

**1 station printer**

**TM-U300C/U300D**  
**TM-U300PC/U300PD**

**Operator's Manual**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording, or otherwise, without the prior written permission of Seiko Epson Corporation. No patent liability is assumed with respect to the use of the information contained herein. While every precaution has been taken in the preparation of this book, Seiko Epson Corporation assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein.

Neither Seiko Epson Corporation nor its affiliates shall be liable to the purchaser of this product or third parties for damages, losses, costs, or expenses incurred by purchaser or third parties as a result of: accident, misuse, or abuse of this product or unauthorized modifications, repairs, or alterations to this product, or (excluding the U.S.) failure to strictly comply with Seiko Epson Corporation's operating and maintenance instructions.

Seiko Epson Corporation shall not be liable against any damages or problems arising from the use of any options or any consumable products other than those designated as Original Epson Products or Epson Approved Products by Seiko Epson Corporation.

Centronics is a trademark of Centronics Data Computer Corporation.  
Epson and ESC/POS are registered trademarks of Seiko Epson Corporation.

## **NOTICE:**

The contents of this manual are subject to change without notice.  
Copyright © 1993, 1997 by Seiko Epson Corporation, Nagano, Japan

## **FCC CLASS A**

### **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.

#### **WARNING**

The connection of a non-shielded printer interface cable to this printer will invalidate the FCC Verification of this device and may cause interference levels which exceed the limits established by the FCC for this equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

#### **FOR CANADIAN USERS**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe A respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

#### **GEREÄUSCHPEGEL**

Gemäß der Dritten Verordnung zum Gerätesicherheitsgesetz (MaschinenlärmrInformations- Verordnung-3. GSGV) ist der arbeitsplatzbezogene Geräusch-Emissionswert kleiner als 70 dB(A) (basierend auf ISO 7779).

# INTRODUCTION

The TM-U300C-U300D and TM-U300PC/U300PD are compact, light-weight printers, designed to provide the highest possible performance to cost ratio.

The main features of the printers are as follows:

- Compact size and light weight
- High-speed printing using logic seeking
- High reliability and long life through the use of stepping motors for both carriage return and paper feeding
- Two print colors (black or red)
- Selectable paper feeding increments for various print formats
- Command protocol based on the ESC/POS® standard
- Internal drawer interface that can control two drawers
- Two character fonts (7 X 9 or 9 X 9)
- Semi-automatic paper loading
- Compact AC adapter
- 1 line validation printing
- Roll paper take-up device (for the TM-U300C and the TM-U300PC)

The table below describes the differences between the TM-U300C/U300D and TM-U300PC/U300PD printers.

|           | <b>Take-up device</b> | <b>Interface</b> |
|-----------|-----------------------|------------------|
| TM-U300C  | Installed             | Serial           |
| TM-U300D  | -----                 | Serial           |
| TM-U300PC | Installed             | Parallel         |
| TM-U300PD | -----                 | Parallel         |

Please be sure to read the instructions in this manual carefully before using your new Epson printer.

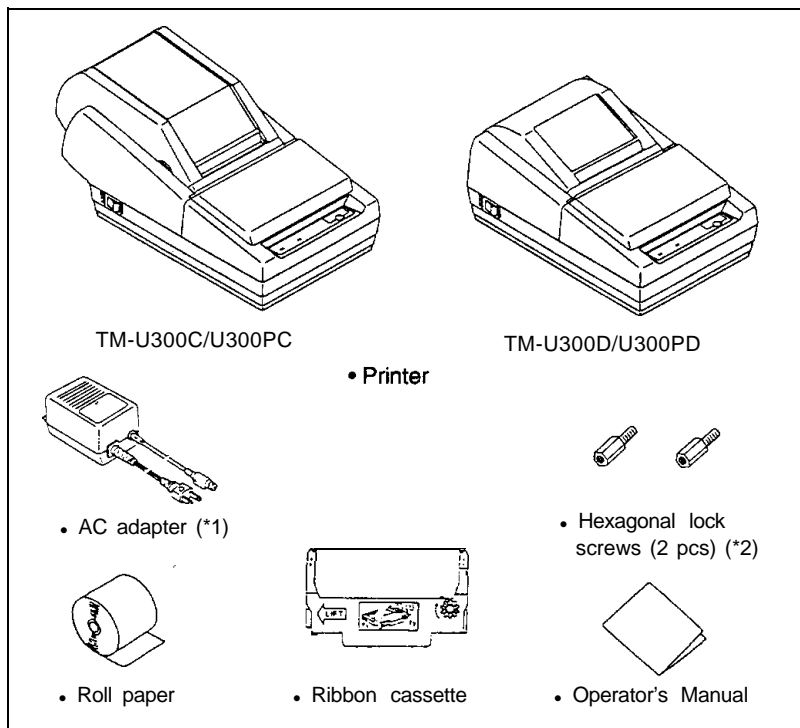
# CONTENTS

|  |           |
|--|-----------|
| <b>Chapter 1 Unpacking the Printer .....</b>             | <b>1</b>  |
| 1-1 Checking the Contents of the Printer Box .....       | 1         |
| 1-2 Choosing a Place for the Printer.....                | 2         |
| 1-3 Removing the Transportation Damper.....              | 2         |
| 1-4 Part Names and Functions.....                        | 3         |
| <b>Chapter 2 Connecting the Cables .....</b>             | <b>5</b>  |
| 2-1 Connecting the AC Adapter to the Printer .....       | 5         |
| 2-2 Connecting the Host Computer to the Printer .....    | 6         |
| <b>Chapter 3 Installing the Printer Parts .....</b>      | <b>8</b>  |
| 3-1 Installing the Ribbon Cassette.....                  | 8         |
| 3-2 Installing the Paper Roll.....                       | 11        |
| 3-3 Adjusting the Paper Near-End Detector Location ..... | 19        |
| 3-4 Inserting a Cut Sheet (Validation Paper) .....       | 21        |
| <b>Chapter 4 Setting the DIP Switches .....</b>          | <b>23</b> |
| <b>Chapter 5 The Self Test .....</b>                     | <b>26</b> |
| <b>Chapter 6 Removing Jammed Paper .....</b>             | <b>27</b> |
| 6-1 Removing Jammed Paper .....                          | 27        |
| <b>Appendix .....</b>                                    | <b>28</b> |
| <b>Appendix A. Specifications .....</b>                  | <b>28</b> |

# Chapter 1 Unpacking the Printer

## 1-1 Checking the Contents of the Printer Box

Remove the printer and the other items from the box.



(\*1) One of eight types of AC adapters may be included with your printer. Refer to Appendix A, Specifications for information on your AC adapter's input voltage, dimensions, and weight.

(\*2) Hexagonal lock screws are provided only if the printer has a serial interface and is shipped to the United Kingdom. See note in page 7 for more information about these screws.

Make sure you have all the items shown above. If any items are damaged or missing, please contact your dealer for assistance.

Keep the original box and packing materials in case you need to transport or store the printer later.

---

## 1-2 Choosing a Place for the Printer

---

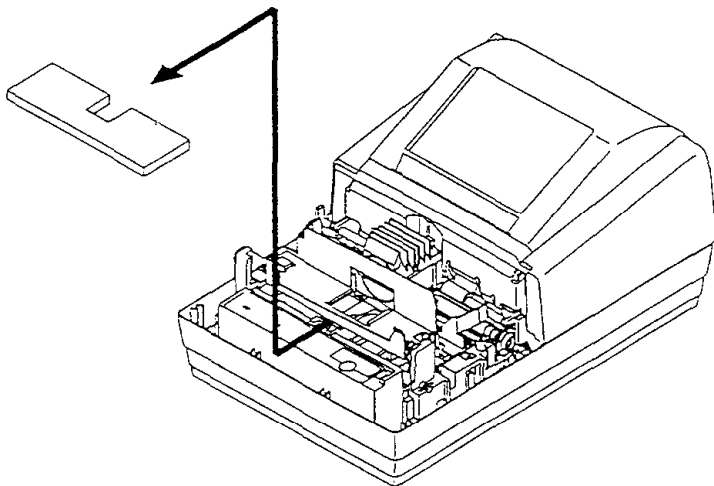
- Avoid locations in direct sunlight or subject to excessive heat (such as near heaters).
- Avoid using or storing the printer in places subject to excessive moisture.
- Do not use or store the printer in a dusty or dirty area.
- Choose a stable, horizontal surface for the printer. Avoid places subject to intense vibration or shock.
- Make sure there is enough space around the printer so that it can be used easily.

