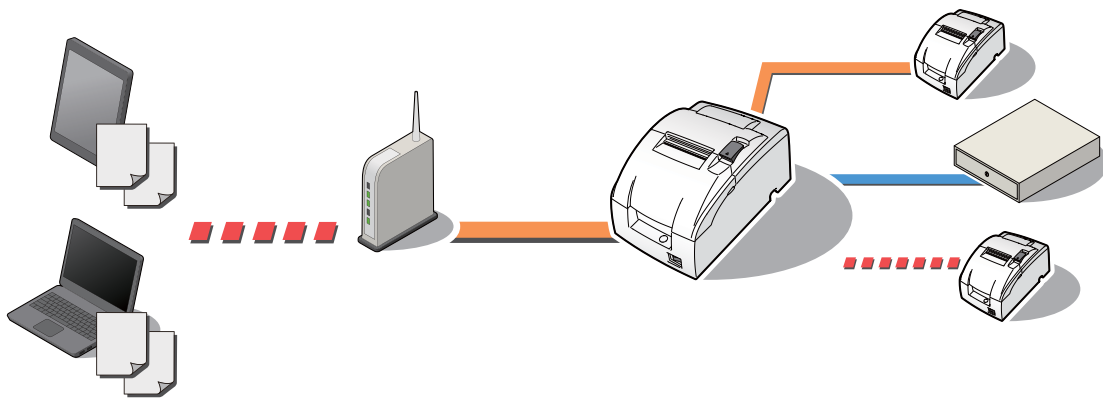
## ePOS-Print XML

ePOS-Print XML is a POS printer command system that uses XML to define the main functions for the ESC/POS command system. The application creates a request message in XML format and sends it to this product using HTTP.

You can print using this product as well as TM printers on a network.

This command system has the following features:

- Print in environments that allow HTTP/HTTPS communication.
- Print using this product as well as TM printers on a network.




---

### Operation environment

#### Application

Environment that allows HTTP/HTTPS communication and that can handle XML documents

#### OS

Example: iOS, Android, Windows, Linux, MacOS, and so on

#### Devices

Environment connected to a network and that allows HTTP/HTTPS communication

Examples: Smartphones, tablets, computers, and so on

---

### The package includes:

The following is provided with the ePOS-Print XML User's Manual package.

- ePOS-Print XML User's Manual
- XML schema files
- Sample programs
- ePOS-Print Editor

---

## How to obtain

Download from our web site.



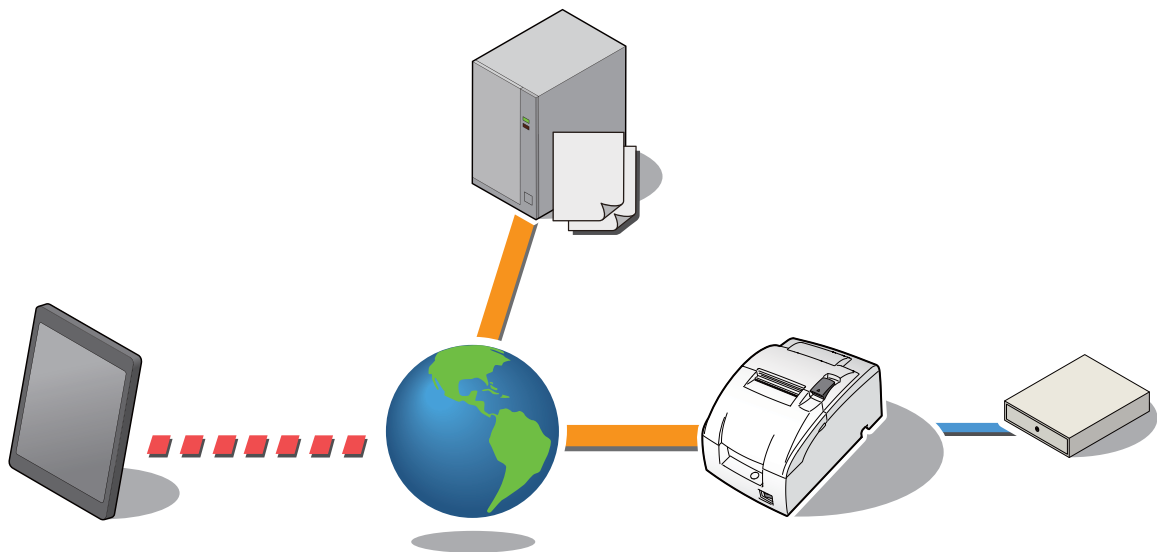
## Server Direct Print

The Server Direct Print function is used to print the print data acquired by this product from the Web server.

Enables a web server application to print to this product or a TM printer on the network by including print data in its responses to requests from the product.

This function has the following features:

- Can acquire print data from three different URLs. Print data can be used in ePOS-Device XML format.
- Printable to TM printers on the network via TM-U220IIB-i.



---

The package includes:

- Server Direct Print User's Manual
- Sample programs in ePOS-Print XML format

---

### How to obtain

Download from our web site.

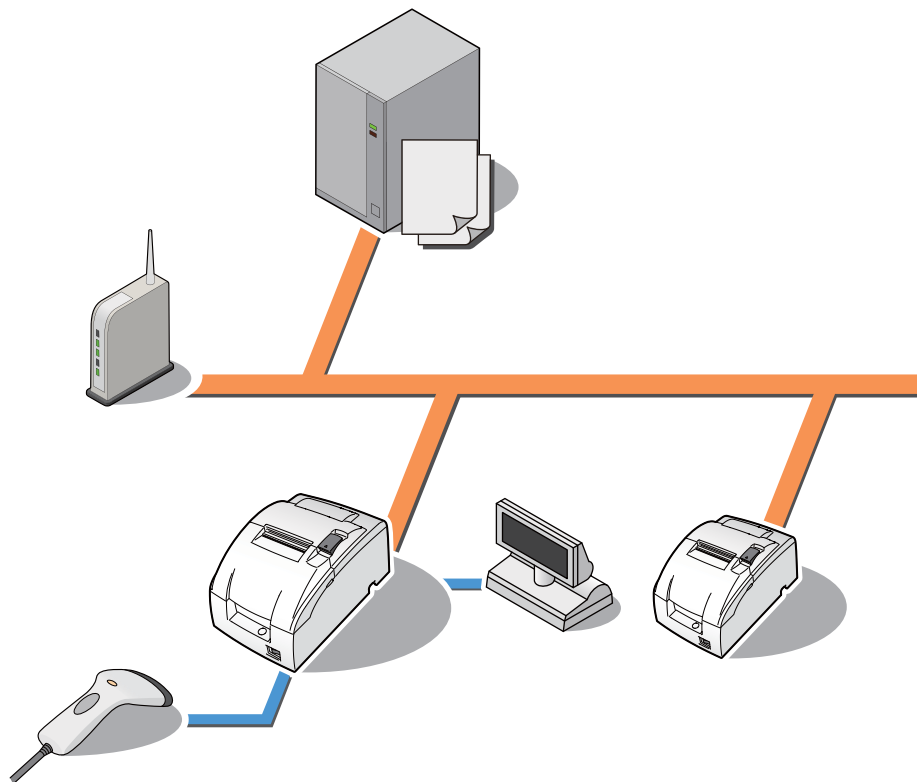
## Device Data Notification

Data from the device can be requested to the Web server to trigger the application.

The response generated by the request of this product can include print data in ePOS-Device XML format, device control, and communication box control.

This comes with the following features.

- Input devices: Key input devices such as barcode scanners, serial communication devices, communication boxes
- Devices that can be controlled by responses from a Web server: Printers, customer displays, serial communication devices, and communication boxes



---

The package includes:

The following is provided with the Device Data Notification User's Manual package.

- Device Data Notification User's Manual
- Sample programs

---

### How to obtain

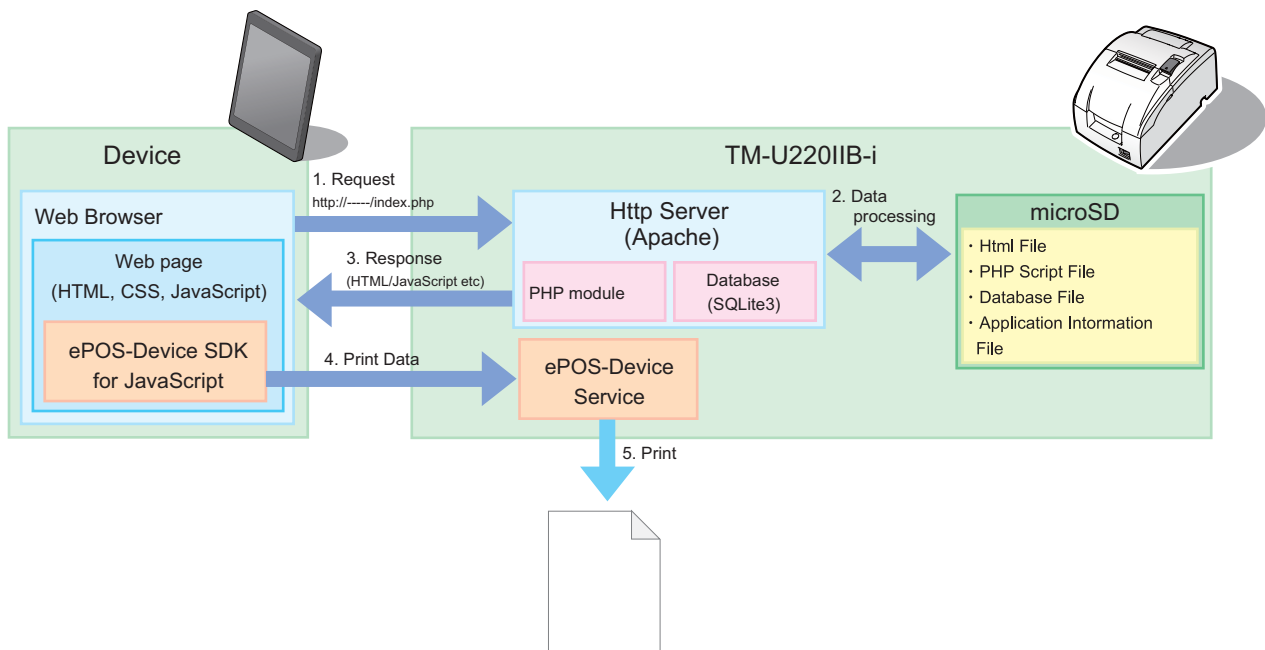
Download from our web site.

## Web Server

Equipped with Web server that supports the scripting language "PHP" and database "SQLite3". Using contents created with PHP, you can:

- Create dynamic Web pages.
- Manage user data by saving files and operating database.

The Web contents registered on this product can be automatically obtained or updated from a specified URL.



### The package includes

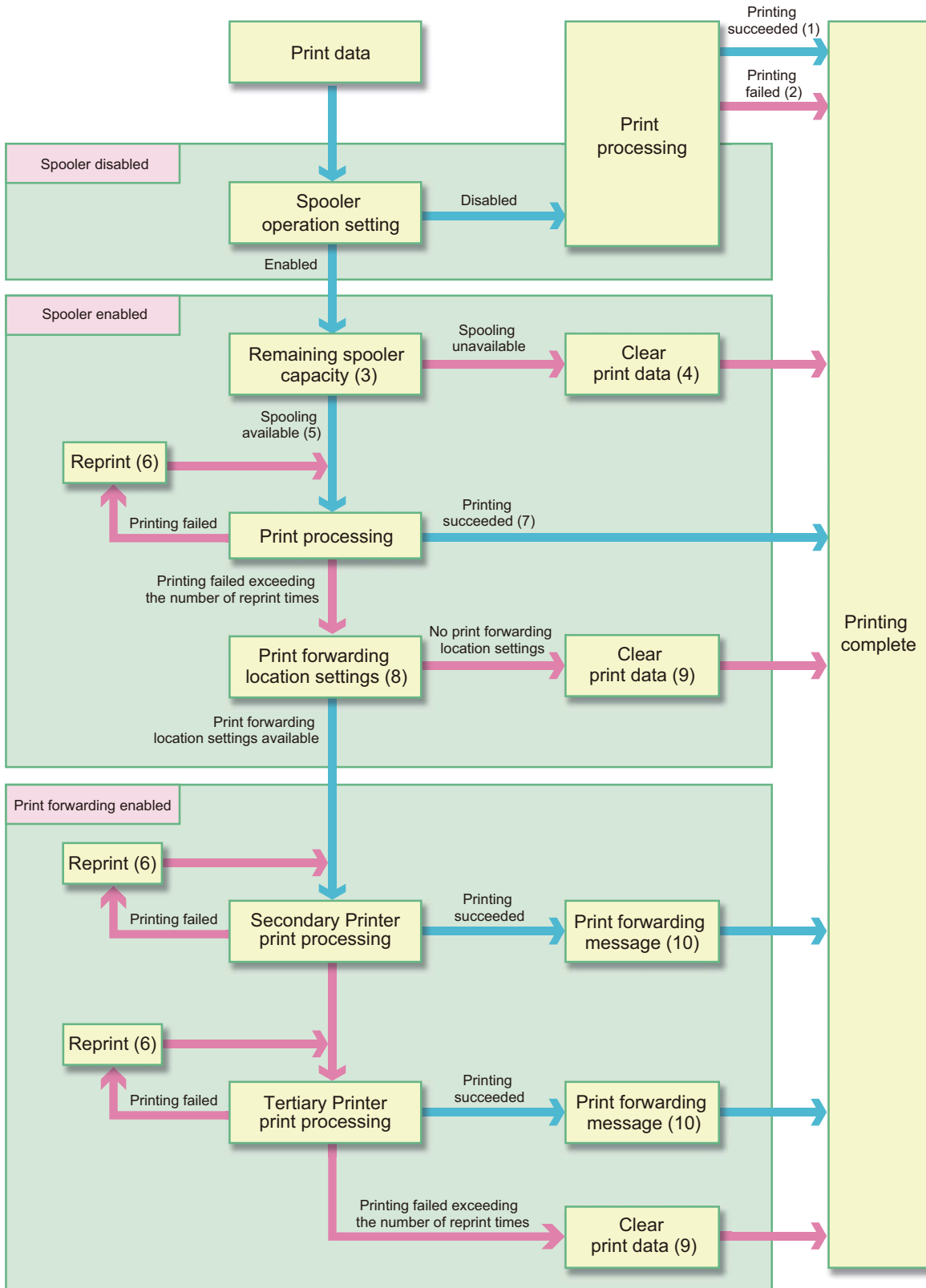
- PHP Setup Manual
- Sample program

### How to obtain

Download from our web site.

