# TM-J2000/J2100

User's Manual / Bedienungsanleitung Gebruikershandleiding / Manuel d'utilisation Manual do utilizador / Manual del usuario Manuale dell'utente

401303603



# **DIP Switch Tables**

#### Serial

SW	Function	ON	OFF		
1-1	Power button function	Disabled	Enabled		
1-2	Interface condition selection	by the DIP switch	by the memory switch		
1-3	Handshaking	XON/XOFF	DTR/DSR		
1-4	Data word length	7 bits	8 bits		
1-5	Parity check	Yes	No		
1-6	Parity selection	Even	Odd		
1-7 1-8	Transmission speed selection (See Serial transmission table.)				
2-1	Reserved Fixed to Off.				

#### Serial transmission speed

1-7	1-8	Transmission speed
ON	ON	9600 bps
OFF	ON	19200 bps
ON	OFF	38400 bps
OFF	OFF	115200 bps

#### Parallel

SW	Function	ON	OFF	
1-1	Power button function	Disabled	Enabled	
1-2~1-8	Reserved	Fixed to Off.		
2-1	Reserved	Fixed to Off.		

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# EMC and Safety Standards Applied

Product Name: TM-J2000/TM-J2100 Model Name: M158A

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

Europe:	CE marking
1	Safety: EN 60950
North America:	EMI: FCC/ICES-003 Class A
	Safety: UL 1950/CSA C22.2
	No. 950
Japan:	EMC: VCCI Class A
- 1	JEIDA-52
Oceania:	EMC: AS/NZS 3548 Class B

#### 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.

#### CE Marking

The printer conforms to the following Directives and Norms:

Directive 89/336/EEC

EN 55022 Class B EN 55024 IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-6 IEC 61000-4-6

#### 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.

### 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.



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.

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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. 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.

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

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

#### Caution for the Ink Cartridge

Keep the ink cartridge out of the reach of children.

Do not disassemble the cartridge. The ink can permanently stain clothing.

Do not refill ink cartridges. Spills can result, causing damage to the printer.

Be sure the storage temperature stays between 0 and 40  $^{\circ}\mathrm{C}$  {32 and 104  $^{\circ}\mathrm{F}$ }.

Do not remove the cartridge except to replace it or to prepare the printer for shipment.

# Warning Label



Do not connect a telephone line to the drawer kick-out connector or to the display module connector; otherwise, the printer and the telephone line may be damaged.

# Unpacking

The following items are included for the standard specification printer.

- Printer
- Paper roll
- □ Ink cartridge
- Hexagonal millimeter screws (only for the serial interface printer) (2)
- □ Power switch cover
- Message board (allows you to display an advertisement or other message on the rear of the printer)
- Instruction sheet

Peel away the 4 pieces of tape on the printer after unpacking.

# Downloading Drivers, Utilities, and Manuals

Drivers, utilities, and manuals can be downloaded from one of the following URLs.

For customers in North America, go to the following web site: http://www.epsonexpert.com/ and follow the on-screen instructions.

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

http://www.epson-pos.com/

Select the product name from the "Select any product" pulldown menu.

# The Control Panel



# LEDs

#### POWER LED

Lights when the power is on and is off when the power is off; flashes during cleaning and other operations.

Note:

Never turn off the printer when the POWER LED is flashing.

#### ERROR LED

Off when the printer is online, lights when the printer is offline, and flashes when an error occurs.

### PAPER OUT LED

Lights when roll paper is out or nearly out.

# INK OUT LED

Off when the ink supply is adequate. Lights when the ink cartridge is nearly empty, but printing can continue. Flashes when the ink cartridge is empty. (The printer goes offline and the ERROR LED lights.)

#### **Buttons**

# **PAPER FEED button**

PAPER FEED feeds the roll paper.

# **CLEANING** button

If printing becomes faint or uneven and the INK OUT LED is not on or flashing, use this button to clean the print head. Press the button until the printer mechanism begins to clean the print head (more than 3 seconds). When the cleaning stops, the printer is ready for normal printing.

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# Power Switch and Power Switch Cover

The power switch is on the front of the printer. Press it to turn on the printer, and press and hold it for more than 3 seconds to turn off the printer.

Note:

*Never turn off the printer when the* POWER *LED is flashing.* 



# **Power Switch Cover**

You can use the enclosed power switch cover to make sure that the power switch is not accidentally pressed. Just press the cover into place to install it.



If an accident occurs when the power switch cover is attached, immediately unplug the power supply cable to avoid fire.

If you are going to store the printer or leave it unused for a long time, turn it off using the power switch on the printer.

