Thermal Printer
μTP－58E（Panel Type）
μTP－58EB（Bulk Type）
Instruction Manual

INTRODUCTION

Thank you very much for your continued favor. Please read this manual attentively to let this equipment serve you for as long as possible. Keep this manual carefully.

SAFETY PRECAUTIONS

The following symbols are used in this Instruction Manual in order to make use of the printer properly and prevent the printer from being damaged.
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 △ indicates caution(including danger and warning).
The example on the left indicates warning or caution.

The symbol ⃠ indicates prohibition.
The example on the left means prohibition of disassembling.

The symbol ● indicates requirement or what must be done.
The example on the left means “pull the power plug out of the outlet.”

⚠ WARNING

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

DO NOT bend the power cable forcibly, or place heavy object 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.

Never disassemble the printer and the AC adapter. Failure to follow this instruction may cause overheating or burning of the printer or the AC adapter, or an electric shock, which may lead to fires or accidents.

⚠ CAUTION

DO NOT drop any metallic objects or liquids, such as water or coffee, into the printer.

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 setting papers or cleaning the thermal head.

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.

Power OFF the printer 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 for which it was designed may cause accidents or fire.

1. OPERATING PRECAUTIONS

Observe the following for safe and trouble-free operation:

Notes on use

- Do not drop or hit the printer.
- Turn off the power switch, and keep the AC adapter removed from the receptacle when the equipment is not used.

Notes on treatment of thermal papers

- Store the papers in a dry, cool and dark place.
- Do not rub the papers with hard substance.
- Keep the papers away from organic solvent.
- Do not let the papers touched with vinyl chloride film, eraser or adhesive tapes for hours.
- Do not put the papers on diazo print or wet copy that is just copied.
- Use dedicated thermal papers only.

Notes on installation

- Install the printer on a stable surface.
- Avoid such places with:
  Unstable surface, Strong vibration,
  Direct sunlight, Full of dust, Corrosive gas,
  Excessively high or low temperature

2. PREPARATION

2.1 Unpacking

Check whether a complete set is present:

- Main body 1 unit
- Thermal papers 1 roll
- Instruction Manual 1 volume

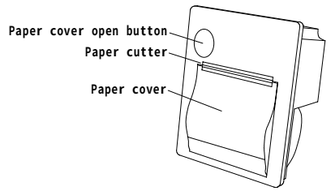
μTP-58E（Panel Type）includes next ones, too.

- Main body fitting 1 unit
- Fitting mounting screw 2 pieces
- Fitting spacer 0.2mm thick 1 sheet
- Fitting spacer 0.5mm thick 1 sheet
- Fitting spacer 1.0mm thick 1 sheet

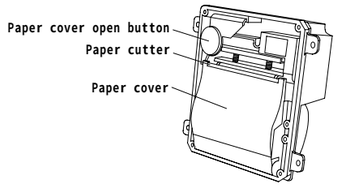
★ Orders for thermal papers will receive prompt attention by our company.

2.2 Components/part names

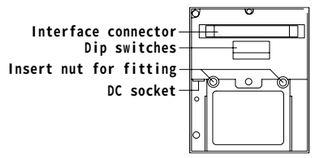
μTP-58E（Panel Type）



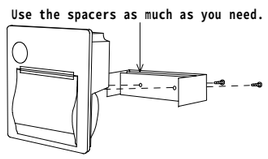
μTP-58EB（Bulk Type）



Back face



2.3 How to install the main body fitting



★ Use the spacers depending on the fitting panel thick like next table. If not, the body will deformative, and it will be hard to open the paper cover, and the printing quarity will be down. (When the fitting panel thick is over 2.2mm, it will be hard to fit the screws.)

Panel thick	Spacer thick	Panel thick	Spacer thick
1.0	None	1.7～1.8	0.5 and 0.2
1.2	0.2	2.0	1.0
1.5～1.6	0.5	2.2	1.0 and 0.2

(unit:mm)

★ The screw torque is 49cN･m(5kgf･cm).

3. OPERATION

3.1 Connecting AC adapter

①Insert the DC plug of the AC adapter into the DC socket of the main body.
②Insert the AC plug of the AC adapter into the receptacle.

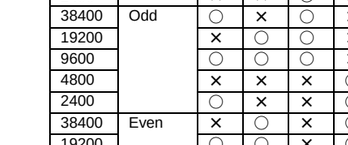
[Attention!]
Do not touch the tip end of the DC plug. When disconnecting the AC adapter, disconnect the AC plug from the receptacle and then DC plug.

3.2 Setting papers

Opening paper cover
Press the paper cover open button.

⚠ Handle the paper cutter carefully not to cut your hand.

Setting papers
①Press the paper cover open button, and open the paper cover.
②Set a paper roll as shown in the figure.
③Close the paper cover by pressing the both end of the cover, with the tip end of the paper emerging from the printer.



3.3 Maintenance

Wipe off the soiling on the printer surface with a dry soft cloth or a cloth with a weak neutral detergent. After that, wipe the printer with a dry cloth.

[Attention!]

- Do not use volatile chemical as thinner or benzine.
- Do not get printer’s inside wet with water.

3.4 Test print

In the test print mode, characters printable with the printer are output(ANK,Kanji). Turning power ON with $\overline{\text{FEED\_IN}}$ signal kept low triggers the test print.

3.5 Hex dump

In hex dump mode, computer data is output in hexadecimal numbers and characters. Set the dip switch No.7 on, No.8 off, and power on, then enter hex dump mode.

3.6 Function set

Printer functions can be set with the dip switches.
The ▒ indicates shipment mode.