## Spooler and Print Forwarding

This section explains the print flow determined by whether or not the spooler or print forwarding is set for this product.



**CAUTION**

- When this product is turned off, data in the spooler and the log storage area is cleared.
- When printing cannot be performed with this product's spooler or print forwarding, the print data is cleared. If printing has not been completed when checking in the application, we recommend reprinting.
- Print data that is too large for the remaining free space in the spooler is cleared. For the spooler capacity, see ["Software Specifications" on page 141](#).
- If the number of job IDs exceeds the maximum number of JobID, the IDs are overwritten starting with the oldest first. For the maximum number of JobID, see ["Software Specifications" on page 141](#).
- You cannot check the print results such as the spooler print data or job IDs from EpsonNet WebConfig.

- (1): [JobID, Print result = true] is returned to the application.
- (2): [JobID, Print result = false, Error code = Printer status] is returned to the application.
- (3): The remaining free space in the spooler and the size of the print data is checked, and the product determines whether or not the print data can be spooled.
- (4): If the print data cannot be spooled, the print data is cleared. [JobID, Print result = false, Error code = EX\_SPOOLER (spooler stopped)] is returned to the application.  
This data is not stored in the product's spooler or the log storage area.
- (5): When print data can be spooled, [JobID, Print result = true] is stored in the spooler. [JobID, Print result = true] is also returned to the application.
- (6): Make the reprint settings (number of times and interval) in EPSON TMNet WebConfig.  
(☞ ["Web Service Settings - Spooler - Settings" on page 104](#))
- (7): When printing is successful, the spooler's print data and [JobID, Print result = true] are deleted. [JobID, Print result = true] are stored in the log storage area of this product.
- (8): Make the print forwarding location settings in EPSON TMNet WebConfig.  
(☞ ["Web Service Settings - Spooler - Print forwarding" on page 105](#)).
- (9): When printing fails, the spooler's print data and [JobID, Print result = true] are deleted. [JobID, Print result = false, Error code = Printer status] are stored in the log storage area of this product.
- (10): Make the forwarding message settings in EPSON TMNet WebConfig.  
(☞ ["Web Service Settings - Spooler - Print forwarding" on page 105](#))

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## Checking the print results

### When the spooler is disabled

After printing, the job ID and print results are returned to the application. Also, when printing cannot be performed, the job ID, print results, and error code are returned.

### When the spooler is enabled

- When print data cannot be spooled:  
[JobID, Print result = false, Error code = EX\_SPOOLER (spooler stopped)] is returned to the application.
- When print data can be spooled:  
After spooling the print data, [JobID, Print result = true] is returned to the application. Printing is not performed at this point. Make an inquiry from the application to this product to confirm if printing was performed.

## Checking the print results from the application

The method for checking the print results differs for each system.

- ePOS-Device XML and ePOS-Print XML:  
Request the empty print data specified for the job ID from the application.  
For details, see the ePOS-Device XML User's Manual or the ePOS-Print XML User's Manual.
- Epson ePOS SDK:  
Use an API that acquires job IDs to acquire the print results from the application.  
For more information on the recommended operation environment for application software, refer to the Epson ePOS SDK User's Manuals.
- Server direct print:  
Return the empty print data specified for the job ID as the response to the print request from this product.  
For details, see the Server Direct Print User's Manual.
- Device data notification:  
Request the empty print data specified for the job ID in ePOS-Device XML format.  
For details, see the Device Data Notification User's Manual.

When an inquiry is made from the application for the print results, this product returns the following information.

- Printing succeeded: [JobID, Print results = true]
- Printing failed: [JobID, Print result = false, Error code = Printer status]
- Printing or print forwarding: [JobID, Print result = false, Error code = Printing]

## Software and Manuals

The following software and manuals are provided for application development.

### Software

| Software                      | Description   | Manual   |
|-------------------------------|---|--|
| Memory Switch Setting Utility | It is used when making changes to the printer's memory switches and customized value settings.  | Memory Switch Setting Utility User's Manual.   |
| Epson ePOS SDK                | The Epson ePOS SDK is a software development kit that integrates the ePOS-Print SDK and the ePOS-Device SDK. The ePOS-Device SDK does not support new products and functions released following the release of the Epson ePOS SDK. It is recommended that application software developed with the ePOS-Device SDK is migrated to the Epson ePOS SDK. For detail, refer to the Migration Guide included with the Epson ePOS SDK. | <ul style="list-style-type: none"> <li>• Epson ePOS SDK for iOS User's Manual</li> <li>• Epson ePOS SDK for iOS Migration Guide</li> </ul>               |
|                               |   | <ul style="list-style-type: none"> <li>• Epson ePOS SDK for Android User's Manual</li> <li>• Epson ePOS SDK for Android Migration Guide</li> </ul>       |
|                               |   | <ul style="list-style-type: none"> <li>• Epson ePOS SDK for JavaScript User's Manual</li> <li>• Epson ePOS SDK for JavaScript Migration Guide</li> </ul> |
| ePOS-Device XML               | Sample files are provided for ePOS-Device XML.  | ePOS-Device XML User's Manual  |
| Server Direct Print           | Sample files are provided for Server Direct Print.  | Server Direct Print User's Manual  |
| ePOS-Print XML                | Sample files are provided for ePOS-Print XML.   | ePOS-Print XML User's Manual   |
| Device Data Notification      | Sample files are provided for Device Data Notification.   | Device Data Notification User's Manual   |
| TM-i Firmware Update Tool     | Tool for updating the TM-i firmware.  | -  |

## Manual

| Manual name                               | Description   | Providing method          |
|---|---|---------------------------|
| TM-U220IIB-i User's Manual                | Describes how to use and set up this product.   | Web                       |
| TM-U220IIB-i Start Here                   | Describes points to be checked before using this product.   | Included with the product |
| TM-U220IIB-i Technical Reference Guide    | This document. Describes how to handle and set up this product.   | Web                       |
| DM-D110/DM-D210 Technical Reference Guide | Describes how to handle and set up the DMD110/DM-D210.  | Web                       |
| OT-WL01 User's Manual                     | Included in the wireless LAN cable set (OT-WL01).   | Included with the product |
| TM-i series WebConfig API User's Manual   | Packs an API for setting EPSON TMNet WebConfig for this product. Using this API, you can set and reference EPSON TMNet WebConfig values from your application.                                | Web                       |
| TM-i series Easy Setup Guide              | Explains procedures that enable settings on the TM-i to be made in a simple manner.<br>You make the settings using a USB memory that contains a file of EPSON TMNet WebConfig setting values. | Web                       |

## How to Get Manuals and Software

You can obtain software and manuals from one of the following URLs.

For customers in North America, go to the following web site:

<https://www.epson.com/support/>

For customers in other countries and regions, go to the following web site:

<https://epson.sn>



# EPSON TMNet WebConfig

EPSON TMNet WebConfig is a Utility to set the product on a web browser.

This section describes EPSON TMNet WebConfig using Internet Explorer as a browser.

## Starting EPSON TMNet WebConfig

Follow the steps below to start up EPSON TMNet WebConfig.

- 1** Start up a PC connected to the network.
- 2** Start up the web browser, and input the following.  
 When SSL is disabled: `http://[This product's IP address]/webconfig/`  
 When SSL is enabled: `https://[This product's IP address]/webconfig/`  
 EPSON TMNet WebConfig starts.

### NOTE

- For the product's IP address, see the status sheet. ([↗ "Confirming with a status sheet" on page 67](#))
- A user name and a password will be required on the authentication screen. The user name is fixed to "epson".  
 The default setting for the password is the product's serial number.  
 You can check the product's serial number on the manufacturing nameplate attached to the product.  
 You can change the password on the [Password Setting] screen ([↗ "Admin Settings - Administrator Information - Password" on page 116.](#)).

## Help Screen Display

Click [Help] to display the help screen for EPSON TMNet WebConfig.

## Version Screen Display

Click [About] to display the version screen for EPSON TMNet WebConfig.

## General Information

You can check the general information of the TM-U220IIB-i.

| Item                  |                                    | Description   |
|-----------------------|------------------------------------|---|
| Administrator Name    |                                    | Displays the administrator name set by the user.              |
| Location/Person       |                                    | Displays the product's installation location set by the user. |
| Firmware Version      |                                    | Shows the TM-i firmware version of the TM-U220IIB-i.          |
| ePOS-Device Version   |                                    | Shows the ePOS-Device version.                                |
| Printer Serial Number |                                    | Shows the serial number of the TM-U220IIB-i.                  |
| Wired                 | MAC Address                        | Shows the MAC address for wired LAN.                          |
| Wireless              | MAC Address                        | Shows the MAC address for wireless LAN.                       |
|                       | Hardware Version                   | Shows the hardware version for wireless LAN.                  |
|                       | Software Version                   | Shows the software version for wireless LAN.                  |
|                       | Communication Standard             | Shows the communication standard.                             |
|                       | Network Mode                       | Shows the communication mode.                                 |
|                       | SSID                               | Shows the SSID.   |
|                       | Wireless LAN Frequency Region      | Shows region codes.   |
|                       | Ad-Hoc Channel                     | Shows the ad-hoc channel.                                     |
|                       | Access Point (MAC Address)         | Shows the MAC address for the access point.                   |
|                       | Signal Condition                   | Shows the signal strength.                                    |
| Time                  |                                    | Shows the date and the present time.                          |
| SSL                   | SSL settings                       | Shows whether the SSL is enable or disable.                   |
|                       | Domain of the certificate          | Shows the domain of the certificate.                          |
|                       | Validity period of the certificate | Shows the validity period of the certificate.                 |
| Refresh               |                                    | Refreshes the information.                                    |

## Information - Wired - TCP/IP

You can check the TCP/IP setting for a wired LAN.

| Item  | Description   |
|---|---|
| Get IP Address                                    | Shows the method of getting the IP address.   |
| Set using Automatic Private IP Addressing (APIPA) | Shows the APIPA setting.  |
| IP Address  | Shows the IP address set with the wired LAN.<br>Nothing is shown when the wireless LAN is enabled.                          |
| Subnet Mask                                       | Shows the subnet mask set with the wired LAN.<br>Nothing is shown when the wireless LAN is enabled.                         |
| Default Gateway                                   | Shows the default gateway set with the wired LAN.<br>Nothing is shown when the wireless LAN is enabled.                     |
| Acquire DNS Server Address Automatically          | Shows the method of getting the address of the DNS server.  |
| DNS Server Address                                | Shows the addresses of the DNS server in order of usage when (Acquire DNS Server Address Automatically) is set to (Enable). |

## Information - Wireless - TCP/IP

You can check the TCP/IP setting for a wireless LAN when the optional wireless LAN cable set (OT-WL01) is used.

| Item  | Description   |
|---|---|
| Get IP Address                                    | Shows the method of getting the IP address.   |
| Set using Automatic Private IP Addressing (APIPA) | Shows the APIPA setting.  |
| IP Address  | Shows the IP address set with the wireless LAN.<br>Nothing is shown when the wired LAN is enabled.                          |
| Subnet Mask                                       | Shows the subnet mask set with the wireless LAN.<br>Nothing is shown when the LAN is enabled.                               |
| Default Gateway                                   | Shows the default gateway set with the wireless LAN.<br>Nothing is shown when the wired LAN is enabled.                     |
| Acquire DNS Server Address Automatically          | Shows the method of getting the address of the DNS server.  |
| DNS Server Address                                | Shows the addresses of the DNS server in order of usage when (Acquire DNS Server Address Automatically) is set to (Enable). |

## Information - Web Contents

You can check the update setting for web contents.

| Item                            | Description  |
|---------------------------------|--|
| Update Schedule                 | Shows whether to enable or disable automatic update of Web contents.<br>Shows the automatic update schedule when automatic update is enabled.                                |
| File URL                        | Shows the URL for the web content file to update automatically.  |
| Date of Installed Web Contents  | When automatic update setting is enabled:<br>Shows the date and time when the registered web contents were created.<br>When manual update setting is disabled:<br>Shows "-". |
| Date of Last Automatic Update   | Shows the latest date and time when the web contents were installed on the TM-U220IIB-i automatically.   |
| Status of Last Automatic Update | Shows the result of the last update of web contents on the TM-U220IIB-i.   |

## Information - Time

You can check the time setting.

| Item               | Description   |
|--------------------|---|
| Time               | Shows the date and the present time.                    |
| Use Time Server    | Shows whether time server is used for time setting.     |
| Get Time Server    | Shows the method of getting time server.                |
| Time Server        | Shows the IP address or host name of the time server.   |
| Time Server Status | Shows the result of communication with the time server. |

## Web Service Settings - Device Admin - Printer

You can set printers or check their operation.

