Mobile Barcode Printer

Alpha-3R

Direct Thermal

Series Models

Alpha-3R

User Manual

www.tscprinters.com

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1 Introduction

Thank you very much for purchasing TSC barcode printer.

Print receipts and tickets on demand and on the go with TSC's Alpha-3R, a cost-effective 3-inch mobile receipt printer. The Alpha-3R printer is designed for durability, featuring an IP54-rated protective case to resist dust and water. It is comfortable to wear for a full shift without interfering with the user's tasks.

Through multiple interfaces (mini type USB 2.0, RS-232, Bluetooth, and 802.11 a/b/g/n Wi-Fi), users can connect Alpha-3R to a computer or smartphone and print clear easy-to-read receipts hour after hour.

This document provides an easy reference for operating this printer. TSC printers include the Windows labeling software for creating your label template. For system integration, the TSPL/TSPL2 printer programming manual or SDKs can be found on TSC website at: https://www.tscprinters.com.

1.1 Specifications

Model	Alpha-3R
Resolution	8 dots/mm (203 dpi)
Printing Method	Direct Thermal
Max. Print Speed	Up to 102 mm (4") per second
Max. Print Width	72 mm (2.83")
Max. Print Length	2,286 mm (90")
Enclosure	Plastic with rubber over-molded construction
Physical Dimension	116 mm (W) x 148 mm (H) x 70 mm (D) 4.57" (W) x 5.83" (H) x 2.75" (D)
Weight (Including Battery)	550 g (1.212 lbs)
Drop Specification	1.5 m (5 ft)
IP Rating	IP54 (with protective case)
Max. Roll Capacity	• Receipt: 57 mm (2.25") outer diameter • Label: 55 mm (2.16”) outer diameter
Processor	32-bit RISC CPU
Memory	• 8 MB SDRAM • 4 MB Flash memory
Connectivity	• mini USB 2.0 • 802.11 a/b/g/n Wireless (factory option) • Bluetooth (factory option) • RS-232 (user option)
Power	Two-cell, 7.4V DC, 2500mAh Li-ion rechargeable battery
User Interface	• 3 buttons (Power On/Off, Feed Paper, and Open Media Cover) • Battery status LED x3 • Printer status LED x1 • Wireless connection LED x1

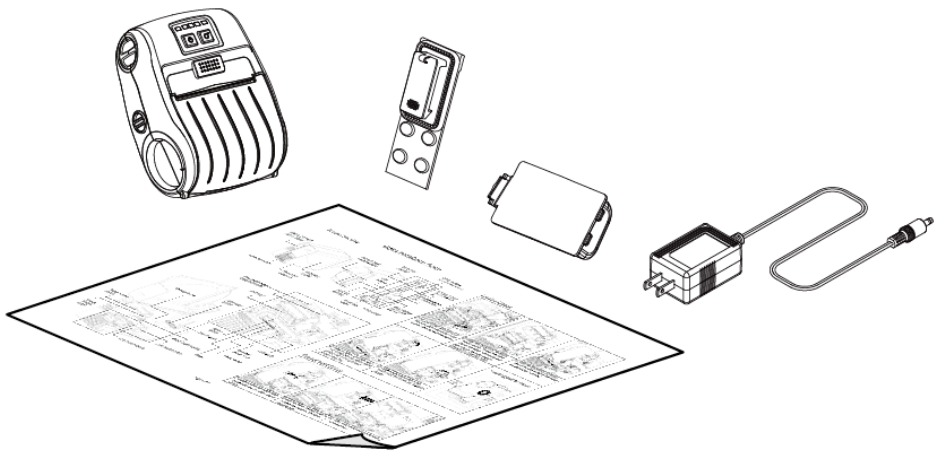
Model	Alpha-3R
Sensors	• Reflective sensor • Head open sensor
Internal Fonts	• 8 alpha-numeric bitmap fonts • One Monotype Imaging® CG Triumvirate Bold Condensed scalable font
Barcode	• 1D barcode Code 39, Code 93, Code128UCC, Code128 subsets A.B.C, Codabar, Interleave 2 of 5, EAN-8, EAN-13, EAN-128, UPC-A, UPC-E, EAN and UPC 2(5) digits add-on, MSI, PLESSEY, POSTNET, China POST, GS1 Data bar • 2D barcode PDF-417, Maxicode, DataMatrix, QR code, Aztec
Printer Language	TSPL-EZ (EPL2, ZPL2), ESC-POS or CPCL emulation
Media Type	Receipt paper, receipt paper with black mark in printing side & selected label
Media Width	• Receipt: 50.8 mm - 80 mm (2" - 3.15") • Label: 50.8 mm - 78 mm (2" - 3.07")
Media Thickness	• Receipt: 0.0508 mm - 0.1016 mm (2 mil - 4 mil) • Label: Up to 0.14 mm (5.5 mil)
Media Height	Label: Min. 25.4 mm (1")
Environment Condition	• Operation: -10°C to 50°C (-14°F to 122°F), 10% - 90% non-condensing • Storage: -40°C to 60°C (-40°F to 140°F), 10% - 90% non-condensing
Accessories	• Quick start guide x1 • Belt clip x1 • Li-ion battery x1 • Power adaptor x1
Factory Options	• 802.11 a/b/g/n Wi-Fi • Bluetooth • MFi Bluetooth

