**Printer Part Names**

1. Printer cover
2. Control panel
3. Power switch
4. Take-up spool
5. Display module connector
6. Interface connector
7. Drawer kick-out connector
8. Power connector
9. DIP switches (under a cover)
10. Cover open recess

**Control Panel**

- POWER light
- ERROR light
- JOURNAL OUT light
- PAPER FEED button
- VALIDATION/SLIP light
- RELEASE button
Product Name: TM-U375/U375P  
Model Name: M63UA/M115A  

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

Europe:  
CE Marking  
Safety: EN60950  

North America:  
EMI: FCC/ICES-003 Class A  
Safety: UL 1950/CSA C22.2 No. 950  

Japan:  
EMI: VCCI Class A  

Oceania:  
EMC: AS/NZS 3548  

**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 61000-4-11  

Directive 90/384/EEC  EN45501  

**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.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.
Gemäß der Dritten Verordnung zum Gerätesicherheitsgesetz (Maschinenlärminformations-Verordnung-3. GSGV) ist der arbeitsplatzbezogene Geräusch-Emissionswert kleiner als 70 dB(A) (basierend auf ISO 7779).
Introduction

Features

The TM-U375 and TM-U375P are high-performance POS printers which handle slip, validation, and journal printing (both journal and receipt printing with pressure-sensitive paper) in a single unit. The main features of the TM-U375 and TM-U375P printers are as follows:

- World’s smallest multi-function 1.5 station printer.
- High-speed printing using logic seeking.
- Easy problem handling (e.g., paper jams or objects dropped into the printer) via a clamshell mechanism.
- Two validation/slip paper entrances: from above for validation paper and from the front for slip paper.
- Free-format printing in page mode.
- Various check printing pattern.
- Logic seeking and page mode for check printing.
- Movible platen for easy paper insertion.
- Paper load switch for easy paper roll loading.
- Control capability for two drawers.
- Selectable character size (7 x 9 font or 5 x 9 font).
- Command protocol based on the ESC/POS® standard.
- ASB (Automatic Status Back) function that automatically transmits printer status changes.
- EPSON® intelligent module connection (for the TM-U375 only).
- EPSON display module series connection (for the TM-U375 only).
- Bidirectional parallel interface in accordance with the IEEE 1284Nibbe/Byte Modes.

About This Manual

Setting up and Using

- Chapter 1 contains information on unpacking the printer, setting it up, setting the DIP switches, and adjusting the paper near end detector.
- Chapter 2 contains information on using the printer.
- Chapter 3 contains troubleshooting information.
Reference

○ Chapter 4 contains specifications.

Notes, Cautions, and Warnings

Note:

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

⚠️ CAUTION:

Cautions must be observed to avoid minor injury to yourself or damage to your equipment.

⚠️ WARNING:

WARNINGS must be followed carefully to avoid serious bodily injury.
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Unpacking

The illustration below shows the items included for the standard specification printer.

![Diagram showing items included for the standard specification printer](image)

- Take-up spool
- Paper roll (1 pc)
- Ribbon cassette
- Hexagonal lock screws (2 pcs) (only for the serial interface)
- Power switch cover

Note:
See the Note on page 1-5 for information on the screws.

Removing the Protective Materials

The printer is protected during shipping by protective materials that must be removed before you turn on the printer.

1. Loosen the screw and remove the protective material A from the printer, as the illustration shows on page 1-3.

1-2 Setting Up the Printer
Protective material A

Note:
Store the protective material A on the back of the printer, following the steps below.

1. Insert the projections on the protective material A into the corresponding holes as the illustration below.

2. Tighten the screw.

Note:
Put the protective material A back in its original position if you ever ship or store your printer.
2. Remove the protective materials B and C as the illustration.

Note:
Put the protective materials B and C back in their original position if you ever ship or store your printer.

---

**Connecting the Printer to Your Computer**

**TM-U375**

Follow the procedures below only when you use the printer as a single unit (not connected to an intelligent module). When you use the printer with the intelligent module, refer to the *IT-U Series User’s Manual* for details.

You need an appropriate serial interface cable to connect your computer to the printer’s built-in interface.

1. Make sure that both the printer and computer are turned off; then plug the cable connector securely into the printer’s interface connector.

2. Tighten the screws on both sides of the cable connector.

---

**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.
Your printer comes with inch-type hexagonal lock screws installed. If you plan to use an interface cable that requires millimeter-type lock screws, replace the inch-type screws with the enclosed millimeter-type screws by using a hex screwdriver (5 mm). To distinguish the two types of screws, see the figure below.

3. Plug the other end of the cable into the computer.

**TM-U375P**

You need an appropriate parallel interface cable to connect your computer to the printer.

1. Make sure that the printer and the computer are turned off. Then plug the cable into the connector on the printer, as shown.
Note:
Squeeze the wire clips on the printer together until they lock in place on both sides of the connector.

2. Connect the other end of the cable to the connector on your computer.

**Connecting the Printer to Your Drawer**

Follow the procedures below to connect a drawer to the printer only when you use the printer as a single unit (not connected to an intelligent module). (Intelligent module connection is available only for the TM-U375.) When you use the TM-U375 with the intelligent module, refer to the *IT-U Series User's Manual* for details.

⚠️ **CAUTION:**

*Use a drawer that matches the printer specification. Using an improper drawer may damage the drawer as well as the printer.*

1. Make sure that the printer is turned off.

2. Plug the cable connector securely into the printer’s drawer kick-out connector until it clicks.
CAUTIONS:

1. Do not connect a telephone line to the drawer kick out connector.
2. Do not confuse the drawer kick out connector and the display module connector.
Anschließen des Druckers an Ihre Geldlade


ACHTUNG:

Nur eine Geldlade verwenden, die der Druckerspezifikation entspricht. Bei Verwendung einer ungeeigneten Geldlade kann sowohl die Geldlade als auch der Drucker beschädigt werden.

1. Stellen Sie sicher, daß der Drucker ausgeschaltet ist.

2. Stecken Sie den Kabelsteckverbinder fest in den Auszugsteckverbinder am Drucker ein, bis er hörbar einrastet.

TM-U375

I-8 Setting Up the Printer
ACHTUNG:

1. Am Auszug-Steckverbinder für die Geldlade keine Telefonleitung anschließen.
Connecting the Printer to Your Direct Connection Display Module (For the TM-U375 only)

Follow the procedures below to connect a direct connection display module to the printer only when you use the printer as a single unit (not connected to an intelligent module). When you use the printer with the intelligent module, refer to the IT-U Series User’s Manual for details.

1. Make sure that the printer is turned off.

2. Plug the cable connector (provided with the direct connection display module) securely into the printer’s display module connector until it clicks.

CAUTIONS:

1. Do not connect a telephone line to the drawer kick out connector.
2. Do not confuse the drawer kick out connector and the display module connector.
3. Never connect any product other than the display module to the DM connector.
4. If you connect any product other than the display module to the DM connector, Seiko Epson Corporation is not liable for any damage to the other product or to the TM-U375 itself.
Grounding the Printer

When you use the printer as a single unit (not connected to an intelligent module), you need to ground your printer. (Intelligent module connection is available for the TM-U375 only.)