### CAUTION

- This product cannot be deleted from a device.
- The "device ID" for this product can be changed. (🔗 ["Changing Device ID of This Product" on page 74](#))

| Item                     |                     | Description  |
|--------------------------|---------------------|--|
| Printer to be registered | Device ID           | Sets the ID of a printer to register.  |
|                          | Model               | Selects the model of a printer to register.  |
|                          | IP Address          | Sets the IP address of a printer to register.  |
|                          | Retry Interval (ms) | Sets the retry interval of a printer to register.  |
|                          | Add                 | Adds a printer to the Device List.   |
| Registered printers      |                     | Displays a list of registered printers.  |
|                          | Test Print          | Performs a test printing.<br>When SSL is enabled on this product, make sure that the certificate issued by the signature source certification authority of the SSL certificate imported to this product is registered in the computer or device. |
|                          | Delete              | Deletes a registered printer.  |

## Web Service Settings - Device Admin - Customer Display

You can use this to set communication with the customer display and check its operation.

| Item                         |                            | Description   |
|------------------------------|----------------------------|---|
| Customer Display             |                            | Set whether to use the Customer Display.  |
| Communica-<br>tions settings | Communications speed (bps) | Set the communication speed.  |
|                              | Data bit                   | Set the data bit length.  |
|                              | Parity                     | Set the parity.   |
| Brightness settings          |                            | Set the brightness of the customer display.<br>You can set 20%, 40%, 60%, or 100%. The maximum bright-ness is 100%.   |
| Test display                 |                            | Performs a test display to the customer display.<br>When SSL is enabled on this product, make sure that the certificate issued by the signature source certification authority of the SSL certificate imported to this product is registered in the computer or device. |
| Apply                        |                            | Saves settings to TM-U220IIB-i.   |

### NOTE

Communication speed and other items must be set for this product in order to control the customer display as an RS232C-compliant serial communication device. Set these items to match the communication conditions of the customer display connected to.

- There is no need to install a USB RS232 conversion driver.
- If you use the default settings unchanged, there will be no need to alter the communication settings.

## Web Service Settings - Device Admin - Key Input Device

You can set the key input device or check their operation.

| Item                              |                | Description  |
|-----------------------------------|----------------|--|
| Key input device to be registered | Device ID      | Set the ID for the key input device.   |
|                                   | Device name    | Set the device name for the key input device.  |
|                                   | Control script | Set the device control script to control the key input device.   |
| Add                               |                | Adds a device to the Device List.  |
| Registered key input devices      |                | Displays a list of registered key input devices.   |
|                                   | Operating test | Performs an operating test for a registered key input device.<br>When SSL is enabled on this product, make sure that the certificate issued by the signature source certification authority of the SSL certificate imported to this product is registered in the computer or device. |
|                                   | Delete         | Deletes a registered key input device.   |

## Web Service Settings - Device Admin - Serial Communication Device

You can use this to set communication with a serial communication device and check its operation.

| Item                        |                            | Description   |
|-----------------------------|----------------------------|---|
| Serial communication device |                            | Set whether to use the Serial communication device.   |
| Communications settings     | Communications speed (bps) | Set the communication speed.  |
|                             | Data bit                   | Set the data bit length.  |
|                             | Parity                     | Set the parity.   |
|                             | Stop bit                   | Set the stop bit.   |
|                             | Flow control               | Set the flow control.   |
| Communication test          |                            | Performs a communication test.<br>When SSL is enabled on this product, make sure that the certificate issued by the signature source certification authority of the SSL certificate imported to this product is registered in the computer or device. |
| Apply                       |                            | Saves settings to TM-U220IIB-i.   |

## Web Service Settings - Device Admin - Search Printer

You can search and configure printers connected to this product through the network.

| Item                      |                      | Description   |
|---------------------------|----------------------|---|
| List of detected printers | Printer              | Lists the printers connected to the same subnet network as this product, and their information. |
|                           | TCP/IP Setting       | For making the TCP/IP setting for printers detected.  |
|                           | Wireless LAN Setting | For making the wireless LAN setting for printers detected.                                      |
| Refresh                   |                      | Updates information.  |

## Web Service Settings - Spooler - Settings

You can set the spooler settings.

**NOTE**

PHP cannot be used if the spooler is enabled.

| Item           |         | Description                             |   |
|----------------|---------|---|---|
| Basic Settings | Spooler | Enable or disable the spooler function. |   |
| Retry Settings | Retry   | Count                                   | Set the number of retry times when a print error occurs.<br>When print forwarding is set and an error occurs the set number of times, printing is performed using the print forwarding route. |
|                |         | Interval(s)                             | Set the retry interval when a print error occurs.   |
| Apply          |         | Save settings to TM-U220IIB-i.          |   |



## Web Service Settings - Spooler - Print forwarding

You can set the print forwarding route when using print forwarding with this product.

**NOTE**

When using print forwarding, make sure you enable the spooler.

| Item                                    |                   | Description  |
|---|-------------------|--|
| Message Text                            | Message Text      | Set the text printed on notification messages when print forwarding occurs.<br>One-byte alphanumeric characters: within 255 characters |
|   | Text Attributes   | Set the text decorations for notification messages.  |
|   | Position          | Set the print position for notification messages.  |
|   | Cut               | Set whether or not to cut paper after printing a notification message.   |
| Apply                                   |                   | Save the notification message settings for this product.   |
| Print forwarding route to be registered | Primary Printer   | Set the printer used for the print forwarding route.   |
|   | Secondary Printer | Set the printer for the print forwarding location when printing fails on the primary printer.  |
|   | Tertiary Printer  | Set the printer for the print forwarding location when printing fails on primary printer and secondary printer.                        |
| Register                                |                   | Save the settings for the print forwarding route to TM-U220IB-i.   |
| Registered Print forwarding routes      |                   | Display a list of the registered print forwarding routes.  |
|   | Delete            | Clears the settings for selected print forwarding routes.  |

## Web Service Settings - Web Contents - Update Settings

You can use this to register web contents in this product and set updating for them.

See also "[Registering Web Contents](#)" on page 75.

| Item                       |                                   | Description   |
|----------------------------|-----------------------------------|---|
| Automatic Update Settings  | Automatic Update                  | Selects the method of updating web contents.<br>Selecting (Enable) enables "Automatic Update Settings".<br>Selecting (Disable) enables "Web Contents Manual Update".  |
|                            | Frequency                         | Sets the frequency of automatic update for web contents.  |
|                            | Timing                            | Sets the timing of automatic update for web contents.   |
|                            | Update Time                       | Sets the start time of automatic update for web contents.   |
|                            | ID                                | Sets ID for identifying this product at the Web server when (Automatic Update) is set to (Enable).<br>This ID will be the user ID used for Digest authentication. This set value will also be passed as an ID parameter value for the form data posted to the server. |
|                            | Password                          | Set the user ID and password used for Digest authentication.<br>Make sure to set a password as Digest authentication cannot be performed for the user ID without a password.  |
| Automatic Update Settings  | File URL                          | Specifies the URL for a file to update automatically.<br>After specifying it, clicking (File Access Test) checks whether the URL is specified correctly.  |
|                            | Authenticate Server               | Sets whether the server authentication is performed with the registered certificate when accessed through https.  |
|                            | Apply                             | Saves settings to TM-U220IIB-i.   |
| Web Contents Manual Update | Web Contents Archive File (*.zip) | Specifies the web content files to register.  |
|                            | Upload                            | Registers the specified web contents on the TM-U220IIB-i.   |

## Web Service Settings - Server Access - Direct Print

You can set server direct print for the TM-U220IIB-i.

| Item                |             | Description  |
|---------------------|-------------|--|
| Server Direct Print |             | Sets whether to use the Server Direct Print function or not.<br>Select (Enable) or (disable).  |
| ID                  |             | Set ID for the server-side program to identify TM-U220IIB-i when (Server Direct Print) is set to (Enable).<br>This ID becomes the user ID used for Digest access authentication.<br>The set value will also be passed as an ID parameter value for the form data posted to the server. |
| Password            |             | Set the user ID and password used for Digest authentication. Make sure to set a password as Digest authentication cannot be performed for the user ID without a password.  |
| Server1 to 3        | URL         | Specifies the Web server URL and the application path when (Server Direct Print) is set to (Enable).<br><b>Example: http://(IP address of Web server)/Test_print.php</b><br>Click the (Access Test) button to check if the address is accessible.                                      |
|                     | Interval(s) | Set the request interval when (Server Direct Print) is set to (Enable).  |
| Authenticate Server |             | Sets whether the server authentication is performed with the registered certificate when accessed through https.   |
| Apply               |             | Saves settings to TM-U220IIB-i.  |

## Web Service Settings - Server Access - Status Notification

You can set Status Notification for the TM-U220IIB-i.

| Item                | Description  |
|---------------------|--|
| Status Notification | Sets whether to use the Status Notification function or not.<br>Select (Enable) or (Disable).  |
| ID                  | Set ID for the server-side program to identify TM-U220IIB-i when (Status Notification) is set to (Enable). This ID becomes the user ID used for Digest access authentication. The set value will also be passed as an ID parameter value for the form data posted to the server. |
| Password            | Set the user ID and password used for Digest authentication. Make sure to set a password as Digest authentication cannot be performed for the user ID without a password.  |
| URL                 | Specify the Test_print.php address of the Web server when (Status Notification) is set to (Enable).<br><b>Example: http://(IP address of the Web Server)/Test_status.php</b><br>Click the (Access Test) button to check if the address is accessible.                            |
| Interval(s)         | Set the request interval when (Status Notification) is set to (Enable).  |
| Authenticate Server | Sets whether the server authentication is performed with the registered certificate when accessed through https.   |
| Apply               | Saves settings to TM-U220IIB-i.  |

## Web Service Settings - Server Access - Device Data Notification

You can set the device data notification for this product.

| Item     |                          | Description   |   |
|----------|--------------------------|---|---|
| Settings | Device Data Notification | Sets whether to use the Device Data Notification function or not. Select (Enable) or (Disable). |   |
|          | Server Access            | ID  | Set ID for the server-side program to identify TM-U220IIB-i when (Device Data Notification) is set to (Enable). This ID becomes the user ID used for Digest access authentication. The set value will also be passed as an ID parameter value for the form data posted to the server. |
|          |                          | Password  | Set your password used for Digest access authentication when (Device Data Notification) is set to (Enable).   |
|          |                          | URL   | Specify the Test_print.php address of the Web server when (Device Data Notification) is set to (Enable).<br><b>Example: http://(IP address of the Web Server)/Test_status.php</b><br>Click the (Access Test) button to check if the address is accessible.                            |
|          |                          | Server Authentication   | Sets whether the server authentication is performed with the registered certificate when accessed through https.  |
|          |                          | Box ID  | Set the Box ID for the communication device, when (Device Data Notification) is set to (Enable).  |
|          |                          | POST Error  | Print Message   |
|          | Message Text             |   | Set the text for the error messages.  |
|          | Text Attributes          |   | Set the text decorations for the error messages.  |
|          | Cut                      |   | Set whether or not to cut paper after printing an error message.  |
|          | Capture Devices          | Devices   | Select the devices that use device data notification.   |
| Apply    |                          | Save settings to TM-U220IIB-i.  |   |

## System Settings - Network - Wired

You can make settings for a wired LAN network.

| Item                | Description                        |
|---------------------|------------------------------------|
| Link Speed & Duplex | Sets the speed of data link layer. |
| Apply               | Saves settings to TM-U220IIB-i.    |

## System Settings - Network - Wired - TCP/IP

You can make settings for a wired LAN such as IP address.

| Item  | Description   |
|---|---|
| Get IP Address                                    | Sets the method of getting the IP address.  |
| Set using Automatic Private IP Addressing (APIPA) | Enables or disables the APIPA setting when (Get IP address) is set to (Auto).   |
| IP Address  | Sets the IP address when (Get IP Address) is set to (Manual).   |
| Subnet Mask                                       | Sets the subnet mask when (Get IP Address) is set to (Manual).  |
| Default Gateway                                   | Sets the default gateway when (Get IP Address) is set to (Manual).  |
| Acquire DNS Server Address Automatically          | Sets the method of getting the address of the DNS server.   |
| DNS Server Address                                | Sets the addresses of the DNS server in order of usage when (Acquire DNS Server Address Automatically) is set to (Disable). |
| Apply   | Saves settings to TM-U220IIB-i.   |

## System Settings - Network - Wireless

You can make settings for a wireless LAN network when the optional wireless LAN cable set (OT-WL01) is used.