---

## 1-3 Removing the Transportation Damper

---

The transportation damper must be removed before turning on the printer. Open the printer cover and remove the damper as shown below.

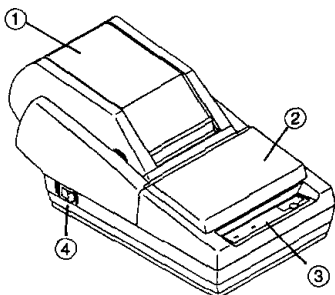


# 1-4 Part Names and Functions

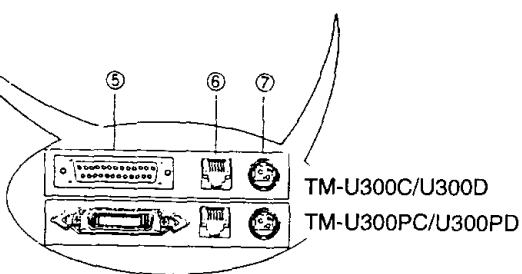
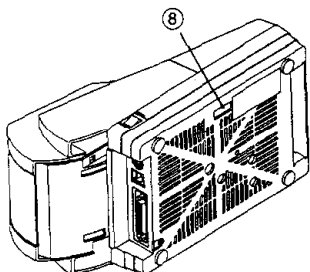
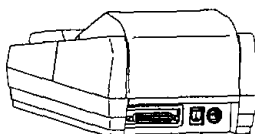
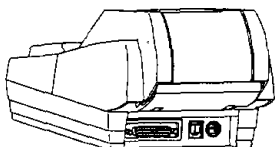
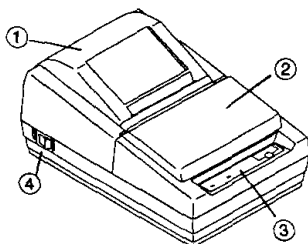
## ■ Part names

- ① Take-up device cover (TM-U300C/U300PC)  
Roll paper cover (TM-U300D/U300PD)
- ② Printer cover
- ③ Control panel
- ④ Power switch
- ⑤ Interface connector
- ⑥ Drawer kick-out connector
- ⑦ Power connector
- ⑧ DIP switches

TM-U300C/U300PC

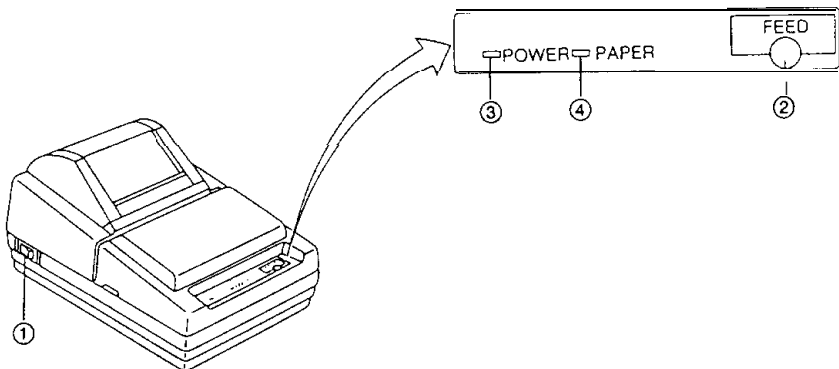


TM-U300D/U300PD





## ■ Functions



### **Switches and Buttons**

#### **① POWER Switch**

The POWER switch is used to turn the printer on and off.

#### **② FEED Button**

The FEED button is used to feed roll paper. The line feed amount is set by the printer commands **ESC 2** and **ESC 3**.

### **Control Panel Lights (LEDs)**

#### **③ POWER LED (green)**

The POWER LED is on when the printer is turned on and off when the printer is turned off.

#### **④ PAPER LED (red)**

Normally the PAPER LED is off.

The PAPER LED is on when the paper roll is nearly finished or completely finished or the paper roll is not installed.

The PAPER LED blinks when an error occurs, when validation paper must be inserted or removed, when the self test enters the printing standby state, or when printing has stopped due to exceeding the allowable print duty cycle.

# Chapter 2 Connecting the Cables

## 2-1 Connecting the AC Adapter to the Printer

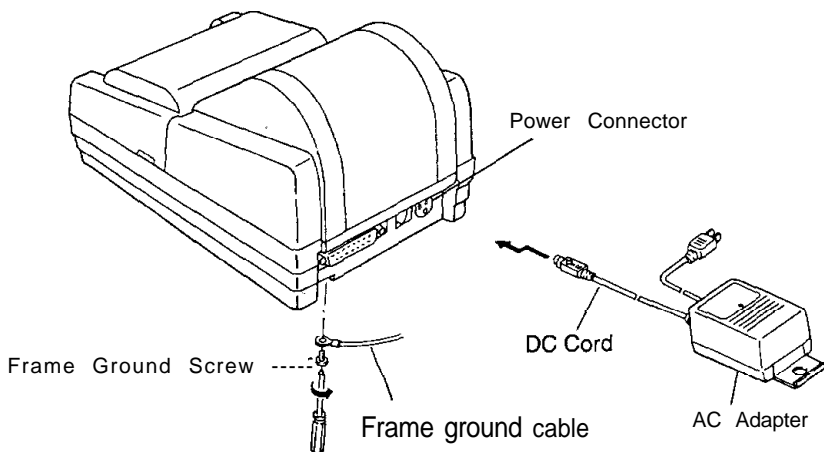
Follow these steps to connect the AC adapter to the printer:

- ① Make sure the printer is turned off. It is off when the O side of the switch is pressed down.
- ② Check the label on the AC adapter to make sure the voltage required by the AC adapter matches that of your electrical outlet.

### CAUTIONS:

- To avoid damage to the AC adapter and the printer, or to avoid an incorrect operation of the printer, do not plug in the power cord, if the rated voltage of the AC adapter and your outlet voltage do not match.

- ③ Plug the DC cord connector into the printer's power connector with the arrow mark facing upward. (You can remove the DC cord by grasping the connector firmly at the arrow mark and pulling it straight out.)



- ④ Ground the printer by connecting a frame ground cable (\*1) to the printer with the frame ground screw located on the bottom of the printer.

(\*1) This cable is not enclosed. Please obtain the appropriate cable for your system.

- ⑤ Plug the AC adapter power cord into the wall outlet.

## 2-2 Connecting the Host Computer to the Printer

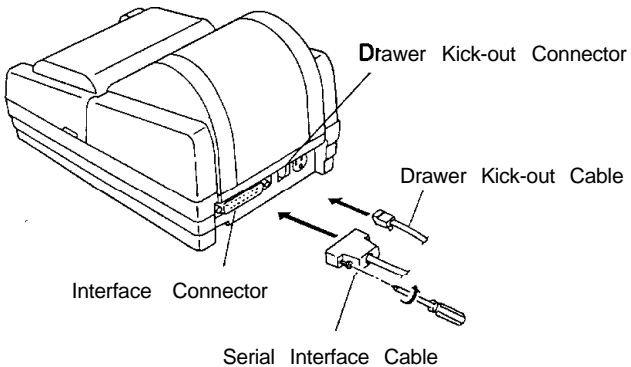
Connect the host ECR (host computer) to the printer using an interface cable that matches the specifications of the printer and the host ECR (host computer).