Recommended wire is described below.
- Thickness of wire: AWG18 or equivalent
- Diameter of terminal to be attached: 3.2

1. Make sure that the printer is turned off.

2. Connect the ground wire to the ground connector (marked FG) on the bottom of the printer with the screw provided on the printer. Alternatively, another screw located beside the power connector on the TM-U375P can be used to connect the ground wire.
3. Ground the other end of the ground wire.

**Connecting the Power Supply**

When the printer is used as a single unit, not connected to an intelligent module, use the optional EPSON power supply, PS-150 for your printer. When the printer is connected to an intelligent module, the power is supplied by the intelligent module. Refer to the IT-U Series User's Manual for details. (Intelligent module connection is available for the TM-U375 only.)

⚠️ **WARNING:**

* Using an incorrect power supply may cause fire or electrical shock.

⚠️ **CAUTION:**

* When connecting or disconnecting the power supply from the printer, make sure that the power supply is not plugged in to an electrical outlet; otherwise you may damage the power supply or the printer.

1. Make sure that the printer’s power switch is turned off, and that the power supply’s power cord is unplugged from the electrical outlet.
2. Check the label on the power supply to make sure that the required voltage matches that of your electrical outlet.

3. Plug the power supply’s DC cable connector into the printer’s power connector as shown below.

```
TM-U375
```

4. Plug the power supply’s power cord into an electrical outlet.

```
Note: To remove the DC cable connector, grasp the connector at the arrow and pull it straight out. Make sure that the power supply’s power cord is unplugged before you disconnect the DC cable connector.
```

```
TM-U375P
```
Installing the Ribbon Cassette

**CAUTIONS:**

Never turn the ribbon cassette’s knob in the opposite direction of the arrow marked on the cassette; otherwise the ribbon cassette may be damaged.

Be sure the printer is not receiving data when you replace a ribbon cassette; otherwise data may be lost.

*Note:*

Use the EPSON ERC-38 ribbon cassette for your printer.

1. Turn on the printer and open the printer cover.

2. Turn the ribbon cassette’s knob two or three times in the direction of the arrow, to take up any slack in the ribbon.

3. Insert the ribbon in the position as the illustration below and push the ribbon cassette until it clicks. Then rotate the cassette’s knob two or three more times. This is necessary to place the ribbon in the correct position.
4. Make sure that the ribbon is installed between the print head and the ribbon mask without wrinkles or creases, as shown below.

**Note:** If the ribbon is not installed correctly, to remove the ribbon cassette, grasp the cassette's tab on the left side, lift the left side out first, and then pull the cassette out of the printer. Repeat steps 2, 3 and 4 above to install the ribbon cassette again.
**Installing the Paper Roll**

Use a paper roll that matches the specifications.

*Note:*

*The printer must be turned on before installing the paper roll.*

1. Fold the paper so it is exactly straight and even, as shown in the illustration, and will not tear off jaggedly.

   ![Paper Fold Options]

   No  No  Correct

2. Turn on the printer, open the printer cover, and remove the take-up spool.

3. Insert the paper roll as shown below.

   ![Paper Roll Insertion]

4. Insert the tip of the paper into the paper inlet as far as it will go, and push the PAPER LOAD switch to feed the paper roll until the paper comes out from the top of the printer.

   Note that the arrow in the exploded drawing below points towards the front of the printer.

---

1-16 Setting Up the Printer
5. When using the take-up spool, follow the steps and the illustration below.
   
   a) Pull out the side of the take-up spool and insert the tip of the paper roll into the groove on the spool as the illustration below.
   
   b) Rotate the spool two or three times to secure the paper and reinsert the side of the take-up spool as the illustration below.
   
   c) Install the take-up spool in the printer.
   
6. Tear off the receipt paper on the cutter; then close the printer cover.

Note:
When the printer cover is open, the PAPER FEED button is inactive.
Running the Self-test

Any time that you want to check the performance of your printer you can run the self test described below. This shows whether your printer is working correctly. It is independent of any other equipment or software. You can run the self-test with the paper roll, slip paper, or validation paper.

Running the self-test with paper roll

Note: Be sure to install the ribbon cassette and the paper roll before you run the self test.

1. Make sure the printer is turned off and the printer cover is closed properly.
2. While holding down the PAPER FEED button, turn on the printer to begin the self-test. The self-test prints the printer settings and pauses printing. (The JOURNAL OUT light flashes.)
3. Press the PAPER FEED button to continue printing. The self-test prints some lines of characters from the character table.
4. The self-test automatically ends after printing "*** completed ***" on the paper. The printer becomes ready to receive data from the computer after the self-test.
5. Self-test mode switches to normal mode.

Running the self-test with the slip paper

Note: Be sure to install the paper roll in the printer to prevent slip paper jams.

1. Make sure the printer is turned off and the printer cover is closed properly.
2. Hold down the RELEASE button and turn on the printer to begin the self-test. The VALIDATION/SLIP light flashes.
3. Feed a sheet of slip paper into the printer. The self-test loads the paper automatically, prints the printer settings, and then ejects the paper. The VALIDATION/SLIP light flashes.
4. Remove the paper and feed another sheet of slip paper into the printer to print characters from the character table. Continue to feed slip paper into the printer until the self-test prints "*** completed ***".

1-18 Setting Up the Printer
5. The self-test automatically ends after printing "*** completed ***".
The printer is ready to receive data from the computer after the self-test completes.
6. Self-test mode switches to normal mode.

Running the self-test with validation paper

- **Note:** Be sure to install the paper roll in the printer to prevent validation paper jams.

1. Make sure the printer is turned off and the printer cover is closed properly.
2. Hold down the PAPER FEED and RELEASE buttons and turn on the printer to begin the self-test. The VALIDATION/SLIP light flashes.
3. Feed a sheet of validation paper into the printer. The self-test prints the printer settings, and then ejects the paper. The VALIDATION/SLIP light flashes.
4. Remove the paper and feed another sheet of validation paper into the printer to print characters from the character table. Continue to feed validation paper into the printer until the self-test prints "*** completed ***".
5. The self-test automatically ends after printing "*** completed ***".
The printer is ready to receive data from the computer after the self-test completes.
6. Self-test mode switches to normal mode.

- **Note:** If you want to pause the self-test for the paper roll, slip paper, or validation paper at any point, press the PAPER FEED button. Press the PAPER FEED button again to resume the self-test.
Setting the DIP Switches

⚠️ CAUTION: ⚠️

*Turn off the printer while removing the DIP switch cover to prevent an electrical short, which can damage the printer.*

You can change your interface and print column settings by changing the DIP switch settings.

1. Make sure the printer is turned off.

2. Remove the screw from the DIP switch cover. Then take off the DIP switch cover, as shown in the illustration below.

3. There are two sets of switches. Notice that ON is marked on each set of switches. Use tweezers or another narrow tool to move the switches.