Model	Alpha-3R
User Options	• Mini type USB 2.0 • USB to RS-232 converter cable • Li-ion battery • 1-slot battery charger • 4-slot battery charger • IP54-rated protective case with shoulder strap • 12-24V DC vehicle power adaptor • 12-60V DC vehicle power adaptor • 12-60V DC vehicle open end power adaptor

2 Unpacking and Inspecting

The printer has been specially packaged to withstand damage during shipment. Retaining the packaging materials is recommended in case you need to ship the printer. When unpacking, ensure that you have received all the following items:

- Barcode printer x1
- Li-ion battery x1
- Quick installation guide x1
- Auto-switching AC adapter x1
- Belt clip x1



NOTE: If anything is missing or damaged, please contact the customer service department of your reseller or distributor.

3 Getting to Know Your Printer

3.1 Front View

1. Media cover release button
2. Feed button
3. LED indicators
4. Media cover
5. Power on/off button
6. Media holder adjustment knob

3.2 Inner View

1. Platen roller
2. Media holder
3. Tear bar
4. Printhead
5. Black mark sensor

3.3 Bottom & Rear View

1. Li-ion Battery
2. Battery clasp
3. USB interface
4. Interface cover
5. Power jack socket

4 Setting up the Printer

4.1 Installing the Battery

1. Install the battery into its compartment as indicated.

2. Press down the battery to lock the battery in place.
   WARNING: DO NOT throw the battery in fire. DO NOT short circuits the battery terminals. DO NOT disassemble the battery.
   NOTE: Follow the regulations in your region/country when disposing the battery.

4.2 Charging the Battery

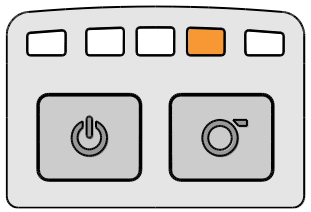
It takes about 2 to 3 hours to fully charge the battery for the first time. The battery lifetime is about 300 charge/discharge cycles.

The battery's normal working temperature is from 0°C to 40°C (32°F to 104°F). The device and battery charger are designed to charge battery in a safe and optimized manner. If charging the battery at high temperatures, e.g. approximately 40°C (104°F), or charging the battery with printer being turned on, the printer or battery charger may stop charging for a period of time to maintain the battery at acceptable temperatures.

4.2.1 Battery Installed in the Printer

1. Open the interface cover and then insert the supplied power connector into the power jack socket.

2. Insert the power plug into the power outlet socket.
   IMPORTANT: Before inserting the power cable connector into the socket, please turn off the printer. DO NOT remove the battery from the printer when charging the battery; otherwise, you need to remove and re-insert the power cable.



The battery status LED will remain solid amber until the battery reaches fully charged. Once fully charged, the LED will turn off and the printer will automatically stop charging.

