



USER'S GUIDE

Thermal Printer

DPU-E247

Read this user's guide carefully before using the printer.

Keep this user's guide in a place where it can be accessed quickly.

Seiko Instruments Inc.

DPU-E247 THERMAL PRINTER USER'S GUIDE

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For use in Turkey

Complies with Electrical and Electronic Equipment Directive.

Türkiye' deki Kullanıcılar için

EEE Yönetmeliğine Uygundur.

Notice:

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:

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Applicable EC Directives and Standards

Product: Thermal Printer DPU-E247

Directive: 2004/108/EC Title: EC Electromagnetic Compatibility Directive

Standards

EMI: EN55022
EN61000-3-2
EN61000-3-3

EMS: EN55024

Product: AC Adapter PW-E024-W3-E

Directive: 2006/95/EC Title: EC Low Voltage Directive

Standards

LVD: EN60950-1

INTRODUCTION

Thank you for purchasing DPU-E247 thermal printer.

User's Guide applies to the DPU-E247 thermal printer (hereafter referred to as a printer).

Read through the Safety Precautions on pages 2 to 6 carefully before using the printer. Also read the instruction manuals of the optional equipment that you purchased with the printer.

Keep this user's guide in a place where it can be accessed quickly.

The User's Guide consists of the following sections.

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For more detailed technical information on this printer, see the *DPU-E247 THERMAL PRINTER TECHNICAL REFERENCE*.

SAFETY PRECAUTIONS

The following symbols are used in this User's Guide to denote the proper and safe use of the printer and to prevent damage.

Follow the instructions marked with the symbol.

 WARNING	Failure to follow the guidelines marked with this symbol could result in severe personal injury or death.
 CAUTION	Failure to follow the guidelines marked with this symbol could result in minor personal injury or product and/or peripheral damage.

Symbol Examples



The symbol  denotes items requiring special caution when using the printer.

The example on the left indicates warning or caution.



The symbol  denotes actions that are prohibited.

The example on the left means do not disassemble or try to repair the item denoted.



The symbol  denotes actions that must be done for the printer to operate properly.

The example on the left means unplug the power cable from the outlet.

WARNING



DO NOT use AC adapter and AC Cable other than that which is specified. Doing so may cause fire leading to serious accidents.



DO NOT use the printer, AC adapter and AC cable in the country which has not complied with regulations. Doing so, we do not assure the safety of these products and you will be responsible for violation of regulations.



DO NOT bend the power cable forcibly, or place heavy objects on the cable because it might damage the cable and cause fire or electric shock. If the power cable is damaged, discontinue use and replace it immediately.



DO NOT disassemble the AC adapter because it may cause the AC adapter to heat up, catch fire, and get an electric shock leading to other serious accidents.

CAUTION



This printer is not designed to be dust-proof or water-proof. **DO NOT** drop any metallic objects or liquids, such as water or coffee, into the printer.



DO NOT disassemble or remodel the printer. **DO NOT REPAIR THE PRINTER YOURSELF.** Doing so may cause fire, electric shock or other accidents.



Never use the printer in a place of extreme humidity or any place where it can possibly be splashed by any liquids. If any liquids get into the printer, it could lead to fire, electric shock, or other serious accidents.



Never touch the thermal head immediately after printing because it becomes very hot. Make sure that the thermal head is cool before clearing a paper jam or cleaning the thermal head.



Thermal head is a precision part. **DO NOT** touch it directly. Doing so may cause defectiveness of it.



Be sure to hold the connector part of the power cable or interface cable when disconnecting the cable. Pulling on the cable portion may cause it to fray and break.



Unplug the AC plug from the outlet before plugging or unplugging the DC plug of the AC adapter.



Power OFF the printer, unplug the power cable from the power outlet in any of the following cases:

- _ The printer does not recover from an error.
- _ Smoke, strange noise or smells erupt from the printer.
- _ A piece of metal or any liquid touches the internal parts or slot of the printer.

Using the printer in any manner other than that for which it was designed may cause accidents or fire.

OPERATING PRECAUTIONS

Please follow the precautions below to enjoy and maintain the full performance of the printer.

