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TM-T88IV ReStick User's Manual

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NOTICE: The contents of this manual are subject to change without notice.

Standards and Approvals

The following standard is applied only to the printers that are so labeled. (EMC is tested using the Epson power supplies.)

North America: FCC/ICES-003 Class A

WARNING

The connection of a non-shielded printer interface cable to this printer will invalidate the EMC standards of this device. You are cautioned that changes or modifications not expressly approved by Seiko Epson Corporation could void your authority to operate the equipment.

FCC Compliance Statement For American Users

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

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

Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

For Canadian Users

This Class A digital apparatus complies with Canadian ICES-003.

À l'intention des utilisateurs canadiens

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

Default Delay Times for Power Management for Epson Products

This product will enter low power (sleep) mode after a period of nonuse. The time interval has been set at the factory to ensure that the product meets Energy Star standards of energy efficiency and cannot be modified by the consumer.

The power consumption in the sleep mode and power off mode when using the AC adapter PS-180 is described below.

		Serial model	Parallel model	USB model	Ethernet model
AC 115V 60 Hz	Sleep mode	1.2 W	1.4 W	1.1 W	2.9 W
	Power off mode	0.3 W	0.3 W	0.3 W	0.3 W

Precautions When Installing the Power Supply Box

A description of EMI standards is on the bottom of the printer. When the optional power supply box (OT-BX88) is installed, it is hard to check it. In such case, uninstall the power supply box if necessary.

Safety Precautions

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



WARNING:

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 attempt to repair this product yourself. Improper repair work can be dangerous. Never disassemble or modify this product. Tampering with this product may result in injury or fire.

Be sure to use the specified power source. Connection to an improper power source may cause 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, unplug the power cord immediately, and then contact your dealer or a Seiko Epson service center for advice. Continued usage may lead to fire.

If you open the DIP switch cover, be sure to close the cover and tighten the screw after adjusting the DIP switch. Using this product with the cover open may cause fire or electric shock.

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



CAUTION:

Do not connect cables in ways other than those mentioned in this manual. Different connections may cause equipment damage and burning.

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

Do not use in locations subject to high humidity or dust levels. Excessive humidity and dust may cause equipment damage or fire.

Do not place heavy objects on top of this product. Never stand or lean on this product. Equipment may fall or collapse, causing breakage and possible injury.

Take care not to injure your fingers on the manual cutter

- *When you remove printed paper*
- *When you perform other operations such as loading/replacing roll paper*

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

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.

Precautions on Use of Recommended Liner-free Label

- ❑ When using the recommended liner-free label, the printer power must always be on to maintain a good print quality
- ❑ Before using thermal roll paper after using the recommended liner-free label, clean up any glue from the recommended liner-free label that is on the thermal head, paper holder, or paper path. This glue may cause paper jams.

Unpacking

The following items are included with the standard specification printer. If any item is damaged, contact your dealer.

- ❑ Printer
- ❑ Power switch cover
- ❑ AC adapter
- ❑ Roll Paper
- ❑ Connector cover

Installing the Printer Horizontally or Vertically

You can install the printer horizontally on a flat surface (with the paper exit on top) or vertically (with the paper exit at the front) by hanging it on a wall, using the optional WH-10 hanging bracket set.



WARNING:

When hanging the printer on the wall with the hanging bracket set, be sure to attach a connector cover to the printer.

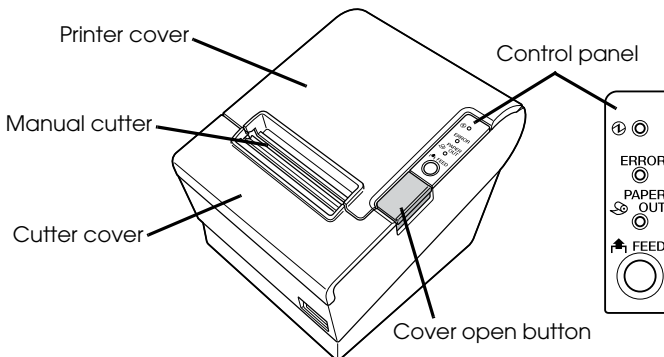
Important Installation Notes

- ❑ For a serial interface, use a null modem cable.
- ❑ For a parallel interface, use an IEEE 1284 cable.
- ❑ For a USB interface, install the driver before connecting the printer.