# Installing or Replacing a Paper Roll



Be sure to use roll paper that meets the specifications. Do not touch the autocutter blade, which is on the exit part of the paper roll cover.

Follow these steps:

1. Make sure the printer is on.

2. Carefully lift where LIFT is marked on the paper roll cover, and pull the paper roll cover toward you.



- 3. Remove the used paper roll core if there is one.
- 4. Put the paper roll inside the printer in the correct direction, as shown in the illustrations below.





5. Pull the leading edge of the roll paper a little beyond the paper roll cover, and then close the paper roll cover.



Be careful not to catch your finger in the printer when you close the paper roll cover.



6. If you close the cover correctly, you will feel it fit into place, and the printer will automatically feed approximately 7 cm {2.76 in.} of roll paper.



7. The roll paper is cut automatically. *Note:* 

Do not touch the paper roll cover during printing, paper feed, or cleaning.

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When using a partial cut, be sure to tear off the paper by pulling it in the direction shown. Otherwise, the cut edge of the paper may not be smooth.



# Installing or Replacing an Ink Cartridge

When the INK OUT LED comes on, it is almost time to change the ink cartridge. Change the cartridge as soon as it is convenient. When the INK OUT LED flashes, printing stops and you must change the cartridge. (TM-J2100 users be sure to see the important information section below.)

*Note:* Use Seiko Epson specified ink cartridges. Performance of the printer when other ink cartridges are used is not guaranteed.

Follow these steps to install an ink cartridge for the first time or to replace an empty ink cartridge.

- 1. Make sure the printer is on. If it is not on, plug in the AC adapter and turn on the power using the switch on the front of the printer.
- 2. Be sure that a paper roll is installed.
- 3. Open the ink cartridge cover.
- 4. Pull the ink cartridge lever toward you.



Do not put your fingers inside the ink cartridge compartment or you may be injured by a needle.



- 5. Remove the used ink cartridge.
- 6. Carefully insert a new ink cartridge as far as it will go.



7. Push the cartridge lever back to its original position. You will feel the cartridge fit into place.

Note:

The INK OUT LED will now be off.

8. Close the ink cartridge cover.

The POWER LED flashes for approximately 1 minute as the ink delivery system is charged.

#### Note:

Do not turn off the power supply while the POWER LED is flashing. This will shorten the life of the ink cartridge.

When the POWER LED quits flashing and stays on, the printer is ready for printing.

#### Important Ink Cartridge Information for the TM-J2100

The TM-J2100 has a two part cartridge, with black ink in one side and colored ink (either red, green, or blue) in the other side. Therefore, the TM-J2100 has two INK OUT LEDs, one for the black part and one for the color part.

When you need to replace either part of the two part cartridge, first follow steps 1 through 4 above.

After you remove the cartridge, check the INK OUT LEDs. You need to replace the part corresponding to the LED that is flashing.

Separate the two parts as shown in the illustration below. Use a new cartridge for the color corresponding to the INK OUT LED that is flashing and fit the two parts together as shown in the illustration below; then carefully insert the combined two part cartridge, continuing with steps 5 through 7 above.



*Note: If both LEDs are flashing, replace the whole cartridge.* 

# Disposal of Used Cartridges

Dispose of used ink cartridges as industrial waste products. Obey the laws and regulations of your country and district.

# Ink Cartridge Life

To make your ink cartridges last as long as possible, follow these simple rules:

- □ Do not turn off the power supply switch immediately after printing is completed.
- □ Do not open the ink cartridge lever or remove the ink cartridge unless you are replacing the cartridge.
- Do not turn the printer on and off unnecessarily.
- Do not press the CLEANING button unless the print is faint or uneven.

# Troubleshooting

# **ERROR** LED is flashing or lit

- □ If a paper jam has occurred, open the paper roll cover and remove the jammed paper. Do not pull the jammed paper by force or use tools. Be sure to remove it manually.
- □ Open the paper roll cover and close it again.
- □ Turn off the power, wait several seconds, and then turn it on again. If the error remains, contact your supervisor or a qualified service person.

#### The autocutter is jammed or the paper roll cover will not open

Turn off the printer and remove the cutter cover. Remove the plate inside the cutter cover. Turn the knob until you see a triangle in the opening.



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# Cleaning the Print Head

If printing becomes faint or uneven and the INK OUT LED is not on or flashing, press the CLEANING button until the printer mechanism begins to clean the print head (more than 3 seconds). When the cleaning stops, the printer is ready for normal printing.

# Transporting

To transport this printer, follow these steps:

- 1. Remove the ink cartridge.
- 2. Turn off the power supply.
- 3. Check that the POWER LED is off.
- 4. Remove the power supply connector.
- 5. Keep the printer upright while you pack it.