■ Using the Printer

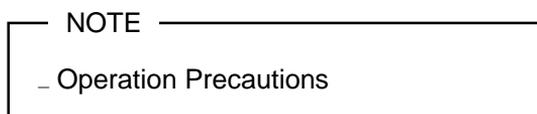
- _ Be careful not to drop or bump the printer on a hard surface.
- _ DO NOT install the printer in direct sunlight or such areas. Suitable environment for the use of the printer is as follows:
 - Ambient temperature: 41°F to 104°F (5°C to 40°C)
 - Relative humidity: 30 to 80%RH (noncondensing)
- _ DO NOT install the printer near devices that generate strong electromagnetic fields such as a copy machine.
- _ DO NOT connect the AC cables of the AC adapter to the same outlet with devices that generate noise.
- _ DO NOT operate the platen release lever during printing.
- _ DO NOT remove or reinstall the interface cable during printing or transmission. DO NOT touch the connectors of the interface cable during printing.
- _ Switch the power off when not in use.
Unplug the AC cable from the outlet when the printer is not used for longtime.
- _ Clean the printer using soft, lint-free cloth. Do not use alcohol or other solvent.
- _ Before use, always clean the terminals using a dry, soft, lint-free cloth. If the terminals are dirty, it may not be possible to obtain proper contact.
- _ The AC adapter may become warm when in use. This is normal and is not a malfunction.

■ Thermal Paper Handling

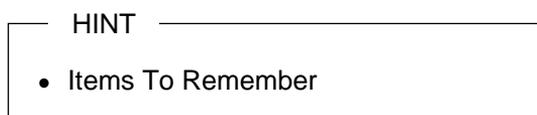
- _ Store the thermal paper in a cool, dry, and dark place.
- _ Do not rub the paper with hard objects.
- _ Do not leave the paper near organic solvents.
- _ Do not allow plastic film, erasers, or adhesive tape to touch the paper for long periods.
- _ Do not stack the thermal paper with diazo copies immediately after copying or wet-type copies.
- _ Do not use chemical glue.
- _ Always use the specified thermal paper. See “Section 10, Options and Consumable Parts”, for details.

■ Notations Used in this User’s Guide

The following two types of notations are used throughout this User's Guide to denote items of caution and items to remember:



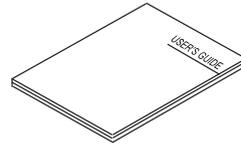
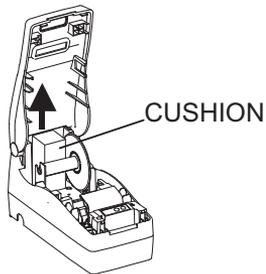
This box contains items that when not followed may lead to a malfunction or to a deterioration of performance.



This box contains helpful hints to remember when using the printer.

1 PREPARATION

Open the carton and make sure it contains the printer and all of the accessories.
Remove the cushion before using the printer by pulling it straight up as shown below.

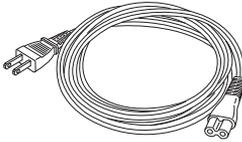
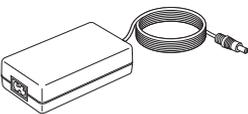
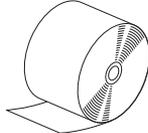


User's Guide (this document)
• U000327993XX
<1>

Printer

- DPU-E247-10S-E(serial RS-232C interface)
 - DPU-E247-10P-E (parallel IEEE1284 interface)
- <Select one>

The followings are available as options:

		
<p>Specified AC cable</p> <ul style="list-style-type: none">• CB-JP05-20A-E• CB-A03-U3-E• CB-A01-E1-E, CB-A01-E3-E <p><Select one></p>	<p>Specified AC adapter</p> <ul style="list-style-type: none">• PW-E024-W3-E	<p>Thermal paper roll</p> <ul style="list-style-type: none">• TP-E23C-1

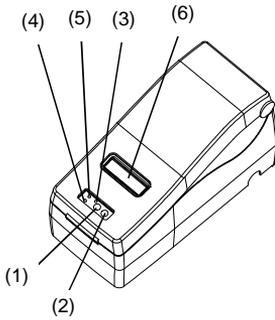
Keep the package and packing materials for future transportation or long-term storage.

