USER'S MANUAL

Receipt Printer

BTP-2002NP

Shandong New Beiyang Information Technology Co., Ltd.

Declaration

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Warning and Caution

Warning: Items shall be strictly followed to avoid damages to body and equipment.

Caution: Items with important information and prompts for operating the printer.

The quality control system of SNBC has been approved of the following certification.

(DNV)ISO9001:2000

The environmental control system of SNBC has been approved of the following certification.

(DNV)ISO14001:2004

BTP-2002NP has been approved of the following certification.

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Contents

General Safety Information

Before installing and using the printer, please read the following items carefully:

1. Safety instructions

Do not touch the cutter and tear-off bar of the printer.

The print head is a thermal element and it is at a high temperature during printing or just after operation, do not touch it and its peripherals for reasons of safety.

The print head is an ESD-sensitive device. To prevent damage, do not touch either its printing parts or connecting parts.

2. Caution

1) Install the printer on a flat and stable surface.
2) Reserve adequate space around the printer so that convenient operation and maintenance can be performed.
3) Keep the printer away from water source, direct sunlight, strong light and heat.
4) Do not use or store the printer in a place exposed to heat or fire, moisture or other pollution.
5) Do not place the printer on a surface exposed to vibration or risk from impact.
6) Avoid exposing the printer to condensation. In case of condensation, ensure it has been completely removed before turn on the power.
7) Connect the power adaptor to an appropriate ground outlet. Avoid sharing a single electrical outlet with large power motors and other devices that may cause the fluctuation in voltage.
8) Disconnect the power adapter if the printer is idle for a long time.
9) Do not spill water or other electric substances (like metal) on the printer. If this happens, turn off the power immediately.
10) Do not allow the printer to start printing when there is no paper, otherwise the print head and platen roller will be damaged.
11) To ensure print quality and normal lifetime, use recommended or good quality paper.
12) Shut down the printer when connecting or disconnecting interface connectors to avoid damage to the control board.
13) Set the print darkness to a lower grade as long as the print quality is acceptable. This will help to keep the print head durable.
14) The printer should only be disassembled or repaired by a technician, who is certified by SNBC.

1 Overview

1.1 Outline

- The BTP-2002NP is a high performance thermal printer. It can be widely used for real-time receipt printing applications, such as for POS systems, hospitality, lottery, weighing systems etc.
- The BTP-2002NP can be connected to computer systems via its interfaces and also offers drivers and utilities under WINDOWS98 /NT4.0 /2000/2003/XP/Vista.
- The BTP-2002NP can be connected to cash drawers via a RJ11 connector.
- The following accessories are available for the BTP-2002NP (see chapter 8):
  - Spill proof cover SPC-2002NP: a transparent cover that fits over the printer and protects the printer from liquid spilling in the printer. This accessory is especially suited when the printer is used in kitchens and on bar counters.
  - Wall-mount system WMS-2002NP: a bracket system, which enables that the printer can be mounted on a vertical surface like a wall.
  - A cable, which enables that the BTP-2002NP printer, that is equipped with a USB interface, can be connected to a host with PoweredUSB connectors.

1.2 Features

- Low noise and high printing speed.
- Easy paper loading: drop in and print.
- Easy operation and maintenance.
- Continuous paper can be used with different paper widths.
- Auto cutter (full cut or partial cut).
- Cash drawer control connector.
- Optional communication interfaces (daughter boards) .
- Optional wall mount parts and spill proof cover.

1.3 Model Classification

BTP-2002NP X X

a b

- **a Interface module (daughter boards)**

R3：RS232 （DB25）（Standard configuration for Serial interface）

R5：RS-485（DB25）

R6：RS-485（RJ11）

R8：RS-485（RJ45）

P4：Parallel nibble mode (DB36 CENTRONICS)（Standard configuration for Parallel interface）

U： USB 1.1

U2：PoweredUSB

E：Ethernet

W：WLAN

- **b Color**

I：Ivory

B：Black

S：Silver

2 Specifications

2.1 Main Specification

Item	Specification	
Print method	Direct thermal	
Resolution	203DPI X 180DPI	
Print speed	Max. 150mm/s	
Print width	Max. 80mm	
Paper type	Continuous thermal paper	
Bar code supported	UPC-A, UPC-E, EAN-8, EAN-13, Codabar, Code39, ITF, Code128, code93	
Character set	Standard ASCII (12x24), compressed ASCII (9x17). Code page 437, 850, 852, 860, 863, 865,866, 858,PC1252, katakana	
Character enlargement	All fonts can be enlarged vertically and horizontally up to 6x.	
Character rotation	(0°, 90°, 180°, 270°)	
Paper detect	Photo sensors (paper end and paper near end detection)	
Printer top cover position	Micro switch	
Print head overheating protection	Thermal resistor	
Graphics	Download bitmap	Direct bitmap print
	6 figures maximum download to a total bitmap buffer of 12KB	Support bitmap mode and can realize fast bitmap printing
Interface	RS232, Parallel, USB, Ethernet or WLAN	
Cash drawer kick-out	RJ11 type connector; 1-2 cash drawers	
Memory	SDRAM: 2MB，FLASH: 1MB	
Power supply	24V±5%DC, Mean current 2.5A, max. 8A External power supply	
Print head lifetime	≥100Km	
Operating temperature and humidity	5～45℃, 20 ~ 80% RH (No dew condensation)	
Storage temperature and humidity	-40～55℃, ≤93%RH (40℃)	
Dimensions printer	144(W)×192(D)×142(H) mm	
Net weight printer	2.3 KG	
Dimensions packing	290(W) X 260(D) X 210(H) mm	
Weight packing	4.0 KG	
Certificates granted	CE, CB, GS, FCC, UL, CUL	

2.2 Cutter Specification

Item	Parameter	Remarks
Cutter type	Slide cutter (Guillotine type)	
Cutting time	600ms	The time that one cut takes.
Cutting interval	2s	30 times/min. (Max.)
Paper type	Thickness: 0.065 – 0.1mm	Thermal paper or paper with the same thickness
Operation voltage	24VDC	
Max. static current	1.2A	24V DC
Cutter lifetime	1,500,000 cuts	Full cut or Partial cut

2.3 Electric Parameters of the Power Supply

Supply voltage: 24VDC±5%

Current consumption:

Mean: approximately 2.5A (12.5% duty ratio)

Peak: Approximately 8 A

Ripple & Noise: < 240mVp-p

Caution:

Please use the power supply that is supplied with the printer or an equivalent type.