| Item                    | Description   |
|-------------------------|---|
| Network Mode            | Sets the communication mode.  |
| SSID                    | Sets the SSID.  |
| Ad-Hoc Channel          | Sets the ad-hoc channel.<br>(Available only in the ad-hoc mode)                             |
| Communication Standard  | Sets the communication standard.  |
| Authentication Method   | Sets the authentication algorithm.  |
| Security Mode           | Sets the encryption algorithm.  |
| Default WEP Key         | Sets the WEP key to use.  |
| WEP Key 1               | Sets the WEP key 1 when (Security mode) is set to (WEP).                                    |
| WEP Key 2               | Sets the WEP key 2 when (Security mode) is set to (WEP).                                    |
| WEP Key 3               | Sets the WEP key 3 when (Security mode) is set to (WEP).                                    |
| WEP Key 4               | Sets the WEP key 4 when (Security mode) is set to (WEP).                                    |
| WPA/WPA2 Pre-Shared Key | Enter the pass phrase of the pre-shared key when (Security mode) is set to "WPA" or "WPA2". |
| Apply                   | Saves settings to TM-U220IIB-i.   |

### CAUTION

- Initially, Authentication Method is set to Open System and Security Mode is set to None. To ensure security, be sure to change the settings before use.
- The following character types can be used for the SSID, WP key and WPA/WPA2 pre-shared key:
  - \* ASCII characters, including spaces

## System Settings - Network - Wireless - TCP/IP

You can change settings for a wireless LAN such as IP address when the optional wireless LAN cable set (OT-WL01) is used.

| Item  | Description   |
|---|---|
| Get IP Address                                    | Sets the method of getting the IP address.  |
| Set using Automatic Private IP Addressing (APIPA) | Enables or disables the APIPA setting when (Get IP Address) is set to (Auto).   |
| IP Address  | Sets the IP address when (Get IP Address) is set to (Manual).   |
| Subnet Mask                                       | Sets the subnet mask when (Get IP Address) is set to (Manual).  |
| Default Gateway                                   | Sets the default gateway when (Get IP Address) is set to (Manual).  |
| Acquire DNS Server Address Automatically          | Sets the method of getting the address of the DNS server when (Get IP Address) is set to (Auto).                            |
| DNS Server Address                                | Sets the addresses of the DNS server in order of usage when (Acquire DNS Server Address Automatically) is set to (Disable). |
| Apply   | Saves settings to TM-U220IIB-i.   |

## System Settings - Network - Security - Server Authentication

You can register certificates, configure the registered certificates, and delete them in this product.

| Item                | Description        |   |
|---------------------|--------------------|---|
| Import Certificates | Certificate Format | Specifies the file format for root CA certificates to be registered in this product. You can only specify the PEM format.   |
|                     | Certificate File   | Specifies certificate files to be registered in this product.   |
|                     | Upload             | Registers the specified certificate files in this product. Up to 6 files can be registered.   |
| Certificate List    | Certificate        | Displays a list of the certificate files registered in this product and detailed information. Place a check mark next to a certificate displayed in the list to allow for the "Delete" operation. |
|                     | Detail             | For checking detailed information on the certificates.  |
|                     | Delete             | Deletes a checked certificate.  |



## System Settings - Network - Security - SSL

You can set the SSL communication settings.

| Item                               | Description  |
|------------------------------------|--|
| Disable                            | Disables SSL authentication.   |
| Remove the certificate             | Select this checkbox to delete the SSL certificate.                                      |
| Enable                             | Enables SSL authentication.  |
| Update the certificate             | Renews certificates registered to this product.  |
| Create the self signed certificate | Registers the self-signed certificate to this product.                                   |
| Private key file                   | Selects private key files registered to this product.                                    |
| Certificate file                   | Selects server certificate files registered to this product.                             |
| Certificate chain file(Optional)   | Selects certificate chain files registered to this product.                              |
| Apply                              | Registers the settings to this product.  |
| Download                           | You can download certificate files (including self signed certificates) for this product |

### NOTE

- This product only supports TLS. SSL3.0 is not supported.
- HTTP communication is not available when SSL is enabled.
- When SSL is enabled, it will take about 1 minute and 30 seconds after the printer is turned on for printing to be possible.

## System Settings - Proxy - Proxy

You can change the proxy settings and service settings using proxy.

| Item                                 |                          | Description  |
|--------------------------------------|--------------------------|--|
| Proxy URL and Port Number            |                          | Enter the proxy server URL and port number in the following:<br>"http://host name: port number".<br>Example: <b>http://10.0.0.1:8008</b> |
| ID                                   |                          | Registers the authentication ID for using proxy authentication.  |
| Password                             |                          | Registers the authentication password for using proxy authentication.  |
| Enable Proxy for following services: | Automatic Update         | Sets whether the proxy is used for automatic update of Web contents.   |
|                                      | Direct Print             | Sets whether the proxy is used for Server Direct Print.  |
|                                      | Status Notification      | Sets whether the proxy is used for Status Notification.  |
|                                      | Device Data Notification | Sets whether the proxy is used for Device Data Notification.   |
| Apply                                |                          | Saves settings to TM-U220IIB-i.  |

## System Settings - Time - Time

You can set the time for the TM-U220IIB-i.

| Item                |                    | Description  |
|---------------------|--------------------|--|
| Time                |                    | Sets the time.<br>Clicking (Get Time) shows the present time.                                |
| Time Zone (Hour)    |                    | Sets the time zone.  |
| Time Server Setting | Use Time Server    | Sets whether to use the time server or not for time setting.                                 |
|                     | Get Time Server    | Sets the method of getting the IP address/host name for the time server.                     |
|                     | Time Server        | Sets the IP address/host name for the time server when (Get Time Server) is set to (Manual). |
|                     | Time Server Status | Shows the result of last getting time from the time server.                                  |
| Apply               |                    | Saves settings to TM-U220IIB-i.  |

## Admin Settings - Maintenance - Reset

You can reset the network functions and restore the settings for EPSON TMNet WebConfig to the factory default settings.

| Item            | Description  |
|-----------------|--|
| Reset           | Restarts the network functions while retaining the network setting values such as IP address. The settings for EPSON TMNet WebConfig other than the network settings are retained.   |
| Factory Default | Restores the settings for EPSON TMNet WebConfig to the factory default settings. All the settings except for the internal time are initialized. Self-signed certificates, Web contents, and PHP contents registered to this product are also deleted. If a microSD card is inserted in this product, only the files in the webapp folder are deleted. Other folders and files are not deleted. |

## Admin Settings - Administrator Information - Administrator

You can set the information for the administrator of the TM-U220IIB-i.

| Item               | Description   |
|--------------------|---|
| Administrator Name | Sets the name of the administrator of the TM-U220IIB-i. |
| Location/Person    | Sets the location where the TM-U220IIB-i is installed.  |
| Apply              | Saves settings to TM-U220IIB-i.                         |

## Admin Settings - Administrator Information - Password

You can change a password of EPSON TMNet WebConfig.

| Item              | Description                              |
|-------------------|--|
| Old Password      | Enter the current password.              |
| New Password      | Enter the new password.                  |
| Re-input Password | Enter the new password for confirmation. |
| Apply             | Saves settings to TM-U220IIB-i.          |

### CAUTION

A user name and a password will be required on the authentication screen when you start up this utility and when you change settings. Enter "epson" for the user name and the password you set for the password.

The initial setting for the password is the product's serial number.

You can check the product's serial number on the manufacturing nameplate attached to the product.

## PHP settings

### Opening PHP Setting Screen

Follow the steps below to open the PHP Setting screen of EPSON TMNet WebConfig.

- 1** Start up a PC connected to the network.
- 2** Start up the Web browser, and input the following in the address bar.  
 When SSL is disabled: [http://\[This product's IP address\]/webconfig/PHPSetting](http://[This product's IP address]/webconfig/PHPSetting)  
 When SSL is enabled: [https://\[This product's IP address\]/webconfig/PHPSetting](https://[This product's IP address]/webconfig/PHPSetting)

### PHP settings

You can configure the PHP settings for this product.

| Item                      |                         | Description  |
|---------------------------|-------------------------|--|
| PHP                       |                         | Enables/disables PHP function.                           |
| Web Contents Save Storage |                         | Shows the storage to save the Web contents.              |
| microSD                   | Status                  | Displays whether microSD card can be used.               |
|                           | Free Space / Total Size | Shows the free space and total size of the microSD card. |
| Apply                     |                         | Saves settings to TM-U220IIB-i.                          |

**NOTE**

The spooler cannot be used if PHP is enabled.

## Status sheet

Make sure the product is turned on, press the push button at the interface part for approximately 3 seconds. When you release the button, a status sheet on which network parameters are printed will be ejected. With the status sheet, you can check the network settings.

Press the push button with a thin object such as a tweezers.

### CAUTION

If you keep pressing the button for more than 10 seconds, the network settings are initialized.

### Information on a status sheet

```
*****  
EPSON Status Sheet  
*****
```

<General Information>

```
Firmware  
X.XX  
ePOS-Device  
X.XX  
Model  
TM-U220IIB-i  
Time  
yyyy-mm-dd hh:mm:ss  
GMT+hh:mm
```

⋮

<Server Direct Print>

```
Use  
Disable  
<Status Notification>  
Status Notification  
Disable  
<Syslog Storage>  
Use microSD  
No
```

| Item  | Description   |
|---|---|
| <b>General Information</b>                        | Shows the product's TM-i firmware version, ePOS-Device version, product's name, and time. |
| Firmware  | Shows the product's TM-i Firmware version.  |
| ePOS-Device                                       | Shows ePOS-Device Service version.  |
| Model   | Shows "TM-U220IIB-i".   |
| Time  | Shows the date, the present time, and the time difference.                                |
| Administrator Name                                | Shows the administrator name.   |
| Location/Person                                   | Shows the location and the user name.   |
| <b>Wired</b>                                      | Shows wired LAN settings.   |
| MAC Address                                       | Shows the MAC address.  |
| Link Speed & Duplex                               | Shows the speed of data link layer.   |
| <b>Wired TCP/IP</b>                               | Shows TCP/IP settings for wired LAN.  |
| Get IP Address                                    | Shows the method of getting the IP address.   |
| Set using Automatic Private IP Addressing (APIPA) | Shows the APIPA setting.  |
| IP Address  | Shows the IP address.   |
| Subnet Mask                                       | Shows the subnet mask.  |
| Default Gateway                                   | Shows the default gateway.  |
| Acquire DNS Server Address Automatically          | Shows the method of getting the address of the DNS server.                                |
| DNS Server Address                                | Shows the address of the DNS server.  |
| <b>Wireless</b>                                   | Shows wireless LAN settings.  |
| MAC Address                                       | Shows the MAC address.  |
| Hardware Version                                  | Shows the hardware version of the wireless LAN cable set (OT-WL01).                       |
| Software Version                                  | Shows the software version of the wireless LAN cable set (OT-WL01).                       |
| Communication Standard                            | Shows the wireless LAN communication standard.  |
| Network Mode                                      | Shows the network mode.   |
| SSID  | Shows the SSID.   |
| Wireless LAN Frequency Region                     | Shows the frequency range.  |
| Ad-Hoc Channel                                    | Shows the ad-hoc channel.   |
| Authentication Method                             | Sets the authentication method.   |
| Security Mode                                     | Shows the encryption scheme.  |

| Item  | Description   |
|---|---|
| <b>Wireless TCP/IP</b>                            | Shows TCP/IP settings for wireless LAN.   |
| Get IP Address                                    | Shows the method of getting the IP address.   |
| Set using Automatic Private IP Addressing (APIPA) | Shows the APIPA setting.  |
| IP Address  | Shows the IP address.   |
| Subnet Mask                                       | Shows the subnet mask.  |
| Default Gateway                                   | Shows the default gateway.  |
| Acquire DNS Server Address Automatically          | Shows the method of getting the address of the DNS server.  |
| DNS Server Address                                | Shows the address of the DNS server.  |
| <b>Time Server Setting</b>                        | Shows time settings.  |
| Use Time Server                                   | Shows whether to use the time server or not.  |
| Get Time Server                                   | Shows the method of getting the time server's IP address and host name.   |
| Time Server                                       | Shows the IP address of the time server's IP address and host name.   |
| Time Server Status                                | Shows the result of communication with the time server.   |
| <b>Proxy Configuration</b>                        | Shows proxy settings.   |
| Proxy URL   | Shows the proxy server URL.   |
| ID  | Shows the proxy authentication ID to be registered.   |
| Web Contents Update UseProxy                      | Shows whether the proxy is used when automatic updating for Web contents.   |
| Server Direct Print UseProxy                      | Shows whether the proxy is used for Server Direct Print.  |
| Status Notification UseProxy                      | Shows whether the proxy is used for Status Notification.  |
| Device Data Notification UseProxy                 | Shows whether to use a proxy for device data notification.  |
| <b>Device</b>                                     | Shows the following information of the devices registered for ePOS-Device. <ul style="list-style-type: none"> <li>· Device ID</li> <li>· Model number</li> <li>· IP address</li> <li>· Connection status</li> </ul> |



