EPSON®
EXCEED YOUR VISION
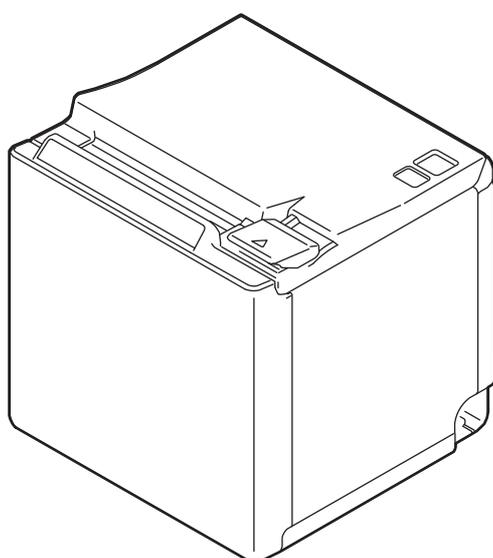
TM-m30
Technical Reference Guide

Product Overview
Describes features of the product.

Setup
Describes setup and installation of the product and peripherals.

Advanced Usage
Describes advanced usage methods for the product.

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.

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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.

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.

⚠ **WARNING**	You must follow warnings carefully to avoid serious bodily injury.
⚠ **CAUTION**	Provides information that must be observed to prevent damage to the equipment or loss of data. • Possibility of sustaining physical injuries. • Possibility of causing physical damage. • Possibility of causing information loss.
CAUTION	Provides information that must be observed to avoid damage to your equipment or a malfunction.
NOTE	Provides important information and useful tips.

Warnings

⚠ **WARNING**	• **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.
	• **Be sure to use the specified AC adapter.**
	Connection to an improper power source may cause fire or 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 your dealer or a Seiko Epson service center for advice.
	• **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 your dealer or a Seiko Epson service center for advice.
	• **Do not use aerosol sprayers containing flammable gas inside or around this product.**
	Doing so may cause fire.
	• **Do not use this product in locations subject to high humidity or dust levels.**
	Excessive humidity and dust may cause equipment damage or fire.

Cautions

⚠️ **CAUTION**	• **Do not connect cables in ways other than those mentioned in this manual.**
	Different connections may cause equipment damage.
	• **Be sure to set this equipment on a firm, stable, horizontal surface.**
	The product may break or cause injury if it falls.
	• **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.**
	• **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 severe shock.
	• **Never attempt to repair this product yourself.**
	Improper repair work can be dangerous.

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.

Note about interference

- This product generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

- If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
   - Reorient or relocate the receiving antenna for the radio/TV.
   - Increase the separation between the equipment and the radio/TV.
   - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
   - Consult your dealer or an experienced radio/TV technician for help.

- Never disassemble or modify this product.

- Seiko Epson Corporation shall not be liable for interference to radio/TV resulting from changes or modifications to this product not expressly approved by Seiko Epson Corporation.

About this Manual

Aim of the Manual

This manual was created to provide information on development, design, and installation of POS systems and development and design of printer applications for developers.

Manual Content

The manual is made up of the following sections:

Contents

Product Overview

This chapter describes features of the product.

Features

Printing

- High speed receipt printing is possible (200 mm/s maximum).

Handling

- Compact and lightweight (127 (W) x 127 (D) x 127 (H) mm, 1.3 kg). (excluding protrusion)
- Easy drop-in paper loading.
- The direct connection without Wi-Fi access point brings a simplified configuration procedure of network settings. (SimpleAP mode)
- You can connect to the printer from an interface, other than the mainly connected interface, and run print operation, when mainly connected interface is not printing.

Software

- NFC tag built into the printer unit for printing to a touched printer.
- Printing triggered by bar code scan by smart device camera.
- A utility for iOS/Android ^{TM} (Epson TM Utility for iOS/Android) for making printer settings is provided.
- Printing of various types of bar codes, GS1-DataBar, and two-dimensional symbols (PDF417, QR code, Max-iCode, Composite Symbology, Aztec Code, DataMatrix) is supported.
- A maintenance counter function is supported.
- Various language support.

Environment

- Compliant with International ENERGY STAR Program.
- Paper saving function is available.

Others

- Paper eject position are selectable from top and front.
- Optional Wireless LAN cable set, customer display, and external buzzer are available.
- Optional wall hanging bracket is available to attach the printer to a wall.
- Charges connected tablet or USB device. (Onboard USB Powers Tablet model)

Product Configurations

Models

- Standard model
- Wi-Fi® model
- *Bluetooth*® model
- Onboard USB Powers Tablet model

* Available models may differ depending on the area.

NFC Tag

You can select the printer you want to use by simply placing an NFC device over the NFC tag (mark) on the printer.

NOTE	• There is no data rewriting function. • Use Epson ePOS SDK or ePOS-Print SDK to build this function into your application.

NFC tag
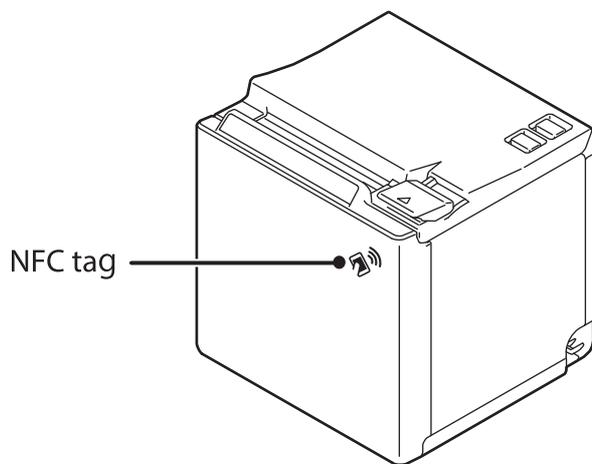
Accessories

Included

- 58-mm width roll paper guides
- Roll paper (for operation check)
- Power switch cover
- AC adapter
- AC cable
- Basic Manuals [1]
- Warranty certificate [2]

∗1 The manual name and formatting differ depending on the model.
∗2 May not be included, depending on the region.

Options

- Wireless LAN cable set (Model: OT-WLxx)
- Customer display (Model: DM-D30)
- Optional external buzzer (Model: OT-BZ20)
- Wall Hanging Bracket Set (Model: OT-WH30)
- Back cover (Model: OT-CC30)

Part Names and Functions

1	Roll paper cover	Open this cover when loading or replacing roll paper.
2	Panel LED	For details on LED, see "Panel LED" on page 14.
3	NFC Tag	A mark is printed here to indicate the position of the NFC tag. To establish communication with an NFC device, bring the device close to this mark. For the functions using the NFC tag, refer to "Useful Functions for Smart Devices" on page 21.
4	Cover open lever	Operate this lever to open the roll paper cover.
5	Feed button	Pressing this button once feeds roll paper for one line. Hold down this button to continue feeding roll paper.
6	Power switch	Turns the printer on or off.
7	Status sheet button	Use this button to print a status sheet on interfaces or initialize the settings on interfaces.

Panel LED

Power LED

- Lights when the power supply is on.
- Off when the power supply is off.
- Flashes during the network to start up, when waiting for power off, or updating firmware.

Error LED

- Lights or flashes when an error occurs. (For information about the flashing patterns, see "Status and Errors" on page 18.)
- Lights after the power is turned on or after a reset (offline). Automatically goes out after a while to indicate that the printer is ready.
- Off when the printer is in standard mode (online).

Paper LED

- Lights when the roll paper is out.
- Flashes to urge user to operate the Feed button.

Connectors

All connectors are located on the lower rear of the printer.

For Standard, Wi-Fi, and *Bluetooth* models.
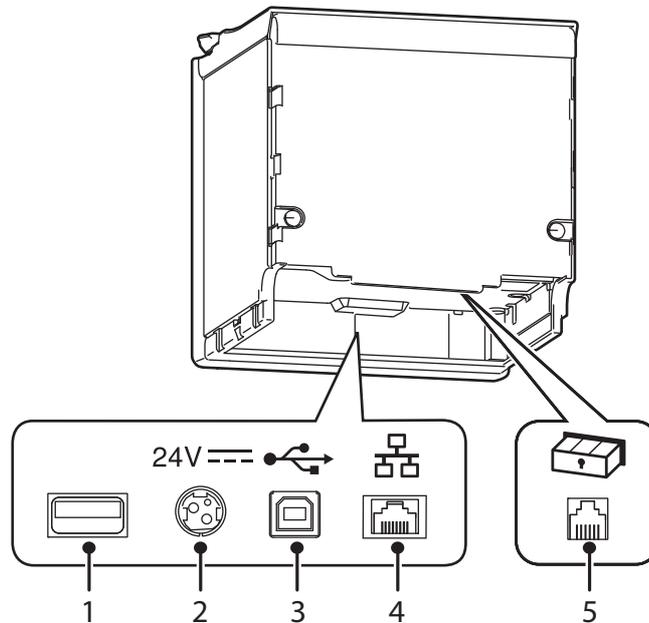
1	USB connector	Use only for connecting optional Wireless LAN unit and customer display.
2	Power supply con-nector	Connect the AC adapter. See "Connecting to the Power Source" on page 30.
3	USB connector (Type B)	Connects the USB cable for connecting to a computer. See "Connecting the Printer to the Host Devices" on page 32.
4	Ethernet connector	Connects the 10BASE-T/100BASE-TX ethernet cable.
5	Drawer kick con-nector	Connects the cash drawer or the optional external buzzer. See "Connecting the Cash Drawer" on page 41, and "Connecting the Optional External Buzzer" on page 40.

For Onboard USB Powers Tablet model.

1	USB connector for charging	A dedicated connector for charging smart devices and USB devices. You can charge whether the printer is on or off as long as the power cable is connected. CAUTION: It may be hard to disconnect some types of USB cable. Do not forcibly pull the cable, or the USB connector and USB cable may be damaged. Contact your dealer if you encounter the trouble.
2	USB connector	Use only for connecting optional Wireless LAN unit and customer display. CAUTION: It may be hard to disconnect some types of USB cable. Do not forcibly pull the cable, or the USB connector and USB cable may be damaged. Contact your dealer if you encounter the trouble.
3	Power supply connector	Connect the AC adapter. See "Connecting to the Power Source" on page 30.
4	USB connector (Type B)	Connects the USB cable for connecting to a computer. See "Connecting the Printer to the Host Devices" on page 32.
5	Ethernet connector	Connects the 10BASE-T/100BASE-TX ethernet cable.
6	Drawer kick connector	Connects the cash drawer or the optional external buzzer. See "Connecting the Cash Drawer" on page 41, and "Connecting the Optional External Buzzer" on page 40.

Online and Offline

Online

The printer is online and ready for normal printing unless there is a reason to go offline.

Offline

The printer automatically goes offline under the following conditions:

- While the printer power is turning on/off
- During the setting and check modes operating (except the hexadecimal dumping mode)
- While roll paper is fed using the Feed button
- When the printer stops printing due to a paper end (when the paper out detector detected the paper out)
- During an operation standby state
- When an error has occurred (See .)
- While the roll paper cover is open

Status and Errors

The status of the printer is indicated by lit and flashing LEDs.

CAUTION	You cannot print when an error has occurred.

NOTE	You cannot identify the error by the flashing patterns of the LEDs. Develop the application so that users can identify the error description and check the solutions.

●: OFF   ○: ON   ☼: Flashing

Power LED	Error LED	Paper LED	Printer Status
○	●	●	Online
○	●	-	During a self-test
			While feeding paper using the Feed button
○	○	-	While initializing after turning on the power
			Roll paper cover open while not printing
○	●	☼	Waiting for the self-test to continue
			Waiting for a Macro execution to run
○	○	☼	Waiting to print a status sheet
○	○	○	No paper
○	○	-	Automatically Recoverable Errors
			Recoverable Errors
○	☼	-	Unrecoverable Errors CAUTION: Turn off the power immediately when an unrecoverable error occurs. If the same error occurs again even after turning the power back on, contact your dealer or a Seiko Epson service center.
☼	●	●	Updating firmware
☼	●	☼	While forced updating firmware mode is on
☼	-	-	During network startup when the power is turned on
☼	●	●	During power off NOTE: The printer enters this status while processing the power off command. It is recommended to use this method when you need to save information on the printer's operating status if the power is cut without using the power switch.

-: Changes depending on whether or not paper is detected.

NV Memory (Non-Volatile Memory)

The printer's NV memory stores data even after the printer power is turned off. NV memory contains the following memory areas for the user:

- NV graphics memory
- User NV memory
- Memory switches
- Maintenance counter

CAUTION	As a guide, NV memory rewriting should be used 10 times or less a day when you program applications.

NV Graphics Memory

Graphics, such as shop logos to be printed on receipts, can be registered.

You can also use the NV graphics information print mode to print and confirm the registered graphics.

NOTE	For information about how to use the NV graphics information print mode, see "NV Graphics Information Print Mode" on page 58.

User NV Memory

You can store and read text data for multiple purposes, such as for storing a note including customizing or maintenance information of the printer.

Memory Switches

With the memory switches, which are software switches for the printer, you can configure various settings of the printer. For information about the memory switch, see "Software Settings" on page 45.

Maintenance Counter

With this function, printer information, such as the number of lines printed, the number of autocuts, and printer operation time after the printer starts working, is automatically stored in printer's memory. You can read the counter information to use it for periodical checks or part replacement.

NOTE	You can also check the head running length and number of times of autocutting with the self-test (see "Self-test Mode" on page 58).

Simple Setup for Wireless LAN

This printer comes with a mode (SimpleAP) that allows printers to connect with a smart device or a computer without requiring a wireless access point. This allows you to easily setup a wireless LAN for the printer by using a printer settings tool (Epson TM Utility, EpsonNet Config, or EpsonNet Config (Web version)) even without a network environment such as access points.
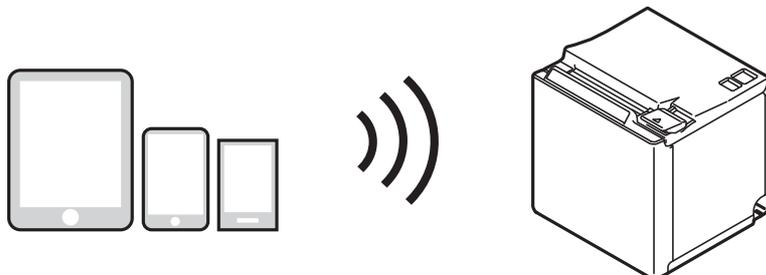
SimpleAP mode is enabled by default when shipping from the factory. When SimpleAP mode is enabled and the printer is turned on, the following information is printed automatically.

```
SimpleAP Start
   SSID              : EPSON_Printer
   Encryption Type  : WPA-2-PSK
   Passphrase       : 12345678

   IP Address       : 192.168.192.168
   MAC Address      : xx-xx-xx-xx-xx-xx
```

Useful Functions for Smart Devices

The Epson TM Utility app provides useful functions for iOS and Android smart devices.

NOTE	You can download the Epson TM Utility from Google Play™ or the App Store.

Wizard Guidance

The wizard provided allows you to easily connect to smart devices.

Quick pairing by NFC/QR code

Touch your device to the NFC tag built-in to the printer, or capture the QR code with the camera on your smart device to select the printer.

Easy print by NFC/QR code

Touch your device to the NFC tag built-into the printer, or capture the QR code with the camera on your smart device to start printing.

Printing Using Multiple Interfaces

In models with multiple interfaces, you can use all interfaces without any limitations on which interface is to be used. You can use this function to temporarily connect a smart device to a nearby printer and print.

The printer provides each interface with an independent receive buffer and switches the active interface depending on the priority, while handling data in each receive buffer.

You can set one interface for the main connection. Data received from the main connection interface is handled with the highest priority.

By default, the interface that receives the first data transfer is set as the main connection interface; however, you can select the main connection interface in advance.

In the status where all receive buffers are empty for more than the set time (1 second by default), interface switching is enabled. The interface that receives the data in this status becomes active.

NOTE	You can select the main connection interface and set the time to enable interface switching from the software settings. For details on software settings, see "Software Settings" on page 45.

Setup

This chapter describes setup and installation of the product and peripherals.

Flow of Setup

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

1. **Installing the Printer (page 26)**

↓

2. **Changing the Paper Width (page 28)**

↓

3. **Connecting to the Power Source (page 30)**

↓

4. **Connecting the Printer to the Host Devices (page 32)**

↓

5. **Connecting the Optional Wireless LAN Unit (page 39)**

↓

6. **Connecting the Optional Customer Display (page 39)**

↓

7. **Connecting the Optional External Buzzer (page 40)**

↓

8. **Connecting the Cash Drawer (page 41)**

↓

9. **Attaching the Power Switch Cover (page 43)**

Installing the Printer

You can install the printer on a flat surface with the paper eject from top or with the paper eject from the front. Place the printer on a flat surface.

Top eject position
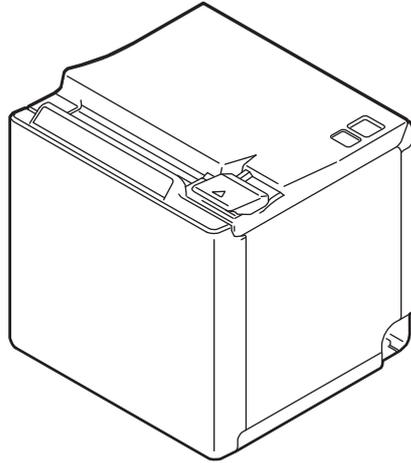
Front eject position
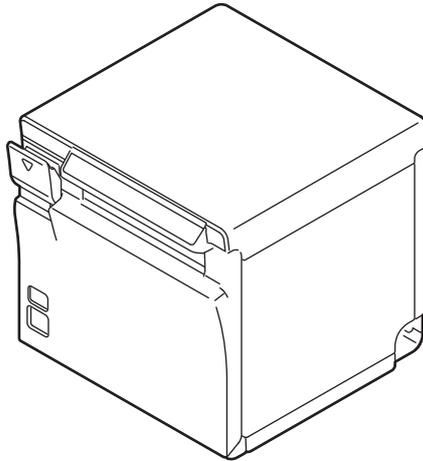
CAUTION	• Take measures to prevent the printer from moving due to vibrations when using the cash drawer. • Do not place the printer in locations subject to high dust levels. • Do not give a high impact on the printer during operation. Doing so may cause the print failure. • Be careful not to place cords or foreign substances under the printer.