The AC cable is not bundled with the AC adapter and must be ordered separately.

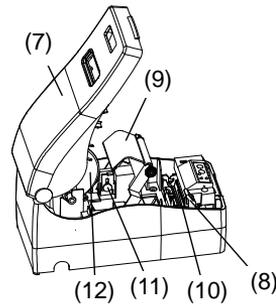
Please be sure to purchase SII specified options.

In such case, see the list of "10 OPTIONS AND CONSUMABLE PARTS" and use them in the country which has complied with regulations.

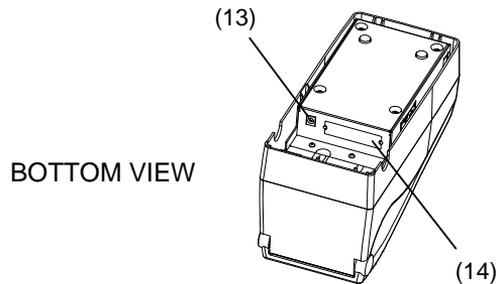
2 PART NAMES



FRONT VIEW



BACK VIEW



BOTTOM VIEW

(1) POWER button

The POWER button turns the printer ON or OFF.

(2) FEED button

When this button is held down, the paper is fed continuously.

(3) POWER lamp

The POWER lamp lights when the printer turns on. See the "Lamp Display" on the next page for details.

(4) ERROR lamp

The ERROR lamp lights when something is wrong with the printer. See the "Lamp Display" on the next page for details.

(5) ONLINE lamp

The ONLINE lamp lights when the printer is ready to print. The ONLINE lamp flashes when there becomes a little residual quantity of paper roll. See "Lamp Display" on the next page for details.

(6) Memo window

Use this window when writing a memo on the print paper additionally. To prevent paper jams, do not write directly on the paper during printing.

(7) Top case

Open the top case when mounting a paper roll and cleaning the thermal head.

(8) Platen release lever**(9) Write stand (Platen holder)**

Turn the platen release lever (8) forward to move the write stand (9) and detach the platen from the thermal head when replacing a paper roll and cleaning the thermal head.

(10) Thermal head

The thermal head prints characters on the paper. It is very hot immediately after printing.

(11) Near-end detector adjustment screw

The near-end detector adjustment screw adjusts the detector position for detecting the amount.

(12) Spool

The spool winds up printed paper.

(13) Power supply connector

Connects with an AC adapter.

(14) Interface connector

Connects with the interface cable.