| Item  | Description   |
|---|---|
| <b>Customer Display</b>                       | Shows the device ID <sup>*1</sup> and the following customer display information that is registered in ePOS-Device.   |
| Use   | Shows whether using the customer display.   |
| Communications speed <sup>*1</sup>            | Shows the communication speed.  |
| Data bit <sup>*1</sup>                        | Shows the data bit.   |
| Parity <sup>*1</sup>                          | Shows the parity.   |
| Brightness setting <sup>*1</sup>              | Shows the brightness of the customer display.   |
| <b>KeyInput Device</b>                        | Displays, for each device ID <sup>*2</sup> , the information below on key input devices registered in ePOS-Device.  |
| Device name <sup>*2</sup>                     | Shows the device name and VID/PID.  |
| Control script <sup>*2</sup>                  | Shows the control script of the key input device.   |
| <b>Serial Communication Device</b>            | Shows the device ID <sup>*3</sup> and following serial communication device information that is registered in ePOS-Device.  |
| use   | Shows whether using the serial communication device.  |
| Communications speed (bps) <sup>*3</sup>      | Shows the communication speed.  |
| Data bit <sup>*3</sup>                        | Shows the data bit.   |
| Parity <sup>*3</sup>                          | Shows the parity.   |
| Stop bit <sup>*3</sup>                        | Shows the stop bit.   |
| Flow Control <sup>*3</sup>                    | Shows the flow control.   |
| <b>Web Contents Update</b>                    | Shows update settings for web contents.   |
| Use Automatic Update                          | Shows whether automatic updating of web contents is enabled or disabled.  |
| Date of Installed Web Contents <sup>*4</sup>  | Automatic update setting: Shows time and date the Web contents (zip file) are created.<br>Manual update setting: Shows time and date the Web contents are uploaded. |
| Date of Last Automatic Update <sup>*4</sup>   | Shows last automatically updated time and date.   |
| Status of Last Automatic Update <sup>*4</sup> | Shows last automatically updated results.   |

| Item                                 | Description   |
|--------------------------------------|---|
| <b>Server Direct Print</b>           | Shows Server Direct Print settings.   |
| Use                                  | Shows Enable or Disable of Server Direct Print.   |
| ID * <sup>5</sup>                    | Shows ID for the server-side program to identify TM-U220-i.   |
| Authenticate Server * <sup>5</sup>   | Shows whether the server authentication is performed with the registered certificate when accessed through https.   |
| Server1 to 3 * <sup>5</sup>          | Shows the information of the registered web server.   |
| URL * <sup>5</sup>                   | Shows the URL of the registered web server.   |
| Access Test * <sup>5</sup>           | To perform the test access to the Web server, and shows the results.  |
| Interval(s) * <sup>5</sup>           | Shows the request interval.   |
| <b>Status Notification</b>           | Shows Status Notification settings.   |
| Status Notification                  | Shows Enable or Disable of Status Notification.   |
| ID * <sup>6</sup>                    | Shows ID for the server-side program to identify TM-U220-i.   |
| URL * <sup>6</sup>                   | Shows the URL of the registered web server and path to the application.   |
| Authenticate Server * <sup>6</sup>   | Shows whether the server authentication is performed with the registered certificate when accessed through https.   |
| Access Test * <sup>6</sup>           | To perform the test access to the Web server, and shows the results.  |
| Interval(s) * <sup>6</sup>           | Shows the request interval.   |
| <b>Device Data Notification</b>      | Shows the device data notification.   |
| Use                                  | Shows enable/disable for the device data notification.  |
| ID * <sup>7</sup>                    | Shows the ID used to identify this product on the Web server.   |
| URL * <sup>7</sup>                   | Shows the set IP address information or host name.  |
| Server Authentication * <sup>7</sup> | When performing https access, shows whether or not to perform server authentication using a registered certificate. |
| Access Test * <sup>7</sup>           | Perform an access test to the Web server and show the results.  |
| Box ID * <sup>7</sup>                | Shows the Box ID for the communication box.   |
| Print Message * <sup>7</sup>         | When a data notification error occurs, show whether or not an error message is printed.                             |
| Device name * <sup>7</sup>           | Shows the device ID for devices that use device data notification.  |

| Item                    | Description   |
|-------------------------|---|
| <b>Spooler</b>          | Shows spooler settings.   |
| Use                     | Shows enable/disable for the spooler.                           |
| Count *8                | Shows the number of retry times when printing from the spooler. |
| Interval(s) *8          | Shows the retry interval when printing from the spooler.        |
| <b>Print forwarding</b> | Shows the printer forwarding route settings for the spooler.    |
| Print forwarding routes | Shows the route for print forwarding.                           |
| <b>Syslog Storage</b>   | Reserved for system.  |
| Use microSD             | Reserved for system.  |
| <b>SSL</b>              | Shows the SSL settings.   |
| Use                     | Shows enable/disable for the SSL.                               |

\*1: Printed only when the customer display is registered to ePOS-Device ([↗ page 102](#)).

\*2: Printed only when the key input devices are registered to ePOS-Device ([↗ page 103](#)).

\*3: Printed only when the serial communication device is registered to ePOS-Device ([↗ page 103](#)).

\*4: Printed only when the automatic update setting for web contents is enabled ([↗ page 106](#)).

\*5: Printed only when the server direct print is enabled ([↗ page 107](#)).

\*6: Printed only when the status notification is enabled ([↗ page 108](#)).

\*7: Printed only when device data notification is enabled ([↗ page 109](#)).

\*8: Printed only when spooler settings are enabled ([↗ page 104](#)).

# Settings Confirmation Mode

In addition to normal printing mode, there is also a self test mode and hexadecimal dump mode to check the various printer settings.

## Self-test Mode

The self test lets you know if your printer is operating properly. It checks the control circuits, printer mechanisms, print quality, control software version, and DIP switch settings.

This test is independent of any other equipment or software, so it is a good idea to run it when you first set up the printer and if you have any trouble. If the self tests work correctly, the problem is in the other equipment or the software, not the printer.

---

### Run the Self-test Mode

Follow the steps below.

- 1** Make sure the printer is turned off and the roll paper cover is closed properly.
- 2** While holding down the FEED button, turn on the printer using the switch on the front of the printer. The self test prints the printer settings and then prints the following, cuts the paper, and pauses. (The PAPER OUT light blinks.)  

If you want to continue SELF-TEST printing, Please press the FEED button.
- 3** Press the FEED button to continue printing. The printer prints a pattern using the built-in character set.
- 4** The self test automatically ends and cuts the paper after printing the following:

\*\*\* completed \*\*\*

The printer is ready to receive data as soon as it completes the self test.

|             |  |
|-------------|--|
| <b>NOTE</b> | If you want to pause the self test manually, press the FEED button. Press the FEED button again to continue the self test. |
|-------------|--|

## Hexadecimal Dumping Mode

In the hexadecimal dumping mode, the printer prints the data transmitted from a host computer in hexadecimal numbers and their corresponding characters.

### Starting Hexadecimal Dump Mode

Follow the steps below to run this mode.

#### NOTE

- If there is no character corresponding to print data, "." is printed.
- If print data is less than one line, press the Feed button to print the line.
- Applications that confirm printer status may not work correctly during the hexadecimal dumping mode. The printer returns only the status for "Transmit real-time status."

Follow the steps below.

- 1 Open the roll paper cover.
- 2 While pressing the Feed button, turn on the printer. (Keep pressing the Feed button until the Error LED is flashing.)
- 3 Close the roll paper cover.  
After this, all the data received by the printer is printed in hexadecimal numbers and their corresponding ASCII characters.

Printing example:

```
Hexadecimal Dump
To terminate hexadecimal dump,
press FEED button three times.

1B 21 00 1B 26 02 40 40 1B 69 . ! . . & . @ @ . i
1B 25 01 1B 63 34 00 1B 30 31 . % . . c 4 . . 0 1
41 42 43 44 45 46 47 48 49 4A A B C D E F G H I J

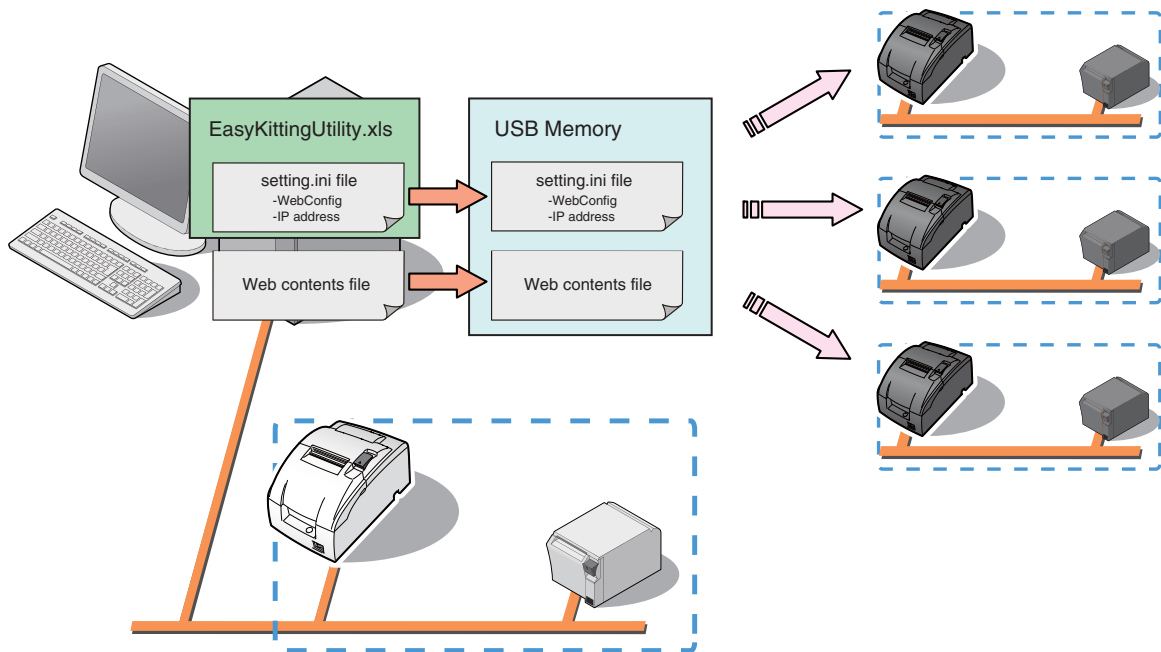
*** completed ***
```

- 4 Turn off the printer or press the Feed button three times to return to the normal mode.

# Easy Setup

Easy setup is a function that allows you to set the EPSON TMNet WebConfig by simply inserting a USB memory stick and turning on the power. The USB memory stick should contain a file (setting.ini) with the setting values for EPSON TMNet WebConfig and a file with web content. When a TM printer connected from TM-i via the network is used, it is also possible to configure the network settings such as the IP address for the TM printer at the same time.

For detail, refer to “TM-i series Easy Setup Guide”.



## Checking/Updating TM-i Firmware

### Checking the TM-i Firmware Version

- Use "Software" in the status sheet ([page 67](#))
- Use "General" in EPSON TMNet WebConfig ([page 98](#))

### Updating TM-i Firmware

You can use the TM-i Firmware Update Tool to do the update. ( [↗ "Software" on page 95](#) )

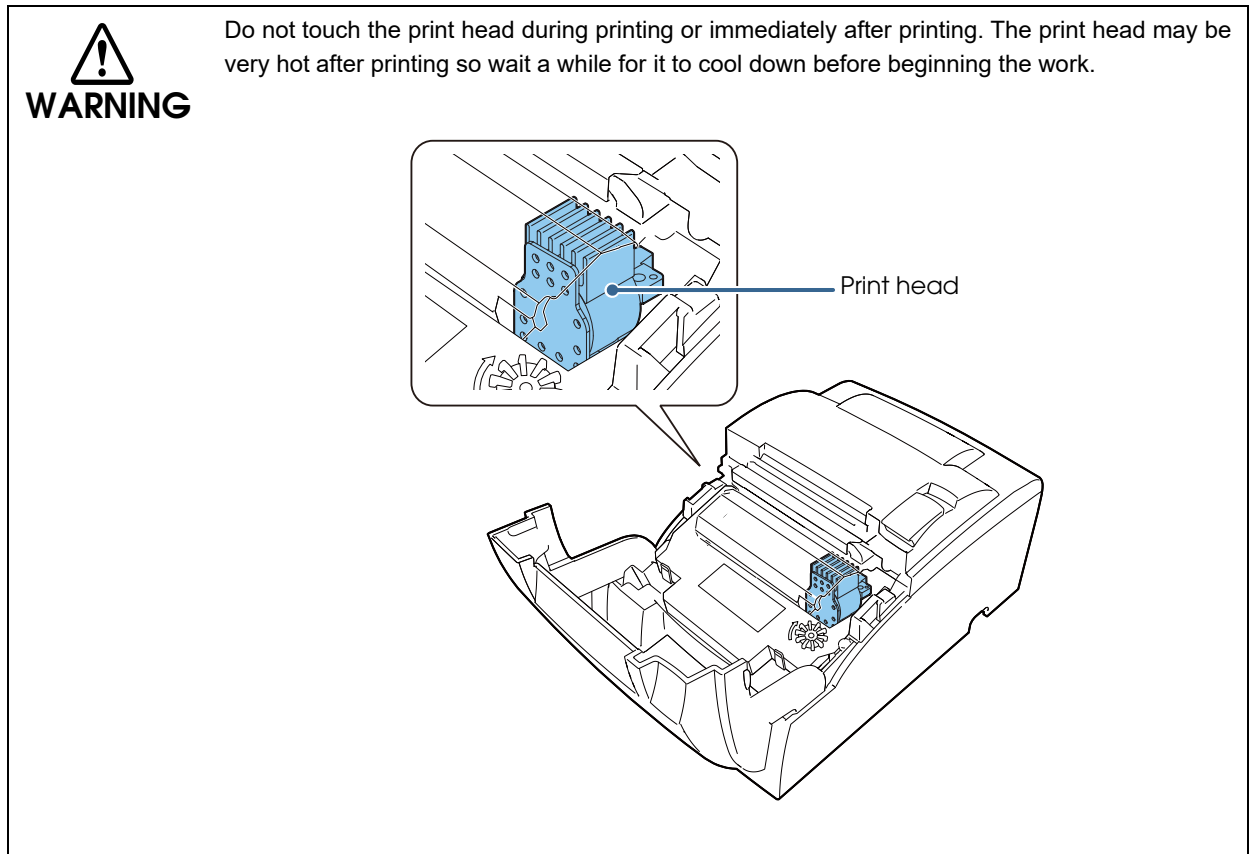




# Handling

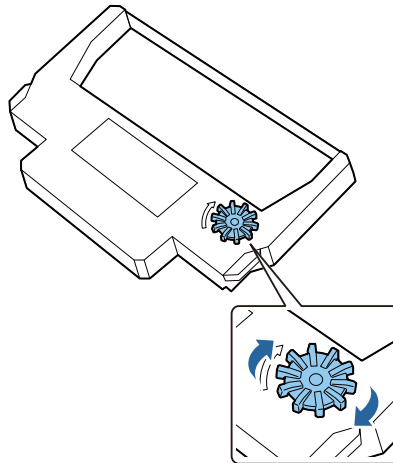
This chapter describes basic handling of the product.