NOTE	You can install the printer as a wall hanging printer if you use the optional Wall Hanging Bracket Set (OT-WH30). Refer to the installation manual of the Wall Hanging Bracket Set for details.

Changing to the Front Eject Position

You can change the eject position by replacing the rear cover and the bottom cover. At the time of purchase, paper is ejected from the top position. When changing to the front eject position, follow the steps below to replace the covers.

1 **Remove the bottom cover and the rear cover.**

2 **Attach the rear cover and the bottom cover.**

Changing the Paper Width

You can change the paper width from 80 to 58 mm by installing the included 58-mm width roll paper guides. Follow the steps below to change the paper width.

CAUTION	Turn off the printer when installing the roll paper guides.

1   **Open the roll paper cover.**
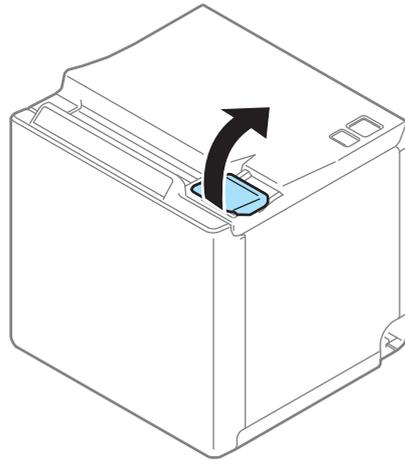
2   **Align the three projections on the roll paper guides with the slots (*) in the printer, and then press them down.**
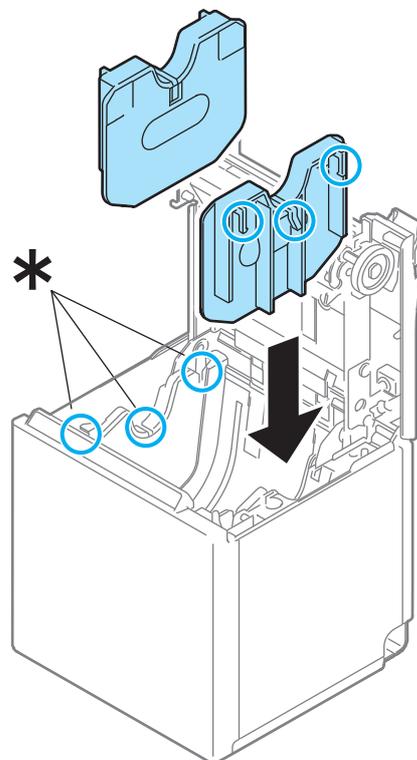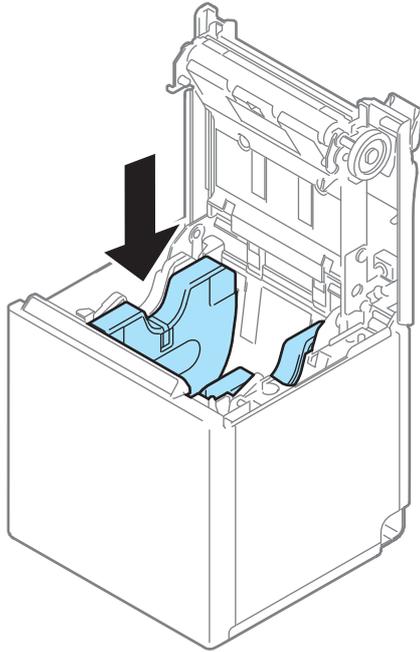
CAUTION	After using the printer for an extended period at 58 mm, do not return to 80 mm. Parts of the print head that do not normally touch the paper may be damaged by the platen roller, and the autocutter may wear out.

3   Set the paper width in software setting mode.

For information about the software setting mode, see "Software Settings" on page 45.

Connecting to the Power Source

⚠ WARNING	• **Be sure to use the specified AC adapter only.** • **Never insert the AC cable plug into a socket that does not meet the input voltage of the AC adapter.** Doing so may result in damage to the printer. • **Should a fault ever occur, immediately turn off the power to the printer and unplug the AC cable from the socket.**

CAUTION	Use the AC cable provided with this printer.

Connecting the AC cable

1   **Make sure the printer is turned off.**

2   **Connect the AC cable to the AC adapter.**
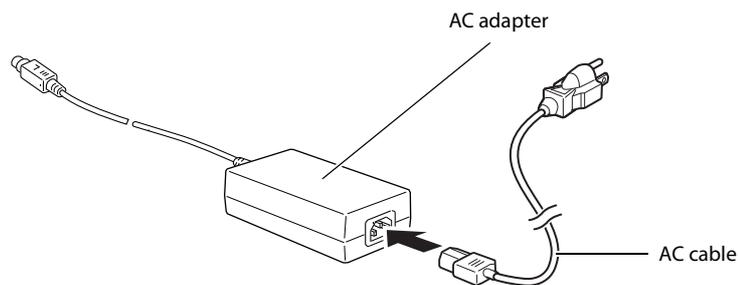
AC adapter

AC cable

3   **Connect the DC cable of the AC adapter to the power supply connector.**
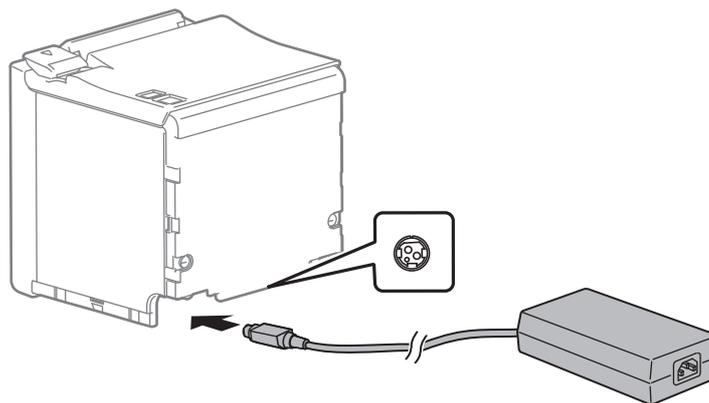
4 **When charging smart devices or USB devices with Onboard USB Powers Tablet model, connect the cable to the USB connector for charging.**

2
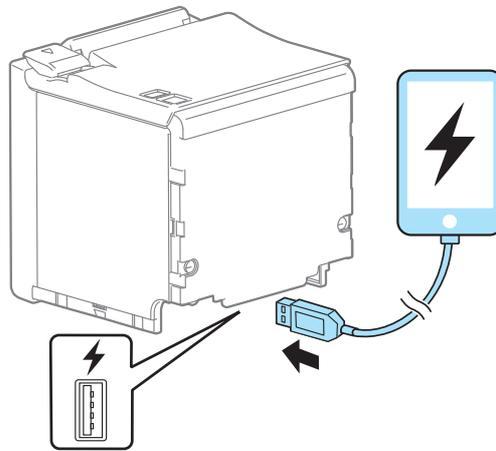
| NOTE |
- Make sure you use the genuine cable for the tablet, smartphone, or USB device you are using.
- Depending on how the device is being used, it may not charge to 100%.
- It may take a few seconds before charging starts as the device searches for the most suitable amperage.
- Charging may not be performed depending on the device's charging specifications.
- Charging stops if it exceeds the rating for the USB connector.
- It may be hard to disconnect some types of USB cable. Do not forcibly pull the cable, or the USB connector and USB cable may be damaged. Contact your dealer if you encounter the trouble.

5 **Insert the AC plug into a socket.**
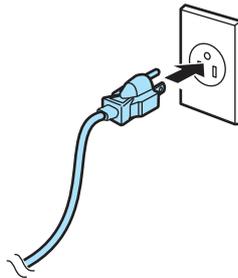
6 **Turn on the printer.**

Connecting the Printer to the Host Devices

USB Interface

When using USB cable to connect with host device, connect the USB cable to the printer, and after starting the host device, turn the printer on.

CAUTION	Do not place any weight or stress on the cable when using. Doing so could damage the cable and connectors.

Ethernet Interface

Use ethernet cable to connect the printer to network via a hub.

Use EpsonNet Config, EpsonNet Config (Web version), or arp/ping commands to set network.

For information on setting up network, see "Network Settings" on page 52.

Wireless LAN Interface

Using Epson TM Utility, you can easily connect the printer to the network from an iOS or Android devices. We also recommend connecting the SimpleAP from a Windows computer, and setting up the Wireless LAN using the network setup tool (EpsonNet Config or EpsonNet Config (Web version)).

CAUTION	• When using wireless LAN, make sure you disconnect the LAN cable. If a LAN cable is connected, wireless LAN is disabled.
	• You can use OT-WL05 with a firmware version of 1.10 ESC/POS or later.
	• When you set up the access point at the same time, set the access point in advance and check that it operates correctly.
	• Examine the radio wave situation in the surrounding area before use.
	• Avoid using the same channel that is used in the neighboring shops where Wireless LAN is used.
	• When using the printer in environments where kitchen microwaves and other devices that may interfere radio waves are installed, observe the following points.
	∗ Keep the printer away from the devices, such as kitchen microwaves, that may cause radio wave interference.
	∗ Use channels that are away from the frequency bands that may cause radio wave interference.
	∗ Place shields between the printer and the devices that may cause radio wave interference.
	∗ Select either 2.4 GHz or 5 GHz, whichever is free from radio wave interference.
	∗ In auto channel setting for the access point, do not select a channel in which the devices may cause radio wave interference.
	∗ In the infrastructure mode, W53 and W56 channels are not available to connect to a stealth SSID access point.

Setting up from a Smart Device

Necessary Items

Prepare the following items.

- Device for setting: iOS or Android device
- Utility for setting: Epson TM Utility for iOS or Epson TM Utility for Android

Running Epson TM Utility

1   **Run the Epson TM Utility.**

2   **Set from "Wi-Fi Setup Wizard" in the menu.**
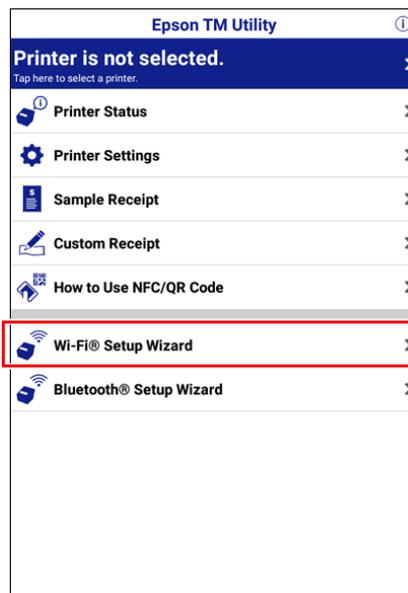
Setup and Operation Work flow

Select the network you want to connect to.

Enter the passkey.

Perform a test print.

Setting up from a Windows Computer

Necessary Items

Prepare the following items.

- Computer for setting: Windows 10/8/7/Vista
  Computer equipped with a wireless LAN function
- Utility for setting: EpsonNet Config or EpsonNet Config (Web version)

Follow the steps below to connect the printer.

1 **Turn on the printer.**
After starting the printer, check that the "SimpleAP Start" is printed. If it is not printed, you need to enable SimpleAP mode in interface settings mode.

2 **Activate Windows Wireless Network Connection and select [EPSON_Printer] as the connection device on the screen that appears.**
If the window to enter a pass phrase appears, enter "12345678".
Default settings on printer are the following values.

Network mode	SimpleAP mode
SSID	EPSON_Printer
Pass phrase	12345678
IP Address	192.168.192.168

3 **When connecting to the printer is complete, setup the Wireless LAN using the network setup tool, EpsonNet Config or EpsonNet Config (Web version).**
For details about EpsonNet Config, see "Setup using EpsonNet Config" on page 53.
For details about EpsonNet Config (Web version), see "Setup using EpsonNet Config (Web version)" on page 54.

4 **When setting the Wireless LAN is complete, restart the printer.**

Bluetooth Interface

Use a tool, such as a built-in *Bluetooth* connection tool of your device to establish the connection with the printer. If your device is a Windows computer, use EPSON TM *Bluetooth*® Connector, which is a utility to easily pair a terminal and the printer. If your terminal is an iOS or Android terminal, use Epson TM Utility to easily pair your terminal and the printer.

CAUTION	• If the host computer and the printer are not connected on a continuous basis but rather connected every time the printer starts printing, some time may be needed for the printer to actually start printing after the host computer commands printing. This pause is the time required for processing the connection between the host computer and the printer, and it depends on the conditions of the environment where used. • If data transfer from an application of the host computer has already been completed, data might remain in the *Bluetooth* module internal buffer. As such data remaining in the buffer might be lost when the connection is cut off, use the status or similar functions to check that transmitted data has been completely printed before cutting off the wireless connection.

NOTE	• For detailed information about EPSON TM *Bluetooth*® Connector, see the TM *Bluetooth*® Connector User's Manual. • The device name and passkey are editable with the TM-m30 Utility or Epson TM Utility.

Setting up from a Smart Device

Necessary Items

Prepare the following items.

- Device for setting: iOS or Android device
- Utility for setting: Epson TM Utility for iOS or Epson TM Utility for Android

Running Epson TM Utility

1   **Run the Epson TM Utility.**

2 **Set from "Bluetooth Setup Wizard" in the menu.**
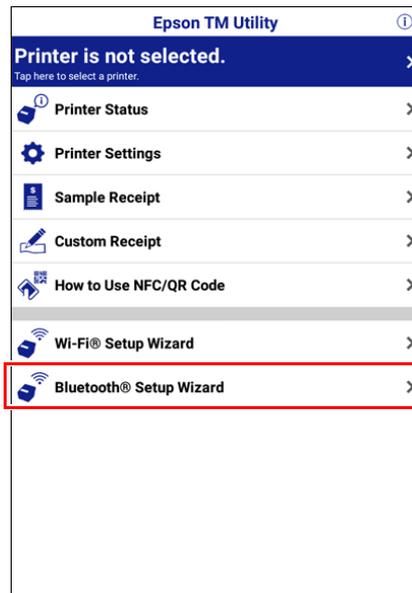
Setup and Operation Work flow

Select the printer you want to connect to.

Enter the passkey.

Perform a test print.

Setting up from a Windows Computer

Follow the procedure below and make the settings.

1 **Have a *Bluetooth* wireless technology compatible computer ready.**
Make sure you have installed TM *Bluetooth*® Connector.

2 **Turn on the printer.**

3 **Start TM *Bluetooth*® Connector.**

4 **Select [Search all printers around this computer], and then click [Search].**
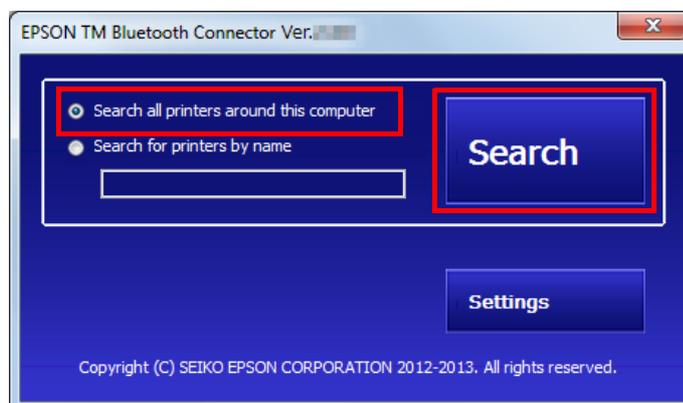
NOTE	If the printer has not detected after clicking the Search button, check the manufacturer of the *Bluetooth* software. 1. Open the Control Panel. 2. In the search box on the Control Panel, enter "Bluetooth", and then click Change Bluetooth settings. 3. In the Bluetooth Settings dialog box, click the Hardware tab, and then search for the Micro-soft Bluetooth Enumerator. If it is not found, the *Bluetooth* software cannot detect the Epson *Bluetooth* printer, and you may not be able to connect to the computer.

5 **Select the printer to be paired (⇨ Not been paired yet), and then click [Connect].**
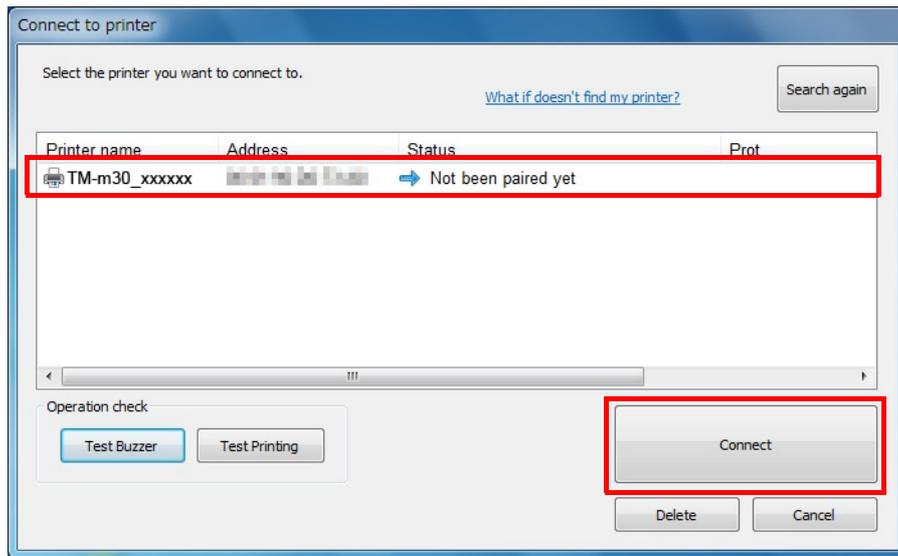
6 **If the window to enter a passkey appears, enter a passkey and click [OK].**

7 **Select the port to be used from the pull-down list, and then click [OK].**
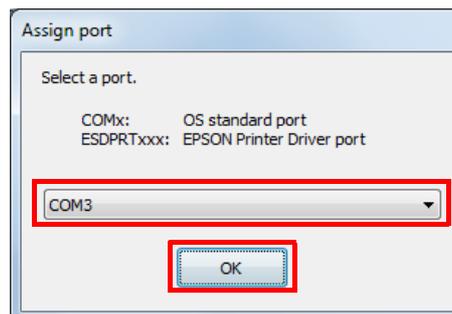
Printing method	Port name
APD print queue	ESDPRTxxx (TM-m30: *Queue name*)
UPOS	ESDPRTxxx (UPOS for TM-m30)
ESC/POS command	Displayed virtual COM port (e.g. COM4)

8 The "Connection complete" window appears. Click [Test Buzzer] or [Test Printing] to check operation.

9 Click [Back to Main screen] to return to the main window.

10 Click the "x" button of TM *Bluetooth*® Connector to exit.

NOTE

- If "Error" is displayed when you click the [Search] on the TM *Bluetooth*® Connector, check whether:
  - ∗ The *Bluetooth* adapter is installed to the computer.
  - ∗ *Bluetooth* is ON in the Windows settings.
- If the device is not displayed on the TM *Bluetooth*® Connector or the TM *Bluetooth*® Connector Status shows " " after pairing.
  Check whether:
  - ∗ The printer is not turned on.
    Turn on the printer.
  - ∗ The printer is 10 m or further away from the computer.
  - ∗ Confirm that there is no other wireless device, such as a microwave oven and cordless telephone, that can interfere with the *Bluetooth* printer.
  - ∗ If the printer and the computer are placed in different rooms separated by a wall, move the printer and/or the computer in the same room.
  - ∗ The printer may not be detected when the search time is short. Try search again with longer search time.
  - ∗ While a computer and printer are communicating, the printer cannot be detected by other computers. Confirm that the printer to be detected is not communicating with any computer.