4. Use the following tables to set the DIP switches. Numbers starting with 1 are in the first set, and numbers starting with 2 are in the second.
## TM-U375 DIP-switch functions

### DIP Switch Set 1

<table>
<thead>
<tr>
<th>SW Function</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1 Data reception error</td>
<td>Ignored</td>
<td>Prints</td>
</tr>
<tr>
<td>1-2 Receive buffer capacity</td>
<td>40 bytes</td>
<td>4K bytes</td>
</tr>
<tr>
<td>1-3 Handshaking</td>
<td>XON/XOFF</td>
<td>DTR/DSR</td>
</tr>
<tr>
<td>1-4 Word length</td>
<td>7 bits</td>
<td>8 bits</td>
</tr>
<tr>
<td>1-5 Parity check</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>1-6 Parity selection</td>
<td>Even</td>
<td>Odd</td>
</tr>
<tr>
<td>1-7 Transfer speed (see table below)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-8 Transfer speed (see table below)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Transfer Speed (BPS)

<table>
<thead>
<tr>
<th>BPS: Bits Per Second</th>
</tr>
</thead>
<tbody>
<tr>
<td>1200</td>
</tr>
<tr>
<td>2400</td>
</tr>
<tr>
<td>4800</td>
</tr>
<tr>
<td>9600</td>
</tr>
</tbody>
</table>

### DSW 2

<table>
<thead>
<tr>
<th>SW Function</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1 Connection of display module</td>
<td>Connected</td>
<td>Not connected</td>
</tr>
<tr>
<td>2-2 Selects number of characters per line (CPL)</td>
<td>42 CPL/7 X 9 font</td>
<td>40 CPU/35 CPL</td>
</tr>
<tr>
<td>2-3 Handshaking operation (busy condition)</td>
<td>Receive buffer full</td>
<td>Off-line or receive buffer full</td>
</tr>
<tr>
<td>2-4 For internal use only.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-5 For internal use only.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-6 For internal use only.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-7 Pin 6 reset signal</td>
<td>Used</td>
<td>Not used</td>
</tr>
<tr>
<td>(see Note 2 on the next page)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CAUTION:

Do not change the settings of switch 2-4, 2-5 and 2-6.
Notes:
1. This function can be used only when a direct connection display module is connected to the display module connector.

2. DIP switch settings cannot be changed after the power is turned on or after the printer is reset through the interface. When turning the power on, do not change the settings of DIP switches 7 and 8.

**TM-U375P DIP-switch functions**

### DIP Switch Set 1

<table>
<thead>
<tr>
<th>SW</th>
<th>Function</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1</td>
<td>Auto line feed</td>
<td>Enabled</td>
<td>Disabled</td>
</tr>
<tr>
<td>1-2</td>
<td>Receive buffer capacity</td>
<td>40 bytes</td>
<td>4K bytes</td>
</tr>
<tr>
<td>1-3</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-4</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-6</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-7</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-8</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### DIP Switch Set 2

<table>
<thead>
<tr>
<th>SW</th>
<th>Function</th>
<th>ON</th>
<th>OFF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-2</td>
<td>Print column selection</td>
<td>42CPL/35CPL</td>
<td>40CPL/33CPL</td>
</tr>
<tr>
<td></td>
<td>7 × 9 font/9 × 9 font</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>Handshaking (busy condition)</td>
<td>Receive</td>
<td>Off-line or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>buffer full</td>
<td>receive buffer full</td>
</tr>
<tr>
<td>2-4</td>
<td>Reserved.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-5</td>
<td>Settings must not be changed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-6</td>
<td>Settings must not be changed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-7</td>
<td>Undefined</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-8</td>
<td>nInit reset signal Fixed to ON.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

⚠️ **CAUTION:**

Do not change the settings of switch 2-4, 2-5, 2-6 and 2-8.

5. Replace the DIP switch cover and secure it with the screw.

---

1-22 Setting Up the Printer
To attach the DIP switch cover, insert the cover upward then slide the cover leftward, as shown in the illustration below.

**Adjusting the Paper Roll End Sensing Position**

The paper near end detector detects when the paper is almost gone by measuring the diameter of the paper roll. Software programs can use the ESC c 4 command to stop printing when the paper is almost gone.

If you want to change the amount of paper remaining when the printer stops printing, follow the steps below to adjust the paper near end detector.

**Note:**

If the inner diameter of the paper roll core is less than 10 mm (0.39 inch), the paper roll near-end detector may not work properly.

1. Open the printer cover and remove the take-up spool.

2. Determine the point on the paper roll at which you want the near-end detector to be triggered. Then measure the distance A shown in the illustration.
3. Find the corresponding adjustment position number from the table below.

<table>
<thead>
<tr>
<th>Distance A</th>
<th>Adjustment position number</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 mm (0.39 inch)</td>
<td>#1</td>
</tr>
<tr>
<td>8 mm (0.32 inch)</td>
<td>#2</td>
</tr>
<tr>
<td>6 mm (0.24 inch)</td>
<td>#3</td>
</tr>
<tr>
<td>4 mm (0.16 inch)</td>
<td>#4</td>
</tr>
<tr>
<td>2 mm (0.08 inch)</td>
<td>#5</td>
</tr>
</tbody>
</table>

4. Loosen the detector screw with a coin or screwdriver.

5. Set the detector scale to the position you determined from the table by moving the detector screw up or down. The numbers #1, #2, #3... are not marked on the detector scale. Use the illustration below for reference.

6. Secure the detector screw; then replace the take-up spool and close the printer cover.

1-24 Setting Up the Printer
Using the Power Switch Cover

You can use the provided power switch cover to protect the power switch from accidental or improper operation. Attach the cover as shown in the illustration below.

You can turn the power on or off with the switch cover attached by inserting a pointed object (like a ball point pen) through either of the two small holes on the switch cover.

![Push to attach the cover.]

**WARNING:**

*If an accident occurs when the power switch cover is attached, unplug the power supply cord from the outlet immediately.*
Chapter 2
Using the Printer
Operating the Control Panel

The control panel has two buttons and four lights.

<table>
<thead>
<tr>
<th>POWER</th>
<th>ERROR</th>
<th>JOURNAL</th>
<th>VALIDATION</th>
<th>PAPER FEED</th>
<th>RELEASE</th>
</tr>
</thead>
</table>

**Buttons**

The control panel buttons perform paper feeding and release functions.

**PAPER FEED**

Press the PAPER FEED button once to advance paper one line. You can also press the PAPER FEED button continuously to feed the paper continuously.

**RELEASE**

Press the RELEASE button to release the paper clamp.

**Indicator lights**

The control panel lights provide information on printer conditions.

**POWER** (green)

The POWER light is on when the printer power is on.

**ERROR** (red)

The ERROR light is on or is flashing when the printer is not ready to print.

The ERROR light is on under the following conditions:

- When you first turn on the printer or after you reset the printer using the interface. The ERROR light goes off after the printer is initialized.
- When the printer cover is open. Close the printer cover if this is the case.
- When the printer stops printing because it senses the paper roll end. Install a new paper roll if this is the case.
When you press the PAPER FEED button to stop the self-test temporarily,

The ERROR light flashes when an error occurs.

The blinking pattern shown below indicates that the temperature of the print head is too high. The printer recovers automatically and resumes printing when the head cools.

[Diagram: Approximately 160 ms, blinking pattern]

If the printer stops working and the ERROR light is blinking, turn the printer off, check for jammed paper, and remove it by following the instructions on page 3-4, if necessary. Then turn the printer back on. If the printer still does not work, unplug the power supply cord from the outlet immediately; then contact a qualified service person.

⚠️ CAUTION:
The print head becomes very hot during printing. Allow it to cool before you reach into the printer.