## *Installing/Replacing the Ribbon Cassette*

**CAUTION**

Be sure to use the specified ribbon cassette. ([↗ "Ribbon Specifications" on page 147](#))

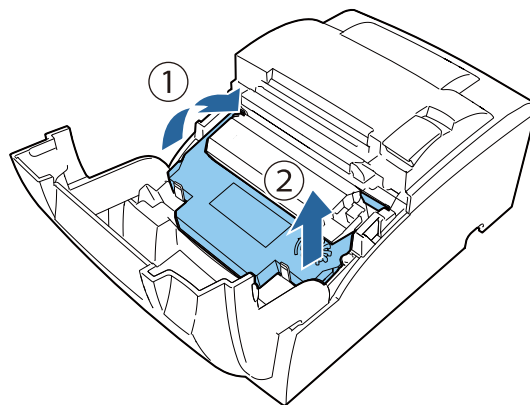
- 1 Turn off the product.
- 2 Open the ribbon cassette cover.
- 3 Turn the knob on the ribbon cassette two or three times in the direction of the arrow.



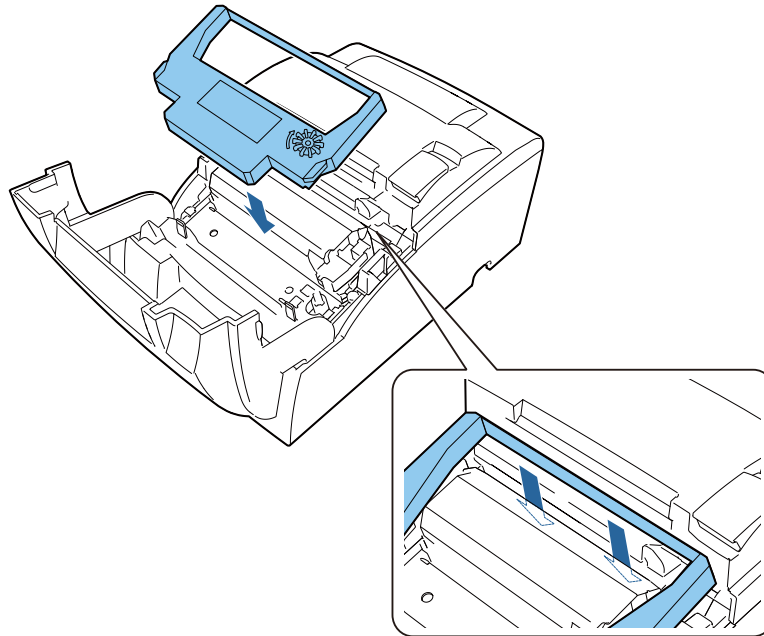
**CAUTION**

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.

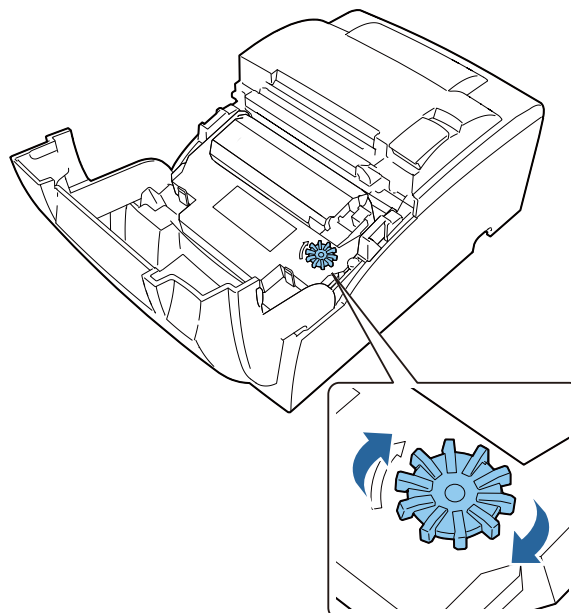
- 4 Remove the used ribbon cassette if there is one.



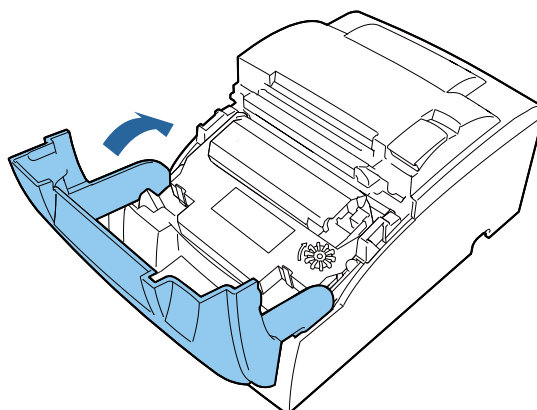
- 5** Install the ribbon cassette so that the ribbon enters between the print head and platen and then push down on the ribbon cassette until it clicks. Check that the ribbon is not wrinkled or creased.



- 6** Turn the knob on the ribbon cassette two or three times in the direction of the arrow.



**7** Close the ribbon cassette cover.



## Installing/Replacing the Roll Paper



- **Do not open the roll paper cover during printing.**  
The product may be damaged.
- **Do not touch the manual cutter with your hands when installing or replacing the roll paper.**  
Otherwise, you may be injured because the manual cutter blade is sharp.



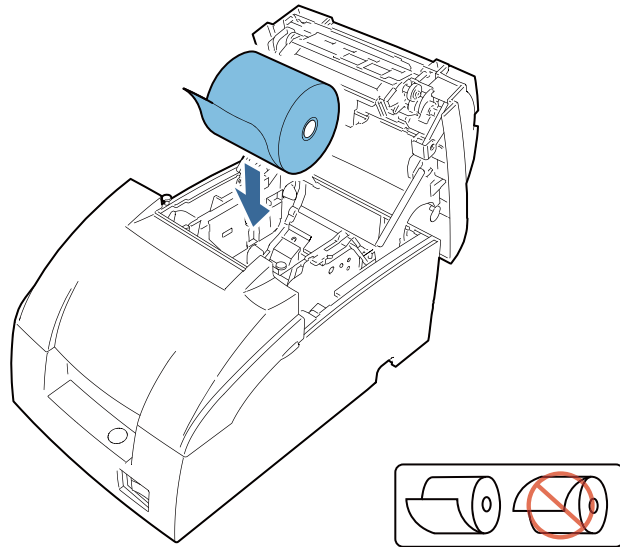
- Use roll paper that meets the product specification. (🔗 ["Paper Specifications" on page 147](#))
- Paper must not be pasted to the roll paper core.



This printer can print on carbon paper (original + 1 copy.) This is available to use for journal. You can cut each a receipt and the copy at same time. A special control is not required to use carbon paper; you can treat it as same as normal paper.

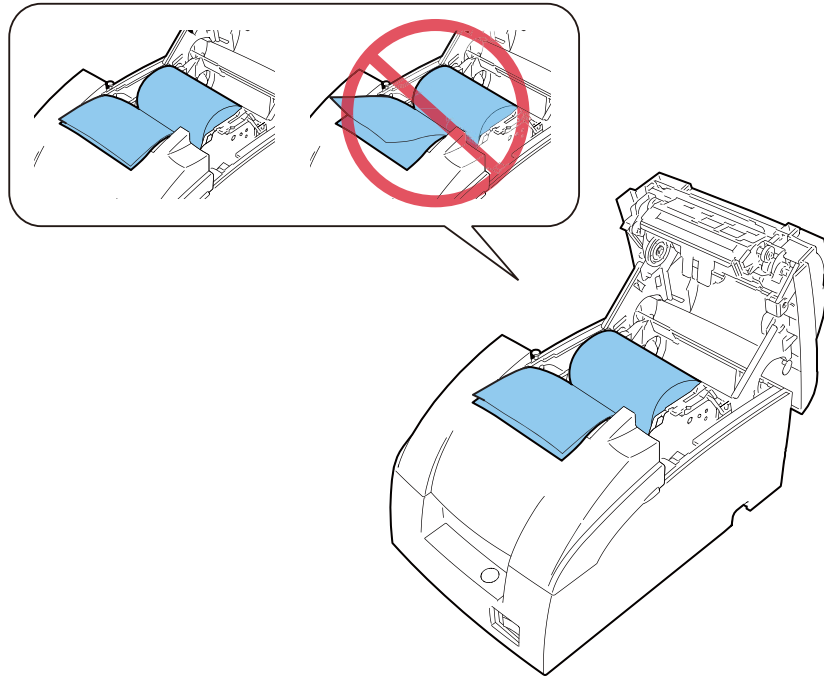
- 1** Open the roll paper cover.
- 2** Remove the used roll paper core, if there is one.

**3** Insert the roll paper in the correct direction.

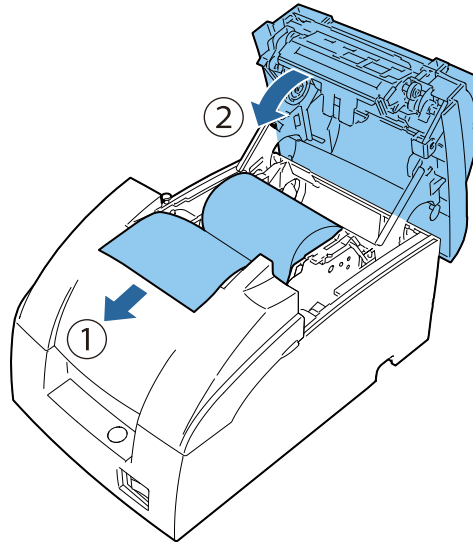


**NOTE**

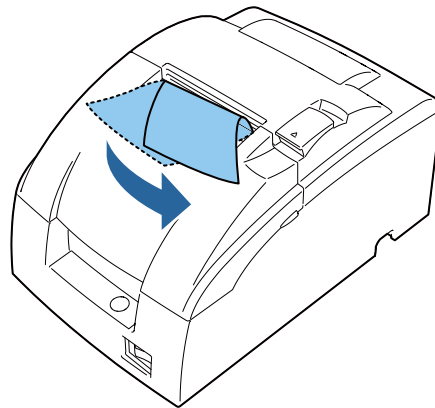
When using 2-ply roll paper, make sure that the top and bottom sheets are aligned at the paper exit.



- 4** Pull out some paper, and close the roll paper cover.



- 5** Cut the paper you pulled out.



## Removing a Paper Jam

- 1 Turn the power off.
- 2 Open the roll paper cover.
- 3 Remove the jammed paper.

**NOTE**

When you turn the power off by mistake during the printing operation, the cutter blade may stop in the paper feed line. So the paper may not be fed in the first operation normally when you turn the power on. If the phenomenon happens again after removing the jammed paper, try the solution "Adjusting the Auto cutter blade" (🔗 ["Adjusting the Auto cutter blade" on page 137](#)).

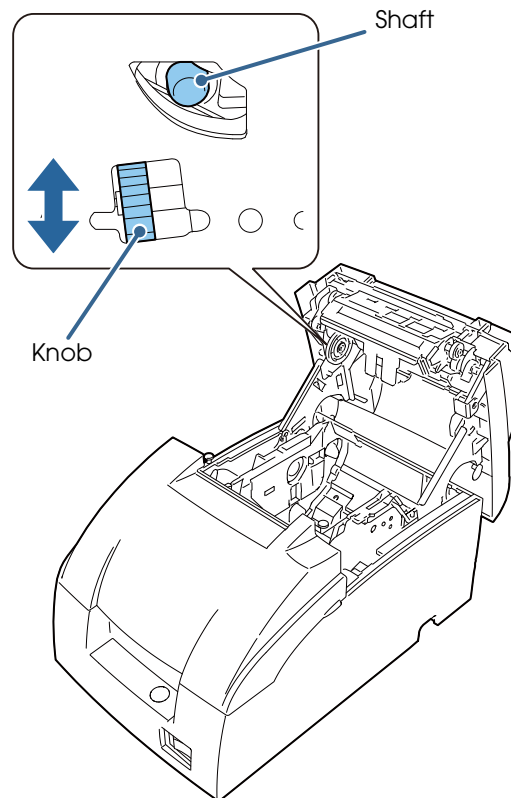


## Adjusting the Auto cutter blade

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.
- 2** Open the roll paper cover.
- 3** Turn the knob in the direction of the arrow until you see a shaft in the opening.