Be sure to use a drawer that matches the printer's specifications.

### ■ Connecting the host computer to the TM-U300C/U300D

Connect the interface cable as follows:

- ① Turn off the printer and the host ECR (host computer).
- ② Plug the serial interface cable connector into the printer's interface connector; then tighten the screws on both sides of the connector.
- ③ Plug the drawer kick-out cable connector into the printer's drawer kick-out connector. (You can remove the drawer kick-out cable by pressing in the connector's clip and pulling out the connector.)



#### NOTE:

- 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 using a hex screwdriver (5 mm). To distinguish the two types of screws, see the figure below.

Notch (one or more line)



Inch-type

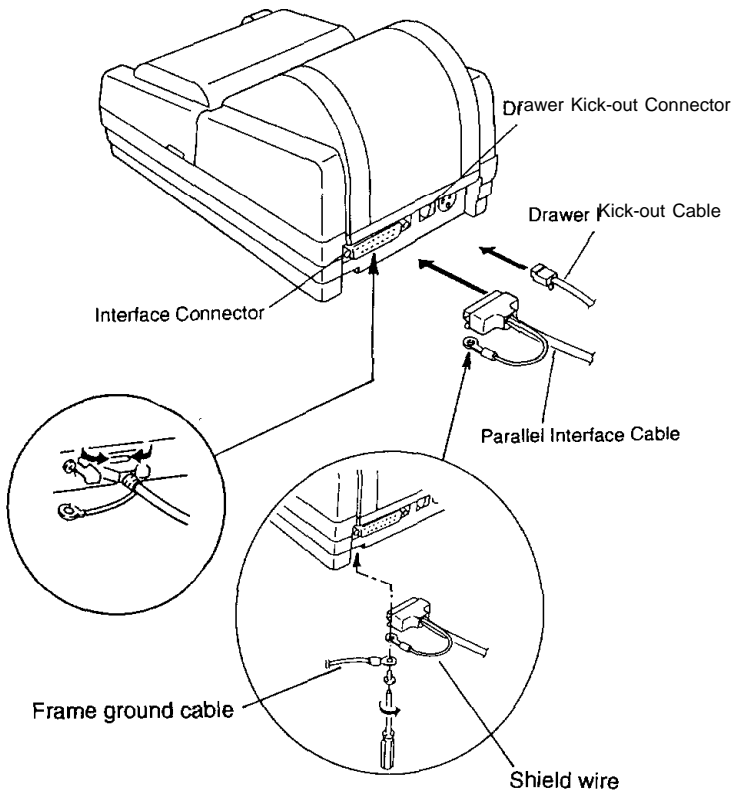


Millimeter-type

## ■ Connecting the host computer to the TM-U300PC/U300PD

Connect the interface cable as follows:

- ① Turn off the printer and the host ECR (host computer).
- ② Plug the parallel interface cable connector into the printer's interface connector.
- ③ Squeeze the wire clips together until they lock in place on both sides of the connector.
- ④ Secure the frame ground cable and the shield wire of the parallel interface cable with the frame ground screw on the bottom of the printer.
- ⑤ Plug the drawer kick-out cable connector into the printer's drawer kick-out connector. (You can remove the drawer kick-out cable by pressing in the connector's clip and pulling out the connector.)



# Chapter 3 Installing the Printer Parts

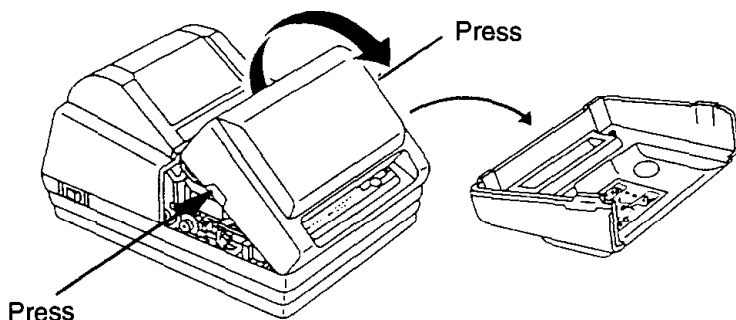
## 3-1 Installing the Ribbon Cassette

### ■ Installing the ribbon cassette

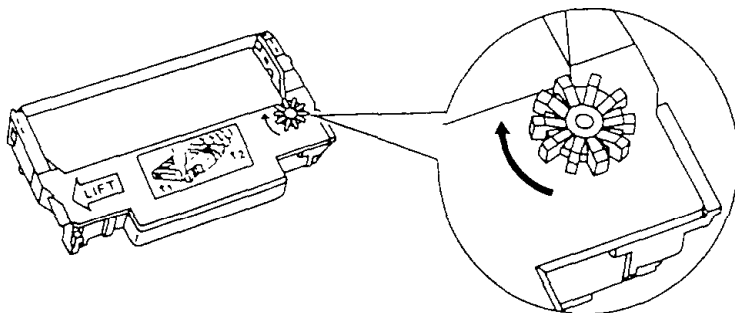
Use Epson ribbon cassette ERC-34 (B/R).

Follow these steps to install the ribbon cassette:

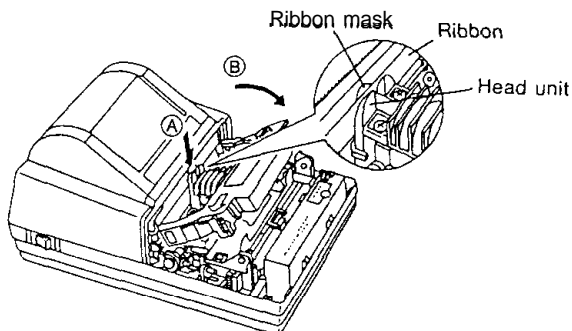
- ① Open the printer cover while lightly pressing the printer cover as shown below.



- ② Turn the ribbon-tightening knob in the direction of the arrow to take up any slack in the ribbon.



- ③ Fit the ribbon between the print head unit and the ribbon mask. Then push the cassette firmly into position.

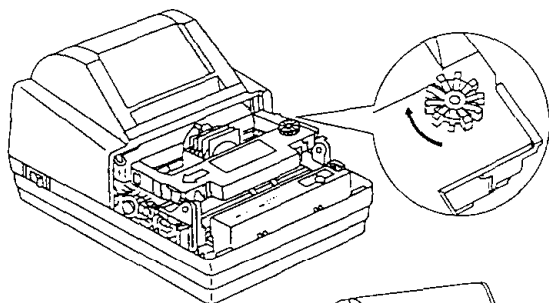


- ④ Turn the ribbon-tightening knob five or six times in the direction of the arrow to feed the ribbon smoothly into place between the print head unit and the ribbon mask.

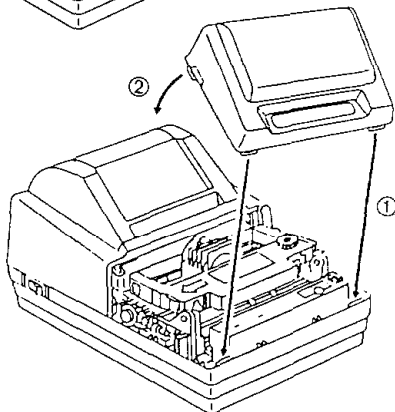
- Check that the ribbon is not twisted or creased.

**CAUTION:**

- Do not turn the ribbon-tightening knob in the reverse direction.