2.4 Paper Specification

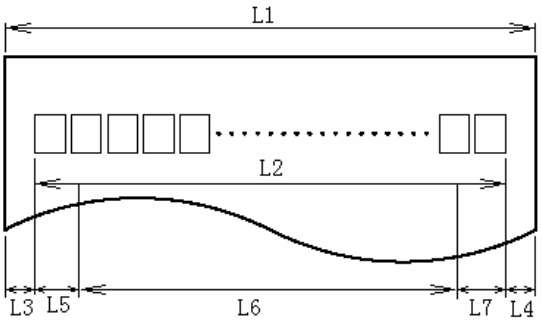
- Paper type: thermal paper
- Paper width: 82.5±0.5mm, 80±0.5 mm, 76±0.5 mm, 69.5±0.5 mm
  57.5±0.5 mm
- Paper thickness: 0.065 – 0.1mm
- Paper roll O/D: Max. 83 mm
- Printing surface: Outside of roll paper
- Recommend paper: POS-grade paper with a thickness of 0.065 – 0.1mm
  (Reference: Mitsubishi: F24OAC/F220-VP thermal paper)
- Paper roll core diameter: Inside 12 mm, Outside 18mm

Caution:

- ✧ Please use the recommended paper type or its equivalents. Using the lower quality paper types may affect the print quality and shorten print head life.
- ✧ The paper should not be glued to the core.
- ✧ If the paper is contaminated by chemical or oil, it may discolor or lose heat sensitivity at the polluted spot.
- ✧ Do not rub the paper surface strongly against hard objects; it may discolor.
- ✧ Discoloring starts when temperature is over 70°C. Be careful of effects of heat, humidity, light, and so on.

2.5 Printing and Cutting Position

2.5.1 Printing Position



L1: Paper cabinet width 83.5mm

L2: Max Print width 80mm

L3: Space between the left end of print head and the left side of paper roll supply device (non-changeable) 1.75±0.3mm

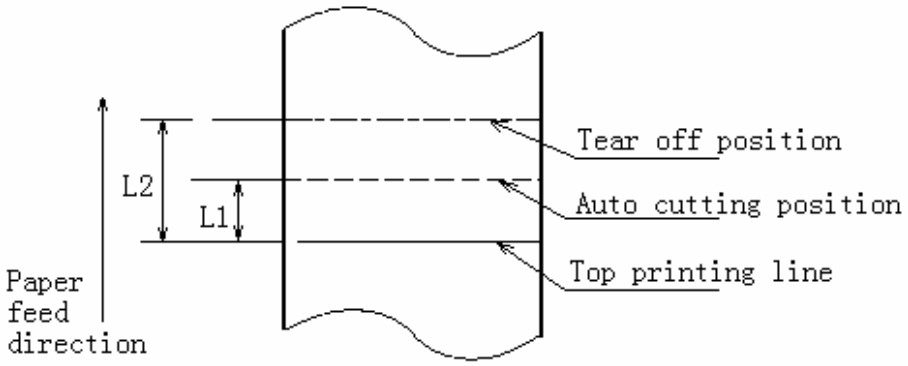
L4: Space between the right end of print head and the right side of paper roll supply device (non-changeable) 1.75±0.3mm

L5: Left margin changeable, default is 7mm

L6: Print area width changeable, default is 64mm

L7: Right margin changeable, default is 9mm

2.5.2 Cutting Position

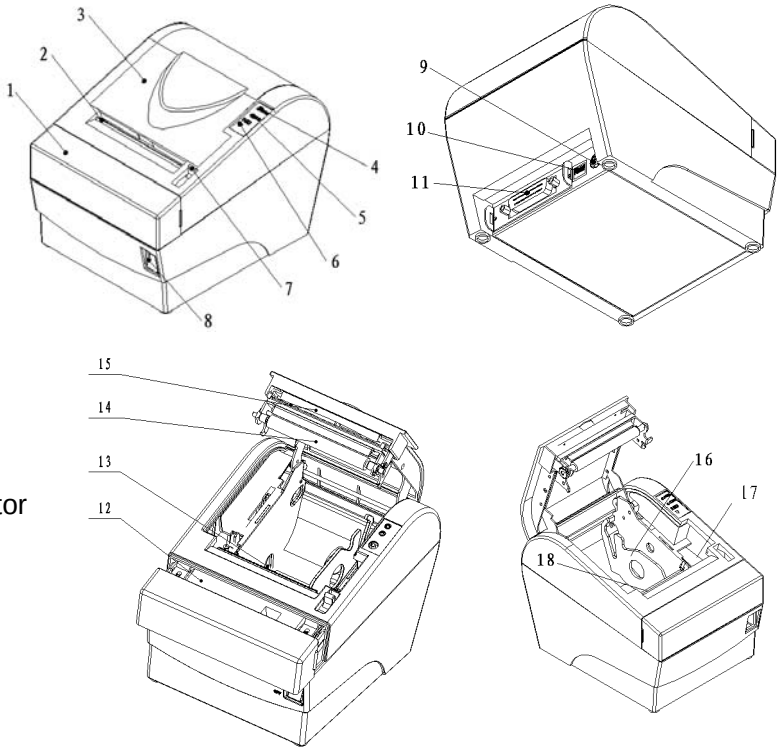


L1: Approximate: 16mm L2: Approximate: 34mm

3 Outline and Parts

3.1 Outline and Parts

1— Cutter cover
2— Tear off bar
3— Printer top cover
4— Power LED
5— Error LED
6— Paper feed button
7— Top cover latch
8— Power switch
9— Power connector
10— Cash drawer connector
11— Signal Interface Connector
12— Sliding blade
13— Paper near end sensor
14— Printer platen
15— Stationary blade
16— Paper guide
17— Micro-switch
18— Paper end sensor



Functions of parts:

a- Paper feed button

- Paper feeding function:

  In normal status, press the FEED button shortly, the printer will feed paper by one line at a time.

- Paper testing and printing configuration information:

  Holding on the feed button while turning on the printer, the self-test will start with printing the configuration information; stop holding the button as soon as the printing starts.

  Then the printer will print following indication information: "Press and Release FEED key to print characters" and "Press and Hold FEED key to configure the printer".