- 4** Close the roll paper cover.

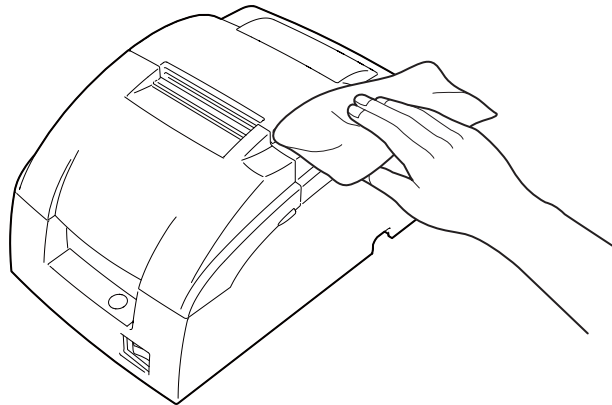
## Cleaning the Printer Case

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



**Never clean the product with alcohol, benzine, thinner, or other such solvents.**

Doing so may damage or break the parts made of plastic and rubber.



## Preparing for Transport

Follow the steps below to transport the product.

- 1** Turn off the product.
- 2** Remove the AC adapter.
- 3** Remove the roll paper.
- 4** Remove the ribbon cassette.
- 5** Pack the product upright.

# Appendix

## Product Specifications

|                          |                            |   |
|--------------------------|----------------------------|---|
| Printing method          |                            | 9-pin serial impact dot matrix  |
| Autocutter <sup>*1</sup> | Cutting method             | By separated-blade scissors   |
|                          | Cutting type               | Partial cut (one point left uncut) (standard factory settings)<br>Full cut (completely cut off) (optional factory setting)  |
| Interfaces               | USB host port              | <ul style="list-style-type: none"> <li>Standards: USB2.0 (High/Full/Low speed)</li> <li>Number of ports: 2 ports</li> <li>Connector: Type A</li> <li>Provided current: Within 500 mA for each port<br/>Within 600 mA for both ports</li> </ul>  |
|                          | USB device port            | <ul style="list-style-type: none"> <li>Standards: USB2.0 (High speed)</li> <li>Number of ports: 1 port</li> <li>Connector: Type B</li> </ul>  |
|                          | Serial                     | <ul style="list-style-type: none"> <li>Data transmission: Bit serial</li> <li>Synchronization: Asynchronous</li> <li>Flow control: XON/XOFF control or DTR/DSR control</li> <li>Signal levels: MARK = -3 to -15 V Logic "1"/ OFF<br/>SPACE = +3 to +15 V Logic "0"/ ON</li> <li>Data format: Data length: 7 bits, 8 bits</li> <li>Stop bits: 1 or more</li> <li>Baud rate: Maximum 115200 bps (bps: bits per second)</li> <li>Parity: Odd, Even, None</li> <li>Connector: D-sub 9 pin (Male)</li> </ul> |
|                          | microSD card               | <ul style="list-style-type: none"> <li>No. of slots: 1 slot</li> <li>Connector: Push-Push type</li> <li>Supported card: micro SD card, micro SDHC card</li> <li>Notes:<br/>Make sure that the product power is turned off before inserting or removing a microSD card.<br/>Use a microSD card with wear leveling.</li> </ul>  |
|                          | Ethernet                   | 10Base-T/100Base-TX   |
|                          | Wireless LAN <sup>*2</sup> | IEEE802.11b/g/n   |
|                          | Drawer kick                | <ul style="list-style-type: none"> <li>Pin: 6 pin</li> <li>Connector: Modular<br/>(only for cash drawer)</li> </ul>   |

|                                 |                |  |
|---------------------------------|----------------|--|
| Buffers                         | Receive buffer | 20K bytes / 40 bytes: selectable   |
|                                 | NV bit image   | 128K bytes   |
|                                 | User NV memory | 8K bytes   |
| Power supply                    |                | 24 V DC $\pm$ 7%   |
| Life<br>(Printer unit)          | Mechanism      | 7.5 million lines  |
|                                 | Print head     | 150 million characters<br>When printing at an average of 2 dots per wire per character.  |
|                                 | Autocutter     | 800,000 cuts<br>End of life is defined as the point at which the printer reaches the beginning of the wear out period                                  |
|                                 | MTBF           | 180,000 hours<br>Failure is defined as a random failure occurring at the time of the random failure period.  |
|                                 | MCBF           | 18 million lines<br>This is an average failure interval based on failures related to wear out and random failures up to the life of 7.5 million lines. |
| Life<br>(Intelligent Interface) | MTBF           | 180,000 hours  |
| RTC <sup>*3</sup>               | Battery life   | 5 years or longer  |
| Temperature/humidity            |                | Operating: 0 to 50°C {32 to 122°F}, 10 to 90% RH<br>Storage: -10 to 50°C {14 to 122°F}, 10 to 90% RH   |
| Overall dimensions              |                | 160 × 248 × 138.5 mm {6.3" × 5.5" × 9.8"} (W × D × H)  |
| Weight (mass)                   |                | Approx. 2.5 kg {5.51 lb} (excluding paper, ribbon, and AC adapter)   |

\*1: It is recommended to feed 2.116 mm {0.083"} or more in advance before printing to prevent dot displacement after cutting.

Changing between partial cut and full cut is not controlled by a software command.

\*2: When the optional wireless LAN cable set (OT-WL01) is used.

\*3: A clock function is embedded in Intelligent Interface. When the power is off, this is backed up using a battery.

## Software Specifications

|                         |  |
|-------------------------|--|
| Print control           | Epson ePOS SDK, ePOS-Device XML, ePOS-Print XML, Server Direct Print, Device Data Notification   |
| Utility                 | <ul style="list-style-type: none"> <li>• EPSON TMNet WebConfig *             <ul style="list-style-type: none"> <li>* Network setting (Ethernet/Wireless LAN)</li> <li>* Web contents registration</li> <li>* ePOS-Device setting</li> <li>* Server Direct Print/Status Notification setting</li> <li>* Printer's Device ID settings</li> <li>* Spooler and Print Forwarding settings</li> <li>* Device Data Notification settings</li> </ul> </li> <li>• Easy Setup             <ul style="list-style-type: none"> <li>* EPSON TMNet WebConfig settings</li> </ul> </li> </ul> <p>*: Settings can be changed or viewed through a Web browser on your computer or tablet terminal.</p> |
| Spooler capacity        | 8MB  |
| Maximum number of JobID | 2,000  |

## Controllable Peripherals

### Network Printer

- The following printers with the UB-E02, UB-E03, UB-R03, or UB-R04 built-in:  
TM-U220/U220II, TM-T88V, TM-T70, TM-T70II, TM-L90, TM-T90, TM-T90II, TM-T20, TM-T20II, TM-T88IV
- TM-P60II, TM-P80, TM-P20

### Other Device

|                             |  |
|-----------------------------|--|
| Customer Display            | DM-D110  |
| Key Input Device            | Barcode scanner, Keyboard  |
| Serial Communication Device | Device that has a serial interface, such as a scale, cash recycler or CAT terminal.<br>ePOS-Device SDK provides only an API that sends/receives commands. For control of a serial communication device, you will have to use an application of your own. |
| Cash drawer                 | Cash drawer  |

## Printing Specifications

|                       |  |
|-----------------------|--|
| Printing method       | 9-pin serial impact dot matrix   |
| Printing direction    | Bidirectional printing (logic seeking)   |
| Printing width        | 63.4 mm / 57 mm / 47.5 mm {2.50" / 2.24" / 1.87"}<br>Dot positions depend on DIP switch setting. (☞ "Dot width of Printable area" on page 143)   |
| Characters per line   | 35 (font A), 40 (font B, default) (When using 76mm width paper)  |
| Maximum print speed * | Approximately 4.7 lps (printing 40 columns per line at 16 cpi)<br>Approximately 6.0 lps (printing 30 columns per line at 16 cpi, with 1/8" line spacing)<br>(except data transmission and processing time) |
| Line spacing          | 4.23 mm {1/6"}, programmable by control commands.  |

\*: This printer adjusts print speed when it prints graphic data, etc.

## Character Specifications

### Number of characters

|                          |                                    |
|--------------------------|------------------------------------|
| Font A (initial setting) | Alphanumeric characters: 95        |
| Font B                   | International characters: 48       |
|                          | Extended graphics: 128 x 12 pages. |

### Character structure

|        |                 |
|--------|-----------------|
| Font A | 9 x 9           |
| Font B | 7 x 9 (default) |

### Dot width of Printable area

The dot width of the printable area depends on DIP switch setting and paper width as shown in the following table.

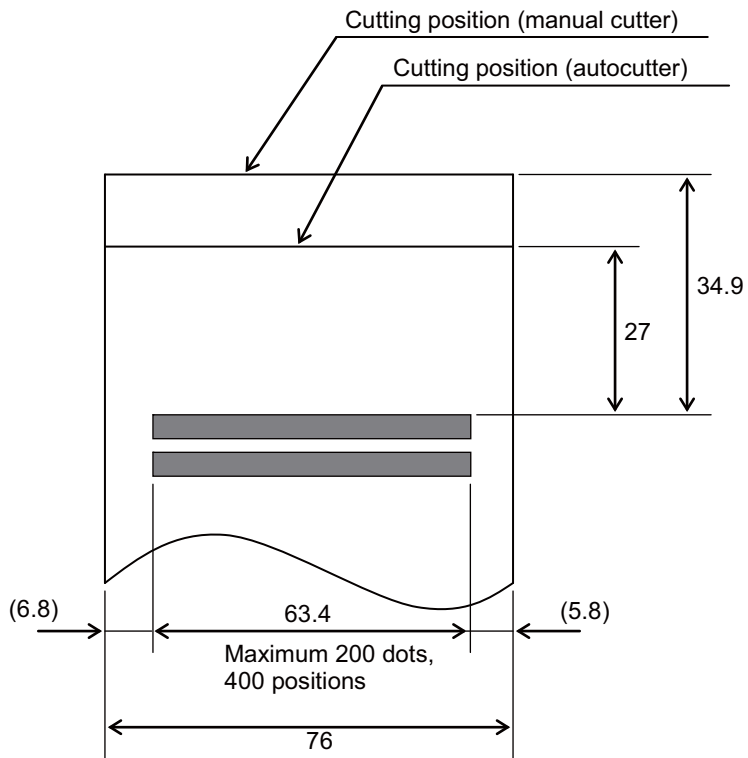
| Paper width | DIP SW2-1 setting |               |
|-------------|-------------------|---------------|
|             | ON                | OFF           |
| 76 mm       | 385 half dots     | 400 half dots |
| 69.5 mm     | 360 half dots     | 360 half dots |
| 57.5 mm     | 297 half dots     | 300 half dots |

### Character Dimensions, Characters Per Inch, Characters Per line

| Character configuration        |                         |                | Character dimensions<br>W x H | Dot spacing between characters | Paper width (mm) and Characters per line (cpl) |         |         | Characters per inch (cpi)<br>(1 inch = 25.4 mm) |
|--------------------------------|-------------------------|----------------|-------------------------------|--------------------------------|--|---------|---------|---|
| Horiz. x Vert.                 | Condition of DIP SW 2-1 | Character type |                               |                                | 76 mm  | 69.5 mm | 57.5 mm |   |
| 7 x 9<br>(Font B)<br>(default) | ON                      | ANK            | 1.2 x 3.1                     | 2 half dots                    | 42   | 40      | 33      | 17.8  |
|                                |                         | Graphic        | 1.6 x 3.1                     | 0                              |  |         |         |   |
|                                | OFF<br>(default)        | ANK            | 1.2 x 3.1                     | 3 half dots                    | 40   | 36      | 30      |   |
|                                |                         | Graphic        | 1.7 x 3.1                     | 0                              |  |         |         |   |
| 9 x 9<br>(Font A)              | ON                      | ANK            | 1.6 x 3.1                     | 2 half dots                    | 35   | 32      | 27      | 14.5  |
|                                |                         | Graphic        | 1.9 x 3.1                     | 0                              |  |         |         |   |
|                                | OFF<br>(default)        | ANK            | 1.6 x 3.1                     | 3 half dots                    | 33   | 30      | 25      |   |
|                                |                         | Graphic        | 2.0 x 3.1                     | 0                              |  |         |         |   |

## Printable Area

### 76 mm paper width printing



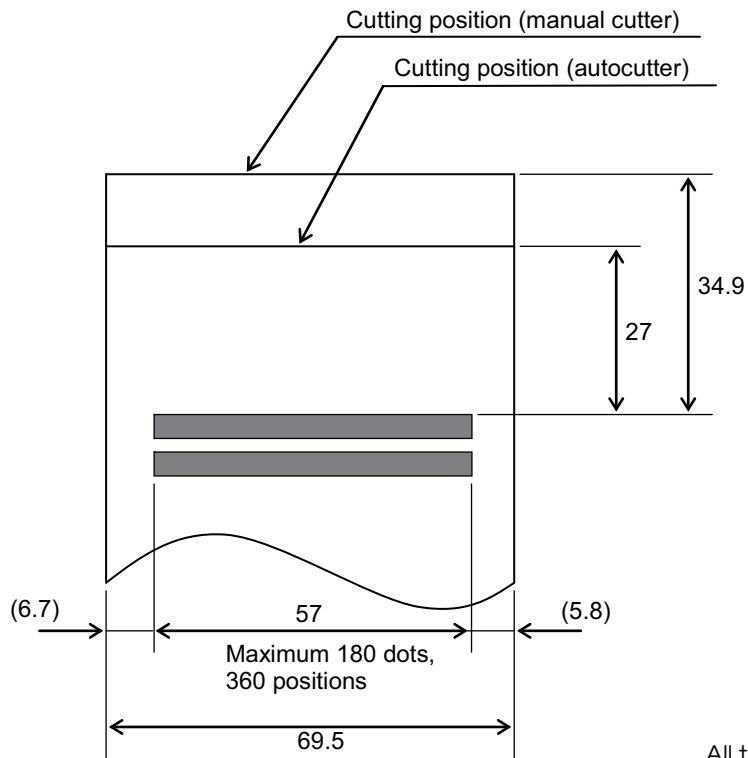
[Units: mm]

All the numeric values are typical.



