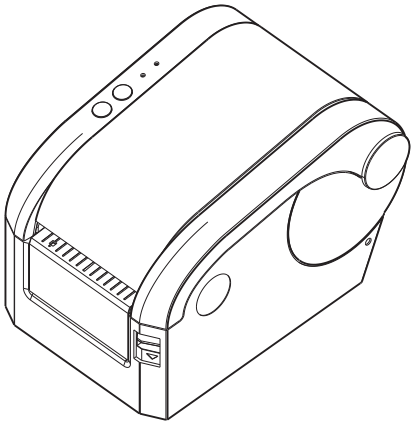
Gprinter®

User's Manual

Thermal Barcode Printers

GP-3120TN



Proficient in Commercial POS Receipt Printers

1. Introduction.....2
1.1 Safety Warning 2
1.2 Note 2
2. General Information 3
2.1 Introduction 3
2.2 Main Features 3
3. Printer Parts 3
4. Paper Roll Installation 5
5. Specification 8
5.1 Specification Table 9
6. Setting Up the Printer 10
6.1 Unpacking 10
6.2 Power Cable Connection 10
6.3 Data Cable Connection 10
6.4 Media Installation 10
7. Power On Utilities 10
7.1 Self-Test 10
7.2 Gap Sensor Calibration 11
7.3 Hexadecimal Dumping 12
7.4 Skip AUTO.BAS 12
7.5 Printer Initialization 13
8. Indicators and Buttons.....13
8.1 Indicators 13
8.2 Buttons 13
9. Maintenance 14
9.1 Printer Cleaning 14

1 、Introduction

Thanks for choosing our new thermal label printer GP-3120TN. This product provides reliable performance and high printing quality at economic price. With powerful functions and easy operation design, GP-3120TN is your best choice of thermal label printer.

⚠ **CAUTION, NOTE**

⚠ **CAUTION:** MUST COMPLY, OTHERWISE HUMAN GET HARM AND DEVICES DAMAGE.

⚠ **NOTE:** IMPORTANT INFOMATION AND TIPS FOR PRINTERS OPERATION.

SAFETY WARNING

PLEASE READ THE BELOW WARNINGS AND NOTES CAREFULLY BEFORE USING THE PRINTER.

1.1 SAFETY WARNING

⚠ **CAUTION:** THE PRINT HEAD IS A HEATED PART, PLEASE DO NOT TOUCH THE PRINT HEAD AND OTHER PARTS AROUND IT IN AND AFTER THE PRINTING PROCESS.

⚠ **CAUTION:** DO NOT TOUCH THE PRINT HEAD AND PLUG-IN PARTS TO AVOID PRINT HEAD DAMAGE.

⚠ **CAUTION:** DO NOT TOUCH THE PAPER TEAR-OFF KNIFE TO AVAOD GETTING HARM.

1.2. Safety Notice:

* Don't touch the printer head with anything.
* Don't touch the cutter blade.
* Don't bend the power cord excessively or place any heavy objects onto it.
* Don't use the printer when it is out of order. This can cause a fire or and electrocution.
* When connecting or disconnecting the plug, always hold the plug but not the cord.
* Keep the desiccant out of children's reach.
* Use only approved accessories and do not try to disassemble, repair or remodel it by yourself.
* Install the printer on the stable surface. Choose firm, level surface where avoid vibration.
* Don't let water or other foreign objects into the printer.
* Don't connect a telephone line into the peripheral drive connector.
* We recommend that you unplug the printer from the power outlet if no use it for a long period .

2 、General Information

2.1 Introduction

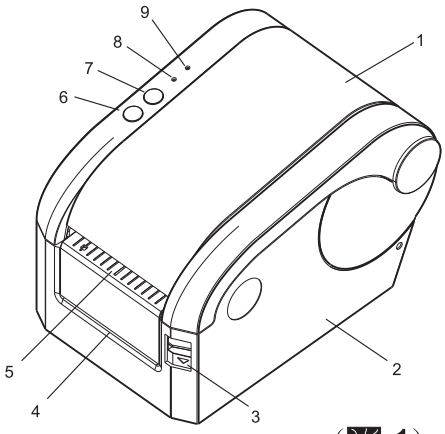
GP-3120TN is designed for real-time and batch label printing, which is applicable in the field of transportation, logistics, post, retail sale, and etc. The printer can be connected with other equipment with various interface cards, such as Parallel, Serial, USB and LAN. It supports different paper media, including thermal paper roll, thermal label paper and sticker paper.