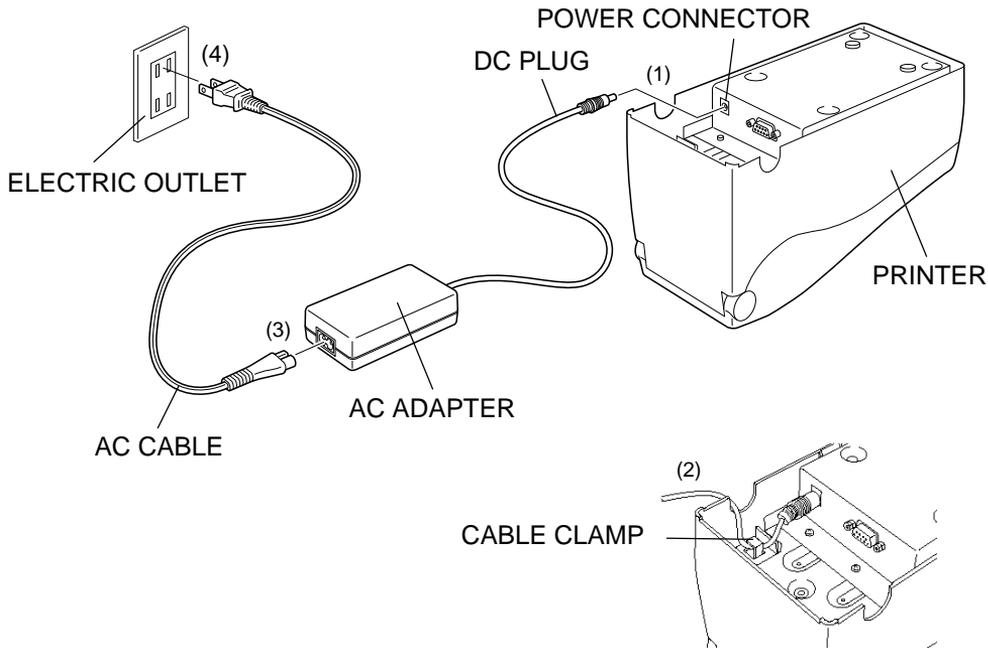
LED Lamp

Lamp display	POWER lamp	ONLINE lamp	ERROR lamp
Power OFF	Off	Off	Off
Power ON (standby mode)	On	On	Off
Near-end	On	Blink	Off
Paper-out, top case open, platen release lever failure	On	Off	On

3 POWER CONNECTION

■ Connecting the AC adapter

- (1) Insert the DC plug of the AC adapter into the power connector of the printer.
- (2) Fix the DC cable to the cable clamp.
- (3) Connect the AC cable to the AC adapter.
- (4) Insert the AC plug of the AC cable into an electric outlet.



NOTE

- ◆ Unplug the AC plug from the electric outlet when plugging or unplugging the DC plug.
- ◆ When the printer is not used for a long time, unplug the AC cable from the outlet.

Detach the AC adapter with the following procedures.

- (1) Turn the power switch OFF.
- (2) Detach the AC plug of the AC cable from the electric outlet.
- (3) Detach the DC cable from the cable clamp.
- (4) Pull out the DC plug from the printer.

■ Turning the Printer ON or OFF

Turn the printer on or off with the POWER button.

HINT

- The printer can be set to turn ON at the same time as power is supplied to the AC Adapter. See DPU-E247 THERMAL PRINTER TECHNICAL REFERENCE in details.
- The time between when the POWER button is pressed and the printer turns off can be controlled to prevent improper operation of the printer. See DPU-E247 THERMAL PRINTER TECHNICAL REFERENCE in details.

4 PAPER SETTING

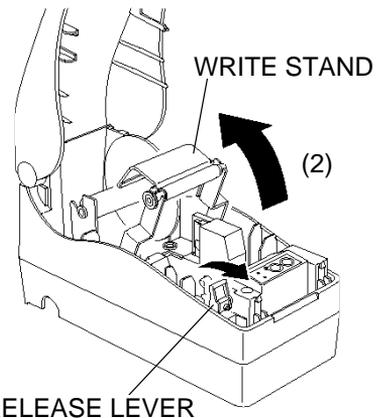
Prepare a paper roll to use in the printer. See “10, OPTIONS AND CONSUMABLE PARTS” about what kind of paper to use.

NOTE

- ◆ Always use paper that fits the specifications.
- ◆ Do not use a paper roll where the core and paper are not glued together. Doing so may cause trouble during printing.

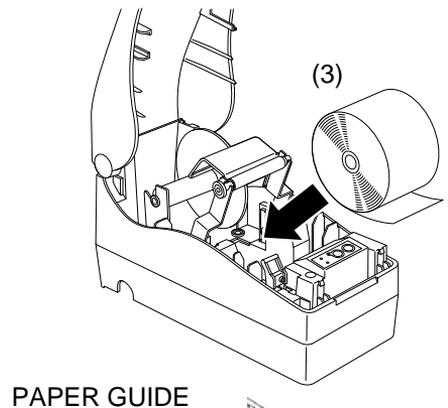
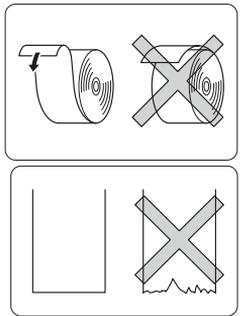
■ Setting the Paper Roll

- (1) Turn the printer on. The POWER and ERROR lamps will light.
- (2) Open the top case and turn the green platen release lever forward to move the write stand away from the thermal head in order to mount a paper roll.
- (3) Mount the paper roll as shown in the figure.