4.2.2 Charging via the Battery Charger Station (optional)

1. Insert the power cable connector into the power jack socket on the charger station.

2. Install the battery in the charger station.

3. Insert the power plug into a power outlet socket.

Charger LED Status	Description
Green / Solid	Battery is fully charged.
Red / Solid	Battery is charging.
Red / Blinking	charging error
Off	No battery
	Battery is fully charged and is not removed from the charger after 2 hours.

4.2.3 Charging via the Vehicle Power Adapter (optional)

1. Open the interface cover and then insert the power cable connector into the power jack socket on the printer.

2. Insert the vehicle power adapter into cigarette lighter socket on your car.

4.3 Setting up the Connection

4.3.1 Wired Connection

USB to USB Cable

1. Open the printer's interface cover.
2. Insert the mini USB connector to the printer.
3. Insert the other end of the USB cable to your computer.

USB to RS-232 Cable

1. Open the printer's interface cover.
2. Insert the mini USB connector to the printer.
3. Insert the RS-232 connector to your computer.

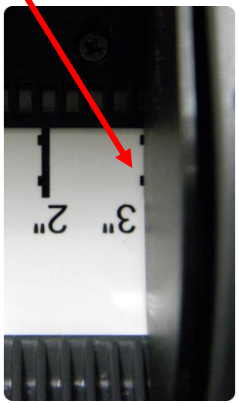
4.3.2 Connection via Bluetooth (optional)

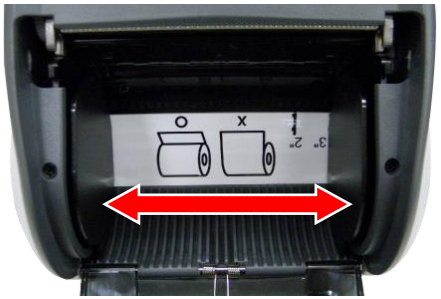
Default	
Name	RF-BHS
PIN	0000

Refer to the section "**Setting up Bluetooth**" to configure Bluetooth for the printer.

4.4 Loading the Media

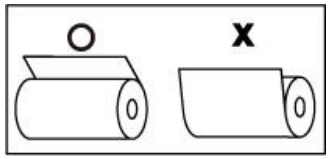
1. Press the media cover release button to open the media cover.





2. Rotate the knob to separate the media holders based on the width of the media ensuring that the media holder overlaps the black line.
   NOTE: The media holder must NOT overlap the two dots on the black line.

3. Load the media as illustrated and then pull out the media until the media extends out of the tear edge.



4. Press to close the media cover.
5. Use TSC Console utility to perform a calibration for the media in use.

NOTE: Performing a calibration is required when using other types of labels or loading a new media roll.

5 Using Accessories

5.1 Installing the Belt Clip

1. Thread the belt clip through under the bar on the rear side of the printer.

2. Align and press the snap buttons to secure the belt clip in place.

5.2 Using the IP54 Case with Shoulder Strap (optional)

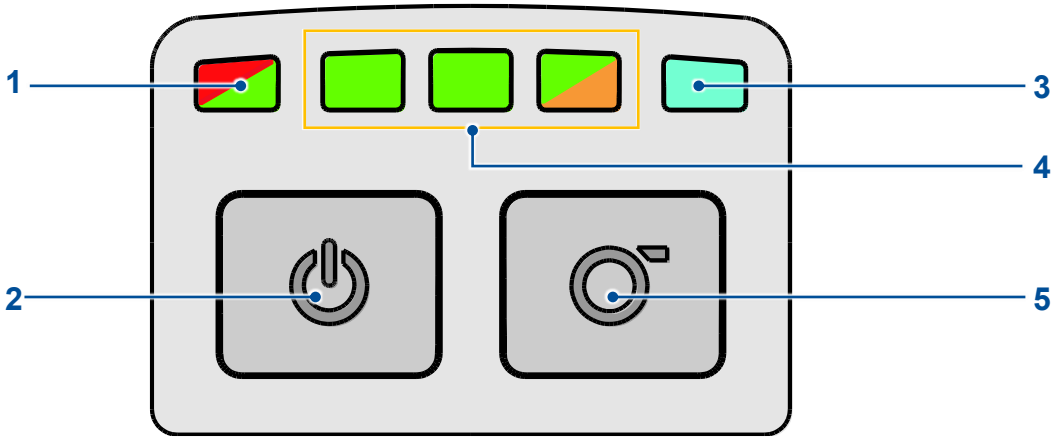
1. Open the case cover.