The printer provides direct thermal printing at selectable printing speed of 2.0, 3.0, 4.0 and 5.0 inches per second. It accepts roll feed, die-cut and fan-fold labels. All common bar code formats are available. Font and bar codes can be printed in 4 directions and in 1 to 10 times enlargement size. High performance and efficiency of label printing save your time!

2.2 Main Features

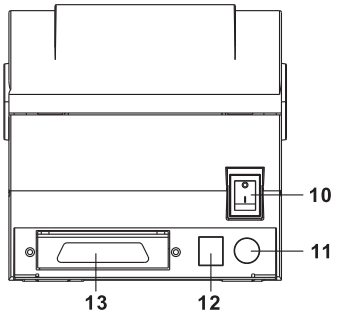
- Support thermal paper roll, thermal label paper and sticker paper.
- Support printing media width from 16mm to 82mm.
- Auto paper adjusting function.
- Auto temperature control for durable printing.
- Module design for different application.

3 、Printer Parts

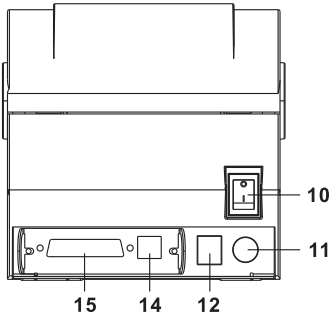


（ 1）

1- Top Cover **2-** Base housing **3-** Top Cover Open Button
4- Backing Paper Opening **5-** Label Opening **6-** Feed Button
7- Pause Button **8-** Error Indicator **9-** ONLINE/POWER Indicator

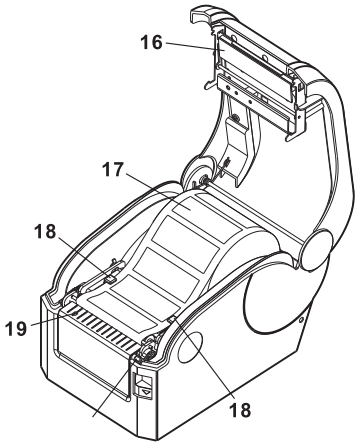


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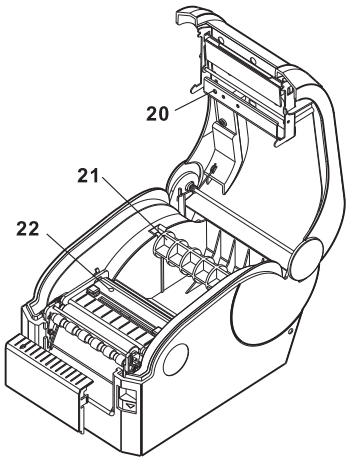


（ 3）

10- Power Switch **11-** Power Jack **12-** Cashdrawer Jack
13- Parallel Interface **14-** USB Interface **15-** Serial Interface



（ 4）

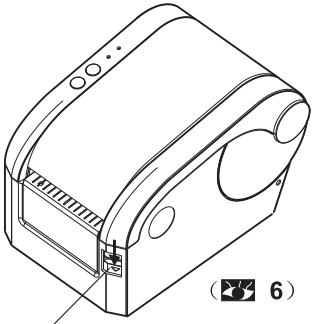


（ 5）

16- Print Head **17-** Paper Roll **18-** Label Guide **19-** Paper Presence Sensor
20- Light Transmission Sensor Light Source **21-** Paper Roll Spindle
22- Light Transmission Sensor Receiver

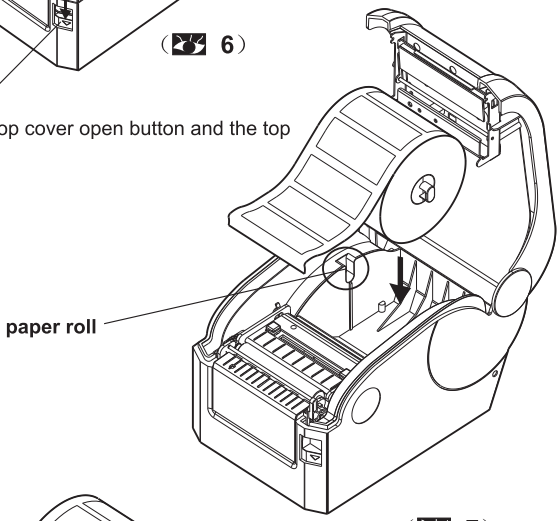
4. Paper Roll Installation

(1) Insert the paper roll spindle into a paper roll, and place the paper roll into the printer. Fixing tab on the paper roll spindle should be inside the internal paper roll mount. Adjust the paper roll spindle position with the paper roll mount.