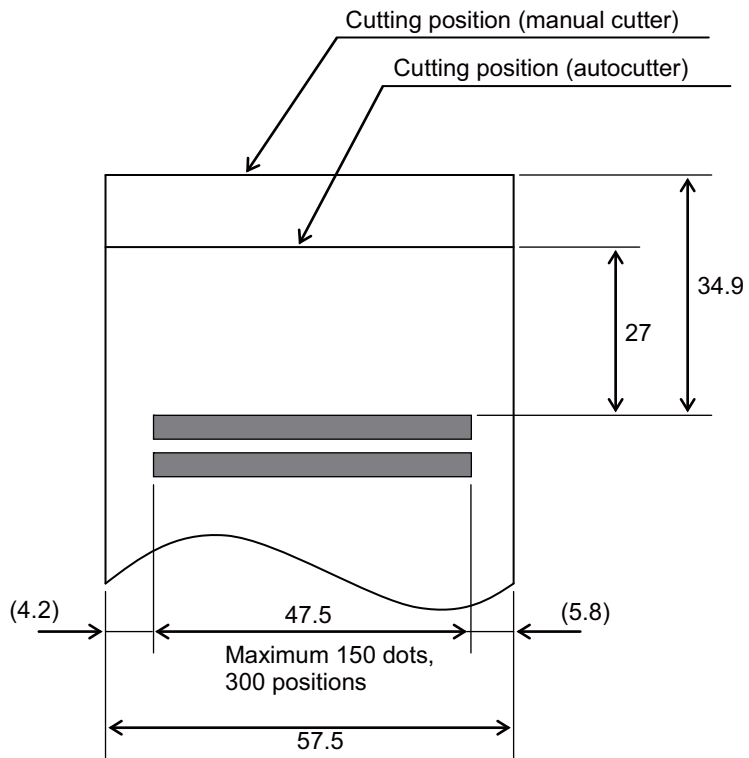
---

## 69.5 mm paper width printing



[Units: mm]  
All the numeric values are typical.

## 57.5 mm paper width printing



[Units: mm]

All the numeric values are typical.

## Paper Specifications

|             |                     |  |
|-------------|---------------------|--|
| Paper types | Normal paper        | Paper thickness: 1 sheet: 0.06 to 0.085 mm {0.0024 to 0.0033"}<br>Weight: 52.3 to 64 g/m <sup>2</sup> {14 to 17 lb}<br>(45 to 55 kg/1000 sheets 1091 × 788 mm)   |
|             | Carbon paper        | Number of copies: Original 1 sheet + one copy sheet<br>Thickness: 0.05 to 0.08 mm {0.002 to 0.0031"}<br>(thickness of one sheet);<br>Recommended paper: Paper by Mitsubishi - Carbonless paper (blue)<br>Top sheets: N40Hi<br>paper thickness: 0.06 mm {0.0024"},<br>mass: 47.2 g/m <sup>2</sup> {12.6 lb}<br>Bottom sheet: N60<br>paper thickness: 0.08 mm {0.0031"},<br>mass: 68.0 g/m <sup>2</sup> {18 lb}<br>The copying capability is affected by the ambient temperature, and is guaranteed for the temperature ranges of 5 - 50°C {41 - 122°F}. |
| Form        |                     | Roll paper   |
| Size        | Roll paper diameter | 76mm / 69.5mm / 57.5mm<br>(Roll diameter: max 83mm)  |
|             | Roll paper core     | When there is no near-end detector, always be sure to use roll paper that is not glued to the core.  |
|             | Paper width         | 76 ± 0.5 mm (3" ± 0.02")<br>69.5 ± 0.5 mm (2.74" ± 0.02")<br>57.5 ± 0.5 mm (2.26" ± 0.02")   |

### CAUTION

- Paper must not be pasted to the roll paper core.
- The remaining amount of the roll paper when a roll paper near-end is detected differs depending on the core type.

## Ribbon Specifications

|                 |                     |       |  |
|-----------------|---------------------|-------|--|
| Ribbon cassette | Model: ERC-38 (B)   | Color | Black  |
|                 |                     | Life  | 3,000,000 characters                                   |
|                 | Model: ERC-38 (B/R) | Color | Black and Red  |
|                 |                     | Life  | Black: 1,500,000 characters<br>Red: 750,000 characters |

\*: These ribbon cassette life numbers are under our test conditions.

## Electrical Characteristics

|                                 |                |   |
|---------------------------------|----------------|---|
| AC adapter                      | Input voltage  | AC 90 V to 264 V (AC 100 V to 240 V)                          |
|                                 | Output voltage | DC 24 V   |
| Supply current from the product | USB            | Total of both ports: 600 mA                                   |
| Consumed current (Rating)       |                | 1.3 A   |
| Consumed power *                |                | When operating: Approx. 29.6 W<br>When standby: Approx. 2.5 W |
| Power supply On/Off             |                | Use the power switch on the product                           |

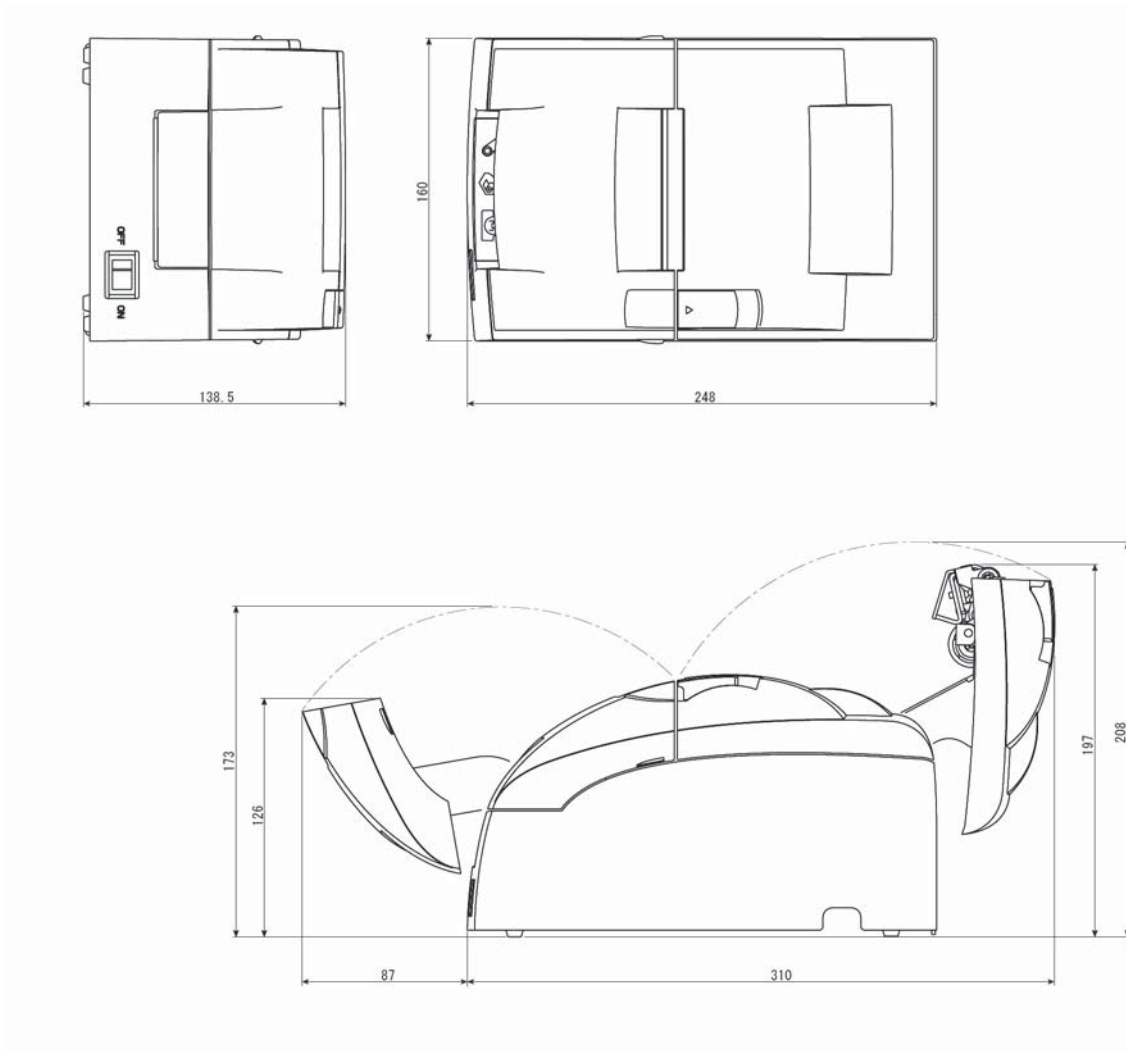
\*: Reference value of consumed power in above is when using the AC adapter (PS-180(MODEL: M159D/M159E)).  
The input rated current of the AC adapter (PS-180(MODEL: M159D/M159E)) is 1.3 A  
According to our operation conditions.

## Environmental Conditions

|                            |  |   |
|----------------------------|--|---|
| Temperature/<br>Humidity   | Operating  | 0 to 50°C {32 to 122°F}, 10 to 90% RH (See the operating temperature and humidity range below.)   |
|                            | Storage<br>(Factory packing)   | -10 to 50°C {14 to 122°F}, 10 to 90% RH (except for paper and ribbon)   |
|                            |  | <p>The graph plots Relative humidity [%RH] on the vertical axis (0 to 90) against Ambient temperature [°C] on the horizontal axis (0 to 50). A shaded region represents the 'Operating environment range'. The upper boundary of this range is defined by three segments: a horizontal line at 90% RH from 0°C to 34°C; a downward-sloping line from 34°C, 90% RH to 40°C, 65% RH; and another downward-sloping line from 40°C, 65% RH to 50°C, 35% RH. The lower boundary is a horizontal line at 10% RH from 0°C to 50°C. Vertical dashed lines connect the key points on the upper boundary to the x-axis.</p> |
| Acoustic noise (operating) | <p>Approximately 64 dB (bystander position)</p> <p>Note:<br/>The values above are measured in the Epson evaluation condition. Acoustic noise differs depending on the paper used, printing contents, and the setting values, such as print speed or print density.</p> |   |

## External Dimensions and Mass

- Width: 160 mm {6.3"}
- Depth: 248 mm {5.5"}
- Height: 138.5 mm {9.8"}
- Mass: Approximately 2.5 kg {5.51 lb} (excluding paper, ribbon, and AC adapter)



## AC Adapter

|                     |   |
|---------------------|---|
| Input conditions    | Input voltage (rating): AC 100V to 240V   |
|                     | Frequency (rating): 50 to 60 Hz           |
|                     | Input current (rating): 1.3A              |
| Output conditions * | Output voltage (rating): 24 V DC $\pm$ 7% |

\*: 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

## Option Specifications

### Wireless LAN Cable Set (OT-WL01)

|  |  |
|--|--|
| Wireless module                        | ELPAP07: 802. 11b/g/n wireless LAN Module (EPSON)  |
| Standard                               | IEEE802.11b/g/n (Wi-Fi certificated)   |
| SSID                                   | 1 to 32 one-byte alphanumeric and numbers  |
| Connection mode                        | Ad hoc mode, Infrastructure mode   |
| Authentic method, Encryption algorithm | Open+WEP, Shared+WEP, WPA-PSK+TKIP, WPA-PSK+AES, WPA2-PSK+AES, WEP64, WEP128, TKIP, AES  |
| Power voltage                          | DC 4.5V to 5.5V  |
| Current consumption                    | 300 mA at maximum  |
| Frequency range                        | 2.4 GHz band   |
| Potential interference range           | 40 m   |
| Overall dimensions                     | Wireless LAN unit: Approx. 24 × 51 × 10 (W × D × H)<br>USB extension cable: 1 m (length) |

### Customer Display (DM-D110)

For details on the specifications of the DM-D110, refer to the "DM-D110/DM-D210 Technical Reference Guide". (🔗 ["Software and Manuals" on page 95](#))

## Character Code Tables

See the Character Code Tables for TM Printers that can be accessed from the following URL:  
[https://support.epson.net/publist/reference\\_en/](https://support.epson.net/publist/reference_en/)