2. Slide the printer into the case.

3. Open the transparent cover and print your labels.

6 Operator Interface

6.1 LED Indicators and Buttons



No.	Name & Icon	Status	Description
1	Printer status LED	Off	The printer is turned on and ready.
		Green (blinking)	The printer is in pause state.
		Red (solid)	The media cover is opened.
		Red (blinking)	The printer is encountering errors.
2	Power button	• When the printer is turned off, press and hold for 2 - 3 seconds to turn on the printer. • When the printer is on, press and hold for 2 - 3 seconds to turn off the printer.	
3	Wireless connection status LED	Blue (solid)	The wireless connection is ready.
		Blue (blinking)	The wireless device is communicating.

No.	Name & Icon	Status		Description
4	Battery status LED	Green (blinking)		The battery power is low. Please recharge the battery.
		Amber (solid)		The battery is charging.
		Green (solid)		Indicates that the battery power level is 100%.
				Indicates that the battery power level is 66%.
				Indicates that the battery power level is 33%.
5	Feed / Pause button	• When the printer is ready, press to feed one label. • When the printer is printing, press to pause the print activities. When the printer is paused, press to resume the print activities.		

6.2 Power-on Utilities

The printer features a set of utilities which provides quick access to the printer's mostly used functions.

Follow the procedures below to launch the power-on utilities and select the function you need.

1. Turn off the printer.
2. Press and hold and then press the power button to turn on the printer. Keep holding . The LED indicator on the control panel will start blinking in a sequence of patterns that indicates which function is going to be activated.
3. When the LED indicator blinks in the pattern which indicates the function you need, release . The Power-on Utilities will run the function you select.

The table below describes the sequence of the patterns and their corresponding functions.

LED Color & Pattern / Sequence & Function		(Solid)	(5 blinks)	(5 blinks)	(5 blinks)	(solid)
1	Media Sensor Calibration		release			
2	Self-Test and enters Dump Mode.			release		
3	Factory Default				release	

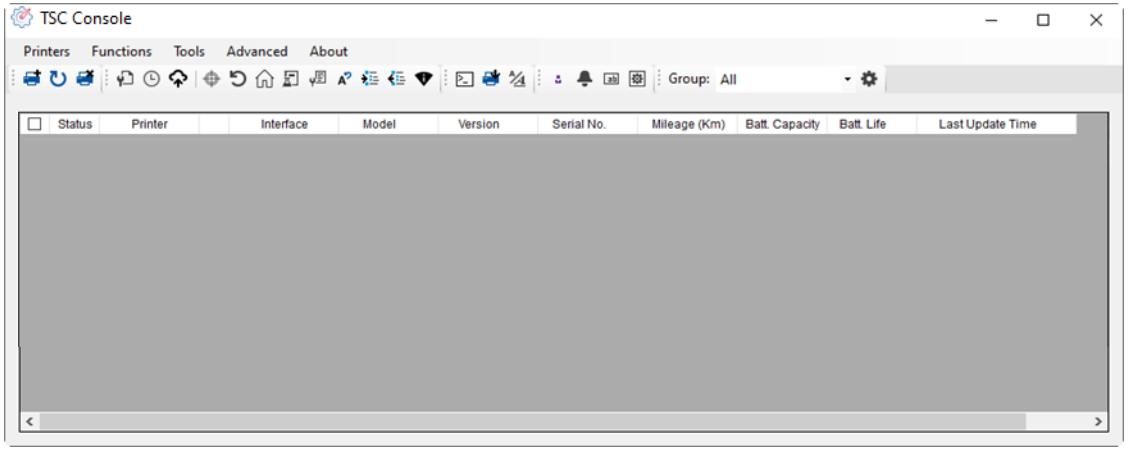
7 TSC Console

Designed especially for the TSC printers, **TSC Console** enables users to deploy, manage, monitor, and troubleshoot both wired or wireless connections to one or a group of printers. **TSC Console** lowers IT costs and increases printer uptime with convenient out-of-the-box installation and a simplified Windows graphical user interface. It enhances robustness through integrated management capabilities and ensures that printers are available, reliable, and serviceable at all times.