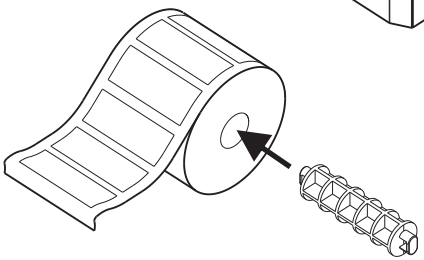


（ 6）

① Press the top cover open button and the top cover lift.



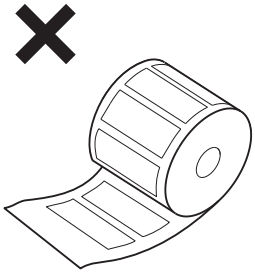
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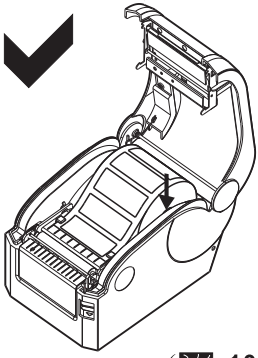
（ 8）

② Insert the paper roll spindle into the paper roll, and adjust the spindle position to make it in the center of the paper roll.

③ Place the paper roll into the internal paper roll mount. Please make sure the paper printing side face up as shown in the below photo.



（ 9）



（ 10）

SPECIFICATIONS

		Parameter
Print	Printing method	Direct Thermal
	Resolution	203DPI
	Print width	16-82mm
	Print speed	Max. 127mm/s; Min. 101mm/s
	Memory	DRAM: 2M FLASH: 2M
	Print head temperature sensor	Thermal Sensitive Resistance
	Print head position sensor	Microswitch
	Paper detection sensor	Photoelectricity sensor
	Interface	Serial+USB
Bar code Font Graphics	Bar code	CODE128, EAN128, ITF, CODE39, CODE93, EAN13, EAN13+2, EAN13+5, EAN8, EAN8+2, EAN8+5, CODABAR, POSTNET, UPC-A, UPCA+2, UPCA+5, UPC-E, UPCE+2, UPC-E+5, CPOST, MSI, MSIC, PLESSEY, ITF14, EAN14
	Internal font	FONT 0 to FONT 8 Simplified Chinese, Traditional Chinese and Korean
	Enlargement & rotation	1 to 10 times enlargement in both directions 0°, 90°, 270°, 360° rotation
	Graphics	Mono PCX and BMP files can be downloaded into FLASH and DRAM
Media	Media type	Continuous, sticker, fan-fold, etc
	Media width	16mm ~ 82mm
	Media diameter	Max. 85mm
	Media core diameter	Min. 25mm
	Paper off mode	Tear off
Power	Input	24V DC/2A
Environment condition	Work	5 ~ 45℃, 20 – 80%RH
	Storage	– 40 ~ 55℃, ≤93%RH（40℃）
Physical dimension	Diameter	220(L) x 150(W) x 150(H)mm
	Weight	1.5kg

The printer supports both continuous and non-continuous paper.

- Continuous type: Paper roll
- Non-continuous type:

  1) Label roll;

  2) Sticker paper.

6 . Setting Up the Printer

6.1 Unpacking

Please unpack the printer package, and inspect the parts according to the packing list. If any parts are missing or damaged, please contact the customer service of your purchased reseller or distributor.

6.2 Power Cable Connection

（ 20）



24V DC

1） Make sure the printer power switch is OFF;

2）The printer power jack is a 3-pin socket and for 24V DC power input. Please plug the DC cord connector into the printer's power jack properly.

⚠ CAUTION:

■ When connecting or disconnecting the plug, always hold the plug but not the cord.

■ Avoid pulling the power cord, otherwise any damages may cause a fire or electrocution.