  Press the FEED button for a short time, the printer will print a second page with a pattern using the built-in character sets; Hold the FEED button for a long time, the printer will enter button configuration mode.

b- Power LED

Indicate power status (ON/OFF).

c- Error LED

Indicate all error status. Under normal conditions, ERROR LED is always off. under error conditions, ERROR LED will flash.

d- Micro-switch

Detect the status of top cover.

e- Paper near end sensor

When the paper near the end, the error LED will flash. the printer will continue printing until the paper end.

f- Paper end sensor

Paper end sensor is used to detect whether the paper roll has run out.

g- Power switch

Turn on/off the printer. "O" is to turn off the printer; "—" is to turn on the printer.

h- Paper guide

There are 4 long slots at the bottom of the paper cabinet. Putting the paper guide in a different slot will allow the printer to use different paper widths listed as follows: 80±0.5 mm, 76±0.5 mm, 69.5±0.5 mm, 57.5±0.5 mm . Removing the paper guide will allow a paper width of 82.5 ±0.5mm.

Caution:

The Paper guide is an indispensable part of the printer and should be kept in the printer.

3.2 Error LED and Buzzer

The error LED and buzzer indicate the states of the printer, as described in the table below:

Errors	Voice of buzzer	LED flash
Cutter error (paper jam)	Long-short-long	Fast
Print head is raised up	Short-long-short	Slow
Print head is overheated (*)	Long-short-long	Fast
Paper near end	No	Faster
Paper end	Short-short-short	Faster

* The printer can detect the temperature of the print head with thermal resistor. If the temperature of the print head has increased too much, the printer will decrease its print speed. If the temperature becomes higher than 65^0 C, the protection circuit of the printer will force the printer to stop printing; at the same time the light and sound signals as described in the table will be given.

4 Installation

4.1 Unpacking

Check whether all items listed on the packing list are present and in good condition. If any items are damaged or missing, please contact your dealer or the manufacture for assistance.

4.2 Selecting the Installation Position and Direction

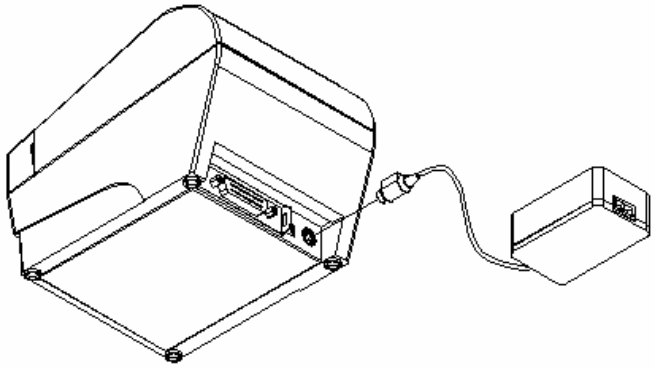
The BTP-2002NP can be installed in two positions: vertically on a wall or horizontally on a table. To install the printer vertically on a wall, please obtain the optional wall mount system WMS-2002NP from the supplier of the printer and follow instructions that are supplied with the system.

4.3 Grounding the Printer

Make sure the printer is connected to a ground line.

4.4 Connecting the Power Adapter

1) Ensure the printer power is turned off.
2) With the flat side of the power adapter's cable connector facing upward, insert the cable connector into the power connector on the backside of the printer.
3) Plug the power cord into a suitable wall outlet.

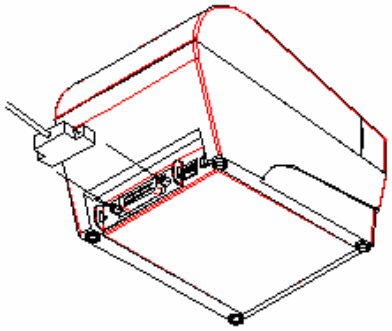


Caution:

- ✧ Use only the manufacturers supplied power adapter or other equal model.
- ✧ When connecting or disconnecting the cable connector of the power adapter, always hold the connector but not the cable.
- ✧ Do not pull on the power adapter cord, otherwise the cord may be damaged or broken, causing a risk of fire or electric shock.
- ✧ Do not place the Power adapter cord near a heating device; otherwise, the cover of the cord may melt, causing a risk of fire or electric shock.
- ✧ When the printer is not in use for a long period of time, disconnect the Power adapter from the wall outlet for safety.

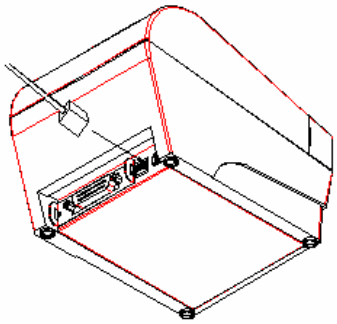
4.5 Connecting Signal Cable

1) Ensure the printer power is turned off.
2) Put signal cable into suitable connector which should be fixed with plug screws or clip springs (for USB connector, there are no such plug screws or clip springs).
3) Connect the other end of the signal cable to the host.



4.6 Connecting the Cash Drawer

1) Ensure the printer power is turned off.
2) Insert the cash drawer cable into the cash drawer kick-out connector on the back of the printer.

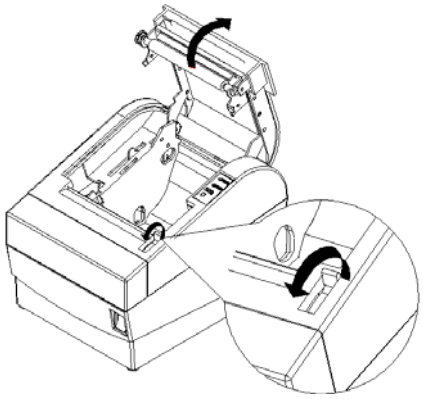


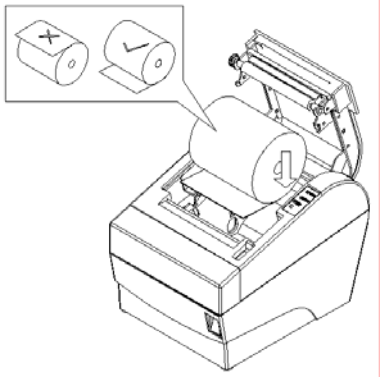
Caution:

- ✧ Do not connect any other device than the specified drawer (Solenoid type) to the cash drawer kick-out connector(Do not connect a telephone line either).