Downloading Drivers, Utilities, and Manuals

Drivers, utilities, and manuals can be downloaded from the following URL.
<http://www.epsonexpert.com/>

Part Names



Control Panel

FEED button

This button feeds paper.

① (Power) LED

This LED is on when the printer is on.

ERROR LED

This indicates an error.

PAPER OUT LED

On indicates a paper out, and when you select to use thermal roll paper by DIP Switches, also indicates a paper near end. (For DIP Switch settings, See Table B on page 7.)

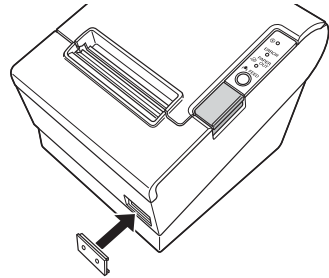
Flashing indicates standby.

Using 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.

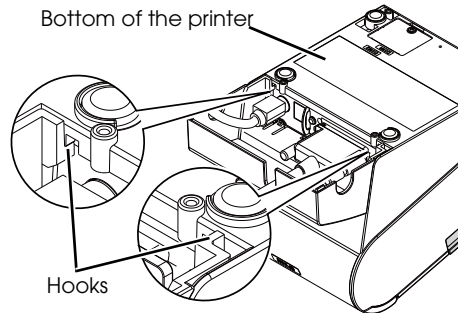
The enclosed power switch cover ensures that the power switch is not pressed accidentally. To use this cover, install it as shown in the illustration on the right.



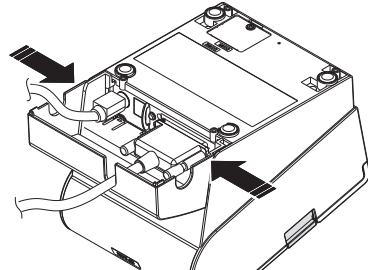
Attaching and Removing the Connector Cover

These instructions apply if a connector cover is packed with your printer to protect your cables. To attach it, follow the steps below:

1. First, connect all the cables. The connector cover has three possible cable exits: on the right, left, and back.
2. Position the two hooks on the connector cover so that they hook the printer case, as shown in the illustration on the right.
3. Push the connector cover down to click onto the printer case

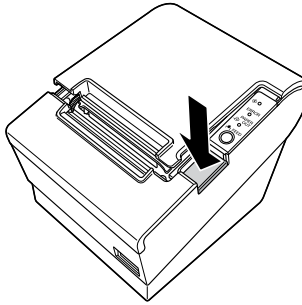


To remove the connector cover, turn the printer over, and push the connector cover down while pushing both sides of the connector cover inward to detach the hooks from the printer case.

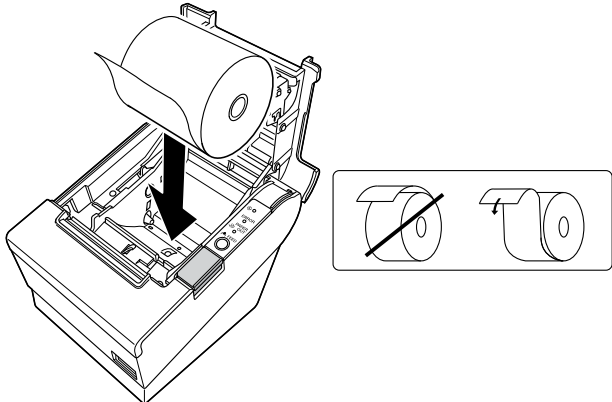


Installing Roll Paper

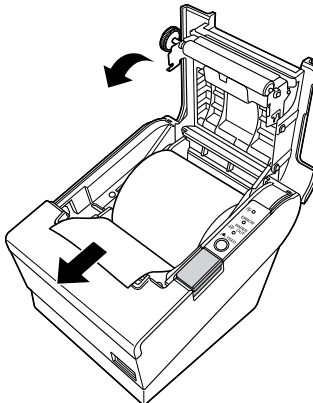
1. Press the cover open button to open the printer cover.