■ Avoid placing the power cord around other over heated equipment to prevent power cord melting, which may cause a fire or electrocution.

■ We recommend that you unplug the printer from the power outlet if no use it for a long period

6.3 Data Cable Connection

1）Make sure the printer power switch is OFF.

2）Plug the data cable connector into the printer's interface properly.

3）Plug the other end of the data cable with the host computer.

⚠ CAUTION:

■ Please do not plug the data cable when the printer power is ON.

6.4 Media Installation

To install the sticker paper and label roll, please refer"4. Paper Roll Installation".

7 、Power On Utilities

There are five power-on utilities to set up and test printer hardware. These utilities are activated by pressing FEED button and PAUSE button.

7.1、 Self-Test

To start the printer self-test, please follow the below steps,

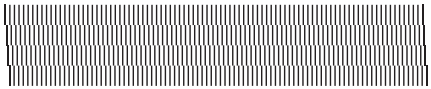
1. Turn off the printer power.

2. Make sure the paper roll is installed correctly and the printer top cover is closed.

3. Press the FEED button and turning on the printer power simultaneously. When the self-test paper (chart 21) comes out, release the FEED button.

Self-test Page Sample:

SELFTEST.....Self-test Mode



（ 21）

MODEL：GP3120TN.....Model name
VERSION：V1.0.....Firmware version
INTERFACE：PARALLEL.....Interface type
SPEED：4.....Print speed
DENSITY：7.....Print darkness
SIZE： 76 mm ， 30 mm .....Paper width
GAP： 0 mm ， 0 mm .....Gap distance
CODE PAGE：437 .....Code page
MILAGE（m）：1.6999999 .....Printed mileage (meter)
REFERENCE：0 mm ， 0 mm.....Reference offset
DIRECTION： 0 ， 0.....Print direction
SHIFT：0 .....Label print offset
OFFSET：0 .....Paper tear-off offset Printer functions

****

SET PEEL：OFF.....Peel-off mode
SET TEAR：ON.....Tear-off mode
SET HEAD：ON.....Cover opening sensor
SET PRINTKEY：OFF.....Press & print function
SET REPRINT：ON.....Auto reprint function
SET KEY1（FEED）：ON.....Feed button function
SET KEY2（PAUSE）：ON.....Pause button function
TAIWANESE BIG5：TST24.BF2.....Taiwanese
CHINESE GB2312：TSS24.BF2.....Chinese
KOREAN KSC5601：K.....Korean

button function

****

DRAM FILE： 0 FILE（S）
FLASH FILE： 0 FILE（S）
SECTOR SIZE： 4 KB
PHYSICAL DRAM： 2048 KBYTES
AVAILABLE DRAM： 1024 KBYTES FREE

PHYSICAL FLASH 2048 KBYTES
AVAILABLE FLASH 1024 KBYTES FREE

Numbers of download files
Physical & available memory space

7.2 Gap Sensor Calibration

Gap sensor sensitivity should be calibrated at the following conditions

1. A brand new printer
2. Label stock changed
3. Printer initialization

This function is to reset the label gap sensor sensitivity when the printer power is turned on. User needs to start the calibration of the gap sensor sensitivity after loading a different type of label roll or the printer is initialized.

Please follow the steps below to calibrate the gap sensor:

1. Turn off the printer power.

2. Make sure the label roll is installed correctly and the printer top cover is closed.

3. Press and hold on the PAUSE button, then turn on the printer power. The printer will automatically calibrate the gap sensor sensitivity and save the gap length into DRAM. After then release the PAUSE button.

7.3 Dump mode

Please follow the steps below:

1. Turn off the printer power.

2. Make sure the label roll is installed correctly and the printer top cover is closed.

3. Press and hold on the PAUSE button and FEED button, then turn on the printer power. When the POWER indicator (blue light) and ERROR indicator (red light) light simultaneously, release both buttons. The printer is changed to Dump Mode and print as below chart.

```
******************************
* NOW IN DUMP MODE *
******************************

 SELFTE   0A 53 45 4C 46 54 45
ST          53 54 0D 0A
```

（ 22）

Note: Printer will not print if data is not more than one piece of label, and need to press FEED button to force the printer to print it out.