JOURNAL OUT (red)

The JOURNAL OUT light is on when the printer senses that the paper roll is not installed or is nearly or completely depleted. The JOURNAL OUT light flashes after the self-test prints the printer settings on the paper roll.

VALIDATION/SLIP (green)

The VALIDATION/SLIP light is on or is flashing while the printer is in validation/ slip paper mode.
The VALIDATION/SLIP light flashes while the printer is waiting for validation/ slip paper to be inserted or removed.
**Slip Paper Handling**

Use only slip paper (flat paper without wrinkles, creases, or folds) that matches the specifications.

*Note:* Be sure to install the paper roll in the printer, even if you plan to print only on slip paper. This will prevent paper jams.

1. Send the appropriate control commands from the computer to print on slip paper.
2. When the VALIDATION/SLIP light flashes, insert a slip into the slip paper inlet as shown in the illustration below.

   Make sure you insert the slip paper into the inlet as far as it will go.

3. The paper will automatically be drawn in and printing will begin.

   *Note:* When the VALIDATION/SLIP light flashes (this depends on the application software), remove the paper from the paper path.

**Validation Paper Handling**

Use only validation paper (flat paper, without wrinkles, creases, or folds) that matches the specifications.

*Note:* Be sure to install the paper roll in the printer, even if you plan to print only on validation paper. This will prevent paper jams.
1. Send the appropriate control commands from the computer to print on validation paper.

2. When the VALIDATION/SLIP light flashes, insert a sheet of validation paper into the validation paper inlet (see the illustration below); printing will then begin.

   Make sure you insert the validation paper into the inlet as far as it will go.

   ![Illustration of printer with validation paper]

   **Note:** When the VALIDATION/SLIP light flashes (this depends on the application software), remove the paper from the paper path.

**Replacing the Paper Roll**

To change the paper roll, follow the steps below.

1. Cut the journal paper on the cutter; then remove the take-up spool.
2. Pull out the paper roll and cut the paper, as the illustration below.

3. Press the **PAPER LOAD** switch and remove the paper in the direction of the arrow, as the illustration below.

![PAPER LOAD switch](image)

**CAUTION:**

*Never pull out the paper roll manually.*

4. Reinstall a new paper roll by following the steps in *Installing the Paper Roll* in Chapter 1.

**Replacing the Ribbon Cassette**

**CAUTIONS:**

*Never turn the ribbon cassette’s feed knob in the opposite direction of the arrow marked on the cassette; otherwise the ribbon cassette may be damaged.*

*Be sure the printer is not receiving data when you replace a ribbon cassette; otherwise data may be lost.*

**Note:**

*Use the EPSON-ERC-38 ribbon cassette for your printer.*
Note:
There are two ways to replace the ribbon cassette. One is to turn the printer off and on again before installing or removing the ribbon cassette, making sure that data sent from the computer is not lost. (When you turn off the printer power, data sent from the computer is lost.) The other is to open the printer cover and press the RELEASE button before installing or removing the ribbon cassette. Both ways cause the print head to move to the center of the printer and the paper clamp to release. If one of these ways is not used, the ribbon might not be inserted or removed correctly.

Removing the ribbon cassette

1. Turn the printer power off and on again; then open the printer cover.

2. Grasp the ribbon cassette’s tab on the left side, lift the left side out first, and then pull the cassette out of the printer, as shown in the illustration below.
Installing the ribbon cassette

1. Turn the ribbon cassette’s knob two or three times in the direction of the arrow, to take up any slack in the ribbon.

2. Insert the ribbon in the position as shown below, and push the ribbon cassette into the printer until it clicks. Then rotate the cassette’s knob two or three more times. This is necessary to place the ribbon in the correct position.
3. Make sure that the ribbon is installed between the print head and the ribbon mask without wrinkles or creases, as shown below.

Note:
Remove the ribbon cassette from the printer when you store the printer for a long time.

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

Read this section if you have a printer problem.

General problems

The lights on the control panel do not come on.

Make sure that the power supply’s DC cable is properly plugged into the printer’s power connector.

Make sure that the power supply’s power cord is properly plugged in the AC inlet of the power supply.

Make sure that the power supply’s power cord is properly plugged into the electrical outlet.

Printing problems

The ERROR light is on (not flashing) and nothing is printed.

If the JOURNAL OUT light is on:

The paper roll is not installed, or the paper roll is nearly or completely depleted. Install a new paper roll in the printer. See Installing the Paper Roll in Chapter 1.

If the JOURNAL OUT light is off:

Make sure that the printer cover is properly closed.

The ERROR light is flashing and the printer does not print.

First, turn off the printer and check for a paper jam. (See the paper jam description on page 3-4.)
If there is no paper jam and the printer has been printing for quite a while, the print head may be overheated. If the print head is overheated, the printer will resume printing when the head has cooled (usually within two or three minutes).

If there is no paper jam and the print head is not overheated, turn off the printer and turn it back on after about 10 seconds. If the printer still does not work, unplug the power supply cord from the outlet immediately. Then contact a qualified service person.

**The ERROR light is off but nothing is printed.**

Try to run the self-test to make sure that the printer works properly. See Self-test later in this section. If the self-test does not work, contact your dealer for assistance.

If the self-test works properly, check the following:

1. Check the connection at both ends of the interface cable between the printer and the computer. Make sure that this cable meets the specifications for both the printer and the computer.
2. The data transmission settings may be different between the printer and the computer. Make sure that the printer’s DIP switch settings for data transmission are the same as the computer’s. You can print the printer’s interface settings using the self-test. See Running the Self-test in Chapter 1.

If the printer still does not print, contact your dealer for assistance.

**The printer sounds like it is printing, but nothing is printed.**

The ribbon cassette may not be installed properly. See Replacing the Ribbon Cassette in Chapter 2.

The ribbon may be worn out. Replace the ribbon cassette as described in Replacing the Ribbon Cassette in Chapter 2.
The printout is faint.

The ribbon may be worn out. Replace the ribbon cassette as described in Replacing the Ribbon Cassette in Chapter 2.

A line of dots is missing in the printout.

The print head may be damaged. Stop printing and contact your dealer for assistance.

**Paper handling problems**

The cut sheets (slip and validation paper) are not fed properly or become jammed frequently.

The paper roll is not installed properly. Remove and reinstall the paper roll as described in *Replacing the Paper Roll in Chapter 2* and *Installing the Paper Roll in Chapter 1*.

The paper is jammed inside the printer.

To clear a paper jam, follow the steps below.

⚠️ **CAUTION:**

*The print head becomes very hot during printing. Allow it to cool before you reach into the printer.*

1. Turn the printer power off and on again; then open the printer cover.

2. Remove the ribbon cassette from the printer. (See *Replacing the Ribbon Cassette in Chapter 2*.)

3. Lift the print head cover while pulling the lever on its right side in the direction of the arrow, to open the cover as shown in the illustration below.
4. Cut the paper roll.

5. Remove the paper jam while pulling the release lever toward you, and pull the paper out in the direction of the arrow as shown in the illustration below.

Notes:
1. Never pull out the jammed paper in the opposite direction from the ejection side of the printer.
2. Pull out the paper gently in the paper feeding direction, and make sure you remove any remaining pieces.

6. Press down the print head cover after confirming that the print head is at the center of the printer. If the print head is not at the center of the printer, bring it to the center by holding the base of the print head.
7. Close the print head cover. The cover clicks when it is closed securely.