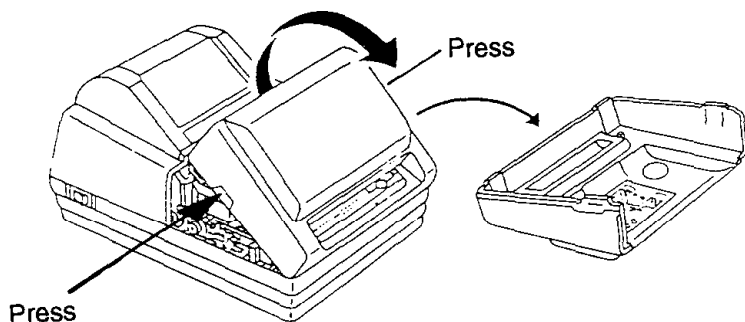
- ⑤ Close the printer cover.



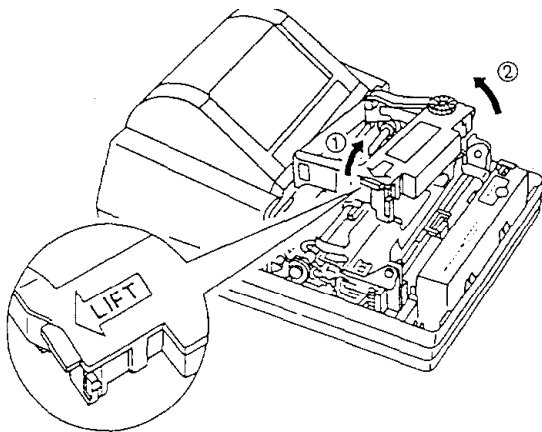
## ■ Replacing the ribbon cassette

Use Epson ribbon cassette ERC-34 (B/R).

① Open the printer cover while lightly pressing the printer cover as shown below.



② To remove the ribbon cassette, grasp the tab on the left side and lift the left side out first.



③ To install a new ribbon cassette, follow steps ② through ⑤ in the previous section, *Installing the ribbon cassette*.

---

## 3-2 Installing the Paper Roll

---

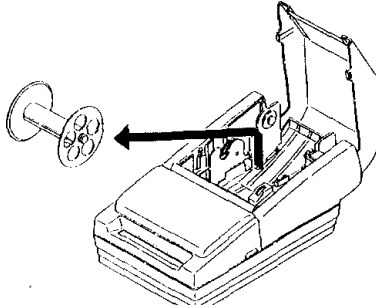
### ■ Installing the paper roll in the TM-U300C/U300PC

Be sure to use roll paper that matches the printer's specifications. See Appendix A, Specifications.

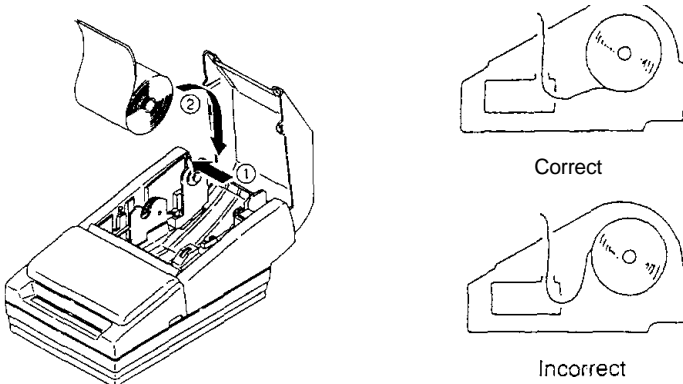
- ① Using scissors, cut the leading edge of the roll paper so that it is perpendicular to the paper feed direction.



- ② Open the take-up device cover and remove the take-up spool from the printer.

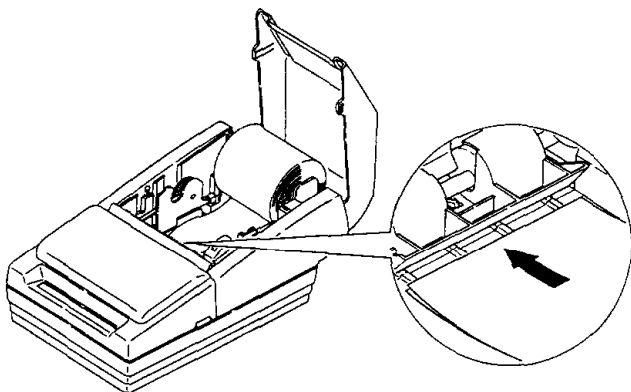


- ③ Load the paper roll while lightly pressing the left paper roll holder outward. Release the holder after fitting the roll paper core onto the holder. Make sure the paper roll turns freely and be sure to load the paper roll so that it rotates in the correct direction.

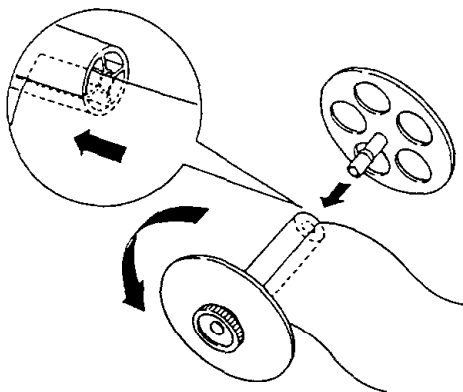




- ④ Turn on the printer. The POWER LED goes on.
- ⑤ While leaving some slack in the paper roll, insert the end of the roll paper straight into the paper inlet. The printer automatically feeds the roll paper into the printer (semi-automatic loading).



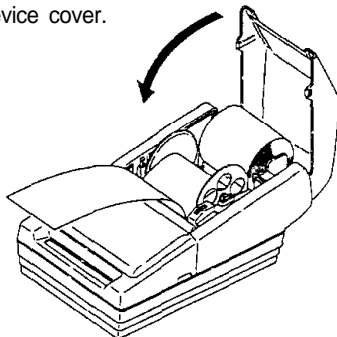
- ⑥ Press the FEED button to continue feeding the paper until it extends about 20 cm (8 inches) beyond tear-off edge.
- ⑦ Remove the side board of the take-up spool and insert the end of the roll paper (or journal paper when using 2- or 3-ply paper) into the groove on the take-up spool. Wrap the paper around the spool two or three times and then replace the side board of the take-up spool.



- ⑧ Install the take-up spool in the printer. Make sure that the gear on the take-up spool aligns with the gear on the printer.



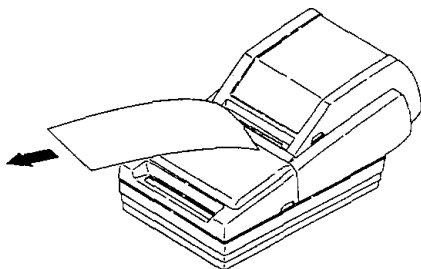
- ⑨ Close the take-up device cover.



- ⑩ Tear off any extra paper at the tear-off edge by pulling the paper toward you.

**CAUTION:**

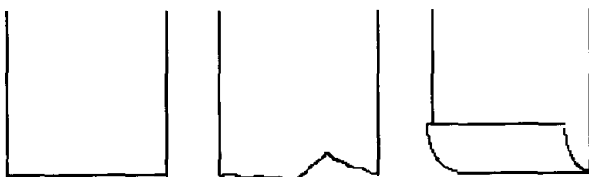
- The extra paper must be torn off after closing the take-up device cover so that roll paper comes out correctly from the paper exit.



## ■ Installing the paper roll in the TM-U300D/U300PD

Be sure to use roll paper that matches the printer's specifications. See Appendix A, Specifications.

- ① Using scissors, cut the leading edge of the roll paper so that it is perpendicular to the paper feed direction.