7.4 Skip AUTO.BAS

User can download an auto execution file (AUTO.BAS) to flash memory. Printer will run the AUTO.BAS program immediately when turning on printer power. The AUTO.BAS program can be interrupted by the power-on utility.

Please follow the steps below to skip the AUTO.BAS:

1. Turn off the printer power.

2. Press and hold on the PAUSE button and FEED button, then turn on the printer power. When the POWER indicator (blue light) dims and ERROR indicator (red light) lights, release both buttons. The printer skips running the AUTO.BAS program. And then the POWER indicator lights.

7.5 Printer Initialization

Printer initialization is used to clear DRAM and restore printer settings to defaults. Please do the gap sensor sensitivity calibration after the printer initialization.

Please follow the steps below to initialize the printer:

1. Turn off the printer power.

2. Press and hold on the PAUSE button and FEED button, then turn on the printer power. When the POWER indicator (blue light) lights and ERROR indicator (red light) dims, release both buttons. The printer DRAM is cleared and printer settings are restored to defaults.

8. Indicators and Buttons

The printer has two indicators (POWER indicator in blue light and ERROR indicator in red light) and two buttons (PAUSE and FEED).

8.1 Indicators:

Item	Indicators Status	Descriptions
1	POWER indicator is ON ERROR indicator is OFF	Printer is powered on and in normal print mode.
2	POWER indicator flashes slowly (640ms) ERROR indicator is OFF	Printer is paused.
3	POWER indicator flashes fast (160ms) ERROR indicator is OFF	Printed label is peel-off but not taken off.
4	POWER indicator is OFF ERROR indicator flashes fast (160ms)	Printer cover is opened.
5	POWER indicator is OFF ERROR indicator flashes slowly (640ms)	Paper shortage or gap sensor calibrated error.
6	POWER indicator flashes fast (160ms) ERROR indicator flashes fast (160ms)	Printer overheated protection is activated. After 1 minute, the printer will check again the temperature of print head. If the temperature gets right, printer resumes working.

8.2 Buttons

Item	Functions	Descriptions
1	**Feed**	Press the FEED button when POWER indicator is on and ERROR indicator is off. It feeds the label to the beginning of the next label
2	**Pause**	Press the feed button during printing and the printing job is suspended.
3	**Self-test**	1. Turn off the printer power. 2. Make sure the paper roll is installed correctly and the printer top cover is closed. 3. Press the FEED button and turning on the printer power simultaneously. When the self-test paper comes out, release the FEED button.

4	**Gap sensor calibration**	1. Turn off the printer power. 2. Make sure the label roll is installed correctly and the printer top cover is closed. 3. Press and hold on the PAUSE button, then turn on the printer power. The printer will automatically calibrate the gap sensor sensitivity and save the gap length into DRAM. After then release the PAUSE button.
5	**Dump mode**	1. Turn off the printer power. 2. Make sure the label roll is installed correctly and the printer top cover is closed. 3. Press and hold on the PAUSE button and FEED button, then turn on the printer power. When the POWER indicator (blue light) and ERROR indicator (red light) light simultaneously, release both buttons. The printer is changed to Dump Mode.

9. Maintenance

9.1 Printer Cleaning

To ensure the printing quality, please proceed this maintenance section to keep your printer in good conditions and extend its life.

Please use one of following material to clean the printer:

Cotton swab

Lint-free cloth

Vacuum / Blower brush

100% ethanol

The cleaning process is described as following

Printer Part	Method
Print Head	1. Turn off the printer power before cleaning the print head. 2. Allow the print head to cool for at least one minute. 3. Use a cotton swab and 100% ethanol to clean the print head surface.
Platen Roller	1. Turn off the printer power. 2. Rotate the platen roller and use a cotton swab or lint-free cloth to wipe it thoroughly with 100% ethanol.
Exterior	Wipe it with water-dampened cloth.
Interior	Use a vacuum or blower brush to clean the dust.

Note:

■ Always turn off the printer power before cleaning the printer.

■ Do not touch print head by hand. Tweezers is not allowed to use for cleaning, otherwise the print head, platen roller or sensor may be damaged.

■ Please use 100% ethanol. DO NOT use medical alcohol, gasoline or acetone, which may damage the print head and platen roller.

■ Do the sensor calibration after cleaning the sensors.

■ Only turn on the printer and resume printing job after the ethanol volatilized.

WARNING:

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