8. Install the ribbon cassette, following the steps in *Replacing the Ribbon Cassette* in Chapter 2.

9. Install the paper roll, following the steps in *Installing the Paper Roll* in Chapter 1.

10. Close the printer cover.

**The remaining amount of paper roll is not detected correctly.**

If a paper roll with a red end mark at the paper end is used, the mark may cause the paper to stick together. If this occurs, the paper roll near-end detector may not work properly. (See *Adjusting the Paper Roll End Sensing Position* in Chapter 1.)

### Hexadecimal Dumping

This feature allows experienced users to see exactly what data is coming to the printer. This can be useful in finding software problems. When you turn on the hex dump function, the printer prints all commands and other data in hexadecimal format along with a guide section to help you find specific commands.

#### Starting hexadecimal dumping

Open the printer cover and turn on the power while pressing the PAPER FEED button, then close the cover. The printer first prints “Hexadecimal Dump” on the paper roll, and prints the data received thereafter in hexadecimal numbers and their corresponding characters.

**Notes:**

1. "." is printed if no character corresponds to the data received.
2. Control commands are printed in bold for emphasis.
3. During hexadecimal dumping, all commands except DLE EOT and DLE ENQ are disabled.

---

3-6 Troubleshooting
4. If there is insufficient print data to fill one line (such as at the end of a hexadecimal dump), the data will not print. (This means that 8-byte data is required to print on one line.) The remaining data in this case can be printed by placing the printer in off-line mode by opening the cover or pressing the PAPER FEED button.

Example printing

<table>
<thead>
<tr>
<th>Hexadecimal Dump</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B 21 00 1B 26 02 40 40 : .&amp;@</td>
</tr>
<tr>
<td>1B 25 01 1B 63 34 00 1B : %04..</td>
</tr>
<tr>
<td>41 42 43 44 45 46 47 48 : ABCDEFGH</td>
</tr>
</tbody>
</table>

**Ending hexadecimal dumping**

End hexadecimal dumping by turning off the power or by resetting the printer after printing completes.
Printing Specifications

Printing method: Serial impact dot matrix
Head wire layout: Serial type 9-pin 1/72 inch
Printing direction: Bidirectional, minimum distance printing (logic seeking)
Printing speed: Approximately 3.5 LPS
(40 columns, 16 CPI, continuous printing)
Approximately 5.4 LPS
(20 columns, 16 CPI, continuous printing)
(LPS: Lines Per Second; CPI: Characters Per Inch)

Note:
During excessive use, printing stops to protect the print head. In this case, the actual printing speed may be slower than that listed above.

Characters per line: See the table below.
Characters per inch: See the table below.

Character Specifications

Number of characters:
Alphanumeric: 95
Extended graphics: 128 X 8 (tables)
(space pages included)
International: 32

Character structure:
7 X 9 (total horizontal dot positions: 400 dots)
5 X 9 (total horizontal dot positions: 200 dots)

Character size:
See the table below.

Character Size, Characters Per Line, Characters Per Inch

<table>
<thead>
<tr>
<th>Character Structure</th>
<th>Character Size W x H</th>
<th>Character Dot Spacing</th>
<th>Characters Per Line (CPL)</th>
<th>Characters Per Inch (CPI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 X 9 [9]</td>
<td>3.34 x 3.1 mm (1/4 x 1/12)</td>
<td>3 half dots</td>
<td>40</td>
<td>16</td>
</tr>
<tr>
<td>5 X 9</td>
<td>1.56 x 3.1 mm (1/8 x 1/12)</td>
<td>0</td>
<td>40</td>
<td>16</td>
</tr>
</tbody>
</table>

Note: Default font is 7 X 9.

4-2 Reference Information
Paper Specifications

Paper feed method: Friction feed

Paper feed pitch:
- 1/6 inch (default)
- Programmable in units of 1/144 inch by using commands.

Paper feed speed:
- Approximately 2.67 IPS (16 LPS) (continuous paper feeding)

Paper size:
a) Paper roll

- Paper width: 76 ± 0.5 mm (2.99" ± 0.02")
- Outside diameter:
  - Single-ply paper:
    - Journal paper only: 60 ± 0 mm (2.36") or less
    - (with take-up flange diameter of 75 mm (2.95"))
    - Receipt paper only: 83 ± 0 mm (3.27") or less
  - 2-ply paper: 83 ± 0 mm (3.27") or less (lower paper must be taken up)
- Inside diameter: 10 mm (.39") or more
- Paper thickness: Single-ply paper: 0.06 to 0.085 mm (.0024 to .0033")
- Multi-ply paper:
  - Paper thickness: 0.05 to 0.08 mm (.0020 to .0031") per sheet
  - Total thickness: 0.16 mm (.0063") or less
- Maximum number of sheets: 2 (1 original + 1 copy)
- Recommended paper: Mitsubishi Paper Mills Co., no-carbon paper (blue)
  - Upper sheet: N40Hi (thickness: 0.06 mm (.0023"), weight: 47.2 g/m²)
  - Lower sheet: N60 (thickness: 0.08 mm (.0031"), weight: 68.0 g/m²)

b) Cut sheets: Slip/validation paper

- Paper types: Normal, pressure sensitive, and carbon copy paper
- Paper size (W X L):
  - Slip paper: 70 to 182 mm X 160 to 257 mm (2.76 to 7.17" X 6.30 to 10.12")
    - (maximum 58 lines at 4.23 mm (.17") pitch)
  - Validation paper: 135 to 182 mm X 70 to 257 mm (5.31 to 7.17" X 2.76 to 10.12")
    - (maximum 16 lines at 4.23 mm (.17") pitch)
- Single-ply paper (without copy paper)
  - Thickness: 0.09 to 0.12 mm (.0035 to .0047")

Reference Information 4-3
- Copy paper:
  Thickness: Backing paper: 0.07 to 0.12 mm (.0028 to .0047")
  Copy and original paper: 0.04 to 0.07 mm (.0016 to .0028")
  Carbon copy paper: Approximately 0.035 mm (.00138")
  Total thickness: 0.09 to 0.31 mm (.0035 to .012")

Example: Original + 2-ply copy

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Original paper</td>
<td>0.04</td>
</tr>
<tr>
<td>Carbon copy paper</td>
<td>0.07</td>
</tr>
<tr>
<td>Copy paper</td>
<td>0.04</td>
</tr>
<tr>
<td>Backing paper</td>
<td>0.07</td>
</tr>
<tr>
<td>Roll paper</td>
<td>0.08</td>
</tr>
</tbody>
</table>

Total thickness: 0.30 mm (.0118")

Copying capability:
As copying capability is influenced by the ambient temperature, printing must be performed under the conditions described in the table below.