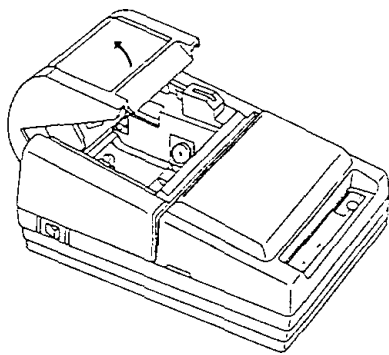


Correct

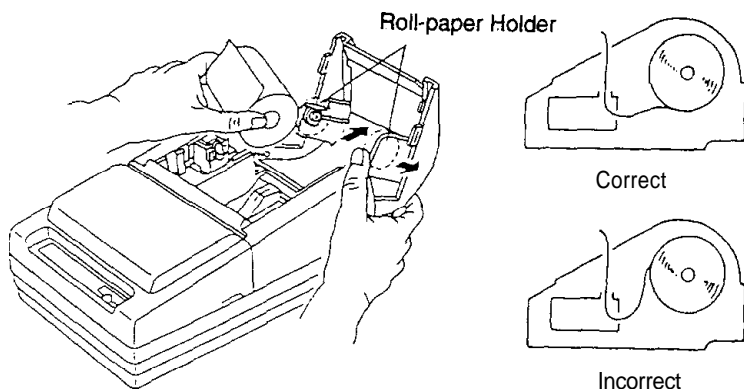
Incorrect

Incorrect

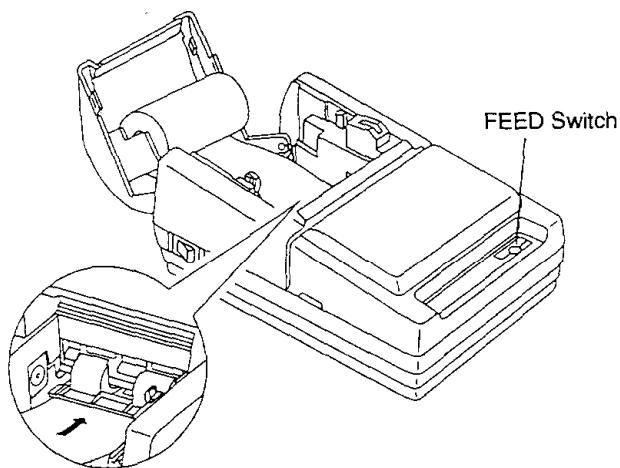
- ② Open the roll paper cover.



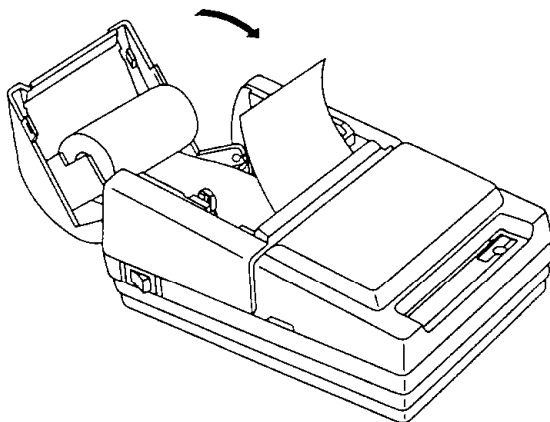
- ③ Load the roll paper while lightly pressing the paper roll holder outward. Release the holder after fitting the paper core onto the holder. Make sure the paper roll turns freely and be sure to load the paper roll so it rotates in the correct direction.



- ④ Turn on the printer. The POWER LED goes on.
- ⑤ While leaving some slack in the paper roll, Insert the end of the roll paper straight into the paper inlet. The printer automatically feeds the roll paper into the printer (semi-automatic loading). Press the FEED button to continue feeding the paper if insufficient paper is fed by the semi-automatic loading.



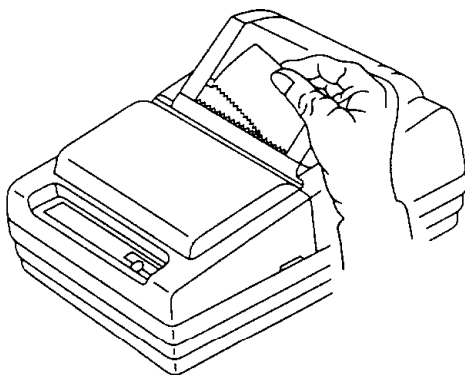
⑥ Close the roll paper cover.



⑦ Tear off any extra paper at the tear-off edge by pulling the paper toward you.

**CAUTION:**

- The extra paper must be torn off after closing the roll paper cover so that roll paper comes out correctly from the paper exit.



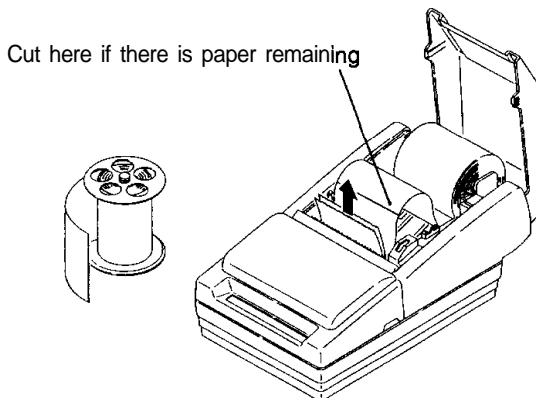
## ■ Replacing the roll paper for TM-U300C/U300PC

Be sure to use roll paper that matches the printer's specifications. See Appendix A, Specifications.

- ① Open the take-up device cover.
- ② Remove the take-up spool from the printer. (If it is necessary, cut the paper going to the take-up spool, using the tear-off edge.) Then remove the roll paper core.

If there is roll paper remaining, cut the paper straight across using scissors at the place shown in illustration below.

- ③ While pressing the FEED switch, remove the remaining roll paper in the printer by pulling the paper lightly out in the direction of the arrow.



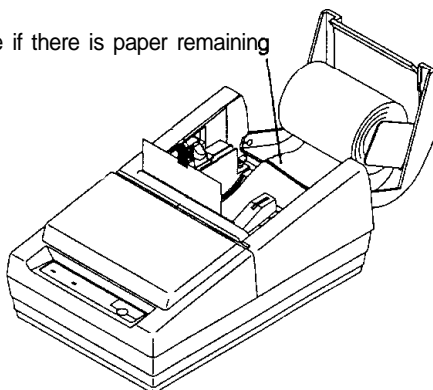
- ④ To install a new paper roll, see *Installing the paper roll* in the TM-U300C/U300PC, on page 11.

## ■ Replacing the paper roll in the TM-U300D/U300PD

Be sure to use roll paper that matches the printer's specifications. See Appendix A, *Specifications*.

- ① Open the roll paper cover.
- ② Remove the roll paper core. If there is roll paper remaining, cut the paper straight across using scissors at the place shown in illustration below.
- ③ While pressing the FEED button, remove the remaining roll paper in the printer by pulling the paper lightly out in the direction of the arrow.

Cut here if there is paper remaining



- ④ To install a new paper roll, see *Installing the paper roll* in the TM-U300D/U300PD, on page 14.

## 3-3 Adjusting the Paper Near-End Detector Location

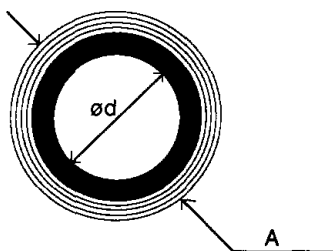
### ■ The paper near-end detector

When the paper near-end detector senses that the paper is almost out, the printer turns on the PAPER LED. The PAPER LED also turns on when the paper is completely out or paper roll is not installed.

### ■ Adjusting the paper near-end detector

Because the paper roll core size differs depending on the paper roll, you may need to adjust the paper near-end detector location.

- ① Make sure the paper core inside diameter is 10.5 to 12.5 mm (0.41 to 0.49")
- ② Determine the paper near-end detecting point on your roll paper and measure diameter A as shown below.