No.	Function	OFF	ON
1～4	Interface	See table 1	
5	Bit len	8BIT	7BIT
6	Flow	RTS/CTS	Xon/Xoff
7～8	Command	See table 2	
9	Direction	Upright	Inverted
0	Test pin	Normal Mode	Prohibition

Table 1. Interface mode

Method	Baud	Parity	1	2	3	4
Serial	38400	None	×	×	×	×
	19200		○	×	×	×
	9600		×	○	×	×
	4800		○	○	×	×
	2400		×	×	○	×
	38400	Odd	○	×	○	×
	19200		×	○	○	×
	9600		○	○	○	×
	4800		×	×	×	○
	2400		○	×	×	○
	38400	Even	×	○	×	○
	19200		○	○	×	○
	9600		×	×	○	○
	4800		○	×	○	○
	2400		×	○	○	○
Parallel	–	–	○	○	○	○

Table 2. Command mode

Mode	7	8
Mode1(20 colm. μTP-5820 compatible)	○	○
Mode2(24 colm. μTP-5824 compatible)	×	○
Mode3(32 colm. ESC/POS conformed)	×	×
Hex dump mode	○	×

(×：OFF ○：ON)

You can check the setting functions by Test Print.

```
UTP-58E TEST PRINT
[VX.XX] XXXX/XX/XX
--------------------------------
  INTERFACE       = PARALLEL
  BAUD RATE       =   9600bps
  PARITY          = NON
  BIT LENGTH      = 8BIT
  FLOW CONTROL    = RTS/CTS
  COMMAND MODE    = MODE 3
  UPRIGHT/INVERT  = UPRIGHT
```

3.7 Connecting the Printer

- Select the correct interface cable for the type of computer.
- Use a flat cable no more than 50 centimeters long.

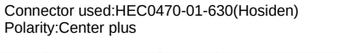
(We will prepare the option cable.)

4. SPECIFICATIONS

4.1 Connector pin layout

- Interface connector pin layout

Connector used:XG4A-4032(Omron)



($\overline{\text{Name}}$ indicates Active Low.)

No.	Signal name	Direc	Function
1	$\overline{\text{STROBE}}$	In	Data capture
2～9	DATA0～7	In	High:1,Low:0
10	$\overline{\text{ACK}}$	Out	Acknowledge
11	BUSY	Out	Busy to read
12	PE	Out	Paper empty
13	SEL OUT	Out	Online High
14	$\overline{\text{ERROR}}$	Out	Error
15	$\overline{\text{RESET}}$	In	Reset
16	TxD	Out	232C Data send
17	RxD	In	232C Data rec
18	RTS	Out	232C Request
19	CTS	In	232C Clear
20	N.C	–	N.C
21	N.C	–	N.C
22	GND	–	GND
23	GND	–	GND
24	N.C	–	N.C
25	$\overline{\text{FEED\_IN}}$	In	Feed signal
26	GND	–	GND
27	SEL_LED+	Out	SEL LED on +
28	SEL_LED-	Out	SEL LED on -
29～34	V+	–	Power (+)
35～40	V-	–	Power (-)

-Connect to all the No.29～34 and No.35～40 pins, when you supply the power into V+ and V- pins. (To avoid voltage drops.)

⚠ When you supply the power through the DC socket, the power outputs from the V+ and V- pins, so never supply the power into V+ and V- pins, and never short V+ and V- pins.

- DC socket pin layout

Connector used:HEC0470-01-630(Hosiden)
Polarity:Center plus

No.	Signal name	Direc	Function
1	DC+8.7V	–	Power(+)
2	GND	–	Power(-)

-You can also supply the power through the interface connector pins, instead of DC socket pins.

4.2 General specifications

Command mode:
Mode1 (μTP-5820 compatible)
Mode2 (μTP-5824 compatible)
Mode3 (ESC/POS conformed)
Print mode: Thermal line dot print
Data entry:
When parallel
Data input: Eight-bit parallel
Handshake: $\overline{\text{STROBE}}$, BUSY and $\overline{\text{ACK}}$
When serial
Data input: RS-232C
(2400bps~38400bps)
Data control: RTS/CTS, Xon/Xoff
Max. printing speed: 20 mm/s max. (when 5V)
50 mm/s max. (when 9 V)
Paper width: 58 mm
Printing width: Mode1 34.75mm
Mode2 41.75mm
Mode3 48mm
-Printed in center of paper.
Power supply:
By the interface connector
5VDC～9VDC, 3A
By the DC socket
AC adapter dedicated to the printer (option)
Product No.: BLS-120W
Input: 100~240VAC (50/60Hz)
Output: 9.0VDC, 3.0A
AC code of AC adapter (option)
Product No.: ACS-100J (for Japan)
ACS-100U (for U.S.A)
ACS-100G (for Europe)
Outer dimensions (W×H×D excluding projections)
μTP-58E （Panel Type）
101mm×116mm×61mm
μTP-58EB（Bulk Type）
95mm×110mm×61mm
Mass: （Excluding AC adapter and roll paper）
μTP-58E (Panel Type) Approx. 230g
μTP-58EB (Bulk Type) Approx. 230g
Operating environment
Temperature: 0 to +50℃
Humidity: 30 to 80%RH (non-condensing)
Storage environment
Temperature: –20 to +60℃
Humidity: 20 to 85%RH (non-condensing)
Thermal papers used
Product No.: P-58-30 (10rolls per box)
Paper width：58mm
Outer diameter of roll paper：50mm
Receive buffer: 4096 bytes

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