### Relationship between Ambient Temperature and Number of Copies

<table>
<thead>
<tr>
<th>Number of Copies</th>
<th>Ambient Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Original + 2-ply copy</td>
<td>10°C to 40°C (50°F to 104°F)</td>
</tr>
<tr>
<td>Original + 1-ply copy</td>
<td>5°C to 40°C (41°F to 104°F)</td>
</tr>
</tbody>
</table>

**Notes on using cut sheets**

- Use cut sheets with a paper roll loaded.
- Use cut sheet that is flat, without curls, folds, warps, or wrinkles, especially at the paper end. Otherwise, the paper may become ink stained or the ribbon may get caught in the printer mechanism.
- Especially slip paper with curls at the paper end may cause character misalignment within the area about 17 mm (.67") from the paper edge.
- Glue must not be on the bottom edge of slip paper. It is desirable that the glue should be on the top edge of slip paper. Choose slip paper carefully when the glue is on the right or left edge of the slip paper, since paper feeding and paper insertion are affected by gluing conditions (e.g., glue quality, method, and length) and glue location (refer to the figure in the next page). Be careful especially when slip paper is wide and has the glue on the right or left edge, since meandering may occur.

4-4 Reference Information
- Cut sheets with holes (e.g., sprocket holes) within the areas shown in the figures below must not be used. Otherwise, the paper cannot be detected by the paper detector. Paper that is translucent must not be used.

**Validation paper**

- Use of multi-ply copy paper with a thick middle sheet may decrease copying capability.
- Printing noise may change depending on paper thickness. Noise may increase when thick single-ply paper is used.
**Electrical Specifications**

- **Power supply:** +24 VDC ± 10%
- **Power consumption** (at 24 V, excluding drawer kick-out)
  - **Operating:** Approximately 1.4 A (mean)
  - **Approximately 5.5 A (peak)**
  - **Standby:** Approximately 0.2 A (mean)

**Electrostatic Protection (measured) based on the IEC801-2 test conditions**

- **Air discharge:** 8K V clear level
- **Contact discharge:** 4K V clear level

**Reliability**

**Life**

**Mechanism:**

- 7,500,000 lines (only when printing on paper roll)
- 3,000,000 lines (only when printing on cut sheet)
  - When printing both on paper roll and on cut sheet, total printing lines are 7.5 million lines.

**Print head:** 150 million characters

End of life is defined as the point at which the printer reaches the beginning of the Wearout Period.

**MTBF**

180,000 hours

Failure is defined as Random Failure occurring at the time of the Random Failure Period.

**MCBF**

18,000,000 lines (only when printing on paper roll)

This is an average failure interval based on failures relating to wearout and random failures up to the life of 7.5 million lines.

7,000,000 lines (only when printing on cut sheet)

This is an average failure interval based on failures relating to wearout and random failures up to the life of 3 million lines.

---

**4-6 Reference Information**
Environmental Specifications

Temperature:
  Operating: 5° to 40°C (41° to 104°F)
  Storage: -10° to 50°C (14° to 122°F) (excluding paper and ribbon)

Humidity:
  Operating: 20 to 80%RH
    (see the range in Figure A.10 below, for 30°C (86°F) and above, without condensation)
  Storage: 20 to 90%RH (excluding paper and ribbon, without condensation)

![Relative Humidity vs. Temperature Graph]

Vibration resistance:
  When packed: Frequency: 5 to 55 Hz
                  Acceleration: 2 G
                  Sweep: 10 minutes (half circle)
                  Time: 1 hour
                  Directions: X, Y, and Z
    No external or internal damage should be found after the vibration test, and the printer should operate normally.

Impact resistance:
  When packed: Package: Epson standard package
                Height: 60 cm (23.62")
                Directions: 1 corner, 3 edges, and 6 surfaces
    No external or internal damage should be found after the drop test, and the printer should operate normally.
  When unpacked: Height: 5 cm (1.97")
                 Directions: Lift one edge and release it (for all 4 edges)
    A non-operating printer should not be damaged after it is dropped (for all 4 edges).

Reference Information 4-7
Acoustic noise:
Operating: Approx. 65 dB or less (Bystander position, receipt/journal printing)

**Interface Specifications**

Serial interface: RS-232 compatible
Parallel interface: IEEE 1284 compatible (Nibble/Byte Modes)

*Note:*
Refer to the EPSON TM-U375/U375P Specification for details.

**Printing on Cut Sheets**

Use the following procedure to print on slip or validation paper.

<table>
<thead>
<tr>
<th>Step</th>
<th>Host Operation</th>
<th>Printer Operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Transmit the ESC c 0 command.</td>
<td>Switches to cut sheet mode and waits for a cut sheet to be loaded, according to the time set by the ESC f m command. The VALIDATION/SLIP light blinks.</td>
</tr>
<tr>
<td>2</td>
<td>Insert the paper.</td>
<td>Detects the cut sheet and turns on the VALIDATION/SLIP light. When using slip paper, detects the slip after the set time (t2) has passed. If the slip is not detected, re-enters the slip waiting state. When the slip paper is detected, feeds the slip as far as the print start position, then redetects the slip and waits for the print data. If the slip is not detected after feeding the paper, re-enters the slip waiting state. When using validation paper, detects the paper after the set time (t2) has passed. If the paper is not detected, re-enters the validation paper waiting state. When the validation paper is detected, waits for the print data. If no cut sheet is inserted within the set time (t-1), switches from cut sheet mode to paper roll mode automatically.</td>
</tr>
<tr>
<td>3</td>
<td>Transmit data and commands.</td>
<td>Prints the data and feeds the paper.</td>
</tr>
<tr>
<td>4</td>
<td>Transmit the FF command.</td>
<td>After printing, ejects the paper and selects paper roll mode. Turns off the VALIDATION/SLIP light.</td>
</tr>
</tbody>
</table>
Notes:

1. When printing on a single cut sheet that is narrower than the carriage movement range, once the printer has been put in the cut sheet mode and the sheet of paper has been inserted, the following operations should be avoided: turning the power supply switch on or off, opening the cover, issuing the return home command (ESC ~), or sending a reset command through the interface. When the carriage moves away from the home position, it may come in contact with the left end of the paper, causing a paper jam.

2. The cut sheet waiting state can be canceled by the DLE ENQ 3 command.

3. Use the ASB function to correctly determine the paper state. See Example Print Control for Cut Sheet later in this section.
Example print control for cut sheet

1) Enables printing stop due to slip paper-end.
2) Enables ASB for all status changes.
3) Receives ASB due to 2).
4) Selects slip printing.
5) Waits for slip paper to be selected.
   ASB: waits for slip paper selection (ASB 4-0*) to be “selected” (0). *Indicates bit 0 of the fourth byte of the ASB data. The same rule applies correspondingly to the following:
6) Waits for slip paper to be inserted.
   ASB: wait for cut sheet sensor (ASB 3-5) to be “paper p” (0).
7) To cancel the slip paper waiting state, send DLE ENQ 3. When canceled, the printer returns to paper roll mode, and the 4 bytes of ASB are transmitted. ASB: slip paper state (ASB 4-1) becomes “not selected” (1).
8) Waits for the slip to be loaded.
   ASB: waits for the slip paper state (ASB 4-1) to be “printable” (0).
9) Transmits each line of print data until there is no data to be transmitted. In this case, ASB is transmitted when the paper has run out. ASB: slip paper state (ASB 4-1) becomes “not printable” (1). Advances to step 10) when all the data has been sent.
10) Ejects the slip paper.
1. When printing on a single cut sheet that is narrower than the carriage movement range, once the printer has been put in the cut sheet mode and the sheet of paper has been inserted, the following operations should be avoided: turning the power supply switch on or off, opening the cover, issuing the return home command (ESC), or sending a reset command through the interface. When the carriage moves away from the home position, it may come in contact with the left end of the paper, causing a paper jam.