4.7 Inserting the Paper Roll

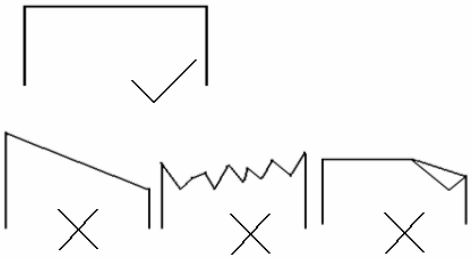
1) Open the top cover of printer.
2) Put the paper roll into the paper cabinet. See figure below.





Caution:

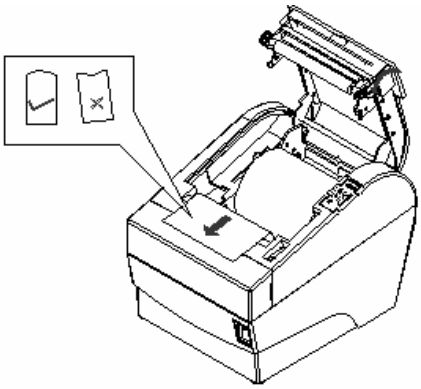
- ✧ Adjust the position of paper guide according to the width of the paper to be used.
- ✧ Make sure that the beginning of roll paper is cut according to the requirement as follows before loading:



Make sure that the heat sensitive side of paper faces the print head and the rolling direction of paper meets the requirements.

- ✧ The paper should be neatly fitted on the paper roll when loading.
  The paper roll should be able to freely roll in the paper cabinet of the printer and not be stuck as it may cause paper jam or other malfunctions.

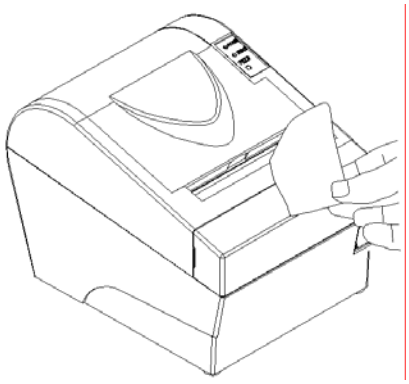
3) Pull the beginning of the roll paper out up to the end of the upper cover, then close the printer cover, as follows:



Caution:

- ✧ Both sides of the printer cover must be pressed down completely in order to ensure that the top cover is closed completely.
- ✧ The paper should leave the paper exit straight and not crumpled as shown in the above figure.

4) Tear off the surplus portion of paper with the tear off bar.



4.8 Self-test

The self-test lets you know if the printer is operating properly. It checks the control circuits, printer mechanisms, print quality, firmware version and prints out the settings.

The test is independent of any other equipment or software and can be started as follows:

1) Ensure the printer power is turned off and the top cover is closed properly.
2) Holding on the feed button while turning on the printer, the self-test will start with printing the configuration information; stop holding the button as soon as the printing starts.
3) Then the printer will print following indication information: "Press and Release FEED key to print characters" and "Press and Hold FEED key to configure the printer".
4) Press the FEED button for a short time, the printer will print a second page with a pattern using the built-in character sets; Hold the FEED button for a long time, the printer will enter button configuration mode.
5) The printer ends and cuts the self-test page automatically.

4.9 Adjusting the Paper Near End Sensor

The remaining detectable amount of paper on the paper roll varies with the inside and outside diameters of the paper roll core. The minimum detectable amount of paper on the paper roll can be set by the following method:

Paper thick-ness (mm)	**For paper rolls with a core inside diameter (A) of 14mm and a core outside diameter (B) of 22 mm**											
	Detected approx. diameter (C) in mm						**Approx. remaining paper length**					
0.06	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	ϕ26	ϕ28	ϕ30	ϕ32	ϕ34	ϕ36	2.5m	3.8m	5.1m	6.5m	8.0m	9.7m

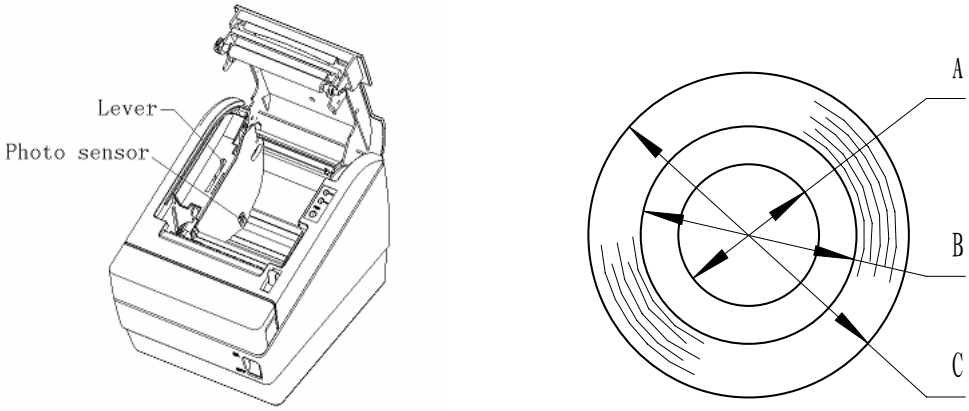


Figure 1 Changing the paper-near-end position

Note:

- ✧ The factory setting of the paper near end sensor is level 2.
- ✧ The value of C and the remaining paper length are calculated values. There may be small deviations due to variations of the printer mechanics and the paper near end sensor.
- ✧ If the paper roll has a core of dimensions different from that in above table, the value of C and the remaining paper length may have different values.

5 Routine maintenance

5.1 Cleaning the Print head

When one or more of the following phenomena occur, the Print head need to be cleaned.

- Printout is light.
- Some of vertical columns on printout are light.
- The paper feeds with loud noises.

To clean the Print head, follow the steps given below:

- Turn off the printer and open the top cover.
- It may take a few minutes for print head to cool down if it has just finished printing.
- Wipe off stain, such as dust, on the heating element of Print head with an alcohol cotton.
- Close printer top cover when the alcohol has evaporated completely.

5.2 Cleaning the Sensor

When one or more of the following phenomena occur, please clean the paper end sensor.

- During printing, the printer stops printing occasionally and indicates incorrectly that the printer is out of paper.
- Doesn't alarm paper end when paper is end indeed.