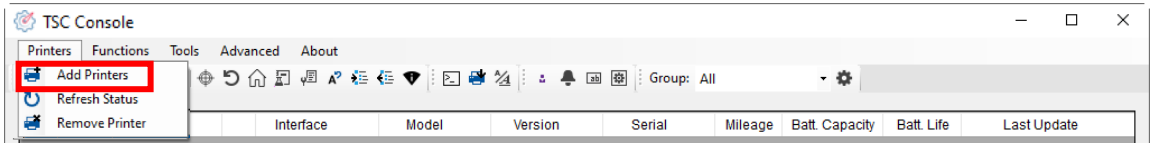
7.1 Launching TSC Console

Follow the steps below to launch **TSC Console**:

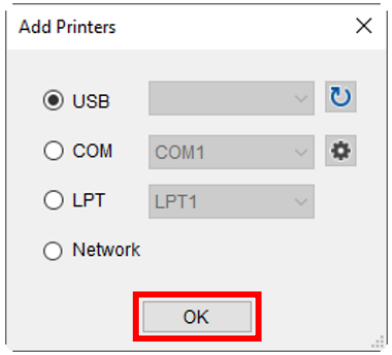
1. Double click the **TSC Console** icon on the desktop of your computer to launch **TSC Console**. After launching **TSC Console**, the following screen will appear.



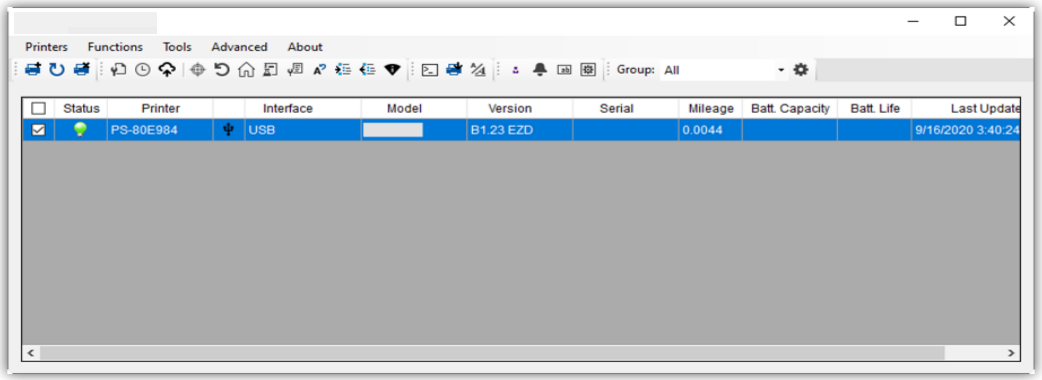
2. Select **Printers > Add Printers** to add the new printer to the **TSC Console** main page.



3. Select the connection based on how the printer is connected to your computer and then select **OK** to add the printer.
   NOTE: The image below shows that the printer is connected to a computer via the USB cable.