2. The cut sheet waiting state can be canceled by the DLE ENQ 3 command.

3. Use the ASB function to correctly determine the paper state. See Example Print Control for Cut Sheet later in this section.

**Transmit Status Identification**

The values of specific bits are fixed in the status information transmitted by the printer, so that the status bytes of commands can be identified. The user can therefore confirm the command to which the status belongs, as shown in the following table.

When using Auto Status Back (ASB), however, process the consecutive three-byte code (except for XOFF) as ASB data after confirming the first byte of the ASB. Otherwise, the status transmitted by using the command and the status of the second and following bytes of the ASB cannot be differentiated.

<table>
<thead>
<tr>
<th>Command</th>
<th>Status Replay</th>
</tr>
</thead>
<tbody>
<tr>
<td>ESC u</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>ESC v</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>GSI</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>GS r</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>XON</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>XOFF</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>DEL EOT</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>ASB (1st byte)</td>
<td>&lt;00010001&gt;B</td>
</tr>
<tr>
<td>ASB (2nd byte-4th byte)</td>
<td>&lt;00010001&gt;B</td>
</tr>
</tbody>
</table>

---

*Reference Information 4-11*
Notes On Number of Printable Columns

When DIP switch 2-2 is set to ON to increase the number of printable columns, the number of dots and the printable area is as shown below. The OFF setting is shown for comparison.

<table>
<thead>
<tr>
<th>DIP switch 2-2 setting</th>
<th>Number of Horizontal Dots/Character</th>
<th>7 X 9 Font</th>
<th>5 X 9 Font</th>
<th>Printable Area/Line</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFF</td>
<td>10</td>
<td>12(*)</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>ON</td>
<td>9</td>
<td>11(*)</td>
<td>385</td>
<td></td>
</tr>
</tbody>
</table>

(*) The 5 X 9 font uses 6 normal dots for one character, but the printer processes the data as 12 half-dots in the print buffer. Therefore, in this case the printer processes the data as 11 half-dots for one character.

There are restrictions when DIP switch 2-2 is ON, as follows:

1) The printable area for one line is decreased.
   Setting DIP switch 2-2 to ON increases the number of printable columns per line but decreases the printable area for one line. Be sure to note the end position of a line and the number of dots for bit-images.

2) The 10th dot is not printed in the 7 X 9 font.
   The 7 X 9 font uses 10 half-dots for one character. However, when DIP switch 2-2 is ON, the printer does not print 10th dot, since the number of printable dots in this setting is 9 and the 10th byte is truncated. Therefore, the 10th dot in some characters is not printed during extended graphic character printing.
   This applies to the character for which dots are defined for the 10th byte.

3) The printing results may differ even if the same data is printed.
   The printer cannot print horizontally adjacent dots. Therefore, the printing results may differ even if the same character codes are transmitted, since the dots placed on the borderline between characters differ depending on the DIP switch 2-2 setting. Particularly in line drawings, a line may be broken when DIP switch 2-2 is ON.

4-12 Reference Information
Example: When transmitting two characters of character code <C4>H (page 0) in the 7 × 9 font (data only), the results are as follows:

DIP switch 2-2 is OFF:

```
1 2 3 4 5 6 7 8 9 10
●●●●●●●●●●●●●●
```

One character    One character

DIP switch 2-2 is ON:

```
1 2 3 4 5 6 7 8 9\n●●●●●●●●●●●●●●
```

One character    One character

© cannot be printed due to adjacent half-dot printing restriction.
WEEE (Waste Electrical and Electronic Equipment) Directive

This information only applies to customers in the European Union, according to Directive 2002/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 27 January 2003 on waste electrical and electronic equipment (WEEE) and legislation transposing and implementing it into the various national legal systems.

For other countries, please contact your local government to investigate the possibility of recycling your product.

<table>
<thead>
<tr>
<th>English</th>
<th>Deutsch</th>
<th>Français</th>
<th>Italiano</th>
<th>Español</th>
<th>Português</th>
<th>Nederlands</th>
<th>Dansk</th>
<th>Suomi</th>
<th>Svenska</th>
</tr>
</thead>
<tbody>
<tr>
<td>The crossed out wheeled bin label that can be found on your product indicates that this product should not be disposed of via the normal household waste stream. To prevent possible harm to the environment or human health please separate this product from other waste streams to ensure that it can be recycled in an environmentally sound manner. For more details on available collection facilities please contact your local government office or the retailer where you purchased this product.</td>
<td>Der Aufkleber mit durchgekreuzter Mülltonne an diesem Produkt weist darauf hin, dass dieses Produkt nicht im normalen Hausmüll entsorgt werden darf. Zur Vermeidung einer möglichen Beeinträchtigung der Umwelt oder der menschlichen Gesundheit und um zu gewährleisten, dass es in einer umweltverträglichen Weise recycelt wird, darf dieses Produkt nicht in den Hausmüll gegeben werden. Informationen zu Entsorgungseinrichtungen erhalten Sie bei der zuständigen Behörde oder dem Geschäft, in dem Sie dieses Produkt erworben haben.</td>
<td>L'étiquette apposée sur ce produit et représentant une poubelle barrée indique que le produit ne peut être mis au rebut avec les déchets domestiques normaux. Afin d'éviter d'éventuels dommages au niveau de l'environnement ou sur la santé, veuillez séparer ce produit des autres déchets de manière à garantir qu'il soit recyclé de manière sûre au niveau environnemental. Pour plus de détails sur les sites de collecte existants, veuillez contacter l'administration locale ou le détaillant auprès duquel vous avez acheté ce produit.</td>
<td>L'etichetta con il contenitore barrato applicata sull'imballo indica che il prodotto non deve essere smaltito tramite la procedura normale di smaltimento dei rifiuti domestici. Per evitare eventuali danni all'ambiente e alla salute umana, separare questo prodotto da altri rifiuti domestici in modo che possa essere riciclato in base alle procedure di rispetto dell'ambiente. Per maggiori dettagli sulle strutture di raccolta disponibili, contattare l'ufficio competente del proprio comune o il rivenditore del prodotto.</td>
<td>La etiqueta de un contenedor tachado que hallará en su producto indica que este producto no se puede tirar con la basura doméstica normal. Para impedir posibles daños medioambientales o para la salud, separe este producto de otros canales de desecho para garantizar que se recicle de una forma segura para el medio ambiente. Para más información sobre las instalaciones de recolección disponibles, diríjase a las autoridades locales o al punto de venta donde adquirió este producto.</td>
<td>A etiqueta com o símbolo de um contentor de lixo traçado com uma cruz que aparece no produto indica que este produto não deve ser detado fora juntamente com o lixo doméstico. Para evitar possíveis danos ao ambiente ou na saúde pública, por favor separe este produto de outros lixos; desta forma, terá a certeza de que pode ser reciclado através de métodos não prejudiciais ao ambiente. Para obter mais informações sobre os locais de recolha de lixo disponíveis, contacte a sua junta de freguesia, câmara municipal ou localonde comprou este produto.</td>
<td>Op uw product is een label van een rolcontainer met een kruis erdoor aangebracht. Dit label zal zeggen dat dit product niet bij het normale huishoudelijk afval mag worden ingezameld. Om eventuele schade aan het milieu of de gezondheid van de mens te voorkomen moet dit product gescheiden van al het ander afval worden ingezameld, zodat het op een verantwoorde wijze kan worden verwerkt. Voor meer informatie over uw lokale afvalinzameling wendt u zich tot uw gemeente of de leverancier bij wie u dit product hebt gekocht.</td>
<td>Etiketten med et kryds over skraldespanden på hjul, der sidder på produktet, angiver, at dette produkt ikke må bortskaffes sammen med almindeligt husholdningsaffald. For at beskytte miljø og helbred skal dette produkt bortskaffes separat, så det kan genbruges på en måde, der er god for miljøet. Kontakt de lokale myndigheder eller den forhandler, hos hvem du har købt produktet, vedrørende steder, hvor du kan aflevere produktet.</td>
<td>Laitte on merkitty jäteastia-simbollilla, jonka yli on yksityiskohtainen täsmentä, joka tarkoittaa, että laite jätteestä voidaan kiertää, mutta se ei saa yhdistää vahinkokien tai muun tyyppisen jätteen kanssa, vaan se on samaan säilytettävä. Lisätietoja laitteen kierrätyksen ja hävittämisvälineen käyttötilanteista saa kunnallisjärjestelmistä.</td>
<td>Symbolen med en överkorsad soptunna innebär att denna produkt inte får kastas i vanligt hushållsavfall. För att skydda miljön ska denna produkt inte kastas tillsammans med vanligt hushållsavfall utan lämnas för återvinning på tillbörligt sätt. För mer information om uppsamlingsplatser kontakta din lokala myndighet eller den återförsäljare där du har köpt produkten.</td>
</tr>
</tbody>
</table>
Česky
Síťek s překládaným odpadkovým košem na kolečkách, který lze nalézt na výrobku, označuje, že tento produkt se nemá likvidovat s běžným domovním odpadem. V zájmu ochrany životního prostředí a lidského zdraví zlikvidujte tento výrobek jako tříděný odpad, který se recykluje zpět do provizorizového prodejce, u kterého ste príslušný výrobok zakoupili.