To clean the paper end sensor, follow the steps given below:

- Turn off the printer and open the top cover.
- Wipe off stain and dust on the surface of the sensor with an alcohol cotton carefully.
- Close printer cover when the alcohol has evaporated completely.

5.3 Cleaning the Platen Roller

When one or more of the following phenomena occur, please clean the platen roller.

- Printout is light.
- Some vertical columns on printout are not clear.
- Paper feeds with loud noises.

To clean the platen roller, follow the steps given below:

- Turn off the printer and open the top cover.
- Wipe off stain, such as dust and the like, on the platen roller by using an alcohol cotton.
- Close the top cover when the alcohol has evaporated completely.

Caution:

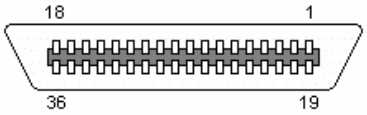
- Before starting routine maintenance, make sure that the printer has been switched off.
- Do not touch the surface of print head with your hands or any metallic objects. Do not use any other method to clean the print head, platen roller and sensors than described in this manual.
- Do not use an organic solvent like gasoline, and acetone.
- After cleaning of the paper end sensor, it is recommended to check the printer settings.
- It may take a few minutes for the alcohol to evaporate before printing.

6 Interface Signal

6.1 Parallel Interface

The parallel interface is bi-directional which supports BUSY/ACK handshaking protocol. Its connector is 36pin centronics.

Pin No.	Source	Compatible Mode	Pin No.	Source	Compatible Mode
1	H	Strobe	19		Signal Ground
2	H	Data 0 (Least Significant Bit)	20		Signal Ground
3	H	Data 1	21		Signal Ground
4	H	Data 2	22		Signal Ground
5	H	Data 3	23		Signal Ground
6	H	Data 4	24		Signal Ground
7	H	Data 5	25		Signal Ground
8	H	Data 6	26		Signal Ground
9	H	Data 7 (Most Significant Bit)	27		Signal Ground
10	P	Ack	28		Signal Ground
11	P	Busy	29		Signal Ground
12	P	P Error	30		Signal Ground
13	P	Select	31	H	nInit
14		Not defined	32	P	-nFault
15		Not defined	33		Signal Ground
16		Logic Ground	34		Not defined
17		Chassis Ground	35		Not defined
18	P	Peripheral Logic High	36	H	nSelectIn

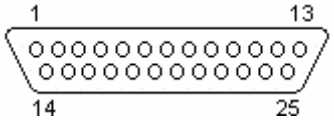


36 PIN CENTRONICS connector

6.2 Serial Interface

The serial interface is RS-232 compatible and its connector is 25pin female D type.

PIN No.	Signal
PIN1	Frame Ground
PIN2	TXD
PIN 3	RXD
PIN 4	RTS
PIN 5~6	NC
PIN 7	Signal Ground
PIN 8~19	NC
PIN 20	DTR
PIN 21~25	NC



The 25 PIN D-SUB connector

User may check the current setting status of the interface by printing a configuration table. The default setting is as follows:

Baud rate: 9600bps
Data bit: 8
Parity bit: None
Stop bit: 1
Handshaking: Hardware

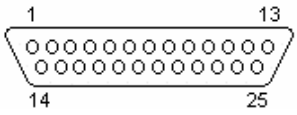
Serial interface connection example:

Host Printer
FG----------FG
TXD----------RXD
RXD----------TXD
CTS----------RTS
DSR----------DTR
DTR----------DSR
SG ----------SG

6.3 RS-485 Serial Interface

Signal definition and functions for DB25 connector are shown as below:

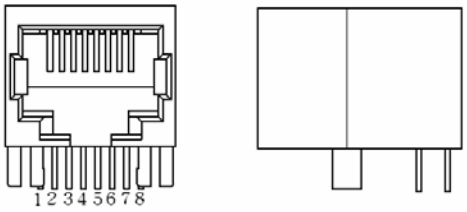
Pin No.	Signal Name	Signal Direction	Functions
1	FG	-	Frame Ground
2 3	SD1 SD2	Output	Send data
4 5	RD1 RD2	Input	Receive data
7	SG	-	Signal Ground
8 9	DR1 DR2	Output	When selecting DTR/DSR, the signal is used to indicate the printer status. 1) DR1>DR2 means that the printer is ready to receive data; DR1<DR2 means that the printer is busy. 2) When selecting XON/XOFF, this signal indicates if the printer is connected and ready to receive data properly. SPACE means the printer is ready to receive data. If the signal is always DR1>DR2, it means the printer is ready to receive data. Except the cases as below, the signal is always DR1>DR2: • From power-on to printer ready for data reception; • When the printer is tested itself.
10 11	CS1 CS2	Input	The signal indicates if the host can receive data. CS1>CS2 means that the host can receive data; CS1<CS2 means that the host can't receive data. When selecting DTR/DSR, the printer shall transmit data after confirming it. (Except the data transmitted via **DLE EOT** and **GS a**) When selecting XON/XOFF, the printer doesn't check this signal.



The 25 PIN D-SUB connector

Signal definition and functions for RJ45 connector are shown as below:

Pin No.	Signal Name	Signal Direction	Functions
1 2	SD2 SD1	Output	Sending data
3 6	RD2 RD1	Input	Receiving data
5 4	DR1 DR2	Output	When selecting DTR/DSR, the signal is used to indicate if the printer is busy or not. 1) DR1>DR2 means the printer is ready to receive data; DR1<DR2 means the printer is busy. 2) When selecting XON/XOFF, this signal indicates whether or not the printer is connected and ready to receive data correctly. SPACE means the printer is ready to receive data. When this signal is always DR1>DR2, it means the printer is ready to receive data. Except the cases as below, the signal is always DR1>DR2: • From power-on to printer ready for data reception; • When the printer is in self-test.
7 8	GND	-	Signal Ground



Interface connector (RJ45 10P8C)

6.4 USB interface

1) Specifications:

Data transmission: Universal Serial Bus Specification Revision 1.1

Connector (printer side): USB "B" type connector(standard)

2) Interface signal definition and signal functions:

Pin No.	Signal Name	Function
1	VBUS	+5V
2	DATA-	Printer data transmit line minus
3	DATA+	Printer data transmit line plus
4	GND	Ground

3) USB interface connection example:

Host side	Printer side
VBUS	VBUS
DATA -	DATA -
DATA+	DATA+
GND	GND

4) Interface Connectors:

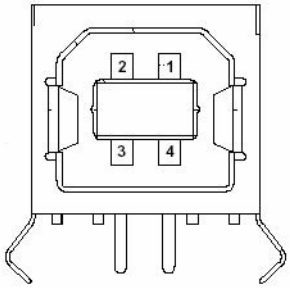
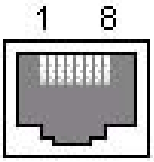


Figure M.1 USB "B" type connector

6.5 Ethernet Interface

The parameters of Ethernet interface socket match 10BASE-T standard of IEEE802.3.