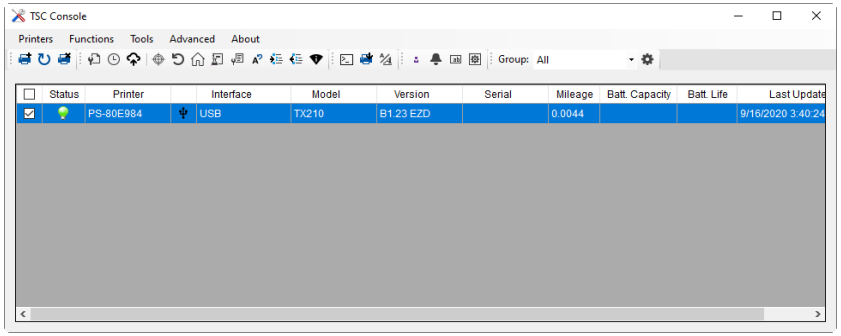
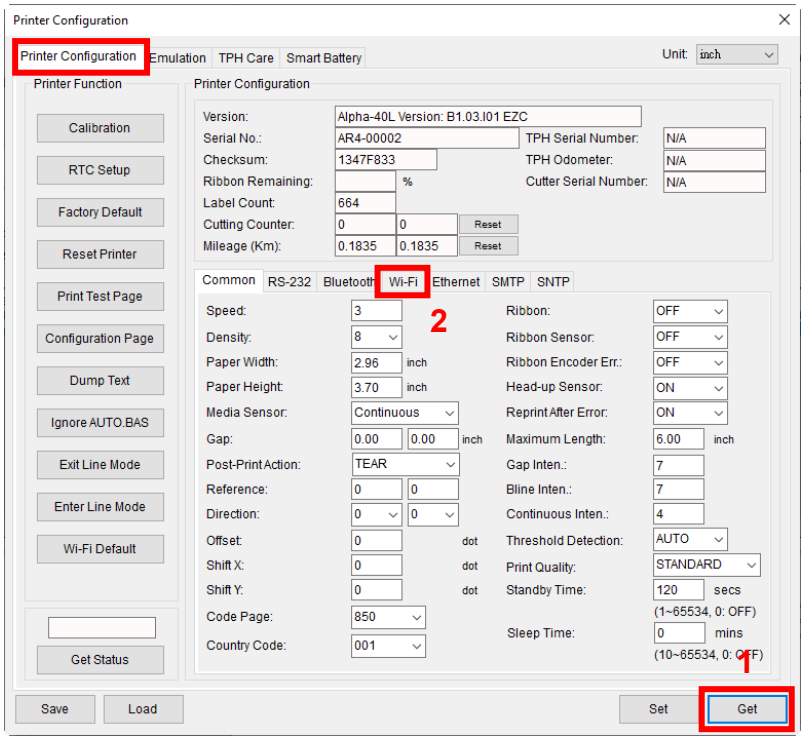
4. Select and start configuring the printer.



NOTE: You may refer to **TSC Console Programming Manual** for further information.

7.2 Adding Wi-Fi Interface

It allows users to add Wi-Fi interface to the **TSC Console** main page and enables users to control the printer through a wireless network. Follow the steps below to add Wi-Fi interface to the **TSC Console** main page:

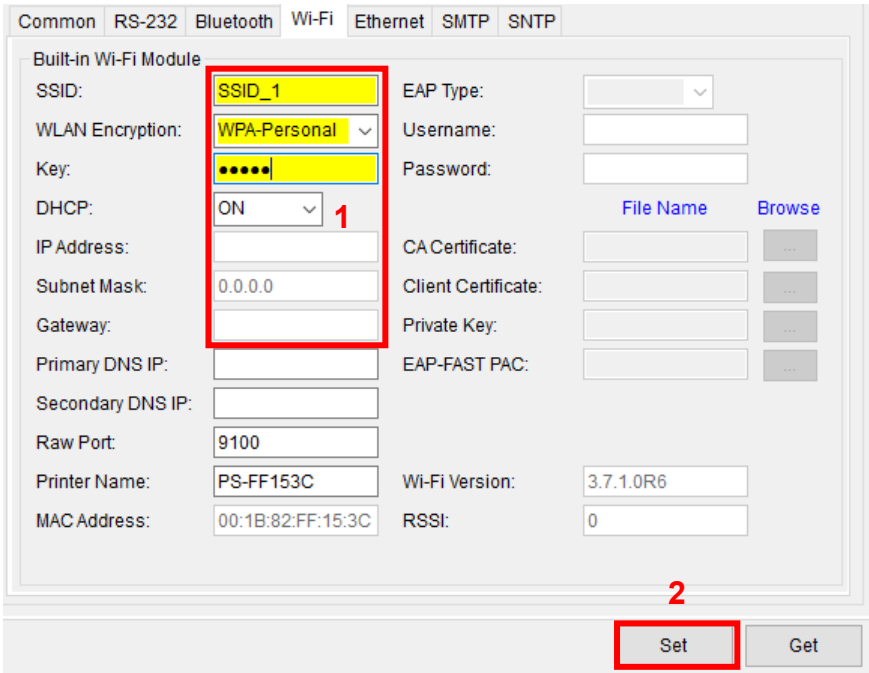
1. Add the printer to the **TSC Console** main page via the USB port or COM port. 2. Double click the printer you want to configure to open the **Printer Configuration** page.	
3. When the **Printer Configuration** page appear, select **Get** to retrieve the printer's information. 4. Select the **Wi-Fi** tab to open the configuration menu for Wi-Fi.	