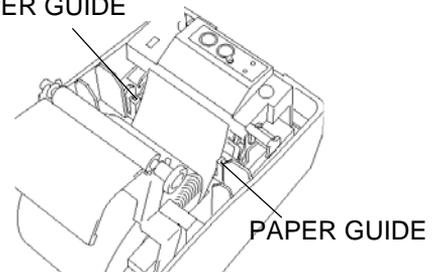


NOTE

- ◆ Make sure the paper unwinds from the bottom.
- ◆ Make sure the paper is cut at a right angle as shown in the figure.



- (4) Draw paper through as shown in the figure. Confirm that there is paper between the black paper guides and close the write stand. If the paper is set properly, the printer will start feeding it automatically.



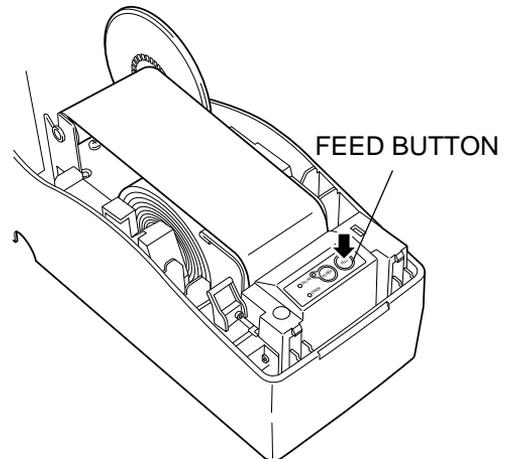
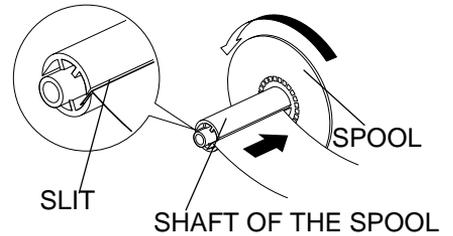
NOTE

- ◆ Make sure the paper is drawn straight through the printer. If it is drawn diagonally, it could cause a problem.

HINT

- Automatic paper feed can be controlled. See DPU-E247 TERMAL PRINTER TECHNICAL REFERENCE in details.

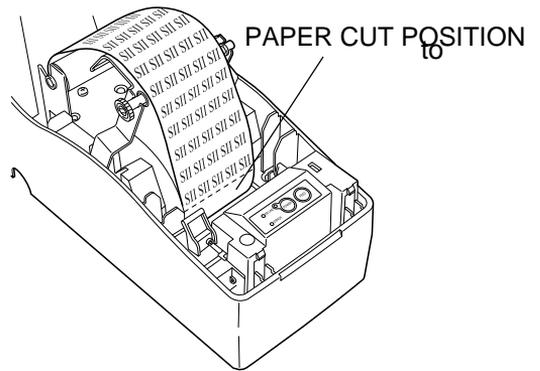
- (5) After automatic paper feed, insert the leading edge of the slit on the spool, wind paper more than 2 times to make sure the paper is wound tight, and place the spool back into the printer. If there seems to be slack in the paper, push the FEED button to remove the slack.



- (6) Close the top case and confirm that the ERROR lamp is not on.

■ Removing Paper from the Printer

- (1) Open the top case of the printer.
- (2) Turn the green platen release lever forward and move the write stand away from the thermal head.
- (3) Cut the paper at the position shown in the figure.
- (4) Remove the paper roll.



■ Adjusting the Paper Near-end Detector

Read the following when use paper near-end detection.

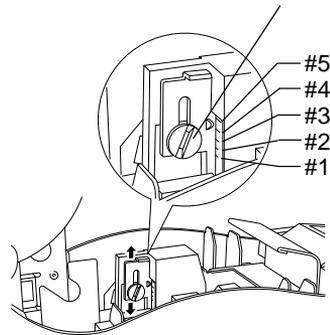
NOTE

- ◆ Use a paper roll with a inner / outer diameter of 12 mm / 18 mm for correct paper near-end detection.