Eesti
Teie tootele kleebitud tähis, mis kujutab ratastega prügikeonterei, millele on rist peale tõmmatud, keelab toote kõrvakandamise majapidamisjäätmehel samasel viisil. Keskkonnale või inimeste terviselle tekitatava võimaliku kahjulikumise eraldage toode testist jäätmetest, et tagada selle korduvkasutamine keskkonnaasäistlikul viisil. Kui suvool saada rohkem teavet võimalike kogumispunktide kohta, võtke ühendust kohalikul omavalituse ametnikuga või teile toote müüdud jaamumärgast.

Česky
Síťek s překládaným odpadkovým košem na kolečkách, který lze nalézt na výrobku, označuje, že tento produkt se nemá likvidovat s běžným domovním odpadem. V zájmu ochrany životního prostředí a lidského zdraví zlikvidujte tento výrobek jako tříděný odpad, který se recykluje zpět do provizorizového prodejce, u kterého ste príslušný výrobok zakoupili.

Estonian
Pildifoorummenu ar pärasvitrotu atkratumu tervini uz ritenlāziem, kas redzams uz izstrādājuma, norāda, ka šo izstrādājumu nedrisk likvidēt kopā ar parastajiem sadzīves atkritumiem. Lai novērstu iespējamo kaitējumu videi vai cilvēku veselībā, lūdzu, atdaliet šo izstrādājumu no citiem atkritumiem, līdzīgi ievērojanosiet šī atkritumu atkritumu tvertni uz savas vārtas nozīmē, ka jūs arī iespējams atvainoties šo izstrādājumu.

Latviesu
Markējums ar pārākrotu atkritumu tvertni uz ritenlāziem, kas redzams uz izstrādājuma, norāda, ka šo izstrādājumu nedrisk likvidēt kopā ar parastajiem sadzīves atkritumiem. Lai novērstu iespējamo kaitējumu videi vai cilvēku veselībā, lūdzu, atdaliet šo izstrādājumu no citiem atkritumiem, līdzīgi ievērojanosiet šī atkritumu atkritumu tvertni uz savas vārtas nozīmē, ka jūs arī iespējams atvainoties šo izstrādājumu.

Latvian
Tikzēbere tukša vezējs, kas iepazīstīts ar kārtējām atkritumiem, atzīmē, ka šo produktu nevaram izlikt ar kārtējām atkritumiem. Lai novērstu iespējamos šķīdumus, atsevišķi kārtējām atkritumiem, vai iespējamos zaudējumus, lūdzu, atdaliet šo izstrādājumu no citiem atkritumiem, līdzīgi ievērojanosiet šī atkritumu atkritumu tvertni uz savas vārtas nozīmē, ka jūs arī iespējams atvainoties šo izstrādājumu.

Lietuviškai
Lietuviškai

Magyar
A terméknél található, áthúzott szemetet drótoroló címke azt jelzi, hogy ezt a terméket nem szabad és rendes háztartási szeméttel együtt kidobni. Az esetleges környezeti- vagy egészségügyi veszélyek megelőzésére, kérjük, hogy ezt a terméket a többi szemetet elkülönített helyezze el, és biztosítsa, hogy azt környezetbarát módon újrakészüléssel sejtse fel. A rendelkezésre álló begyűjtő létesítményekről kérjük azt környezetbarát módon újrahasznosítsa. A szemétltől elkülönítve helyezze el, és biztosítsa, hogy esetleges környezeti- vagy egészségkárosodást okozó tevékenységeket a helyi kormányzat és a termékesítő készítsen le. Van szó valladásos információért, ha kér, hogy a terméket a termék által jelölött begyűjtő létesítményhez rendeli.

Polski
Słotek z przekreślonym odpadkowym koścem na kołach, który jest wskazówką, że produkt ten należy odseparować od reszty odpadów z gospodarstwa domowego i utylizować w ekologicznie właściwy sposób. Szczegółowe informacje na temat punktów zbiorów odpadów można uzyskać w lokalnych urzędach lub u sprzedawcy danego produktu.

Slovensky
Štítek s preškrtným odpadkovým košom na kolieskach, ktorý je možné nájsť na výrobku, označuje, že tento produkt sa nemá likvidovať s bežným komunálnym odpadom. V záujme ochrany životného prostredia a ľudskeho zdravia zlikvidujte tento výrobok ako triedený odpad, ktorý sa recykluje zpäť do provizorizovaneho predajcu. Podrobnejšie informácie o zbiercom dvoroch pre triedený odpad získať na obecnom úrade alebo u predajcu, u ktorého ste príslušný výrobok zakúpili.

Slovensky

Turkçe
Ürününüzün üzerinde bulunan çapra işareti tekerlekti kutu etiketi, bu ürünün normal ev atık sistemine vasantasyla elden çıkarılmasının gerektiği gösterir. Çevreye ve insan sağlığına zarar vermemi öinemek için, lütfen bu ürünün çevreye zarar vermemeyecek şekilde giri dönüştürebilir bir tutunun üzerinde diğer atıklardan ayırın. Mevcut toplama testleri ile lütfen ayrıntılı bilgi edinmek için, yerel devlet makamlarıyla veya bu ürünün satının alındığını saticıya İrtibata geçiniz.