Connecting the Optional Wireless LAN Unit

The optional Wireless LAN cable set (OT-WLxx) enables you to use the product with a Wi-Fi connection.

For more information, refer to Technical Reference Guide of the Wireless LAN cable set.

CAUTION	• Be sure to turn off the printer when connecting the Wireless LAN unit. • Depending on the installation conditions of the printer and the routing for cables connected to it, the status of the radio waves for the Wireless LAN unit may decline. If this does happen, use an extension cable.

NOTE	• This option may be included with this product, depends on the models. • The shape of the Wireless LAN unit varies depending on the model.
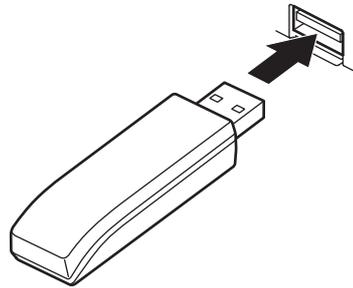
Connecting the Optional Customer Display

You can connect the customer display (DM-D30) to this product, using USB connection.

For more information, refer to "DM-D30 Technical Reference Guide".

CAUTION	Be sure to turn off the printer when connecting the customer display.

USB
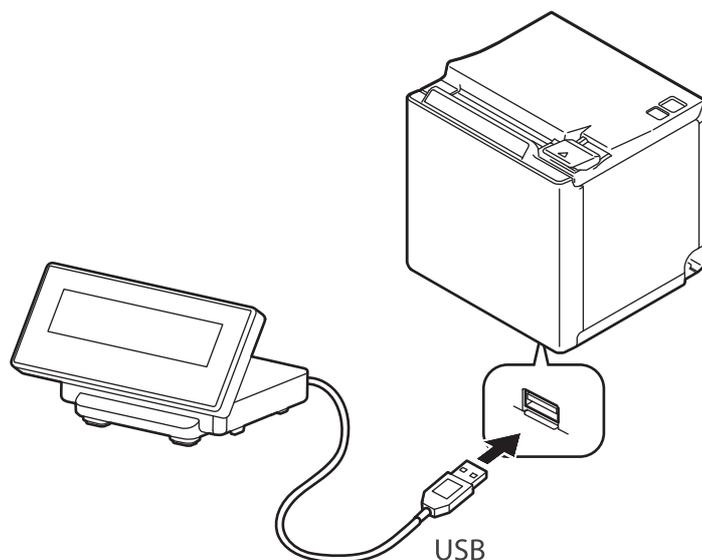
Connecting the Optional External Buzzer

When the optional external buzzer (model: OT-BZ20) is connected to the drawer kick connector of the printer, you can set the printer so that it beeps when you send commands, when an error occurs, when executed auto-cutting, and when detected paper end. Settings for sound patterns and frequency depending on the occasions the buzzer beeps are also available.

You need to set with the memory switch (customized values) for buzzer enable/disable setting, sound pattern setting, and frequency setting. For information about the memory switch (customized values), see "Software Settings" on page 45.

CAUTION	• Be sure to turn off the printer before you connect/disconnect the optional external buzzer.
	• Do not connect both the optional external buzzer and the cash drawer to the printer at the same time by using a branched connector.

Volume adjustment knob
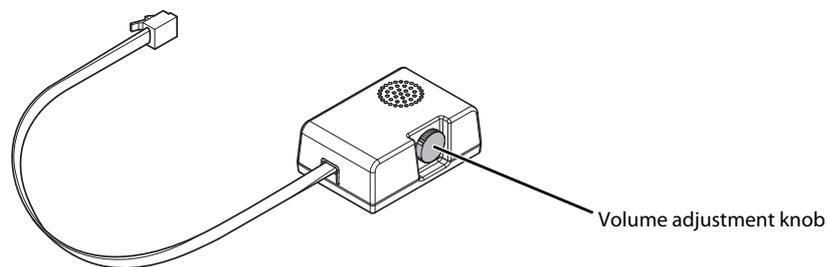
Attachment Position

The optional external buzzer is recommended to be installed in the following positions.

- When using the printer in top eject position: either side
- When using the printer in front eject position: side or top
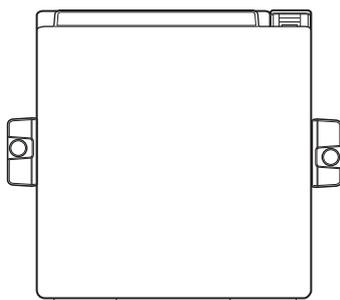
Top eject position
(Viewed from the front)
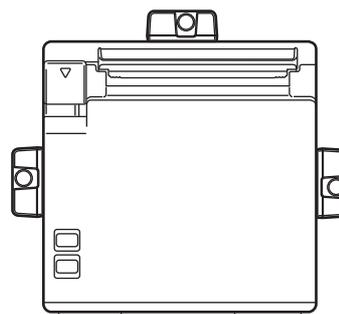
Front eject position
(Viewed from the front)

CAUTION	• Do not install the optional external buzzer at the roll paper exit.
	• To prevent liquid from entering inside, it is recommended to install the optional external buzzer so that the volume adjustment knob is positioned sideways or downward.

Connecting the Cash Drawer

CAUTION	• Do not connect both the optional external buzzer and the cash drawer to the printer at the same time by using a branched connector. • When the optional external buzzer is enabled with the memory switch (customized values) (see "Software Settings" on page 45), a cash drawer cannot be used. Be sure to disable it when you use a cash drawer. • Two driver transistors cannot be energized simultaneously. • Leave intervals longer than 4 times the drawer driving pulse when sending it continuously.

Required specifications of cash drawers

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 Ω 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.

Drawer Connection Diagram
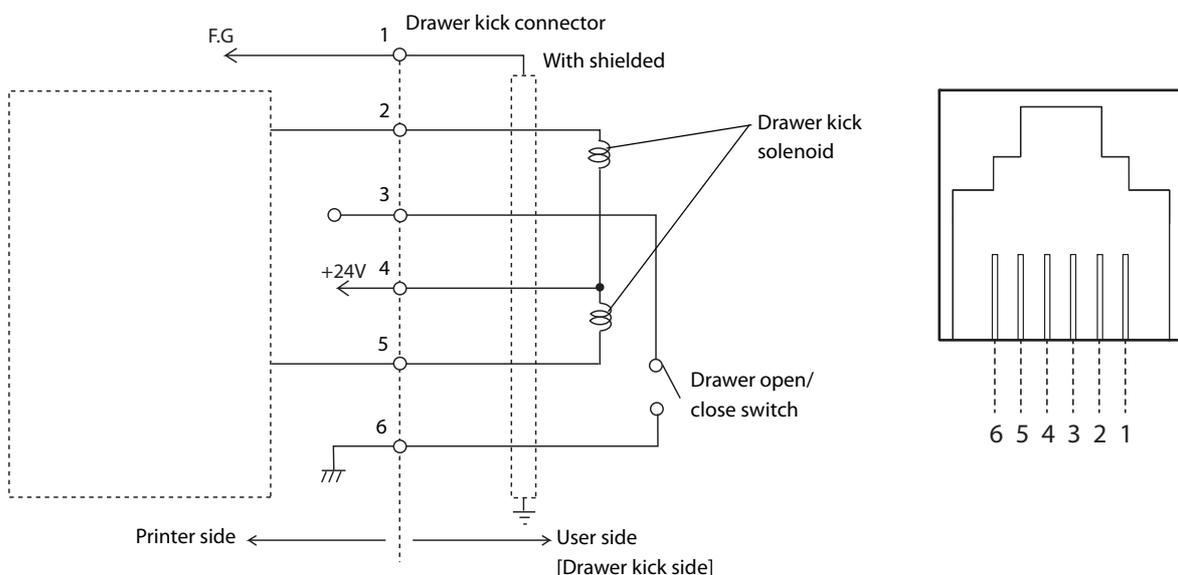
Connecting the drawer kick cable

⚠ **WARNING**	• **Use a shield cable for the drawer kick cable.**
	• **When using cash drawer, make sure to use the power supply for printer (connector pins 4).**
	• **Do not insert a telephone line into the drawer kick connector.**
	Doing so may damage the telephone line or printer.

Connect the drawer kick cable to the drawer kick connector by pressing firmly until the connector clicks into place.
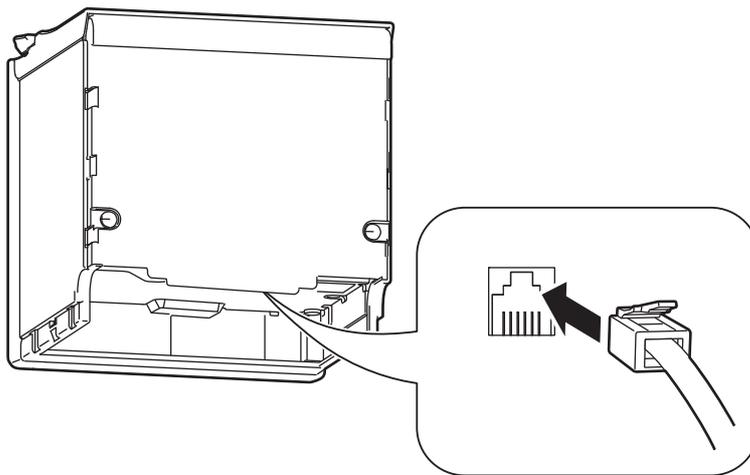
Attaching the Power Switch Cover

By attaching the power switch cover supplied, you can prevent accidental operations of the power switch. You can press the power switch by inserting a sharp-pointed object in the holes on the power switch cover.

⚠️ **WARNING**	If an accident occurs with the power switch cover attached, unplug the power cord immediately. Continued use may cause fire or shock.

43
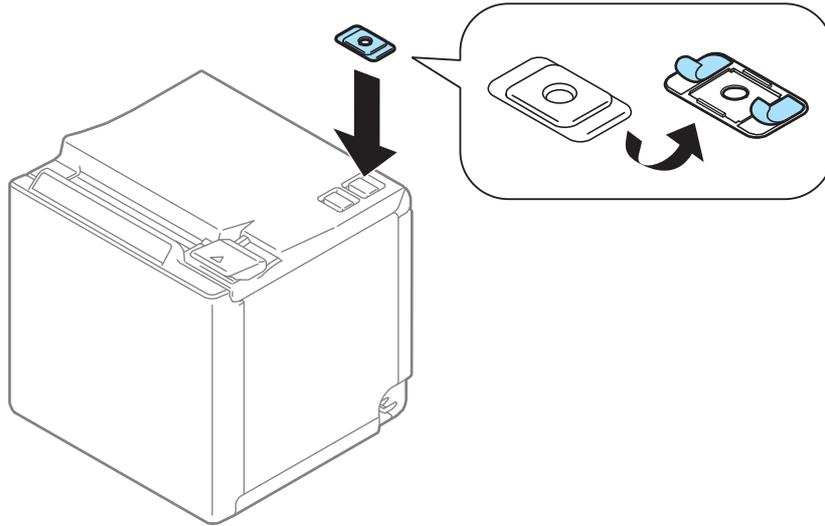
Advanced Usage

Software Settings

With the memory switches and customized values, which are software settings for this printer, you can set the various functions.

For an outline of the functions, see the following section. Use the Software Setting Mode to set the memory switches.

Item\Method		TM Utility for iOS, for Android	TM-m30 Utility for Windows	Software Setting Mode
Memory Switches	Receive buffer capacity	✔	✔	✔
	BUSY condition	✔	✔	✔
	Auto line feed	✔	✔	✔
	USB power-saving function	✔	✔	✔
	Release condition of receive buffer BUSY	✔	✔	✔
	Select paper out detector enabled for paper out signal output	✔	✔	✔
	Error signal settings	✔	✔	✔
	Pre-feed before next print	✔ *	✔	✔
Customized Values	User NV memory capacity			✔
	NV graphics memory capacity			✔
	Paper width	✔	✔	✔
	Print density	✔	✔	✔
	Print speed	✔	✔	✔
	Character code table defaults		✔	
	International character defaults		✔	
	Command execution during offline	✔	✔	✔
	Amount of top margin by backfeed	✔	✔	✔
	Interface switch waiting time	✔	✔	✔
	Main connection interface	✔	✔	✔
	LED indicator when I/F starting	✔	✔	✔
	Autocutting after closing cover	✔	✔	✔
	Paper reduction	✔	✔	✔
	Font A auto replacement			✔
	Font B auto replacement			✔
	Font C auto replacement			✔
	Multi-tone print density	✔	✔	✔
	Optional buzzer		✔	✔
Communication condition of USB interface			✔	✔

Item\Method	TM Utility for iOS, for Android	TM-m30 Utility for Windows	Software Setting Mode
Communication condition of *Bluetooth* interface	✔	✔	

∗: Supported by Ver. 3.2.0 or later.

> **NOTE**
> For information about how to use the software setting mode, see "Software Setting Mode" on page 59.

Functions

Receive buffer capacity

- 4KB (initial setting)
- 45 bytes

> **NOTE**
> The receive buffer capacity for the *Bluetooth* interface is 64 K bytes.

BUSY condition

- Receive buffer full/Offline (initial setting)
- Receive buffer full

> **NOTE**
> - In either case above, the printer enters the BUSY state after power is turned on, and when a self-test is being run.
> - This function is enabled only when Receive buffer capacity is set to 4KB.

Auto line feed

- Normally disabled (initial setting)
- Normally enabled

USB power-saving function

- Disabled
- Enabled (initial setting)

> **NOTE**
> The USB power-saving function is valid only when the USB interface communication condition is set to the vendor-defined class and the system configuration is set so that the USB driver can support the USB power-saving function.

Release condition of receive buffer BUSY

- Releases when the remaining receive buffer capacity becomes 256 bytes (initial setting)
- Releases when the remaining receive buffer capacity becomes 138 bytes

> **NOTE**   This function is enabled only when Receive buffer capacity is set to 4KB.

Select paper out detector enabled for paper out signal output

- Roll paper out detector (initial settings)
- Disabled

Error signal settings

- Enabled (initial setting)
- Disabled

Pre-feed before next print

- Disabled (initial setting)
- Enabled

> **CAUTION**   This is available for firmware version 1.10 ESC/POS or later.

> **NOTE**   When using this function, the top margin is approximately 10.5 mm.

Paper width

- 80mm (initial setting)
- 58mm

Print density

Selectable from 70% to 130% (5% increment)

Initial setting: 100%

Depending on the paper type, it is recommended to set the print density as shown in the table below for the best print quality.

Original Paper type	Density
AF50KS-E, KT55FA, KT48FA, P30523, P31523, P35524	100%
F5041(55), F5041(48)	105%

> **NOTE**   When the print density level is increased, print speed may be reduced.

Print speed

Selectable from levels 1 to 10 (Slow ~ Fast)

Initial setting: level 10

NOTE	Depending on print conditions, such as print duty, print head temperature, and data transmission speed, print speed is automatically adjusted, which may cause white lines due to intermittent print (the motor sometimes stops). To avoid this, keep the print speed constant by setting it lower.

Character code table defaults

Selectable from 43 pages including user defined page

International character defaults

Selectable from 18 sets

Command execution during offline

- Enabled (initial settings)
- Disabled

Amount of top margin by backfeed

- 2.0mm (initial settings)
- 9.5mm (no backfeed) (initial settings)

CAUTION	• Remove all ejected paper before printing with backfeed. • Disable the automatic top logo setting when enabling backfeed. • You cannot use backfeed in the following cases even if you have enabled backfeed. ∗ Immediately after auto cutting while the cover is closed. ∗ While the self-test is in progress.

NOTE	• You can specify values in 0.5mm steps if you use TM-m30 Utility or TM Utility for iOS/Android.

Interface switch waiting time

Select from 1 to 10 seconds (in intervals of 1 second)

1 second (initial setting)

Main connection interface

- Auto (interface that receives data first) (initial setting)
- USB
- Bluetooth
- Ethernet/Wi-Fi
- No main connection I/F

CAUTION	• When using this printer with multiple interfaces, make sure the interface that is always connected to be set as the main connection. • When using multiple interfaces, set the receive buffer capacity to 4 KB. • You cannot use wired LAN and wireless LAN at the same time.

NOTE	• The displayed items vary depending on the interface configuration. • For information about the function, see "Printing Using Multiple Interfaces" on page 23.