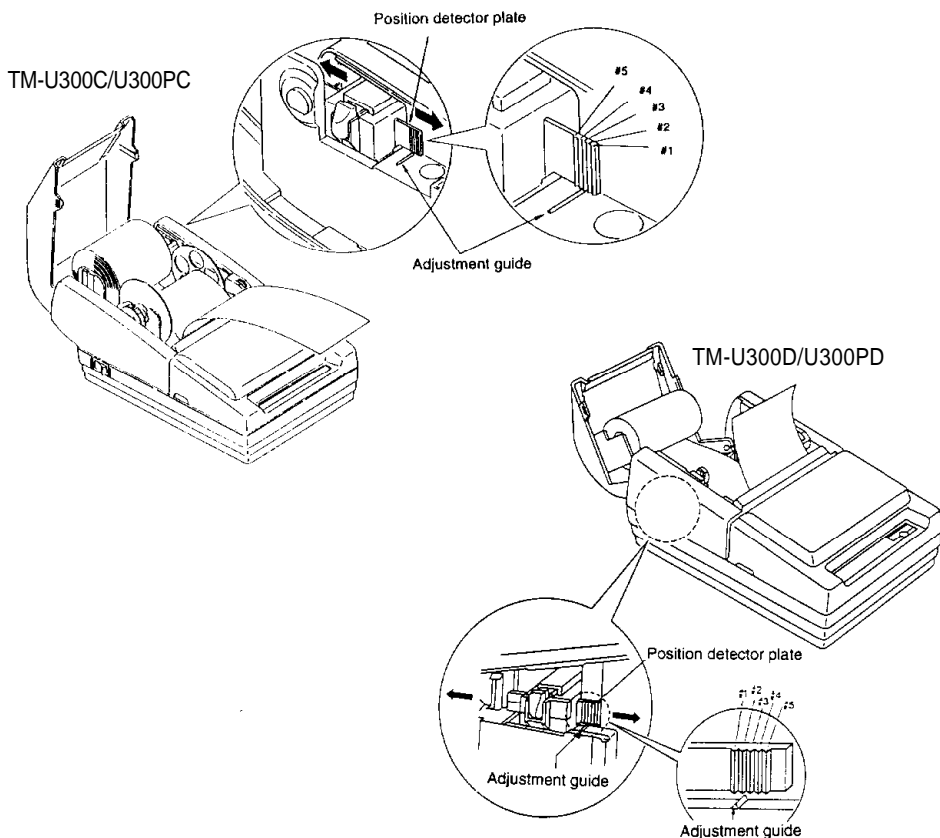
- ③ Find the corresponding adjustment position number from the table below.

Table 3-1. Adjustment Position Number

| Diameter A    | Adjustment position number |
|---------------|----------------------------|
| 18 mm (0.71") | # 1                        |
| 20 mm (0.79") | # 2                        |
| 22 mm (0.87") | # 3                        |
| 24 mm (0.94") | # 4                        |
| 26 mm (1.02") | # 5                        |



- ④ Referring to the illustration below, set the position detector plate to the appropriate position according to the adjustment position number from the table above.



#### NOTES:

1. Since the adjustment values in the Table 3-1 are calculated value, there may be some variations depending on the printer.
2. If roll paper with a red end mark at the paper end is used, this mark may cause the paper to stick together. If this occurs, the paper near-end detector may operate incorrectly.
3. Be sure that the detecting lever operates smoothly after you finish the adjustment.
4. If the roll paper becomes loose due to the paper quality, the paper near-end detector may operate incorrectly.

## 3-4 Inserting a Cut Sheet (Validation Paper)

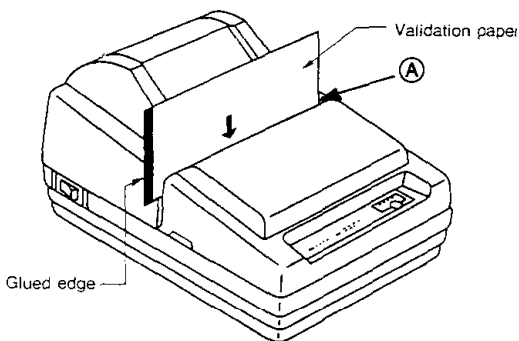
Be sure to use a validation paper that matches the printer's specifications. Refer to Appendix A, *Specifications*.

- ① Check that the paper is not wrinkled. Using creased or wrinkled paper may cause a paper jam.
- ② Check that the paper roll is already installed. If not, install it first.

### CAUTION:

- Printing with no roll paper installed in the printer may cause damage to the print head pin.

- ③ After checking that no validation paper is inserted, turn on the power switch. The POWER LED light goes on.
- ④ Using printer control command, select validation paper mode. The PAPER LED begins blinking.
- ⑤ Insert the paper straight into the printer using the guide marked with an A in the following illustration.



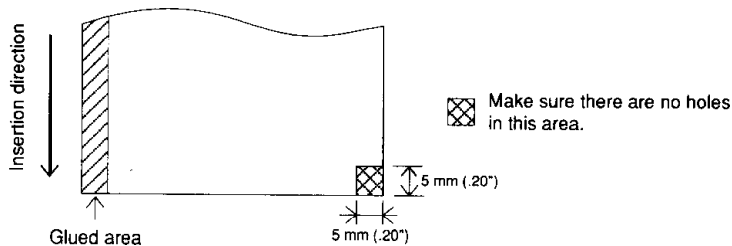
### CAUTIONS:

- When printing on copy sheets, make sure the glued (fixed) edge is positioned as shown in the illustration above.
- After you insert validation paper, do not move the paper. Moving the paper may cause the paper to slip.

## ■ Notes on printing on validation paper

- The printer can print only one line on validation paper. Printing is performed by the print commands, but the paper is not fed. Therefore, double-height printing cannot be performed on validation paper.
- Printing on the validation paper must be performed when roll paper is loaded. However, printing is affected by the total thickness of the paper.
- The validation paper should be flat, with no curls, folds (especially no curls or folds at the edges), wrinkles, or warps. Otherwise, the paper may rub against the ribbon and become dirty or the paper could catch on the ribbon.
- Select multi-ply paper carefully because the gluing conditions (glue quality, gluing method, glued length etc.) and the position of the glued area affect paper insertion; insert the validation paper so that the glued position is on the left or top edge of the paper as seen from the front.
- Insert paper from the top as shown in the following figure.
- When the optional validation detector is installed, do not use validation paper with holes (e.g., sprocket holes) in the area shown below or the paper detector does not work correctly.

### Validation paper



# Chapter 4 Setting the DIP Switches

## ■ Finding the DIP switches

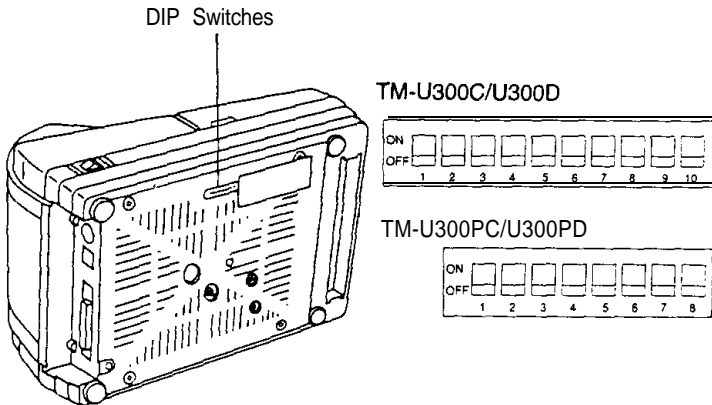
As shown in the illustration below, the DIP switches are located on the bottom of the printer. The DIP switches are used to set the printer to perform various functions.