Interface module socket

Pin No.	Signal name	Explanation
1	TX+	Data sending+
2	TX-	Data sending-
3	RX+	Data reception+
4	NC	Reserve
5	NC	Reserve
6	RX-	Data reception-
7	NC	Reserve
8	NC	Reserve

6.6 WLAN interface

Item		Content
Wireless	Standard	802.11b、802.11g
	Communication Speed (Max)	54M
	Transmission Distance (Max)	100m (Indoors without obstructs)(the distance depending on the environment)
	channel	1-14
	Safety	64/128 WEP、WPA
The interface module	Condition's monitor	Special configure tools Browser
	Configuration management	Special configure tools Browser
	Firmware updating	TFTP
	Basic communication protocol	ARP、RARP、IP、ICMP、TCP、UDP
	Printing communication mode	Port 9100、LPR/LPD
The printer	State demand	The software package (includes DLL and routines)、browser
	Average communication speed	＞50kByte/s

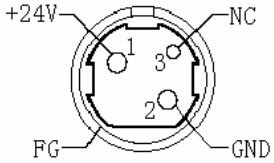
The functions of the WLAN interface module

6.7 Signal Definition of Power Connector

1 --- Positive (+24V)

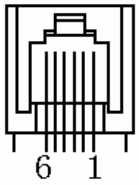
2 --- GND

3 --- NC.



6.8 Cash Drawer Kick-out Connector

1) Electrical characteristics
   - Driving voltage: DC 24 V
   - Driving current: Max 0.8 A (Within 510 ms)
   - SW signal: Signal level "L" = 0 to 0.5 V "H" = 3 to 5 V



Cash drawer connector

socket is RJ-11 6P connector

2) Signal definition

Pin No.	Signal	Function
1	FG	Frame ground
2	DRAWER 1	Cash drawer 1 drive signal
3	DRSW	Cash drawer status detect signal
4	VDR	Cash drawer drive power supply
5	DRAWER 2	Cash drawer 2 drive signal
6	GND	Common ground on circuits

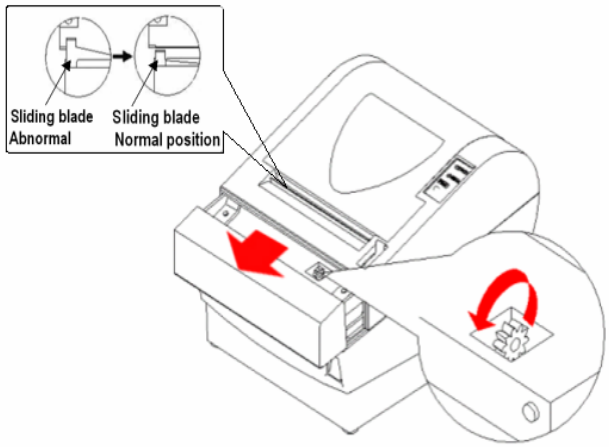
7 Troubleshooting

If the printer does not operate correctly, refer to the troubleshooting table below. If there are still problems that cannot be solved, please contact your local distributor or a manufacturer technician for assistance.

7.1 Clearing Paper Jams

When encountering a cutter malfunction due to paper jams or unexpected power off, do not open the top cover of the printer by force because the sliding blade of the cutter might have not gone back to its original position and have blocked the cover. Open the top cover by force will damage the cutter. In case of such a malfunction of the cutter, please follow instructions below to solve the problem.

1) Power off the printer.
2) Remove the cutter cover (the cutter cover is the part with brand name) as in the figure below. A wheel-knob will be exposed. If the cutter works in full cut mode, turn the wheel-knob towards the front of the printer as shown in the figure below.
3) If the auto cutter works in partial cut mode, turn the wheel-knob towards the back of the printer.
4) When turning the wheel-knob observe the movement of the sliding blade through the paper exit. Do not stop turning before the sliding blade is completely separated from the stationary blade (which is mounted in the top-cover). Then open the top cover to clear paper jams.



Caution

- ✧ Usually, at the beginning of turning the wheel-knob, the sliding blade will move slowly as if it does not move. But in fact it does. Therefore, keep turning while carefully observing its movement of the sliding blade.
- ✧ In case of being unable to turn the knob towards the front of the printer as shown in figure above, turn it in the back direction.

7.2 Error LED and Buzzer

Problem	Possible cause	Solution
Error LED flashes quickly	Paper near end	Replace the paper roll in time
Error LED flashes and buzzer beeps	Paper end	Load new paper roll
	Cutter error	Deal with the error according to 7.1
	Top cover is open	Close the top cover completely
	The print head overheated	Turn off printer power and wait for normal print head temperature
Buzzer beeps and error LED on	Indication of a serious problem	Contact your local distributor or a technician of manufacturers for assistance

7.3 Problem during Printing

Problem	Possible causes	Solution
Colored stripes on receipt	Paper near end	Replace the paper roll in time
Receipt does not come out	Paper jammed	Deal with the problem according to 7.1 and clear jammed paper
Halt of printing	Paper jammed	Deal with the problem according to 7.1 and clear jammed paper
Receipt is not cut	Paper jammed	Deal with the problem according to 7.1 and clear jammed paper
Printout is light or spotty	Paper roll is loaded incorrectly.	Make sure the paper roll has been loaded correctly
	Paper is out of specification	Make sure to use recommended paper or its equivalent
	Print head or platen roller is dirty	Clean the print head or platen roller
Vertical column of print is missing	Print head or platen roller is dirty	Clean print head or platen roller
	Print head is damaged	Contact distributor or manufacturer for assistance

7.4 Printer does not work

Problem	Possible causes	Solution
Printer does not work when turned on.	Printer is not plugged in	Make sure that printer cable has been connected correctly on both ends. Check that the host or power supply is getting power

☆ Paper near end alarm acts only as an indication for users to pay attention to the remained paper. The printer does not take it as an error. This alarm does not affect the printing.