LED indicator when I/F starting

- Enabled (initial setting)
- Disabled

Autocutting after closing cover

- Cuts (initial setting)
- Does not cut

Paper reduction

Extra upper space reduction

- Disabled (initial setting)
- Enabled

Extra lower space reduction

- Disabled (initial setting)
- Enabled

Line space reduction rate

- Not reduced (initial setting)
- 25%
- 50%
- 75%

Line feed reduction rate

- Not reduced (initial setting)
- 25%
- 50%
- 75%

Barcode height reduction rate

- Not reduced (initial setting)
- 25%
- 50%
- 75%

Font A auto replacement

- Does not replace (initial setting)
- Font B
- Font C

Font B auto replacement

- Does not replace (initial setting)
- Font A
- Font C

Font C auto replacement

- Does not replace (initial setting)
- Font A
- Font B

Multi-tone print density

Selectable from 70% to 130% (5% increment)

Initial setting: 100%

Optional buzzer

> **NOTE**
> - For information about how to connect the optional external buzzer, see "Connecting the Optional External Buzzer" on page 40.
> - When the optional external buzzer is enabled, a cash drawer cannot be used. Be sure to disable it when you use a cash drawer.

Enables/disables

- Disabled (initial setting)
- Enabled

Buzzer frequency (Error)

- Does not sound
- Sounds 1 time
- Sounds continuously (initial setting)

Sound pattern (Autocut)

Selectable from Patterns A to E
Initial setting: Pattern A

Buzzer frequency (Autocut)

- Does not sound
- Sounds 1 time (initial setting)

Sound pattern (Pulse 1)

Selectable from Patterns A to E
Initial setting: Pattern A

Buzzer frequency (Pulse 1)

- Does not sound
- Sounds 1 time (initial setting)

Sound pattern (Pulse 2)

Selectable from Patterns A to E
Initial setting: Pattern B

Buzzer frequency (Pulse 2)

- Does not sound
- Sounds 1 time (initial setting)

Communication condition of USB interface

Class

- USB printer class (initial setting)
- USB vendor-defined class

Communication condition of *Bluetooth* interface

- Device name (initial setting: TM-m30_xxxxxx)
- Passkey (initial setting: 0000)
- Security (initial setting: Low)
- Auto Re-Connect with iOS device (initial setting: Disabled)

> **NOTE**
> The device name is initially set to TM-m30_xxxxxx.
> (xxxxxx refers to the last 6 digits of the serial number labeled on the back of your printer.)

Network Settings

The following explains the procedure for network settings in order to connect the product to your network.

Setup methods

There are three methods for set up.

Method 1: Setup using EpsonNet Config

This method involves installing the network configuration tool, EpsonNet Config, on your computer for setting.

As it does not require any settings in advance to allow set up, you can easily perform set up using a computer already connected to the network.

Download EpsonNet Config from the Epson website.

Method 2: Setup using EpsonNet Config (Web version)

This method involves opening the Web application equipped in the printer from a Web browser to perform settings.

Because you specify the printer's IP address to open it, you need to set your computer to the same network segment as the printer.

With EpsonNet Config (Web version), you can set more items than with EpsonNet Config.

Method 3: Setup using arp/ping commands

This method involves setting the printer's IP address in the setting computer's arp/ping commands, then using the setting tool to change the other settings.

The setting computer must be in the same segment as the printer. Also, settings can be done only when the printer's arp+ping IP setting is set to Enable.

Use EpsonNet Config or EpsonNet Config (Web version) for settings other than the IP address.

Flow of Setup

Method 1	Method 2	Method 3
Printing the status sheet (check settings) (See "Printing a Status Sheet" on page 65.)		
Setup using EpsonNet Config	Change network settings on setting computer	Use arp/ping command to set printer IP address
	Use EpsonNet Config (Web version) to perform settings	- Use EpsonNet Config to perform other settings - Use EpsonNet Config (Web version) to perform other settings
Finish	Finish	Finish

Setup using EpsonNet Config

Execute EpsonNet Config, select the target printer from the displayed device list, then check and change the settings.

If the printer is still set to factory defaults, the printer's MAC address is listed up, even if the computer does not have the same network address.

> **CAUTION**
> - The initial setting uses an IP address for the printer provided by a DHCP server. Since you cannot complete setup if there are conflicting IP addresses on the network, make sure that there are no other devices on the network that conflict with the IP address provided by the DHCP server. If a DHCP server is not available, a fixed IP address (192.168.192.168) is set approximately one minute after turning on the printer. Also, if the Ethernet cable is not connected, connect the Ethernet cable and then run this process.
> - When DHCP is enabled, the provided IP address is printed automatically. However, if the Ethernet cable is not connected, and the Wireless LAN unit is not installed, printing is not performed.

1 **Connect the printer to the same network as the computer where you installed Epson-Net Config.**

2 **Start up EpsonNet Config.**
The tool automatically detects printers connected to the network and displays a list.
It may take up to a minute for the printer to be displayed in the list.
If it is not displayed, check that [Filter] is set to "(All)" or "Network-connected devices", then click [Refresh]. Or, select [Tools], then [Option], and check the settings of [Search Parameters].

3 **Select the target printer, then click [Configuration].**
If you cannot determine the target printer from the product name or the IP address, use the MAC address. You can check the printer's MAC address on the status sheet.

4 **Change the printer's settings based on the network setting information you received from the network administrator.**
Select an item from the menu and change the setting.

5 **Once you set the necessary items, click [Transmit].**
The changed contents are sent to the printer and the printer settings are changed.

> **NOTE**
> For details about EpsonNet Config, see the manual (operation guide) installed together with the tool or the online help.

Setup using EpsonNet Config (Web version)

Follow the steps below to start up EpsonNet Config (Web version), and check or change the settings.

CAUTION	• When setting up using the EpsonNet Config (Web version), you need to set the network settings for the device to the same network segment as the printer you want to connect to. • The initial setting uses an IP address for the printer provided by a DHCP server. Since you cannot complete setup if there are conflicting IP addresses on the network, make sure that there are no other devices on the network that conflict with the IP address provided by the DHCP server. If a DHCP server is not available, a fixed IP address (192.168.192.168) is set approximately one minute after turning on the printer. Also, if the Ethernet cable is not connected, connect the Ethernet cable and then run this process. • When DHCP is enabled, the provided IP address is printed automatically. However, if the Ethernet cable is not connected, and the Wireless LAN unit is not installed, printing is not performed.

1 **Connect the setting computer and the printer to the same network.**

2 **Perform network settings on the computer so that it is in the same segment as the printer's IP address.**

Subnet mask: Same subnet mask as the printer
IP address: Same segment (same network address) as the printer, different host address

Check the values set in the printer on the status sheet.

E.g.)

	Printer	Setting computer
Subnet mask	255.255.255.0	255.255.255.0
IP address	192.168.192.168	192.168.192.2

3 **Start up your Web browser and input the printer's IP address into the address field.**
E.g.) http://192.168.192.168

NOTE	Under initial settings, when you access EpsonNet Config (Web version) from your browser, an authentication warning message may be displayed.

4 **Input your user name and password on the authentication window.**
Input "epson" for both the user name and password. You can change the password in the [Optional] setting menu, under [Password].

5 **Change the settings based on the network setting information you received from the network administrator.**
Select an item from [Configuration] and change the setting.

6 **After changing the necessary parameters, click the [Send] button.**
The changes are sent to the printer.

7 **Click the [Reset] button on the Web page displayed after sending.**
The sent contents are enabled.
Depending on the changes, such as the IP address, the connection with the setting computer may be cut and the EpsonNet Config window may not be displayed. To reconnect, you need to set the net-

work settings of the setting computer to the same network segment as the printer for which settings were changed.

Setup using arp/ping commands

You can change the printer's IP address by changing the ARP table (table of IP address and MAC addresses) managed by the OS on the setting computer.

Check that the setting computer is connected to the network in the same segment as the printer, and that the arp+ping IP setting for the printer is set to Enable. (The factory default is Disable.)

You can check the printer settings on the status sheet.

1   Delete the IP address you want to set to the printer from the ARP table.
arp -d (IP address)
E.g.) arp -d 192.168.0.10

2   Add the printer's MAC address and the IP address you want to set to the ARP table.
arp -s (IP address) (MAC address)
E.g.) arp -s 192.168.0.10 00-26-AB-7B-00-00

3   Execute the ping command and enable settings.
ping (IP address you want to set)
E.g.) ping 192.168.0.10
When a message like "Reply From 192.168.0.10: Bytes=32 Time < 10ms TTL=255" is displayed, the IP address setting is complete.

Use EpsonNet Config or EpsonNet Config (Web version) for settings other than the IP address.

MAC Address Confirmation

You can check the printer's MAC address using the following procedures.

- Printing the status sheet
- Label attached on the product
- A printer self-test (May not be supported by some TM printers.)
- Using EpsonNet Config to confirm
- Using a Web browser to confirm (EpsonNet Config (Web version) function)

Setting/Check Modes

As well as print mode, the following modes are also provided for making various printer settings and checking items.

- Self-test mode
- NV graphics information print mode
- Receipt Enhancement information print mode
- Software settings mode
- Restore default values mode
- Interface setup mode
- Hexadecimal dumping mode

The self-test mode or hexadecimal dumping mode is selected depending on the operation performed when the power is turned on.

NV graphic information print mode, Receipt Enhancement information print mode, Software settings mode, and Restore default settings mode are selected depending on the Feed button operation performed during a self-test.

Close the roll paper cover, and turn on the printer while pressing the Feed button.
Self-test

①

Briefly press the Feed button.	Hold down the Feed button.
Continuing the self-test	**Mode selection guidance**

②

Press the Feed button once briefly and then hold it down.	Press the Feed button twice briefly and then hold it down.	Press the Feed button three times briefly and then hold it down.	Press the Feed button four times briefly and then hold it down.	Press the Feed button five times briefly and then hold it down.
NV Graphics Information	**Receipt Enhancement Information**	**Software Settings**	**Restore Default Values**	**Interface Setup**

Open the roll paper cover, and turn on the printer while pressing the Feed button, and then close the roll paper cover.
Hexadecimal dumping

In 1 and 2, the following guidances are printed, the Paper LED flashes, and instructs the user's operations.

1. Continuing self-test guidance

```
Select Modes by pressing Feed Button.
   Continue SELF-TEST: Less than 1 second
   Mode Selection    : 1 second or more
```

2. Mode selection guidance

Mode Selection

Modes
  0: Exit and Reboot Printer
  1: NV Graphics Information
  2: Receipt Enhancement Information
  3: Customize Value Settings
  4: Restore Default Values
  5: Interface Setup
  6 or more: None

Select Modes by executing following procedure.
  step 1. Press the Feed button less than 1 second as many times as the selected mode number.
  step 2. Press Feed button for 1 second or more.

3

Self-test Mode

You can check the following items using the self-test.

- Product name
- Firmware version
- Product serial number
- Interface type
- Peripheral device information
- Resident fonts
- Maintenance counter information (head running length, number of times of autocutting)

Follow the steps below.

1 **Close the roll paper cover.**

2 **While pressing the Feed button, turn on the printer. (Hold down the Feed button until printing starts.)**
After printing the current print status, a Continuing self-test guidance is printed, and the Paper LED flashes.

3 **Briefly press the Feed button (less than one second) to continue the self-test.**
The printer prints a rolling pattern on the roll paper, using the built-in character set.
After "*** completed ***" is printed, the printer initializes and switches to standard mode.

NV Graphics Information Print Mode

Prints the following NV graphic information registered to the printers.

- Capacity of the NV graphics
- Used capacity of the NV graphics
- Unused capacity of the NV graphics
- Number of NV graphics that are registered
- Key code, number of dots in X direction, number of dots in Y direction to be defined.
- NV graphics data

> **NOTE** For details on NV graphics, see "NV Graphics Memory" on page 19.

Follow the steps below.

1 **After running a self test, hold down the Feed button for at least one second, and then select the Mode selection.**
The Mode selection guidance is printed, and the Paper LED flashes.

2 After briefly (less than one second) pressing the Feed button once, hold it down for at least one second, to print the NV graphics information.

After information printing, the Mode selection guidance is printed again.

3 To finish, turn off the power, or select "Exit and Reboot Printer".

Receipt Enhancement Information Print Mode

You can check the following items using the R/E information mode:

- Automatic top logo setting
- Automatic bottom logo setting
- Extended settings for automatic top/bottom logo

Follow the steps below.

1 After running a self test, hold down the Feed button for at least one second, and then select the Mode selection.

The Mode selection guidance is printed, and the Paper LED flashes.

2 After briefly (less than one second) pressing the Feed button twice, hold it down for at least one second, to print the R/E information.

After information printing, the Mode selection guidance is printed again.

3 To finish, turn off the power, or select "Exit and Reboot Printer".

Software Setting Mode

Set the printer's memory switches and customized values.

- Print Density
- Print Speed
- Enable/Disable Auto Paper Feed&Cut at cover close
- Embedded Font Replacement
- Communication condition of USB Interface
- Buzzer Control
- Interface Settings
- Automatic Paper Reduction
- NV Memory Capacity
- Command execution during offline
- LED indicator when I/F starting
- Paper Width
- Amount of top margin by backfeed

- Interface switch waiting time
- Main connection interface
- Pre-feed before next print

Follow the steps below.

1 **After running a self test, hold down the Feed button for at least one second to enter the Mode selection.**
The Mode selection guidance is printed, and the Paper LED flashes.

2 **Briefly press the Feed button three times (less than one second), hold it down for at least one second to enter the Software settings mode (Customized value setting).**
The Software setting mode guidance is printed, and the Paper LED flashes.

```
            Customize Value Settings


Modes
   0: Exit
   1: Print Current Settings
   2: Print Density
   3: Automatic Paper Reduction
   4: Auto Paper Feed&Cut at cover close
   5: Paper Width
   8: Embedded Font Replacement
   9: USB Interface Settings
   10: Printing Speed
   11: NV Capacity
   12: Command Execution (Offline)
   13: Buzzer Control
   14: Interface Settings
   15: Other Settings

Select Modes by executing following
procedure.
   step 1. Press the Feed button less
           than 1 second as many times
           as the selected mode number.
   step 2. Press Feed button for 1
           second or more.
```

3 **After briefly pressing the Feed button (less than one second) for the number of times shown in the print result, hold down the button for more than one second to select the setting items.**
The setting selected as the setting item, the current settings and initial settings are printed.
Depending on the setting item, you may need to continue selecting the setting item before the settings are printed.
For details on setting items, see .

4 **Select a setting by briefly pressing the Feed button (less than one second) for the number of times applicable to the setting, and then hold down the button for more than one second to confirm your selection.**
After saving the settings, the Software setting mode guidance is printed, and the Paper LED flashes.

5 **To close Software setting mode, turn off the printer, or select "Exit" to return to Mode selection guidance, and then select "Exit and Reboot Printer".**

> NOTE
> * To select 0 as the item number, hold down the Feed button until printing starts.
> * If the button is pressed a number of times that is not displayed by the Setup guidance, the operation is invalid and the same guidance is printed.

Restore Default Values Mode

In Restore default values mode, following values saved on NV Memory will be set back to initial settings. When any error occurs, you can use to specify the reason.

* Memory switch
* Customized Value
* Communication Condition of USB Interface
* Status
* Character types
* Accessories
* Barcode
* Two-Dimensional Symbol
* Print Position
* Logo Setting

Follow the steps below.

1 **After running a self test, hold down the Feed button for at least one second to enter the Mode selection.**
The Mode selection guidance is printed, and the Paper LED flashes.

2 **Briefly press the Feed button four times (less than one second), hold it down for at least one second to enter the Restore Default Values.**
The guidance is printed.

3 **Briefly press the Feed button once (less than one second), hold it down for at least one second. (Hold down the Feed button until the message of restore completion is printed.)**

Interface Setup Mode

Use this mode to setup the interface and other settings.

Follow the steps below.

1 **After running a self test, hold down the Feed button for at least one second to enter the Mode selection.**
The Mode selection guidance is printed, and the Paper LED flashes.

2 **Briefly press the Feed button five times (less than one second), hold it down for at least one second to enter the Interface Setup mode.**
The guidance is printed.

3 **After briefly pressing the Feed button (less than one second) for the number of times shown in the print result, hold down the button for more than one second to select the setting items.**

Initialize

Select [Wi-Fi & Ethernet Setup] or [Bluetooth Setup] and select [Initialize] to initialize the communication settings. The printer is reset and restarted.

SimpleAP mode (Wi-Fi model)

In Wi-Fi model, select [Wi-Fi & Ethernet Setup] and select [SimpleAP] to start in SimpleAP mode (the same as the factory default setting). The printer is reset and restarted, and it begins printing the "SimpleAP Start" information.

Select this to use Quick connection for Wi-Fi model.

NOTE	For information on the Quick connection function, see "Simple Setup for Wireless LAN" on page 20.

Auto re-connect to iOS device (*Bluetooth* model)

In *Bluetooth* model, select [Bluetooth Setup] and then select [Auto Re-Connect iOS], you can select whether to enable or disable auto reconnection to iOS devices.

NOTE	• For details on the auto re-connect function, see "Auto Reconnect Feature" on page 98. • You can change the settings with TM-m30 Utility and TM Utility for iOS/Android.

Bluetooth Security Settings (*Bluetooth* model)

For *Bluetooth* models, select [Bluetooth Setup], and then select [Security], and you can change the *Bluetooth* security settings.

CAUTION	When the security settings are changed, the link key (pairing information) is removed. If the printer is already paired with a terminal, unpair them and then pair again.

NOTE	You can change the settings with TM-m30 Utility and TM Utility for iOS/Android.

Security	Pairing Mode	Pairing Method
Low	Pairing is always possible	Just Works
Middle	Pairing is possible for one minute after printing the status sheet	Just Works
High	Pairing is possible for one minute after printing the status sheet	Numeric Comparison/Passkey Entry

Pairing method when the security is set to Middle/High (from the printer)

When the security is set to Middle/High and the printer is ready to be paired, perform the following procedure.

1   **Load paper in the printer, and then turn it on.**

CAUTION	• Make sure no errors have occurred and that the printer is not off-line. • You cannot pair the printer while the network is starting up immediately after the power is turned on.