2. Remove the used roll paper core, and insert the roll paper. Be sure that the paper comes off the roll in the correct direction.



3. Pull out some paper, and close the printer cover. The paper will be automatically fed and cut.



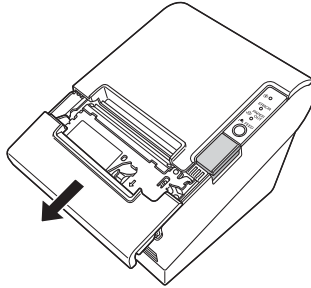
Removing Jammed Paper



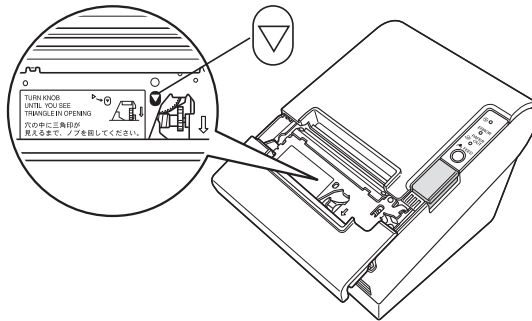
CAUTION:

Do not touch the thermal head because it can be very hot after printing.

1. Turn the printer off and press the cover open button to open the printer cover.
2. Remove the jammed paper, reinstall the roll, and close the printer cover.
3. If paper is caught in the cutter and you cannot open the printer cover, open the cutter cover.



4. Turn the knob until you see a triangle in the opening to return the cutter blade to the normal position. There is a label near the opening to assist you.



5. Close the cutter cover.
6. Open the printer cover and remove the jammed paper.

Cleaning the Thermal Head

If you use thermal paper, follow the steps below to clean the thermal head.



CAUTION:

After printing, the thermal head can be very hot. Be careful not to touch it and to let it cool before you clean it. Do not damage the thermal head by touching it with your fingers or any hard object.

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

Epson recommends cleaning the thermal head periodically (generally every 3 months) to maintain receipt print quality.

Troubleshooting

No lights on the control panel

Check the power supply cable connections and the power outlet.

ERROR LED on (not flashing) with no printing

If PAPER OUT is **on**, the roll paper is not installed or is near the end.
If PAPER OUT is **off**, the printer cover is not closed properly.

ERROR LED flashing with no printing (and no paper jam)

Printing stops if the head overheats and resumes automatically when it cools.If overheating is not the cause, turn the printer off, and after 10 seconds, back on.

DIP Switch Tables

DIP switch 1 (Serial Interface)

SW	Function	ON	OFF
1-1	Data receive error	Ignored	Prints "?"
1-2	Receive buffer capacity	45 bytes	4K bytes
1-3	Handshaking	XON/XOFF	DTR/DSR
1-4	Data word length	7 bits	8 bits
1-5	Parity check	Enabled	Disabled
1-6	Parity selection	Even	Odd
1-7 1-8	Transmission speed (See table A.)		

Table A

Transmission speed (bps)-bits per second	1-7	1-8
Adjustable by control commands*	ON	ON
4800	OFF	ON
9600	ON	OFF
19200	OFF	OFF

* Only when DIP Switches 1-7 and 1-8 are on, the transmission speed can be selected from one of seven speeds: 2400, 4800, 9600, 19200, 38400, 57600, and 115200 bps by control commands. The default is 38400.

DIP switch 1 (Parallel/USB Interface)

SW	Function	ON	OFF
1-1	Auto line feed	Always enabled	Always disabled
1-2	Receive buffer capacity	45 bytes	4KB
1-3 ^{*1}	Select paper sensors to output paper-end signals (default value of a command) from parallel I/F.	Disabled	Roll Paper end sensor enabled, Roll Paper near-end sensor enabled
1-4 ^{*1}	Error signal output from parallel I/F	Disabled	Enabled
1-5- 1-7	Undefined		
1-8 ^{**2}	Power saving function for USB	Disabled	Enabled

*1: For USB I/F, DIP Switches 1-3 and 1-4 are Undefined.