When using the WPA-Personal encryption:

(1) Enter the network name in the **SSID** field.
(2) Select **WPA-Personal** in the **WLAN Encryption** field.
(3) Enter the Wi-Fi network password in the **Key** field.
(4) Set **DHCP** to **ON**. If **DHCP** is set to **OFF**, you need to specify information for the **IP Address**, **Subnet Mask**, and **Gateway** fields.
(5) Select **Set** to finish the configuration.

NOTE: The fields marked in yellow indicate that information in the fields have been changed before selecting **Set** to finish the configuration.

NOTE: Users are also allowed to change the name for the printer and raw port in the **Printer Name** field and **Raw Port** field.

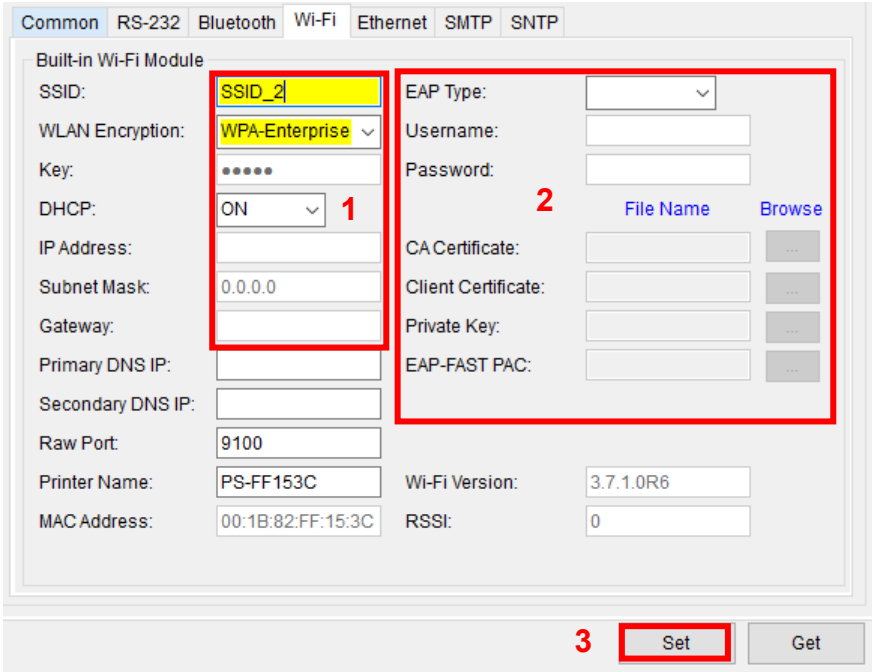


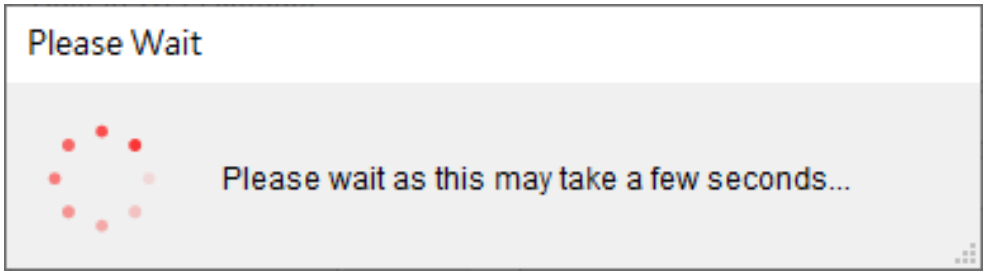
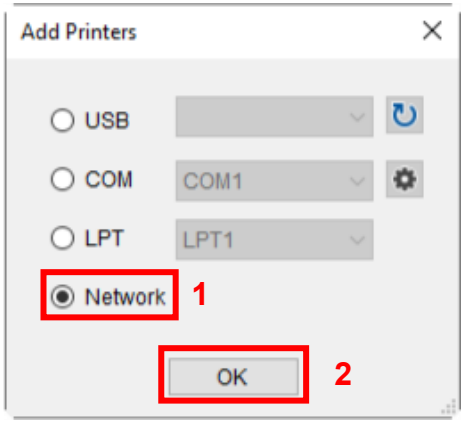
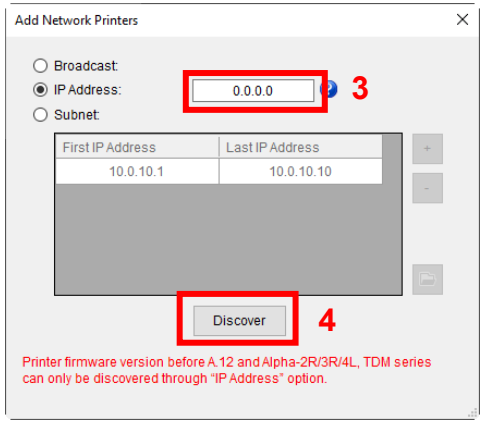
When using the WPA-Enterprise encryption:

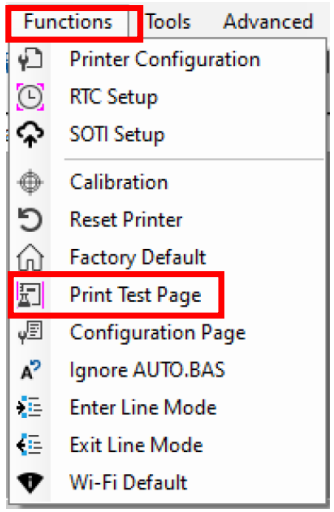
(1) Enter the network name in the **SSID** field.
(2) Select **WPA-Enterprise** in the **WLAN Encryption** field.
(3) Set **DHCP** to **ON**. If **DHCP** is set to **OFF**, you need to specify information for the **IP Address**, **Subnet Mask**, and **Gateway** fields.
(4) Select EAP type in the **EAP Type** field.