8. Accessories

8.1 Spill Proof Cover(SPC-2002NP)

8.2 Wall Mount System (WMS-2002NP)

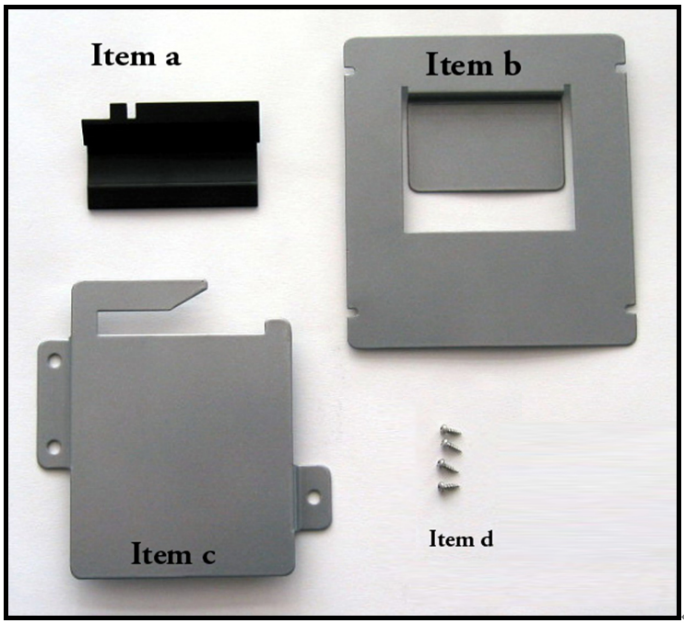
This wall mount system (WMS-2002NP) can be used for mounting the POS printer BTP-2002NP on a vertical surface. The system contains the following items except the installations instructions:

Item a: One Paper-Roll-Tray

Item b: One Bracket-Plate

Item c: One Fixed-Hook-Plate

Item d: Four screws (Ø 2.9 mm x 8 mm)



Instructions:

1) Open the top cover of the printer and fix the Paper-Roll-Tray on the top cover axis with the two stretch fasteners as shown in figure N.2.1.
2) Figure N.2.2 shows when the Paper-Roll-Tray has been fixed in position.
3) Close the top cover of the printer and mount the Bracket-Plate on the bottom of the printer with the four screws (Ø 2.9 mm x 8 mm) as shown in figure N.2.3. The four screws are supplied with the set.

4) Select the location for mounting the printer with wall mount systems, It needs at least 15 cm free space to the right of the location. Drill three Ø 8 mm holes in the wall using the Fixed-Hook-Plate as a template. Insert three plastic plugs (Ø 8 mm x 40 mm) in these holes and make sure that the plugs are completely inserted in the holes. Mount the Fixed-Hook-Plate onto the wall with three screws (Ø 4.8 mm x 30 mm) as shown in figure N.2.4. Please note that these screws and plastic plugs are not supplied with the Wall mount system.

5) Hang the printer on the Fixed-Hook-Plate as shown in figure N.2.5 by sliding the printer from the right side of the Fixed-Hook-Plate.

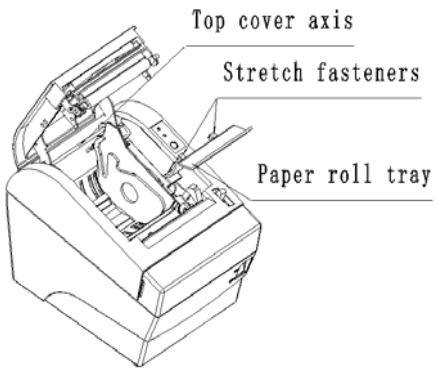


Figure N.2.1

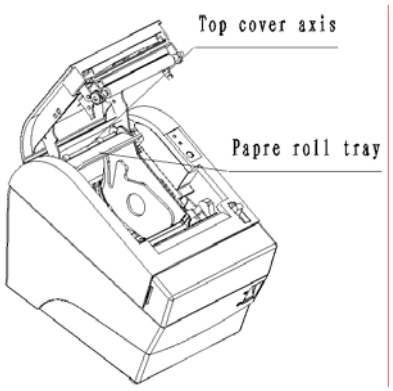


Figure N.2.2

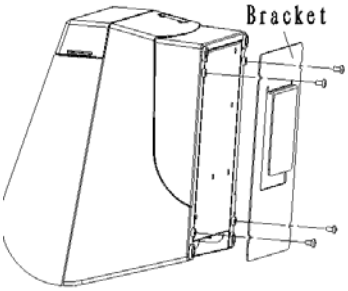


Figure N.2.3

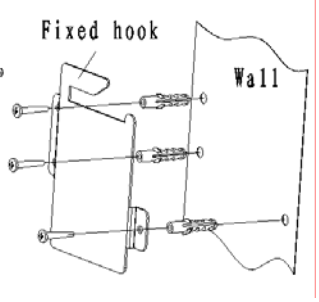


Figure N.2.4

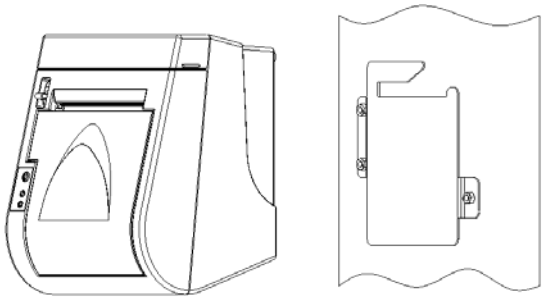
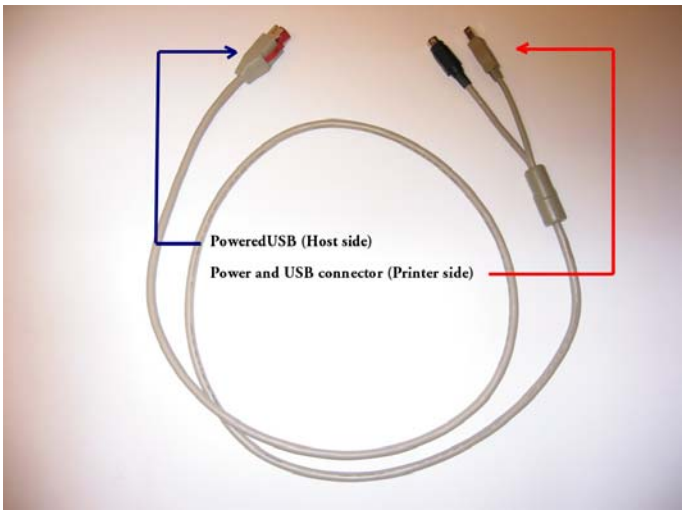