# Limitations on Placing an Object on Top of the Printer

Be careful about placing heavy items on top of the printer. The mass of any object placed on the printer must be 98 N (10 kgf) or less. If the mass is between 19.6 N (2 kgf) and 98 N (10 kgf), you must be careful about the limited area shown in the illustration.

- □ If the object has rubber feet or other such supports on its bottom surface, the feet must not rest on the limited area.
- □ If the object has a perfectly flat bottom surface, the bottom surface must extend beyond the edges of the limited area, as shown in the illustration.



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# TM-J2000/J2100 Specifications

Print Method	Serial Ink Jet Dot Matrix Method		
Resolution	Normal, High speed, Economy: 180 × 180 dpi		
	Bar Code: 360 × 360 dpi		
Fonts (Includes Horizontal	Font A: 12 × 24		
2 Dot Spaces)	Font B: 9 × 17		
Print Width	50.8 / 61 / 67.7 / 72.2 mm {2.0 / 2.4 / 2.7 / 2.8"}		
Character Size: (W $\times$ H)	Font A: 1.41 × 3.39 mm {0.06 × 0.13"}		
	Font B: 0.99 × 2.40 mm {0.04 × 0.09"}		
Character Configuration	Alphanumeric: 95 characters, International Characters: 37 characters		
	Expanded Graphics Characters: 128 characters × 11 pages		
Printing Speed	See Table Below		
Paper Roll Dimensions	Diameter 83 mm {3.3"}		
	Paper Width 82.5 $\pm$ 0.5 mm {3.2 $\pm$ 0.02"}		
	76 ± 0.5 mm {3.0 ± 0.02"}		
	69.5 ± 0.5 mm {2.7 ± 0.02"}		
	57.5 ± 0.5 mm {2.3 ± 0.02"}		
Paper Thickness	0.06 ~ 0.11 mm {0.0024 ~ 0.0043"}		
Ink Cartridge	TM-J2000: SJIC5(K) (Monochrome: Black)		
	TM-J2100: SJIC3(K) + SJIC4(R)/(B)/(G)		
	Note: TM-J2100 uses a combined cartridge of SJIC3(K) and either		
	SJIC4(R), (B), or (G).		
Power Supply	$24 \text{ V} \pm 2.4 \text{ V}$		
Current Consumption	Average: Approximately 1 A		
Temperature/Humidity	When Printing: 10-35 °C {50-95 °F} 20-80% RH Must be no condensation		
	When Running: 5-40 °C {41-104 °F} 20-80% RH Must be no condensation		
	Storage: ink filled: -20-40 °C {-4-104 °F} 20-85%,		
	ink not filled: -20-60 °C {-4-140 °F} 5-85% No condensation		
Reliability	Machine: 20 million lines		
	Print Head: 1.6 billion shots / nozzle		
	Autocutter: 2 million cuts		
	MTBF: 180,000 hours		
<u>.</u>	MCBF: 50 million lines		
Size	195 × 195 × 275 mm {7.7 × 7.7 × 10.8"}		
Mass	Approximately 4.7 kg {10.4 lb}		
	(Including ink cartridge; not including paper roll.)		

Print Mode	Fonts			Paper Width (mm)			
				57.5 {2.3"}	69.5 {2.7"}	76 {3.0"}	82.5 {3.3"}
Normal	Font A	(6 lpi)	(lps)	7.9	7.0	6.5	6.2
	Font B	(8 lpi)	(lps)	11.5	10.2	9.5	9.1
	Graphics		(mm/s)	33.6 {1.3"}	29.7 {1.2"}	27.5 {1.1"}	26.3 {1.0"}
High speed	Font A	(6 lpi)	(lps)	11.9	10.8	10.2	9.8
	Font B	(8 lpi)	(lps)	17.0	15.5	14.7	14.2
	Graphics		(mm/s)	50.3 {2.0"}	45.8 {1.8"}	43.2 {1.7"}	41.6 {1.6"}
Economy	Font A	(6 lpi)	(lps)	11.9	10.8	10.2	9.8
	Font B	(8 lpi)	(lps)	17.0	15.5	14.7	14.2
	Graphics		(mm/s)	50.3 {2.0"}	45.8 {1.8"}	43.2 {1.7"}	41.6 {1.6"}
Bar code			(mm/s)	17.5 {0.69"}	15.9 {0.63"}	15.0 {0.59"}	14.4 {0.57"}

dpi: dots per 25.4 mm (dots per inch) lps: lines per second lpi: lines per 25.4 mm (lines per inch)