2   **Open the roll paper cover, hold down the FEED button (two seconds), and then close the roll paper cover.**

3   **A status sheet is printed, and the power LED flashes a pattern indicating that pairing is now possible.**

NOTE	• Pairing is possible for one minute after printing the status sheet. • You can enable pairing also by printing the status sheet by pressing the status sheet button.

Pairing method when the security is set to High (from the host)

When the security is set to High and the printer is ready to be paired, perform the following procedure.

1 **Search for the printer on the Bluetooth settings screen on the host device.**

2 **Select the printer you want to pair with.**
   The printer prints the Passkey.

3 **Check that the printed Passkey and the Passkey displayed on the host device match, and then select "Pairing" on the host device.**

Hexadecimal Dumping Mode

In hexadecimal dumping mode, data from the host device is printed in hexadecimal numbers and characters. By comparing the print outs and the program, you can check whether or not data is being sent to the printer correctly.

NOTE	• When there are no characters that correspond to the print data, " . " is printed. • If you press the Feed button when there is less than one line of print data, one line is printed. • During hexadecimal dumping mode, applications that check the printer status may not operate correctly. The printer only returns the status for the "Real-time transmission status" command.

Follow the steps below.

1 **Open the roll paper cover.**

2 **While pressing the Feed button, turn on the printer. (Hold down the Feed button until the Error LED turns on.)**

3 **Close the roll paper cover.**
   From this point, all data received by the printer is printed in the corresponding hexadecimal numbers and ASCII characters.

   Example of printing in hexadecimal dumping mode:

```
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 **To close hexadecimal dumping mode, turn off the printer after printing is complete, or press the Feed button for three times.**

Printing a Status Sheet

Follow the steps below to check the interface settings.

NOTE	You cannot print after turning on the power while the Power LED is flashing.

Using the Status Sheet Button

1 **Check that the printer is turned on.**
Make sure the roll paper cover is closed.

2 **If there is a bottom cover, remove the cover.**
See "Removing the Covers" on page 87 for details on removing the bottom cover.

3 **Hold down the status sheet button for at least three seconds.**
The status sheet is printed. After printing, the printer returns to the standard mode.

Using the Feed button

1 **Check that the printer is on.**

2 **Open the roll paper cover.**

3 **Hold down the Feed button for at least three seconds.**

4 **Close the roll paper cover.**
The status sheet is printed. After printing, the printer returns to the standard mode.

```
        * * *  Wi-Fi & Ethernet  Interface  * * *

Wi-Fi Status
   MAC Address      : Unmounted
   SSID : EPSON_Printer
   Network Mode     : Infrastructure
   Comm Standard    : 802.11b/g/n
   Encryption Type   : WPA2-PSK
   Link Status       : Unknown
   Channel          : Unknown
   Transmission      : Unknown
   Access Point      : Unknown
   Signal Level      : Unknown

Ethernet Status
   MAC Address      : XX-XX-XX-XX-XX-XX
   Physical Layer     : Auto-negotiation
   Link Status        : Disconnect

      Ethernet
         WF : XXXXXXXXXXX
         DN : TM-m30

Network
   Soft Version        : 00.09

TCP/IP Status
   Acquiring         : Auto
   IP Address        : (NONE)
   Subnet Mask       : (NONE)
   Default Gateway    : (NONE)

Other Status
   Time Server        : Invalid
   Stored Date/Time   : 2015/01/01 00:00:00
   Wi-Fi Device ID     : Unknown
```

```
        * * *  Bluetooth  Interface  * * *

Bluetooth Status
   BD_ADDR     : XX:XX:XX:XX:XX:XX
   Passkey       : XX
   Device Name : TM-m30_XXXXXX
   Module Ver   : X.XX
   Module Info  : BT401-XXXXX
   Mode          : Auto re-connect enable
   Security      : Low

      Bluetooth Status
         BT : XXXXXXXXXXXX
         DN : TM-m30


        * * *  Wi-Fi & Ethernet  Interface  * * *

Wi-Fi Status
   MAC Address      : Unmounted
   SSID : EPSON_Printer
   Network Mode     : Infrastructure
   Comm Standard    : 802.11b/g/n
   Encryption Type   : WPA2-PSK
   Link Status       : Unknown
   Channel          : Unknown
   Transmission      : Unknown
   Access Point      : Unknown
   Signal Level      : Unknown

Ethernet Status
   MAC Address      : XX-XX-XX-XX-XX-XX
   Physical Layer     : Auto-negotiation
   Link Status        : Disconnect

      Ethernet
         WF : XXXXXXXXXXX
         DN : TM-m30

Network
   Soft Version        : 00.10

TCP/IP Status
   Acquiring         : Auto
   IP Address        : (NONE)
   Subnet Mask       : (NONE)
   Default Gateway    : (NONE)