Figure N.2.5

Caution:

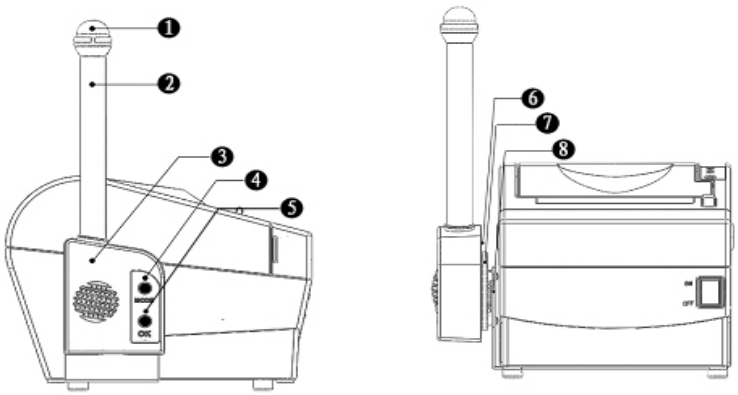
- ✧ The printer should only be mounted as instructed above.
- ✧ The structure of the wall should be strong enough to prevent the printer and wall mount from dropping.

8.3 Cable for PoweredUSB Connections



8.4 HERALD – Kitchen Alarm System

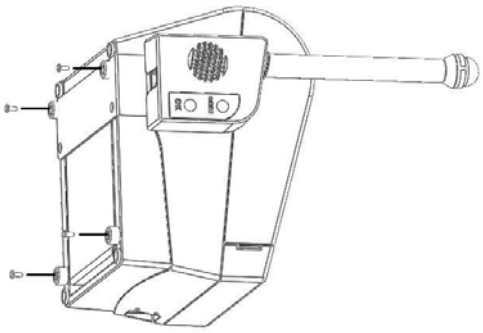
- Exterior and parts（see figures below）



1—Light 2—Light pole 3—Top cover 4—MODE button
5—OK button 6—Bottom cover 7—Turn-plate 8—Bracket

- **Assembling the HERALD**
  - **Mounting of the bracket**

    Mount the metal bracket with two nylon feet and two screws onto the bottom of the printer as shown in the following diagram. Then mount the two remaining nylon feet onto the bottom of the printer opposite the metal bracket (see drawing).



■ **Mounting the Main Unit**

Step 1: Insert the Main Unit in the plastic turn-plate of the Bracket as shown in Figure 1.

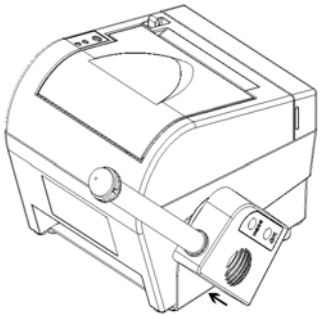


FIGURE 1

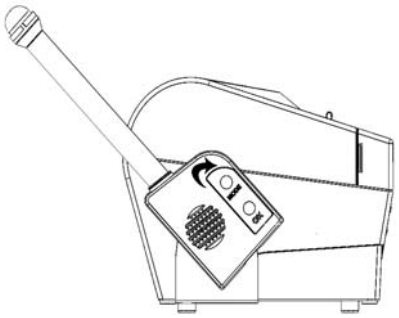


FIGURE 2

Step 2：Rotate the Main Unit clockwise as shown in figures 2 and 3 if the printer is to be used on a horizontal surface. If the printer is mounted on a vertical surface by means of the Wall Mount System then the Main Unit should be rotated anti-clockwise.

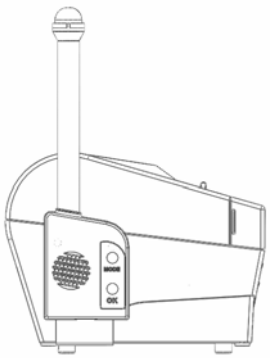


FIGURE 3

FIGURE 4

Step 3：After you have ensured that the printer is switched off, the Main Unit can be connected to the Cash drawer connector at the back of the printer as shown in figure 5.

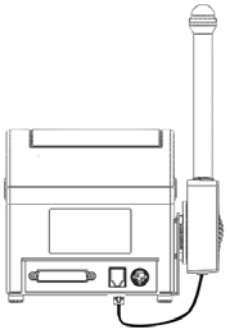
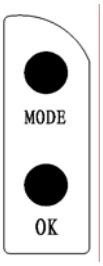


FIGURE 5

➢ **Printer button**



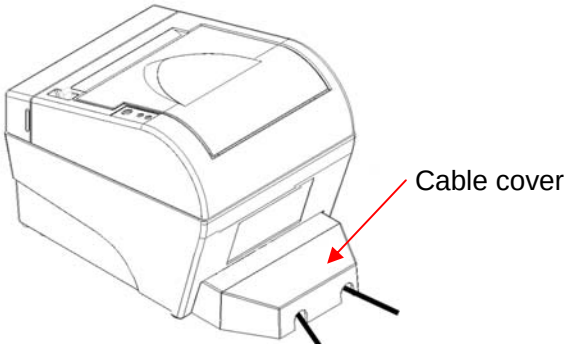
■ **The printer module has two buttons: MODE button and OK button.**

The HERALD has two modes, named "Operation" and "Setting". The operation mode is used for operating the HERALD; the settings mode is used for setting the light and sound signals of the HERALD. When the printer is switched on after connecting the HERALD, a test procedure will happen and the HERALD will give a short beep with a short light flash. This indicates that the HERALD is connected correctly and it is in the Operation mode.

8.5 Cable cover and Power adapter cover

1) Cable cover

This cover is used to tidy and protect interface cable which on the backside of the printer, so that the printer could be kept tidy and well during the printing.



2) Power adapter cover

This cover is used to install the AC power adapter under the printer, so that the power adapter would become an internal part of the printer (the power adapter will be inside of the printer).