- The TM-U300C/U300D DIP switches are numbered SW-1 to SW-10 and the TM-U300PC/U300PD DIP switches are numbered SW-1 to SW-8, from left to right as shown in figure below.
- The tables on the following pages describes the DIP switch functions.

## ■ Setting the DIP switches

Follow these steps when changing DIP switch settings:

- ① Turn the printer power switch off.
- ② Flip the DIP switches using tweezers or another narrow-ended tool.  
Switches are on when up and off when down in the figure below.



- ③ The new setting takes effect when you turn on the printer.

### NOTES:

- Always change DIP switch settings when the printer is turned off.
- Changes made with the power on have no effect until you turn the printer off and then on again.

■ TM-U300C/U300D DIP Switch Functions

Table 4-1. TM-U300C/U300D DIP Switch Functions

| Switch No. | Function                | ON                  | OFF             |
|------------|-------------------------|---------------------|-----------------|
| SW-1       | Data receive error      | Ignored             | Prints "?"      |
| SW-2       | Receive buffer capacity | 40 bytes            | Approx. 1 Kbyte |
| SW-3       | Handshaking             | XON/XOFF            | DTR/DSR         |
| SW-4       | Word length             | 7 bits              | 8 bits          |
| SW-5       | Parity check            | On                  | Off             |
| SW-6       | Parity selection        | Even                | Odd             |
| SW-7       | Baud rate selection     | Refer to Table 4-2. |                 |
| SW-8       |                         |                     |                 |
| SW-9       | Internal use            | (*)                 |                 |
| SW-10      | Internal use            | (*)                 |                 |

(\*) Do not change the settings of DIP switches 9 and 10 on the TM-U300C/U300D

Table 4-2. Baud Rate Selection

| Transmission Speed (BPS) | SW-7 | SW-8 |
|--------------------------|------|------|
| 1200                     | ON   | ON   |
| 2400                     | OFF  | ON   |
| 4800                     | ON   | OFF  |
| 9600                     | OFF  | OFF  |

■ TM-U300PC/U300PD DIP Switch Functions

Table 4-3. TM-U300PC/U300PD DIP Switch Functions

| Switch No. | Function                | ON               | OFF                               |
|------------|-------------------------|------------------|-----------------------------------|
| SW-1       | Auto feed               | Always enabled   | Depends on<br><u>AUTO FEED XT</u> |
| SW-2       | Receive buffer capacity | 0 byte           | Approx. 1 Kbyte                   |
| SW-3       | Internal use            | (*) Fixed to OFF |                                   |
| SW-4       | Internal use            | (*) Fixed to ON  |                                   |
| SW-5       | Internal use            | (*) Fixed to ON  |                                   |
| SW-6       | Internal use            | (*) Fixed to OFF |                                   |
| SW-7       | Internal use            | (*)              |                                   |
| SW-8       | Internal use            | (*)              |                                   |

(\*) Do not change the settings of DIP switches 3 through 6 on the TM-U300PC/U300PD.

# Chapter 5 The Self Test

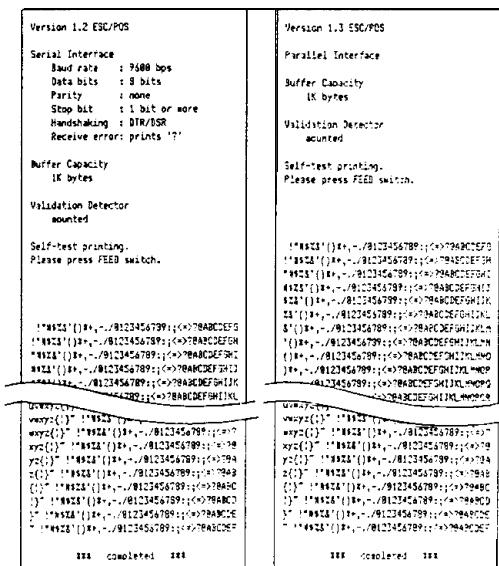
## ■ The purpose of the self test

The self test checks whether the printer has any problems. If the printer does not function properly, contact your dealer. The self test checks the following:

- Control circuit functions
- Printer mechanism
- Print quality
- Control ROM version
- DIP switch settings
- Presence or absence of a validation detector

## ■ Running the self test

- ① Make sure the ribbon cassette and paper roll have been installed properly. Make sure the printer cover and the take-up device cover or the roll paper cover are closed properly.
  - ② Turn on the power while holding down the FEED button. The self test begins.
  - ③ First the self test prints the current printer status, which provides the following information:
    - Control ROM version
    - DIP switch settings
  - ④ After printing the current printer status, it prints "Self-test printing. Please press FEED switch". The PAPER LED blinks and the printer enters the test printing standby state. Press the FEED button to restart test printing.
  - ⑤ After the printer completes a certain number of lines, it prints "\*\*\* completed \*\*\*", and stops printing automatically.
- \* The printer goes off-line during and after self-test printing. Turn the power off and on again to put the printer on-line before transmitting data from the host computer.



TM-U300C/U300D

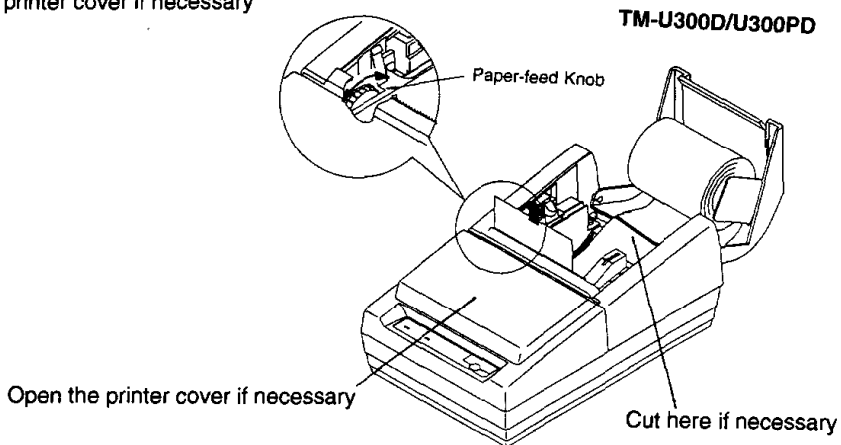
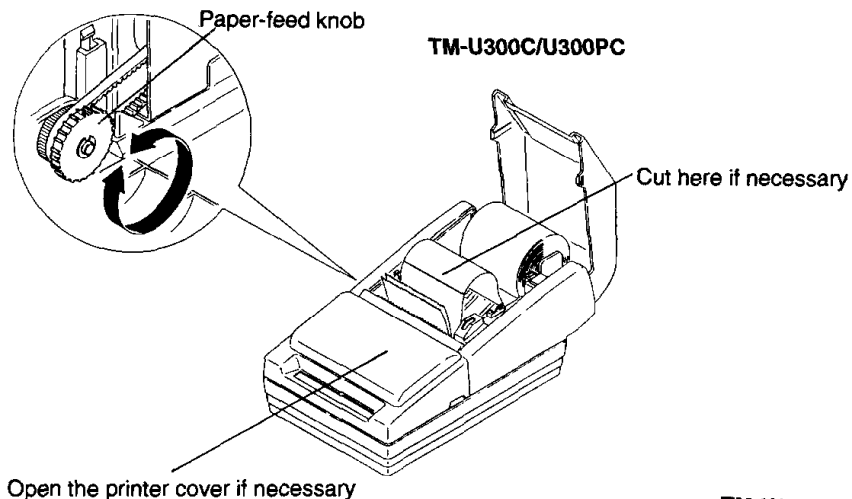
TM-U300PC/U300PD

Self-test Printing Sample

# Chapter 6 Removing Jammed Paper

## 6-1 Removing Jammed Paper

Turn the paper-feed knob as shown below, and remove any jammed paper. It may be easier if you cut the roll paper or remove the printer cover.