Other Status
   Time Server        : Invalid
   Stored Date/Time   : 2015/01/01 00:00:00
   Wi-Fi Device ID     : Unknown
```

Resetting the Interface Settings

Follow the steps below to reset the interface settings.

NOTE	You can return the interface settings to their defaults from the Interface Setup mode. See "Interface Setup Mode" on page 62 for details on the Interface Setup mode.

1   **Turn off the printer and close the roll paper cover.**

2   **If the bottom cover is attached, remove the cover.**
See "Removing the Covers" on page 87 for details on removing the bottom cover.

3   **Hold down the status sheet button while turning on the printer.**
A message is printed indicating that resetting is being performed, and the printer restarts.

EpsonNet Config (Web Version)

This section explains items that can be displayed in the Web application EpsonNet Config (Web version) built-into the TM-m30, as well as items that can be set.

Information Menu

On the Information menu, you can check the following settings. For the details of each protocol or the settings other than the Information menu, check the Configuration menu.

Basic Information

You can check the items below.

(Administrator name, installation location, MAC address, hardware version, software version, connected printer name, wireless connection channel, wireless transmission speed, MAC address of the wireless connection access point, wireless radio wave strength, printer status)

TCP/IP

You can confirm TCP/IP protocol IP address settings.

SNMP

You can confirm SNMP protocol settings.

Bonjour

You can confirm Bonjour protocol settings.

Time Setting

You can confirm SNTP protocol time server settings.

Timeout

You can confirm LPR/Port9100 protocol Timeout duration settings.

ePOS-Print

You can check the ePOS-Print version.

Configuration Menu

On the Configuration menu, you can check and set the following items.

Ethernet

You can check and set the communication standard.

(Auto / 10Base-T Half Duplex / 10Base-T Full Duplex / 100Base-TX Half Duplex / 100Base-TX Full Duplex)

Wireless

This is required when using the Wireless LAN unit. You can check and set the following wireless settings.

- Settings of wireless transmission standards (Auto / 802.11b/g/n / 802.11a/n)
- Network mode settings (Infrastructure / Ad hoc)
- SSID name input
- Channel setting *Used only in ad hoc mode.
- Encryption code setting (WPA2-PSK / WPA2-Enterprise / WPA-PSK (AES) / WEP (128bit) / WEP (64 bit) / None)
- WPA Pre-Shared Key setting *WPA wireless password setting
- Default WEP Key selection (Key 1 / 2 / 3 / 4)
- WEP key1 to 4 setting *WEP wireless password setting
- Authentication algorithm setting (OpenSystem / Shared key / Auto)
- Power saving function settings (Disable/Enable)

*If using "WPA2-Enterprise" in the above encryption method, the following settings are required.

- EAP authentication setting (EAP-TLS / PEAP-TLS / PEAP-MSCHAPv2)
- Client-signed certificate (Client-Signed Certificate1 / Client-Signed Certificate2 / Client-Signed Certificate3)
- User ID input
- Password input
- Server authentication setting (Disable / Enable)
- Server ID input
- CA-signed certificate setting (CA Certificate1 / CA Certificate2 / CA Certificate3 / CA Certificate4 / CA Certificate5 / CA Certificate6 / CA Certificate7 / CA Certificate8 / CA Certificate9 / CA Certificate10)
- Anonymous Name -input alias used when establishing communication with RADIUS server
- Encryption strength setting
  (Low: AES256-SHA / DES-CBC3-SHA / AES128-SHA / RC4-SHA)
  (Medium: AES256-SHA / DES-CBC3-SHA / AES128-SHA / RC4-SHA)
  (High: AES256-SHA / DES-CBC3-SHA)

Security

SSL/TLS

You can check and set the SSL/TLS.

- Selection of the server certificate type
  (Selfsigned Certificate / CA signed Certificate1 / CA signed Certificate2 / CA signed Certificate3)
- Encryption strength setting (Medium / Low / High)
- Setting for automatic redirect from HTTP to HTTPS (Enable / Disable)
- Confirmation of each certificate

Authentication

Certificate List

You can check the following items for certificates.

- Self-signed certificate setting
- CA signed certificate settings 1 to 3
- CA certificate settings 1 to 10

Certificate Import

You can check and set the following items for certificate imports.

- File format settings (PEM / DER Certification / Password Protection PKCS#12 Certificate)
- File name input
- Password input

* If you import and select an invalid certificate, you will no longer be able to start up EpsonNet Config (Web version).
  In that case, use EpsonNet Config to select a certificate other than the invalid one (for example, a Selfsigned Certificate), and import the correct certificate with EpsonNet Config (Web version) again.

TCP/IP

IP v4 Address

This sets the IP address when setting the manual.

- Setting for IP address acquisition method (Manual / Auto)
- IP address setting
- Subnet mask address setting
- Default gateway address setting
- APIPA setting (Enable / Disable)
- ARP+Ping setting (Enable / Disable)
- IP Address Printing (Enable / Disable)

DNS/DDNS

This sets the DNS server address (IPv4).

- Setting for automatic acquisition of the DNS server address (Disable / Enable)
- DNS server address setting

This sets the host name and domain name.

- Setting for automatic acquisition of the host name and domain name (Disable / Enable)
- Host name input
- Domain name input
- Setting of the function for registering the network I/F address in the DNS server (Disable / Enable)

SNMP

Community

This sets the community name used in notifications. You can set up to 16 ASCII characters.

- Read Only community name fixed as "public" *Cannot be changed
- Read/Write community name input

IP Trap

This sets the IP trap.

IP Trap1
- Trap setting (Disable / Enable)
- Trap address setting
- Community name input

IP Trap2
- Trap setting (Disable / Enable)
- Trap address setting
- Community name input

Bonjour

This sets Bonjour.

- Bonjour setting (Disable / Enable)
- Name input for when using Bonjour*
- Printer name setting for when using Bonjour*
- Installation location input

* You can use upper and lower case alphabet characters, numerals and hyphens, however, only use upper and lower case alphabet characters for the initial character.

Time Setting

You can check and set the time server.

- Use of time server (Disable / Enable)
- Time server address setting
- Time setting for refresh interval (Can be set between 1 min to 10,080 min) - Default is 60 min.
- Confirmation of time server status (Invalid / Success / Synchronize / Failure)
- Error setting

Timeout

This sets the timeout time for printing.

- LPR time-out setting - Default is 90 sec.
- RAW (Port9100) time-out setting - Default is 90 sec.

ePOS-Print

You can check and set ePOS-Print.

- Version confirmation
- ePOS-Print setting (Disable / Enable)
- Device ID setting
- Printer type setting (Thermal(180dpi) / Thermal(203dpi) / Impact / Impact(24pin))
- Setting for character code table type

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(Page 0-5, 16-19, 20-21, 26, 30-31, 11-15, 32-53)

NOTE	**You can select the following functions on the [Optional] menu.** - **Administrator Information:** This registers the administrator name and the location where the printer is installed. - **Reset:** This resets the interface card or restores it to initial settings. - **Password:** This changes the password.

Protection with a password

You can set a password for protecting the set content.

User Name	"epson" (User name cannot be changed.)
Password	Default: None Settable characters: ASCII characters (Alphanumerics and symbols) Number of settable characters: 20 characters

NOTE   You can use the password set for the EpsonNet Config (Web Version) function as the password for when using EpsonNet Config to perform settings.

Certificate Import

CAUTION   Enable the time server when using a certificate.

Make the following settings in the Authentication - Certificate Import menu.

1 **Set the file type of certificate.**

2 **Specify the certificate file to import.**

3 **If the file type of certificate is PKCS#12, enter the password.**

4 **Click [Import].**

3

Application Development Information

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

Controlling the Printer

The printer supports the following command systems:

- ePOS-Print XML
- ESC/POS

Users can control the printer by using the aforementioned commands, or the following development kits or drivers.

- Epson ePOS SDK
- ePOS-Print SDK
- OPOS ADK
- OPOS ADK for .NET
- JavaPOS ADK
- EPSON Advanced Printer Driver (APD)
- EPSON TM Virtual Port Driver
- Mac Printer Driver
- Epson TM/BA Series Thermal Printer Driver

ePOS-Print XML

ePOS-Print XML is the Epson original control command system for POS printers defined in XML. With ePOS-Print XML commands, you can print in environments where http communication is available and from OS applications. For detailed information about ePOS-Print XML, see the ePOS-Print XML User's Manual.

ESC/POS

ESC/POS is the Epson original printer command system for POS printers and customer display. With ESC/POS commands, you can directly control all the TM-m30 printer functions, but detailed knowledge of printer specifications or combination of commands is required, compared to using drivers and applications.

For detailed information about ESC/POS commands, see the Product Specifications. Product Specifications is available after contracting the non-disclosure agreement with Epson. For details, please contact the selling agency.

Software

The following software is provided for application development.

Development Kit

Software	Description
Epson ePOS SDK	This is a developer kit to control applications, native applications for smart devices, and printers. This includes libraries, manuals, and sample programs.
for Android	
for iOS	
ePOS-Print SDK	This is a developer kit to control applications, native applications for smart devices, and printers. This includes libraries, manuals, and sample programs.
for Android	
for iOS	
for Windows Store Apps	
for JavaScript	
EPSON OPOS ADK	This OCX driver can control POS peripherals using OLE technology.*1 Because controlling POS peripherals with original commands is not required on the application side, efficient system development is possible.
EPSON OPOS ADK for .NET	The OPOS ADK for .NET is a POS industry standard printer driver compatible with Microsoft POS for .NET. It allows you to develop applications that are compatible with the UPOS (Unified POS) specification. When developing applications, use a separate development environment such as Microsoft Visual Studio .NET.
EPSON JavaPOS ADK	JavaPOS is the standard specification which defines an architecture and device interface (API) to access various POS devices from a Java based system. Using JavaPOS standard API allows control with Java based applications of functions inherent to each device. A flexible design with Java language and JavaPOS enables many different types of computer systems, such as stand alone or network configuration, to use a same application. You can use JavaPOS to build applications and drivers independently of platforms. This allows flexible configurations using thin clients to meet the system requirements.

∗1: OLE technology developed by Microsoft divides software into part blocks. The OPOS driver is presupposed to be used with a development environment, such as Visual Basic, unlike ordinary Windows printer drivers. It is not a driver to be used for printing from commercial applications.
You can acquire documents regarding the UnifiedPOS from the following link.
https://nrf.com/resources/retail-technology-standards/unifiedpos

Drivers

Software	Description	Operating environment
EPSON Advanced Printer Driver (APD)	In addition to ordinary Windows printer driver functions, this driver has controls specific to POS. The Status API (Epson original DLL) that monitors printer status and sends ESC/POS commands is also attached to this driver.	Windows
EPSON TM Virtual Port Driver	This is a serial/parallel-USB/LAN conversion driver to make an Epson TM/BA/EU printer connected via USB or LAN accessible from a POS application through a virtual serial or parallel port. It allows you to directly control devices connected via USB or LAN with ESC/POS commands without making changes in the POS application that controls devices connected via a serial or parallel interface.	Windows
Mac Printer Driver	Mac printer driver allows you to control the printer using Common UNIX Printing System (CUPS) on Mac OS X. This is a full raster printer driver. It is able to print images, text, and vector graphics etc., that an application displays. With this driver many printer controls are possible, such as paper cut timing control, cash drawer control, printing speed control, blank line skip, and upside-down printing. It also provides API and dialogues for print setting, sample applications, and logo setting utility.	Mac OS X
Epson TM/BA Series Thermal Printer Driver	This driver allows you to control the printer using Common UNIX Printing System (CUPS) on GNU/Linux. This is a full raster printer driver. It is able to print images, text, and vector graphics etc., that an application displays. With this driver many printer control are possible, such as paper cut timing control, cash drawer control, printing speed control, blank line skip, and upside-down printing.	GNU/Linux

Utilities

Software	Description	Operating environment
Epson TM Utility	A utility that can be downloaded from App Store or Google Play. Use to check and change setting values on the printer from iOS and Android devices. This utility also comes with the following sample printing functions: • Sample receipt printing • Customized receipt printing • Printer status display • Quick pairing by NFC/QR code • Easy print by NFC/QR code • Firmware update *	iOS, Android