**2: For Parallel I/F, DIP Switch 1-8 is Undefined.

DIP switch 2 (Serial/Parallel/USB Interface)

SW	Function	ON	OFF
2-1	Handshaking (BUSY condition)	Receive buffer full	Offline or Receive buffer full
2-2	Do not change settings	Fixed to OFF	
2-3 2-4	Print density/ Liner-free label	See Table B	
2-5	Release condition of receive buffer BUSY (If receive buffer capacity set to 4 KB.)	Releases BUSY when remaining receive buffer capacity reaches 138 bytes.	Releases BUSY when remaining receive buffer capacity reaches 256 bytes.
2-6	Do not change settings.	Fixed to OFF	

DIP switch 2-7, 2-8 (Serial Interface)

SW	Function	ON	OFF
2-7	I/F pin 6 reset	Enabled	Disabled
2-8	I/F pin 25 reset	Enabled	Disabled

DIP switch 2-7, 2-8 (Parallel/USB Interface)

SW	Function	ON	OFF
2-7	Do not change	Fixed to OFF	
2-8	Do not change	Fixed to ON	

Table B

Paper	Print density	2-3	2-4
Recommended liner-free label	Fixed	ON	ON
Thermal roll paper	Normal	OFF	OFF
	Medium	ON	OFF
	Dark	OFF	ON

Specifications

	58mm paper width model	80mm paper width model
Printing method	Thermal line printing	
Dot density	203 dpi × 203 dpi (dots per 25.4 mm {1"})	
Printing direction	Unidirectional with friction feed	
Printing width	52.5 mm {2.07"}, 420 dot positions	72 mm {2.83"}, 576 dot positions
Number of characters	Alphanumeric characters: 95; International characters: 48 Extended graphics: 128 × 11 pages (including user-defined page)	
Printing speed^{*1}	Recommended liner-free label: 150 mm/s {5.9"/s} (default) Thermal roll paper: 177 mm/s {7.0"/s} max. Ladder bar code and 2D code: 88 mm/s {3.46"/s} The above speed values are approximate.	
Paper feed speed	Approx. 150 mm/s {approx. 5.9"/s} continuous paper feed	
Line spacing (default)	3.75 mm {1/6.7"}	
Roll paper (single-ply)	Width	57.5 mm ± 0.5 mm {2.26" ± 0.02"} 79.5 mm ± 0.5 mm {3.13" ± 0.02"}
	Diameter	Maximum outside diameter: 83 mm {3.27"}
	Spool	Roll Paper spool diameter: Inside: 12 mm {0.47"}; Outside: 18 mm {0.71"}
Specified thermal roll paper type	NTP058-80	NTP080-80
Recommended liner-free label type	MS214150	MS318150
Interface (compatible)	Serial (RS232/RS485)/Parallel (IEEE1284)/Ethernet (10/100Base-T)/USB (Full speed)	
Receive buffer	4KB/45 bytes	
Cash drawer function	2 drives	
Supply voltage	DC + 24 V ± 7%	
Temperature	Operating: 5 to 45°C {41 to 113°F}	
	Storage: -10 to 50°C {14 to 122°F}, except for paper	
Humidity	Operating: Recommended liner-free label: 10 to 80% RH Thermal roll paper: 10 to 90% RH	
	Storage: 10 to 90% RH, except for paper	
Overall dimensions	148 × 145 × 195 mm {5.83 × 5.71 × 7.68"} (H × W × D)	
Weight (mass)	Approx. 1.8 kg {3.96 lb}	

dpi: dots per 25.4 mm (dots per inch)

*1: Set DIP Switches 2-3 and 2-4 for each paper type. (See Table B on page 7.)

Font Specification

Memory switch setting	Font	58mm paper width model		80mm paper width model	
		Font structure	Column	Font structure	Column
Memory switch 5-2 ON (default)	Font A (default)	10 × 24	42	13 × 24	44
	Font B	9 × 17	46	10 × 17	57
	Font C	12 × 24	35	10 × 24	57
Memory switch 5-2 OFF	Font A (default)	12 × 24	35	12 × 24	48
	Font B	9 × 17	46	9 × 17	64
	Font C	10 × 24	42	10 × 24	57

* Memory switches can be set with the memory switch setting utility.