- (1) Open the top case of the printer.
- (2) If there is a paper roll in the printer, remove it.
- (3) Loosen the paper near-end adjustment screw using a coin and select an α (α includes the paper core) value for residual paper quantity from the list shown below.

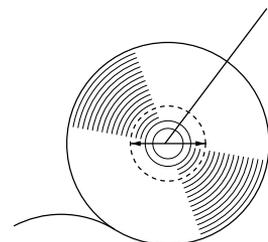
Scale α	Adjustment position	Paper residual quantity
18 mm	#1	0 m
22 mm	#2	1.7 m
26 mm	#3	3.7 m
30 mm	#4	6.1 m
34 mm	#5	8.7 m

PAPER NEAR-END ADJUSTMENT SCREW



- (4) Set the paper near-end detector to the desired α position and tighten the paper near-end adjustment screw.

SCALE α



5 TEST PRINTING

After loading paper in the printer, perform a test print. In the test print, the printer's function settings and character strings are printed.

- (1) Make sure that paper is loaded in the printer and the printer is off. If paper is not loaded in the printer, load paper according to the instructions shown in “4, PAPER SETTING” and turn off the printer.
- (2) Press the POWER and FEED buttons at the same time.
- (3) Several dozen lines of text are printed. After the start of test printing, release the POWER and FEED buttons.

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Journal Printer
DPU-E247 [ Ver.*.** ]
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Copyright (C) : SII
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Test Printing Sample

- (4) After test printing, the printer goes into standby mode.

NOTE

- ◆ If you press and hold the FEED button during test printing, the printer goes into function setting mode. Do not push the FEED button during test printing unless you want set the function.
- ◆ For a detailed explanation about function setting mode, see DPU-E247 THERMAL PRINTER TECHNICAL REFERENCE.

6 CONNECTING TO THE HOST COMPUTER

Prepare an interface cable according to the host device. For details of the interface that specification fitted an interface connector, see "9 SPECIFICATIONS".

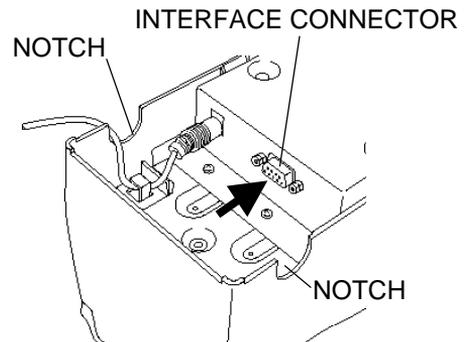
■ Connecting the Interface Cable



NOTE

- ◆ When connecting or disconnecting the interface cable, hold the connector, not the cable.
- ◆ When removing or installing the interface cable, turn the printer off.

- (1) Turn the printer OFF.
- (2) Connect the interface cable that specification fitted an interface connector.
- (3) Pass the cable through the right or left notch in the printer case.
- (4) Turn the printer on and send data from the host computer to the printer.
- (5) Verify that the data is printed correctly.
- (6) Always, lock the interface cable connector with the latch to prevent disconnection of the cable.

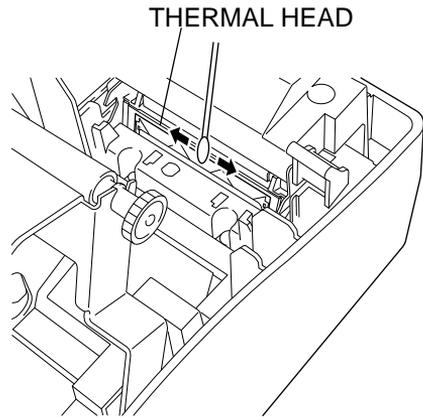


7 THERMAL HEAD MAINTENANCE

The thermal head of the printer does not usually require user maintenance. If paper powder accumulates, clean the thermal head to maintain maximum print quality.

■ Cleaning the Thermal Head

- (1) Turn off the printer.
- (2) Open the top case of the printer and turn the green platen release lever forward to expose the thermal head.
- (3) Clean the thermal head with a cotton swab moistened with a small amount of ethyl alcohol.
- (4) Wait until any ethyl alcohol remaining on the thermal head evaporates completely, then close the writing stand.