TM-m30 Utility	A utility for checking and changing various printer settings. Use this utility to: • Check the current settings • Test operation • Store logos • Set paper saving • Set printing control • Set communication interfaces • Save/restore settings	Windows

EpsonNet Config	A network setting tool for Epson network products.	Windows, Mac
TM *Bluetooth*® Connector	Use to pair a *Bluetooth* printer and associate the generated *Bluetooth* port with that used by the driver and applications.	Windows
Deployment Tool	Use to make network and printer settings simultaneously. Allows you to make settings efficiently at the time of introducing TM printers for the first time, or when configuring multiple TM printers at the same time.	Windows
Monitoring Tool	Use to check a list of status for the Epson printers connected to the network. You can also update certificates for multiple printers used for WPA-Enterprise in a batch.	Windows
TM-m30 Firmware Updater	Use this tool to update the printer's firmware. An executable file and the firmware are packaged together.	Windows

∗: Supported by Ver. 3.2.0 or later.

Others

Manual	Description
ePOS-Print XML User's Manual	Describes ePOS-Print XML statements. This manual comes with sample programs.

Download

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

For customers in North America, go to the following web site and follow the on-screen instructions.

http://www.epson.com/support/

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

http://download.epson-biz.com/?service=pos

Application Development and Distribution for iOS

If registering an application that uses *Bluetooth* in the App Store, Epson must submit an application to Apple in advance. Please apply for each application you want to register in the App Store from the URL below.

https://c4b.epson-biz.com/ais/E/

Handling

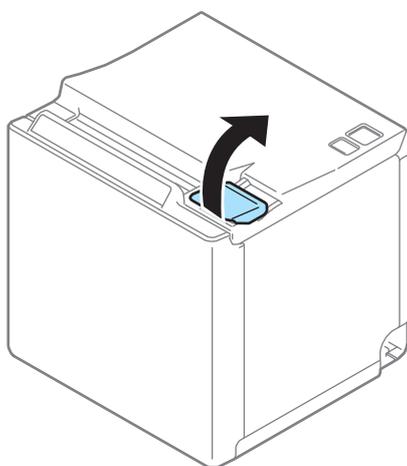This chapter describes basic handling of the printer.

Installing Roll Paper

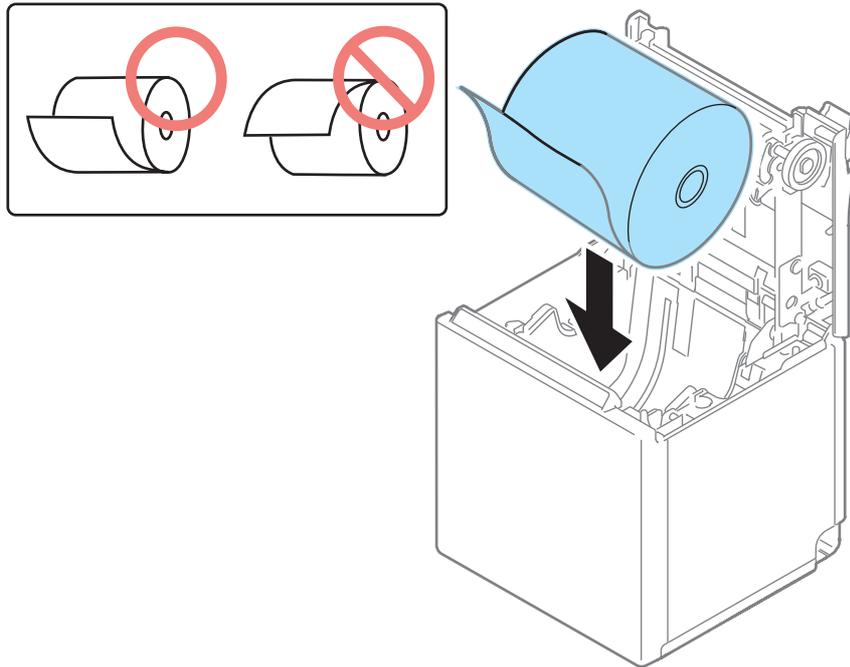Follow the steps below to install the roll paper.

CAUTION   Make sure you use a specified roll paper type.

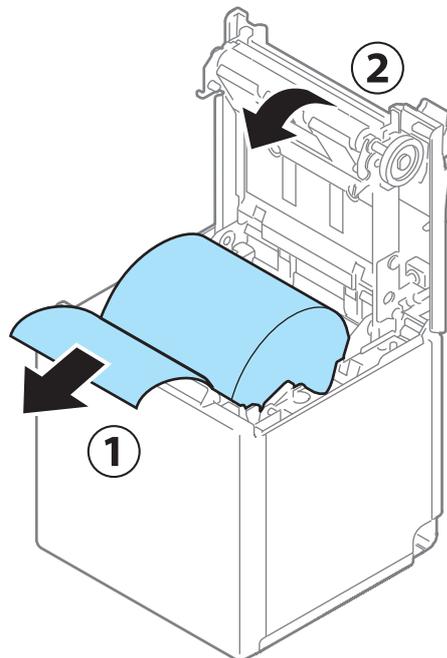**1** **Use the cover open lever to open the roll paper cover.**

2 **Remove the used roll paper core if any, and insert the roll paper.**

3 Load the roll paper in the correct direction.

4 Pull out some paper, and close the roll paper cover.
When the printer power is on, the roll paper is automatically cut.

Removing Jammed Paper

⚠ ♨ **CAUTION**	Do not touch the thermal head and its surroundings. After printing, the thermal head and its surroundings can be very hot.

CAUTION	When a paper jam occurs, never pull out the paper forcibly.

Follow the steps below if the roll paper is jammed.

1 **Turn off the printer**

2 **Open the roll paper cover.**
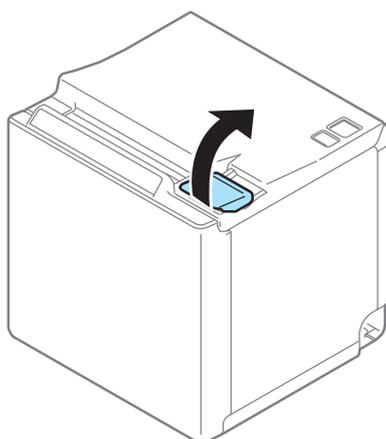
3 **Remove the jammed paper.**

4 **Close the covers.**

Roll Paper Cover does not Open

When the roll paper cover does not open using the lever, restart the printer.

Cleaning the Printer

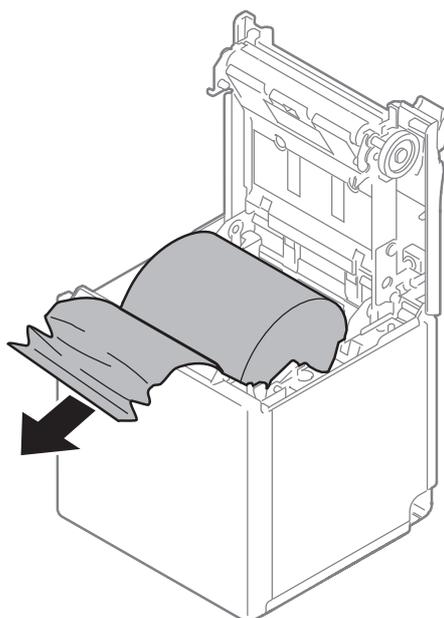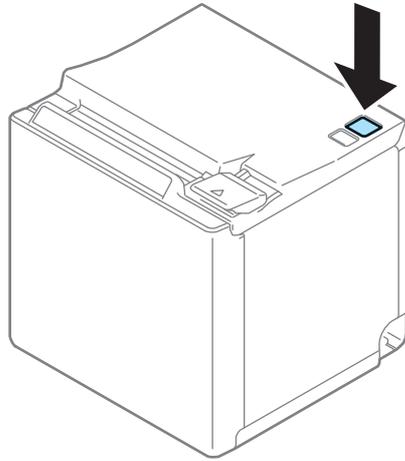## Cleaning the Printer Case

Be sure to turn off the printer, and wipe the dirt off the printer case with a dry cloth or a damp cloth. Be sure to unplug the AC cable while cleaning.

⚠ **CAUTION**	**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.

Cleaning the Thermal Head/Platen Roller

It is recommended to clean the thermal head periodically (generally every 3 months) to maintain receipt print quality.

Depending on the roll paper used, paper dust may stick to the platen roller and the paper may not be fed correctly. To remove the paper dust, clean the platen roller.

Turn off the printer, open the roll paper cover, and clean the thermal elements of the thermal head/platen roller with a cotton swab moistened with an alcohol solvent (ethanol or IPA).

⚠ **CAUTION**	• **After printing, the thermal head and its surroundings can be very hot. Do not touch it and let it cool before you clean it.** • **Do not damage the thermal head by touching it with your fingers or any hard object.**
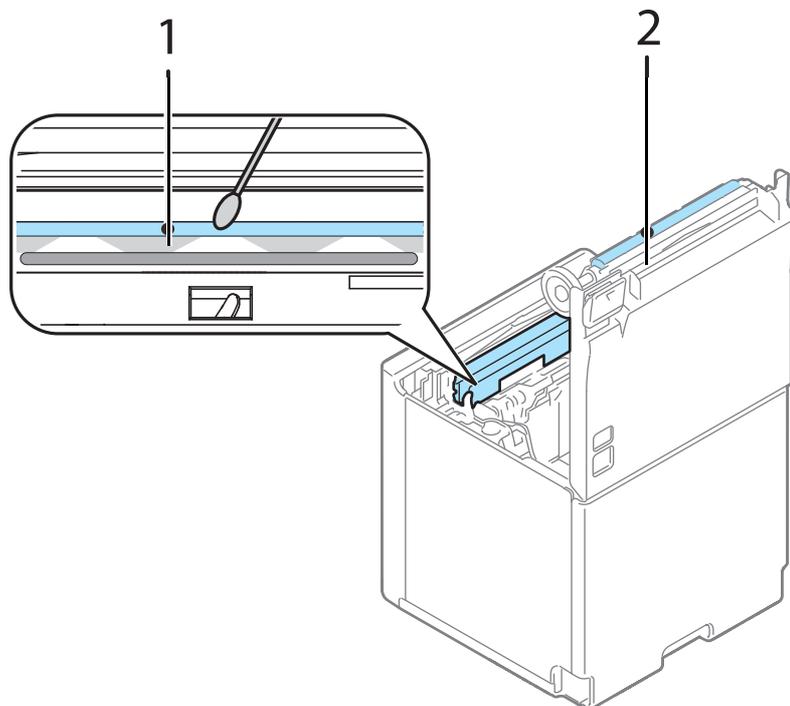
1. Thermal head
2. Platen roller

Preparing for Transport

Follow the steps below to transport the printer.

1   **Turn off the printer.**

2   **Confirm that the Power LED is off.**

3   **Disconnect the AC cable from the socket.**

4   **Remove the roll paper.**

5   **Pack the printer upright.**

Removing/Attaching the Rear and Bottom Covers

Removing the Covers

Follow the steps below to remove the covers.

For the top eject position

1 **Use your finger to remove the rear cover as shown in the illustration.**
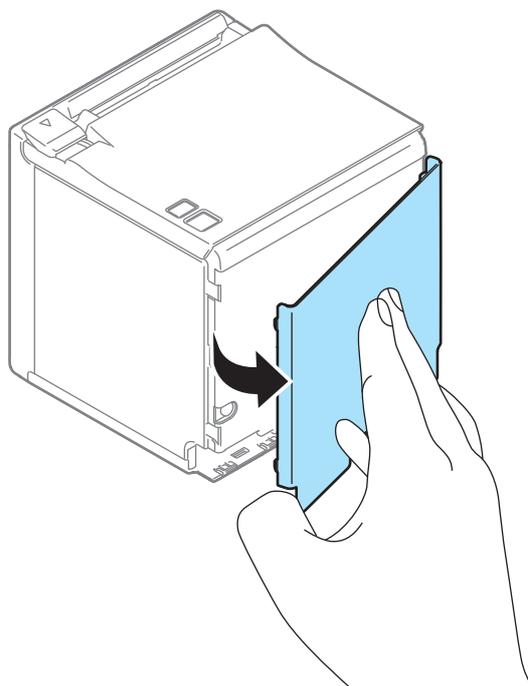
2   Use your finger to remove the bottom cover as shown in the illustration.
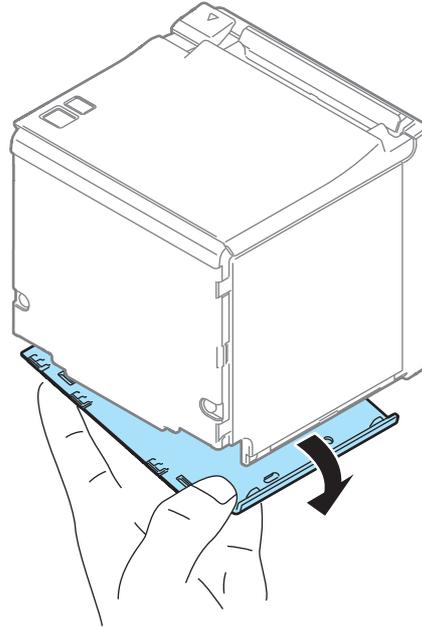
For the front eject position

1   Use your finger to remove the rear cover as shown in the illustration.
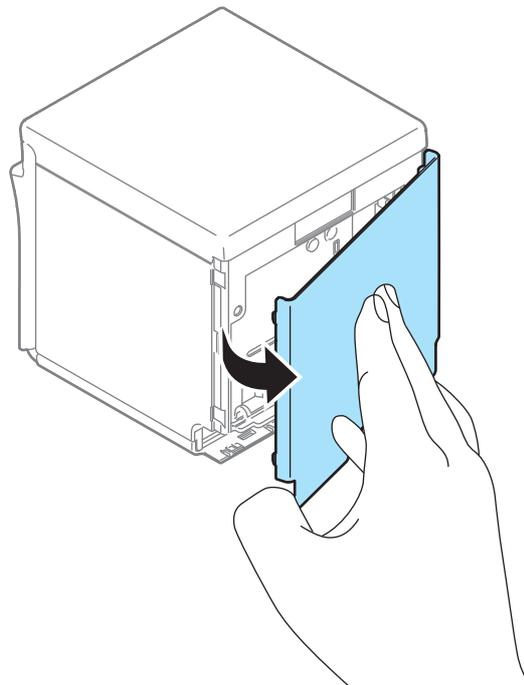
2 **Use your finger to remove the bottom cover as shown in the illustration.**
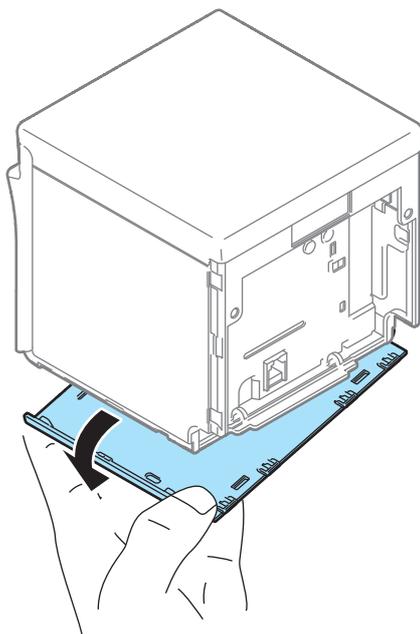
Attaching the Covers

Follow the steps below to attach the covers.

For the top eject position

1 **Align the catches and attach the bottom cover to the printer.**
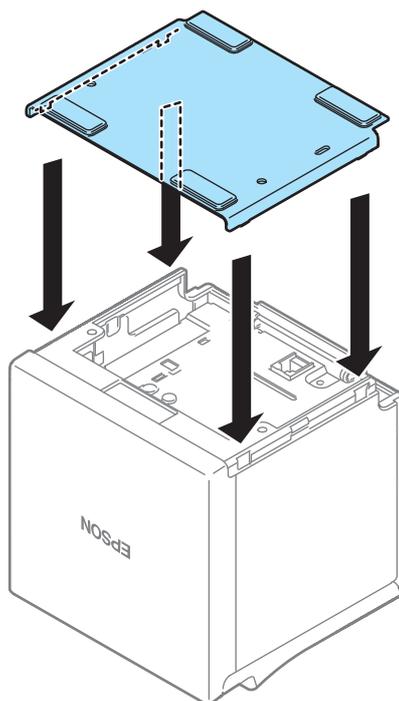
2 **Hook the catches into the bottom cover and attach the rear cover to the printer.**
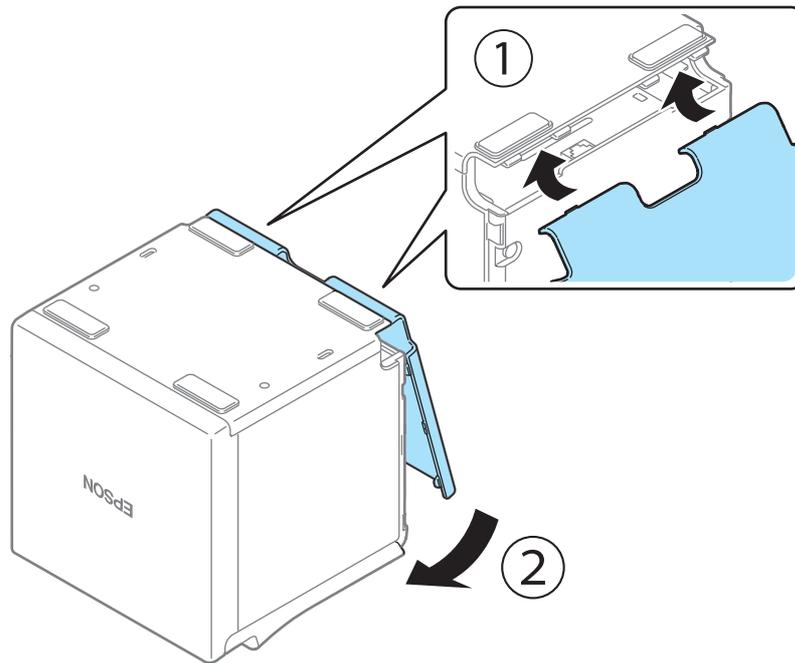
For the front eject position

1 **Align the catches and attach the rear cover to the printer.**
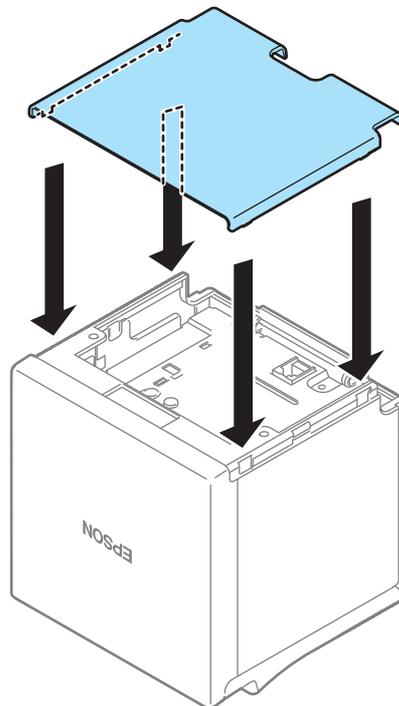
2   **Hook the catches into the rear cover and attach the bottom cover to the printer.**
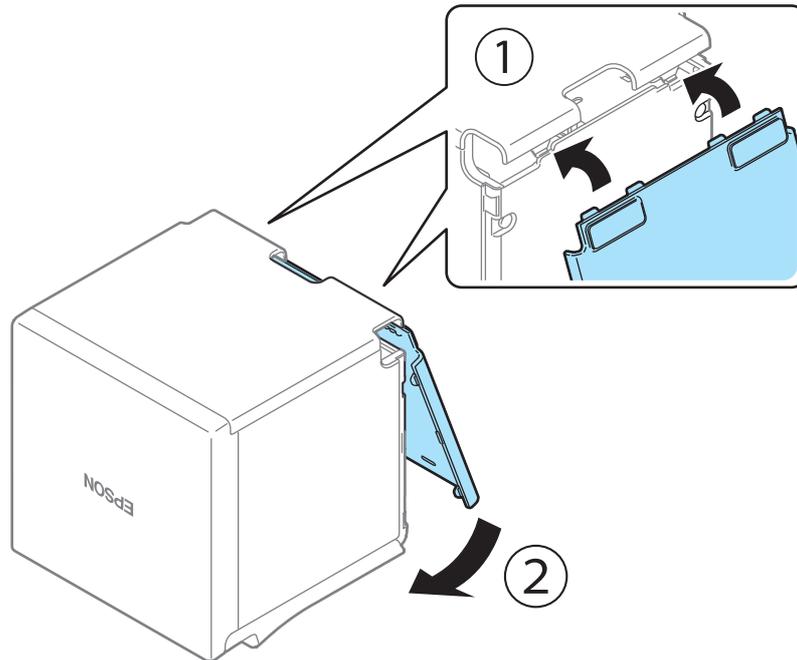
Appendix

Specifications of Interface and Connector

USB Interface

USB interface connector

USB type-B connector

USB transmission specifications

USB function

Overall specifications		According to USB 2.0 specifications
Transmission speed		USB Full-Speed (12 Mbps)
Transmission method		USB bulk transmission method
Power supply specifications		USB self power supply function
Current consumed by USB bus		2 mA
USB packet size (with full-speed connection)	USB bulk OUT (TM)	64 bytes
	USB bulk IN (TM)	64 bytes
USB device class		Both USB vendor-defined class and USB printer class are supported. The class switches when software setting startups.

> **NOTE** To set the USB device class, see "Software Settings" on page 45.

USB descriptor

		USB vendor-defined class	USB printer class
Vendor ID		04b8h	04b8h
Product ID		0202h	0E1Fh
String Descriptor	Manufacturer	EPSON	EPSON
	Product	TM-m30	TM-m30
	Serial number	Character string based on the product serial number	Character string based on the product serial number

Ethernet Interface

Communication specifications

10BASE-T/100BASE-TX

Support protocols

Protocols	Usage
IP, ARP, ICMP, UDP, TCP	Basic communication protocols
LP, LPR, TCP Socket Port	Printing protocols
HTTP/HTTPS	Used in EpsonNet Config (Web version)
SNMP, ENPC	Used in setting and monitoring
DHCP, APIPA	Used in automatic setting for the IP address and so on

Network parameters

Item	Initial settings
IP address	192.168.192.168
Subnet mask	255.255.255.0
Default gateway	0.0.0.0
IP address acquisition	Automatic
APIPA	Disabled
arp/ping	Disabled
Socket Timeout	90 seconds
Community name 1 (Read Only)	Fixed at "public"
Community name 2 (Read/Write)	Unavailable
SNMP IP Trap 1	Disabled
SNMP IP Trap 2	Disabled
Communication mode	Auto negotiation

Wi-Fi Interface

NOTE	• Countries where Wi-Fi can be used are limited. Since notes are provided for each country, check the sheet supplied with the product.
	• When using wireless LAN, make sure you disconnect the LAN cable. If a LAN cable is connected, wireless LAN is disabled.
	• You can use OT-WL05 with a firmware version of 1.10 ESC/POS or later.

Specification

- IEEE802.11b/g/n (2.4 GHz band) or IEEE802.11a/b/g/n (2.4 GHz or 5 GHz band) compliant Wi-Fi communication compatible.

- Infrastructure mode and 802.11 Ad-hoc mode are supported.

- Support the IP address automatic acquisition function (DHCP, APIPA).

Communication Standard

When using OT-WL02:

- IEEE802.11b (2.4 GHz)

- IEEE802.11g (2.4 GHz)

- IEEE802.11n (2.4 GHz)

When using OT-WL05:

- IEEE802.11b (2.4 GHz)

- IEEE802.11g (2.4 GHz)

- IEEE802.11n (2.4 GHz)

- IEEE802.11a (5 GHz)

- IEEE802.11n (5 GHz)

Security

Security can be selected from among the following:

- WEP

- WPA-PSK(AES)

- WPA2-Personal

- WPA2-Enterprise

Initial settings

These settings apply when the printer is initialized in the Interface Setup mode.

Parameter	Setting value
Communication standard	802.11b/g/n
Network mode	Infrastructure mode
SSID	EPSON_Printer

Parameter	Setting value
Encryption type	WPA2-Personal
Passphrase	EpsonNet
IP Address	Automatically acquired by DHCP

∗ You can connect to a WPA2-PSK (AES) access point using the settings above.

Settings in SimpleAP mode (Factory default settings)

Parameter	Setting value
SSID	EPSON_Printer
Passphrase	12345678
IP Address	192.168.192.168
Subnet mask	255.255.255.0

∗ In SimpleAP mode, DHCP Server is working and assign IP address to host automatically.

Printing communication protocol

- LP, LPR: Transfers printing data
- TCP Socket Port: Transfers printing data and printer status via bidirectional direct socket communication.

LP, LPR

- Max. simultaneous connections: 2
- Number of connections for which printing is available: 1 (Other users need to wait until printing is completed.)
- Time out: 1 min. (changeable)
- Job cancel: Not available
- Banner printing: Not available

Socket communication

- Port type   TCP communication port for direct printing
- Port number   9100
- Port communication direction   bidirectional
- Max. simultaneous connections   3
- Number of connections for which printing is available   1 (Other users need to wait until printing is completed.)
- Time out: 5 min. (changeable)

Notes on Using the Wi-Fi Model

- Keep the printer away from the devices, such as kitchen microwaves, that may cause radio wave interference.
- Use channels that are away from the frequency bands that may cause radio wave interference.

- Place shields between the printer and the devices that may cause radio wave interference.

- Select either 2.4 GHz or 5 GHz, whichever is free from radio wave interference.

- In auto channel setting for the access point, do not select a channel in which the printer may cause radio wave interference.

Notes on Wi-Fi connection

Because not all the combinations of the printer and Wireless LAN units have been checked for operation, the operation of the printer in combination with all the Wireless LAN units is not guaranteed. Especially in the ad-hoc mode, the printer may not operate normally, depending on the combination of the device to connect with. Be sure to carry out evaluation of the operation before use.

Notes on use

- When you initialize or change the printer settings, the printer is reset to reflect the settings. It may take about 1 minute depending on the network settings or environment. Also, your application may indicate power off during the time waiting for reset. In that case, wait for about 1 minute, and then reconnect to the printer.

- Where Wi-Fi communication is in heavy traffic, your application may falsely recognize that the communication is disconnected and indicate power off due to response delay. In that case, disable Power Save to improve the trouble.

Bluetooth Interface

CAUTION	Countries where *Bluetooth* can be used are limited. Since notes are provided for each country, check the sheet supplied with the product.

Specification

- *Bluetooth* 3.0 (EDR supported)
- *Bluetooth* Power Class 2
- Built-in antenna
- Pass key setting is possible
- Device name setting is possible

Initial Settings

Setting Contents	Setting Items	Initial Settings
Bluetooth communication settings	Bluetooth passkey	"0000"
	Bluetooth device name	"TM-m30_xxxxxx" (Where xxxxxx is the last six digits in the serial number)
	Bundle Seed ID	"TXAEAV5RN4"
	Enable/Disable auto reconnect to iOS device	"1" (Enable)

Auto Reconnect Feature

The auto reconnect feature allows the printer to automatically restore a connection in the following situations if the *Bluetooth* connection to the iOS device is lost.

- When the printer is turned on
- When the signal is dropped and then restored

The following shows the printer operations and connection methods when the auto reconnect feature is enabled or disabled.

Auto Reconnect Feature	Enabled	Disabled
Printer operations when *Bluetooth* is disconnected	Perform the following reconnection sequence. **[Reconnection sequence]** 1. The printer tries to connect to the iOS device to which it was last connected. 2. When step 1 fails, the printer waits for connections from other devices. 3. If connection is not established in step 2, the printer tries again to connect to the iOS device to which it last connected. Steps 1 and 2 are repeated until a connection is established.	Wait for a connection from the *Bluetooth* device.
Reconnecting to iOS device	Reconnect automatically.	Make settings on the *Bluetooth* settings screen on the iOS device.
Switch to connection from other device	Method 1: After disabling the *Bluetooth* feature of the connected iOS device, make connection settings on the *Bluetooth* device that you want to connect. (When the auto reconnect feature is enabled, it may take some time to connect.)	
	Method 2: After disconnecting from the connected iOS device using applications with the TM Utility or Epson ePOS SDK/ePOS-Print SDK disconnection feature, make settings on the *Bluetooth* device you want to connect.	

∗ In the following situations, even if the feature is enabled, the same operations are performed as when it is disabled.
- When pairing is canceled from the connected iOS device.