**CAUTION:**

Be careful not to touch the tear-off edge.



# Appendix

---

## Appendix A. Specifications

---

### 1. Printing Specifications

|                        |  |
|------------------------|--|
| Printing method:       | Serial impact dot matrix   |
| Head wire arrangement: | Serial-type, 9-pin   |
| Printing directions:   | Bi-directional (logic seeking)   |
| Lines per second:      | Approx. 3.5 LPS<br>(40 columns, 16 CPI, single color, continuous printing)<br>Approx. 5.8 LPS<br>(20 columns, 16 CPI, single color, continuous printing) |

- NOTES:**
- When printing exceeds the allowable duty cycle, the actual printing speed may be slower than that listed above.
  - Because switching operations are required for red printing or black/red printing, their printing speeds are slower than the black printing speed.

(LPS: Lines Per Second) (CPI: Characters Per Inch)

|                        |                                  |
|------------------------|----------------------------------|
| Characters per line:   | Refer to Table A-1.              |
| Characters per inch:   | Refer to Table A-1.              |
| Print color switching: | Selectable black or red printing |

### 2. Characters Specifications

|                       |   |                |
|-----------------------|---|----------------|
| Number of characters: | Alphanumeric:   | 95             |
|                       | Graphics:   | 128 X 7 tables |
|                       | International characters:   | 32             |
| Character structure:  | 7 x 9 (total number of dots in the horizontal direction: 400 half dots) |                |
|                       | 9 x 9 (total number of dots in the horizontal direction: 400 half dots) |                |
| Character size:       | Refer to Table A-1.   |                |

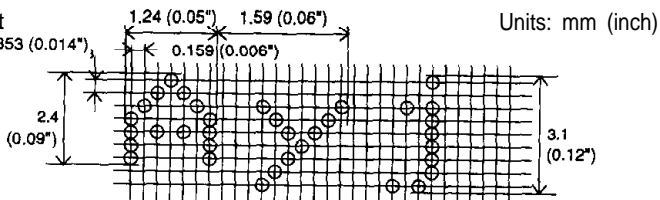
Table A-1. Character Size, Characters Per Inch, Characters Per Line

| Character Structure      |                          | Character Size<br>W × H (mm)  | Character<br>Dot Spacing | Characters<br>Per Line<br>(CPL) | Characters<br>Per Inch<br>(CPI) |
|--------------------------|--------------------------|-------------------------------|--------------------------|---------------------------------|---------------------------------|
| Horizontal<br>× Vertical | Characters               |                               |                          |                                 |                                 |
| 7 × 9 (# 1)              | ANK and<br>International | 1.24 × 3.1<br>(0.05" × 0.12") | 3 half dots              | 40                              | 16                              |
|                          | Graphic                  | 1.59 × 3.1<br>(0.06" × 0.12") | 0                        | 40                              | 16                              |
| 9 × 9                    | ANK and<br>International | 1.56 × 3.1<br>(0.06" × 0.12") | 3 half dots              | 33                              | 13.3                            |
|                          | Graphic                  | 1.91 × 3.1<br>(0.08" × 0.12") | 0                        | 33                              | 13.3                            |

(\*1) The 7 x 9 font is the default.

Example

7 x 9 font



### 3. Ribbon

Ribbon cassette type:

Exclusive ribbon cassette ERC-38

Color:

Black and Red, Black, Red

Single-color ribbons [Part No.: ERC-34 (P) (purple) or ERC-34 (B) (black)] and P-color ribbon [Part No.: ERC-34(B/R) (black and red)] are also available. When using these ribbons, the print color selection command (**ESC r**) must not be used.

Ribbon life:

Black: Approx. 1,500,000 characters

(In case of using 2-color type)

Red: Approx. 750,000 characters

[Conditions]

- Character font: 7 X 9 font (with descenders)
- Printing pattern: 96 ASCII character rolling pattern, continuous printing
- Temperature: 25°C (77°F)

Ribbon cassette overall dimensions:

Refer to Figure A-1

[Units: mm]

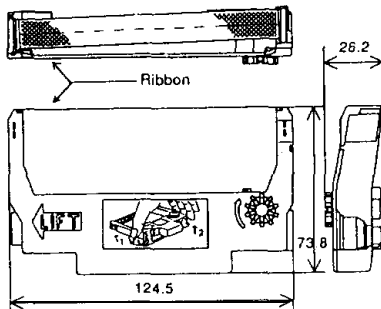


Figure A-1. ERC-38 Overall Dimensions

#### 4. Roll Paper Supply Device

- Supply method: Paper roll holding shaft
- Near-end detector: Provided inside the printer case  
The paper near-end detector location should be adjusted by the user. Refer to section 3-3, *Adjusting the Paper Near-End Detector Location*.
- Roll paper core  
inside diameter:  $\varnothing$  10.5 to 12.5 mm (0.41" to 0.49")
  - Near-end adjustment: Adjustable slider

#### 5. Roll Paper Take-up Device

The TM-U300C and TM-U300PC are equipped with a take-up device. The paper is automatically taken up by the paper feed motor.

#### 6. Paper

- Paper feed method: Friction feed
- Paper feed pitch: Default 1/6 inch  
Can be set in 1/144 inch units by software command.
- Paper feed speed: Approx. 4.17 IPS (25 LPS) (continuous feeding)  
(IPS: Inches Per Second)  
(LPS: Lines Per Second)

Paper size:

- Roll paper

Paper width: 76 mm  $\pm$  0.5 mm (2.99"  $\pm$  0.02")  
Maximum diameter:  $\varnothing$  83 mm (3.27") (when 2-ply or 3-ply paper is used)  
 $\varnothing$  60 mm (2.36") (when 1 -ply paper is used)  
Paper core inside diameter:  $\varnothing$  10.5 to 12.5 mm (0.41" to 0.49")

① Normal paper

Paper thickness: 0.06 to 0.085 mm (0.002" to 0.003")  
(single-ply sheet)

Weight: 52.3 g/m<sup>2</sup> to 64 g/m<sup>2</sup>  
(45 to 55 kg/1000 sheets/1091 mm x 788 mm)

② Pressure sensitive paper

Maximum 1 original + 2 copies

Copy capability is greatly influenced by the ambient temperature. Refer to the table below.

| Number of copies    | Ambient temperature        |
|---------------------|----------------------------|
| Original + 2 copies | Approx. 25°C (77°F)        |
| Original + 1 copy   | 5° to 40 °C (41° to 104°F) |

- Validation paper

Paper type: Normal paper, pressure-sensitive paper, carbon copy paper

Paper width and paper length:

|                  | Width                                | Length                               |
|------------------|--------------------------------------|--------------------------------------|
| Validation paper | 135 mm to 210 mm<br>(5.32" to 8.27") | 70 mm to 297 mm<br>(2.76" to 11.69") |

Paper thickness: 0.07 mm to 0.14 mm (0.003" to 0.006")  
(Weight: 56.2 g/m<sup>2</sup> to 128 g/m<sup>2</sup>)

Total thickness including roll paper:  
0.2 mm (0.008") or less



## 12. Environmental Conditions

### Temperature:

Operating: 5° to 40°C (41° to 104°F)

For the TM-U300C/U300PC, when the temperature is 30°C (86°F) or more, the operating humidity is limited.

Storage: -10° to 50°C (14 to 122°F) (excluding paper and ribbon)

### Humidity:

Operating: TM-U300C/U300PC: 20% to 80% (non-condensing)

TM-U300D/U300PD: 30% to 85% (non-condensing)

Storage: TM-U300C/U300PC: 20% to 90%

(non-condensing, excluding paper and ribbon)

TM-U300D/U300PD: 30% to 90%

(non-condensing, excluding paper and ribbon)