NOTE

- ◆ Clean the thermal head after it cools.
- ◆ Wipe the thermal head with a cotton swab or other soft material.

8 TROUBLESHOOTING

Check the following points before you make a request for repair.

■ The power does not turn on.

- Is the recommended AC adapter being used ?
- Are the AC cable and AC adapter connected correctly ?
- Is the AC adapter connected to the printer correctly ?

■ The printer does not print.

- Is the interface cable connected correctly?
- Is the interface cable that meets the interface specification listed on page 19 of the User's Guide being used ?
- Do the communication conditions with the host device fit the printer?
- Is the recommended paper being used ? Is the paper orientation (face / back) correct ?

■ The ERROR lamp is lit.

- See the Lamp Display on page 9.
- Is the top case closed closely ?
- Is the write stand in the fixed positioned?

9 SPECIFICATIONS

■ Printer Specifications

Item	Specification
Printing method	Thermal
Characters per line	27 ^{*1}
Character size (H × W)	
Standard size:	24 dots × 12 dots 16 dots × 8 dots
Kanji size:	24 dots × 24 dots 16 dots × 16 dots
Dots available	432 dots
Dot density	8 dots/mm
Printing width/paper width	54/58mm
Printing speed	Maximum 90 mm/second
Operating temperature	41°F to 104°F 5°C to 40°C
Related humidity	30% to 80%RH (no condensation dew)
Dimensions (W × D × H)	119.9 × 255 × 145.5mm ^{*2}
Weight	Approx. 1.3 kg (main unit only)
Regulation	The printer complies with regulation in following countries. ^{*3} USA, Canada, Japan, EU

^{*1} Standard size characters, 4 dots between characters

^{*2} Excluding projections

^{*3} Please ask if the printer can use in other than countries above to our sales representative.

■ Interface Specifications

●DPU-E247-10S-E

● Serial interface (Conforms to RS-232C)

Printer connector:

Dsub 9 pin (female) inch based screw fit

● Connector signals

Pin No.	Signal name
1	N.C.
2	TXD
3	RXD
4	DSR
5	GND
6	DTR
7	CTS
8	RTS
9	N.C.

●DPU-E247-10P-E

● Parallel Interface (Conforms to IEEE1284)

Printer connector:

conforms to 36 pin Centronics specification connector

● Connector signals

Pin No.	Signal name
1	STROBE
2-9	DATA1-8
10	ACK
11	BUSY
12	PE
13	SELECTED
14	AUTOFEED XT
15	N.C.
16	GND
17	CHASSIS GND
18	N.C.
19-30	GND
31	INIT
32	ERROR
33	GND
34	N.C.
35	+5V
36	SELECT IN

10 OPTIONS AND CONSUMABLE PARTS

■ Specified AC adapter (Model:PW-E024-W3-E)

Item	Specification
Input voltage	AC100-240V, 50/60 Hz
Rated output	DC24V, 2.5 A
Operating temperature	32 °F to 104 °F 0 °C to 40 °C
Dimensions (W × D × H)	124×60×28.3mm ^{*1}
Weight	Approx. 260g
Regulations	The AC adapter complies with regulation in following countries. ^{*2} USA, Canada, Japan, EU

^{*1} Excluding power cable

^{*2} Please ask if the AC adapter can use in other than countries above to our sales representative.

■ Paper (Model: TP-E23C-1)

Item	Specification
Stencil paper number	PD160R-N (Oji Paper Co., Ltd.)
Paper width	58 mm
Dimensions (Paper roll diameter)	80 mm (maximum 81 mm)
Diameter of paper roll core	Inter diameter 12 mm, outer diameter 18 mm

If the recommended paper is not used, the print quality or the thermal head life may be below product specifications.

■ Specified AC cable

Model	Specification
CB-JP05-20A-E	for Japan ^{*1} , 2m
CB-A03-U3-E	for USA ^{*1} , 2m
CB-A01-E1-E	for Europe ^{*1} , 2m
CB-A01-E3-E	for Europe ^{*1} , 2m

^{*1} Please ask if the AC cable can use in other than countries above to our sales representative.



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(Specifications are subject to change without notice.)