- When the last *Bluetooth* device connected was not an iOS device.
- When wireless communication settings are initialized from the printer.

∗ Disable this feature when using the printer from devices that are not running iOS. Otherwise, it may take some time to connect.

Notes on use

Time required until printing starts

If the host computer and the printer are not connected on a continuous basis but rather connected every time the printer starts printing, some time may be needed for the printer to actually start printing after the host computer commands printing. This pause is the time required for processing the connection between the host computer and the printer.

After opening the port, leave an interval of 300 msec or more before sending data to the port.

Timing to shut the connection off

If a connection between the host computer and the printer is shut off while the printer is offline, it may not be re-established. In this case, first clear the printer offline causes, and then try to re-establish the connection.

Multi-tone printing

When performing multi-tone printing over *Bluetooth*, the print speed may fluctuate or intermittent printing may occur due to data transfer conditions, also the print shade may change or white lines may occur.

Interference from Wi-Fi

2.4 GHz Wi-Fi may interfere with *Bluetooth* communication. Using the optional Wireless LAN cable set (OT-WLxx) with 2.4 GHz may disrupt *Bluetooth* communication or printing. 5 GHz Wi-Fi is recommended when using Wi-Fi with *Bluetooth*.

Notes when communicating with Android devices

- The printer cannot connect to Android 2.3 and 2.3.2.
- When communicating with Android 2.3.3 or later versions, communicate through an insecure connection.

Notes when communicating with iOS devices

Print data deletion and *Bluetooth* disconnections occur

Situation

Depending on the specifications of the iOS device, print data sent to the printer may be deleted. When this occurs, the *Bluetooth* connection between the printer and the iOS device is disconnected.

Conditions

This occurs when the printer is not ready to print, and 64 KB or more of print data is sent to the printer.

<Status in which the printer cannot print>

- When the roll paper cover is open
- When the paper is out

Solution

Do not send data to the printer if the printer is not ready to print.

For developers using the SDK from Epson, see the User's Manual - Chapter 3 Programming Guide - "Printing After Checking the Printer Status".

Since *Bluetooth* is disconnected when this occurs, if the auto reconnect feature is not enabled, you need to reconnect from the *Bluetooth* settings screen on the iOS device.

When using the SDK from Epson, this connection process is not necessary.

The iOS application cannot receive the data sent from the printer

Situation

Although the printer sends data to the iOS device and the data is received by the iOS device, depending on the combination of the iOS version and the iOS device, the iOS application may not be able to receive the data.

Conditions

This may occur in combinations of the following conditions.

- iOS version: 7.1, 7.1.1
- iOS device: iPhone 5s, iPhone 5c, iPhone 5, iPad Air, iPad mini 3, iPad (4th generation), iPad mini, iPod touch (5th generation), iPhone 4s, iPhone 4, iPad (3rd generation), iPad 2
- Application processing: If the *Bluetooth* port is closed and then reopened while the application is running.

Solution

The solution differs depending on the iOS device being used. See the following table.

iOS Device	Solution
iPhone 4s iPhone 4 iPad (3rd generation) iPad 2	This situation can be avoided by using one of the following methods. • Using the ePOS-Print SDK for iOS which is included in the ePOS-Print SDK Release 14.06.30E or later package • Using the Epson ePOS SDK for iOS

NFC Tag

Transmission standard	ISO14443 A
Frequency	13.56 MHz
Resonance frequency	14.30 Hz±0.55 MHz
Memory	144 byte
Transmission distance	Approximately 10 mm from the NFC installation location.

NOTE	• The transmission distance is an estimate that depends on our experiment conditions and is not a guaranteed value. • It varies based on the installation environment and target device.

Product Specifications

Printing method		Thermal line printing
Printing direction		Two directional with friction feed
Paper feed speed		200 mm/s {7.87"/s} (continuous paper feeding with the Feed button)
Cutting method		Partial cut (cutting with one point in center left uncut)
Interface	Standard model	Ethernet [10BASE-T/100BASE-TX] USB [USB 2.0, Full-speed (12 Mbps)]
	Wi-Fi model	Wireless LAN [IEEE802.11 b/g/n or IEEE802.11 a/b/g/n] Ethernet [10BASE-T/100BASE-TX] USB [USB 2.0, Full-speed (12 Mbps)]
	Bluetooth model	*Bluetooth* [*Bluetooth* 3.0 (EDR supported)] Ethernet [10BASE-T/100BASE-TX] USB [USB 2.0, Full-speed (12 Mbps)]
	Onboard USB Powers Tablet model	*Bluetooth* [*Bluetooth* 3.0 (EDR supported)] Ethernet [10BASE-T/100BASE-TX] USB [USB 2.0, Full-speed (12 Mbps)]
Buffers	Receive buffer	4 KB/45 bytes (64 KB for *Bluetooth* interface)
	Downloaded buffer (user-defined characters and user-defined images)	12 KB
	NV graphics memory	384 KB
Barcode/ two-dimensional symbol printing		UPC-A, UPC-E, JAN8 / EAN 8, JAN13 / EAN13, Code39, Code93, Code128, ITF, CODABAR(NW-7), GS1-128, GS1 DataBar, PDF417, QR code, Maxi Code, Data Matrix, Aztec Code, Two-dimensional GS1 DataBar, Composite Symbology
Cash drawer function		2 drives
Power supply [*]		AC Adapter, C1: Standard, Wi-Fi, and Bluetooth models PS-180: Onboard USB Powers Tablet model

Power consumption	Standard model	Operating	26.6 W (during USB communication) (AC 115 V/60 Hz) (According to our operation conditions)
		Standby	0.41 W (during Ethernet communication) (AC 115 V/60 Hz)
	Wi-Fi model	Operating	26.6 W (during USB communication) (AC 115 V/60 Hz) (According to our operation conditions)
		Standby	0.44 W (during Ethernet communication) (AC 115 V/60 Hz)
	Bluetooth model	Operating	26.6 W (during USB communication) (AC 115 V/60 Hz) (According to our operation conditions)
		Standby	0.44 W (during Ethernet communication) (AC 115 V/60 Hz)
	Onboard USB Powers Tablet model	Operating	42.6 W (during USB communication) (AC 115 V/60 Hz) (When charging at 2.1A)
		Standby	16.5 W (during Ethernet communication) (AC 115 V/60 Hz) (When charging at 2.1A)
Operating voltage			DC 24V ± 7%
USB connector for charging (Onboard USB Powers Tablet model)			Rated current: 2.1A Rated voltage: 5.2V
Life	Printer mechanism		15 million lines (printing + paper feeding)
	Thermal head		100 million pulses, 100 km
	Autocutter		1.5 million cuts
	MTBF		360,000 hours
	MCBF		60 million lines
Temperature/Humidity			Operating: 5 to 45°C {41 to 113°F}, 10 to 90% RH Storage: -20 to 60°C {-4 to 140°F}, 10 to 90% RH
Overall dimensions (W × D × H)			Top eject position: 127 X 127 X 135 mm (5.0 × 5.0 × 5.3") Front eject position: 127 X 133 X 129 mm (5.0 × 5.2 × 5.1")
Weight (mass)			Approx. 1.3 kg {2.87 lb}

*: Reference data: When using AC adapter (AC Adapter, C1 or PS-180 depending on the model).

Printing Specifications

	Paper width 58 mm	Paper width 80 mm
Printing method	Thermal line printing	
Dot density	203 × 203 dpi	
Paper width	52.5 mm {2.07"}, 420 dots	72.0 mm {2.83"}, 576 dots
Character spacing Font A	0.25 mm {0.0098"} (2 dots)	
Font B	0.125 mm {0.0049"} (1 dot)	
Font C	0.25 mm {0.0098"} (2 dots)	
Special Font A	0.25 mm {0.0098"} (2 dots)	
Special Font B	0.25 mm {0.0098"} (2 dots)	
Kanji Font A	0.00 mm (0 dot)	
Kanji Font B	0.00 mm (0 dot)	
Line spacing	3.75 mm {1/5"} (initial setting, programmable by command)	
Maximum print speed*	200 mm/s {5.9"/s}	

dpi: dots per inch

*: when the printer prints with the standard print density level at 25°C {77°F} and 24V.

> **CAUTION**
> - The print speed changes automatically depending on the applied voltage and head temperature.
> - If the data transmission speed is slower than the maximum print speed, the print speed may fluctuate and the print result may become shaded and/or dot displacement in paper feeding may occur. Furthermore, if the data transmission speed is much slower than the maximum print speed, intermittent printing will occur.

Character Specifications

Number of characters

Single-byte code characters

- Alphanumeric characters: 95
- Extended graphics: 128 × 43 pages (including user-defined page)
- International characters: 18 sets

Multi-byte code characters

- Simplified Chinese: GB18030-2000 28,553
- Traditional Chinese: Big5 13,535
- Korean: KS C5601 8,366

Character structure

Font A	12 × 24 (including 2-dot horizontal spacing)
Font B	10 × 24 (including 1-dot horizontal spacing)
Font C	9 × 17 (including 2-dot horizontal spacing)
Special Font A	12 × 24 (including 2-dot horizontal spacing)
Special Font B	9 × 24 (including 2-dot horizontal spacing)
Kanji font A	24 × 24 (including 0-dot spacing)
Kanji font B	20 × 24 (including 0-dot spacing)

Character size

	Standard/Double-height/Double-width/Double-width, double-height W × H
Font A	1.25 × 3.00 mm/1.25 × 6.00 mm/2.50 × 3.00 mm/2.50 × 6.00 mm {0.05 × 0.12"/0.05 × 0.24"/0.10 × 0.12"/0.10 × 0.24"}
Font B	1.13 x 3.00 mm/1.13 x 6.00 mm/2.26 x 3.00 mm/2.26 x 6.00 mm {0.04 × 0.12"/0.04 × 0.24"/0.09 × 0.12"/0.09 × 0.24"}
Font C	0.88 × 2.13 mm/0.88 × 4.26 mm/1.76 × 2.13 mm/1.76 × 4.26 mm {0.03 × 0.08"/0.03 × 0.17"/0.07 × 0.08"/0.07 × 0.17"}
Special Font A	1.25 × 3.0mm/1.25 × 6.0mm/2.5 × 3.0mm/2.5 × 6.0mm {0.05 × 0.12"/0.05 × 0.24"/0.10 × 0.12"/0.10 × 0.24"}
Special Font B	0.88 × 3.0mm/0.88 × 6.0mm/1.76 × 3.0mm/1.76 × 6.0mm {0.03 × 0.12"/0.03 × 0.24"/0.06 × 0.12"/0.06 × 0.24"}
Kanji font A	3.00 × 3.00 mm/3.00 × 6.00 mm/6.00 × 3.00 mm/6.00 × 6.00 mm {0.12 × 0.12"/0.12 × 0.24"/0.24 × 0.12"/0.24 × 0.24"}
Kanji font B	2.00 × 2.00 mm/2.00 × 4.00 mm/4.00 × 2.00 mm/4.00 × 4.00 mm {0.08 × 0.08"/0.08 × 0.16"/0.16 × 0.08"/0.16 × 0.16"}

Note:

Space between characters is not included.

Characters can be scaled up to 64 times as large as the standard sizes.

Characters per line

	Standard/Double-height/Double-width/Double-width, double-height	
	Paper width 58 mm	**Paper width 80 mm**
Font A	35/35/17/17	48/48/24/24
Font B	42/42/21/21	57/57/28/28
Font C	46/46/23/23	64/64/32/32
Special Font A	35/35/17/17	48/48/24/24

Special Font B	46/46/23/23	64/64/32/32
Kanji font A	17/17/8/8	24/24/12/12
Kanji font B	26/26/13/13	36/36/18/18

Paper Specifications

		Paper width 58 mm	Paper width 80 mm
Paper types		Specified thermal paper	
Form		Roll paper	
Size	Roll paper diameter	83 mm {3.27"} maximum	
	Roll paper core	Outside: 18 mm {0.71"}	
	Roll width when taken up	58 + 0.5/-1.0 mm {2.28 + 0.02/-0.04"}	80 + 0.5/-1.0 mm
	Paper width	57.5 ± 0.5 mm {2.26 ± 0.02"}	79.5 ± 0.5 mm
Specified original paper type		AF50KS-E　　　　　　Jujo Thermal Oy F5041(55), F5041(48)　Mitsubishi HiTec KT55FA, KT48FA　　　Koehler Paper Group P30523, P31523, P35524　Kanzaki Specialty Papers	

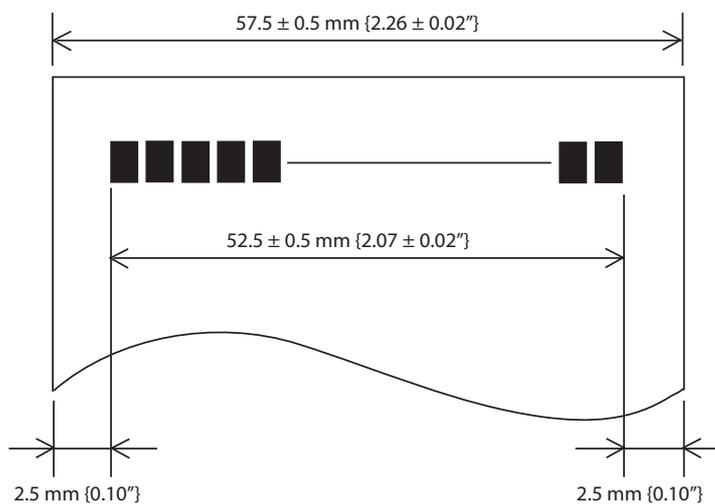| CAUTION	• Paper must not be pasted to the roll paper core. • To keep the print quality, it is recommended to change the print densities for each roll paper. See "Software Settings" on page 45.

Printable Area

For paper width 80 mm

The maximum printable area of paper with a width of 72.0 ± 0.5 mm is 72.0 ± 0.5 mm (576 dots), and the approximate space is 3.75 mm on both sides.
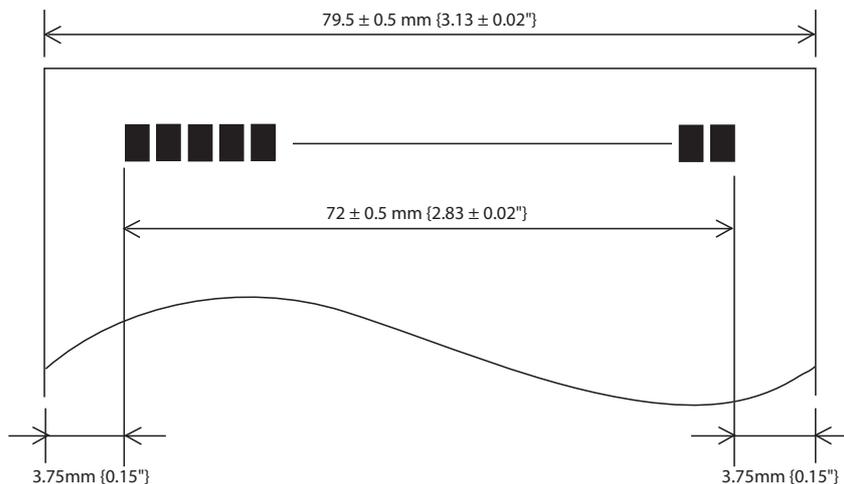
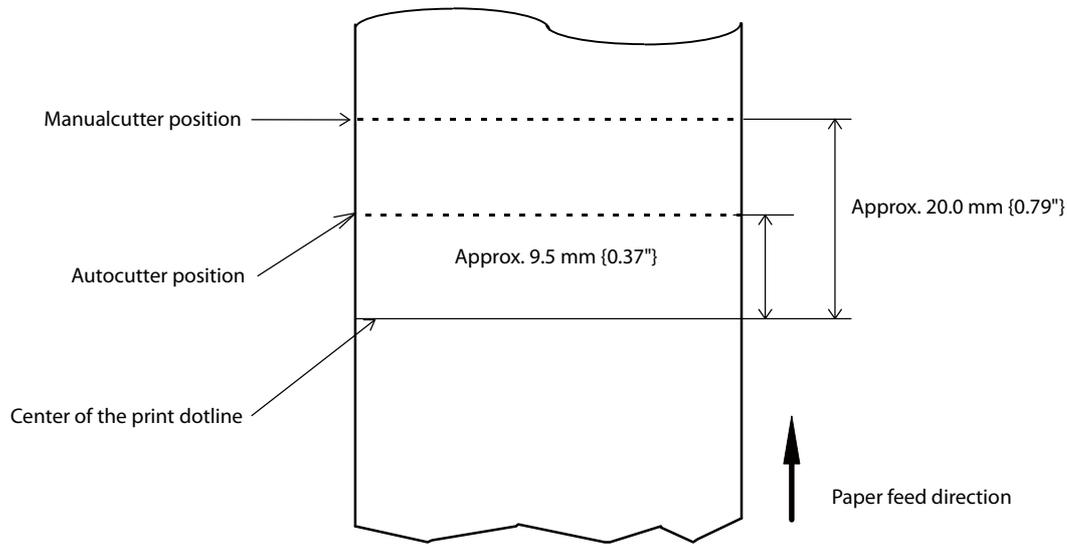
For paper width 58 mm

The maximum printable area of paper with a width of 57.5 ± 0.5 mm is 52.5 ± 0.5 mm (420 dots), and the approximate space is 2.5 mm on both sides.

Printing and Cutting Positions

Manualcutter position →

Autocutter position

Center of the print dotline

Approx. 20.0 mm {0.79"}

Approx. 9.5 mm {0.37"}

Paper feed direction

CAUTION	• The values above may vary slightly as a result of paper slack or variations in the paper. Take this into account when setting the cutting position of the autocutter. • When removing cut paper, the remaining roll paper is pulled at the uncut section and the pitch of the next print may be reduced. When printing after cutting paper for prints with no pitch reduction, feed the paper about 1 mm {16/406 inches} before printing. When the Pre-feed before next print function is enabled, this operation is performed automatically. See"Software Settings" on page 45 for more details.

Electrical Characteristics

| Operating voltage		DC 24V ± 7%
Current consumption (24V, 25°C, standard print density)	Standby	Mean: Approximately 0.1 A (Standard, Wi-Fi, *Bluetooth* models) Approximately 0.5 A (Onboard USB Powers Tablet model)[*] *: When charging at 2.1A

	Operating	Mean: 1.5 A (Standard, Wi-Fi, *Bluetooth* models)
		        2.1 A (Onboard USB Powers Tablet model)[*]
		*: When charging at 2.1A
		Note: When print ratio is approximately 18%
		• Continuous printing for 50 lines (repeating 20H-7FH)
		    ∗ Font A, 35 columns, ASCII character
		• 5 lines feeding
		• Autocutting

Environmental Conditions

Temperature/ Humidity	Operating	5 to 45°C {41 to 113°F}, 10 to 90% RH (See the operating temperature and humidity range below.)
	Storage	-20 to 60°C {-4 to 140°F}, 10 to 90% RH (except for paper)
Acoustic noise (operating)		Approximately 55 dB (bystander position) Note: 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.
Drip proof function*		IPX2 equivalent Note: At front eject position. Excluding the cover open lever area.

∗ The value measurements are equivalent to JISC0920 (IEC60529:2001) standard. Therefore, safety standard application, and failure and breakage of the printer are not guaranteed.
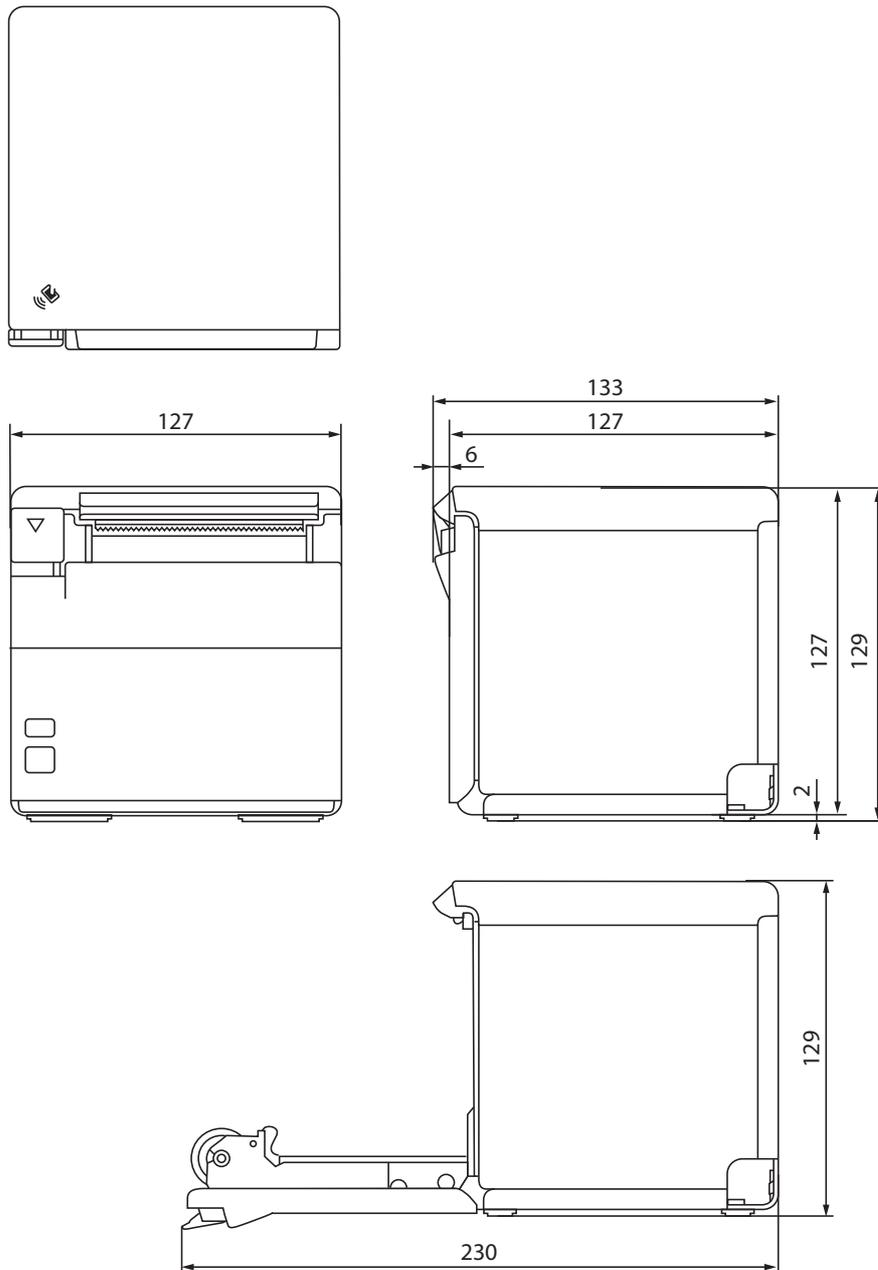
External Dimensions

Top eject position

127

127

6

127

135

2

232

134
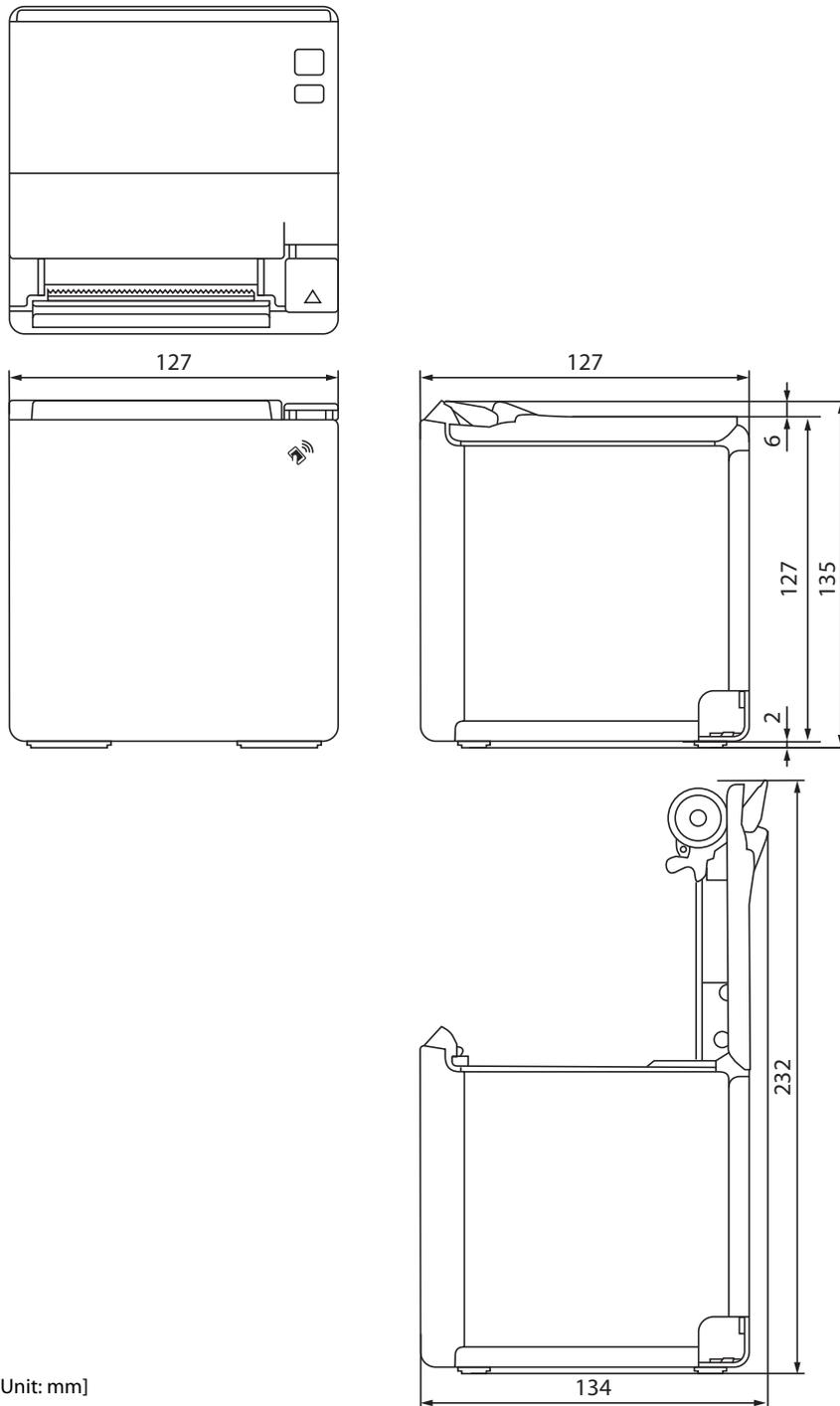
[Unit: mm]

Front eject position

127

133
127

6

127
129

2

129

230

[Unit: mm]

Character Code Tables

Refer to the following URL regarding the character code table.

http://www.epson-biz.com/pos/reference/charcode/