(5) Upload certificate and key for the **CA Certificate**, **Client Certificate**, and **Private Key** field respectively.
(6) Select **Set** to finish the configuration.

NOTE: The fields marked in yellow indicate that information in the fields have been changed before selecting **Set** to finish the configuration.

NOTE: Users are also allowed to change the name for the printer and raw port in the **Printer Name** field and **Raw Port** field.



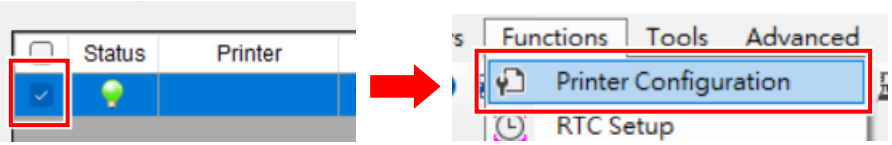
5. After selecting **Set** to finish the configuration, the message will appear on the screen and the printer will re-start automatically.	
6. After the printer re-starts, the Wi-Fi IP address will appear in the **IP address** field. **NOTE:** The IP address should appear in the field from 5 to 15 seconds after the printer re-starts. If the IP address does not appear, initialize the printer's Wi-Fi module and then re-configure the Wi-Fi connection.	
7. Remove the interface cable. 8. Go to the **TSC Console** main page, select **Printers > Add Printers** and then select **Network** to add the printer.	 

9. Go to the **TSC Console** main page. 10. Select and then double click the printer. 11. Select **Functions > Print Test Page** to check if you can print the test page via the Wi-Fi connection.	

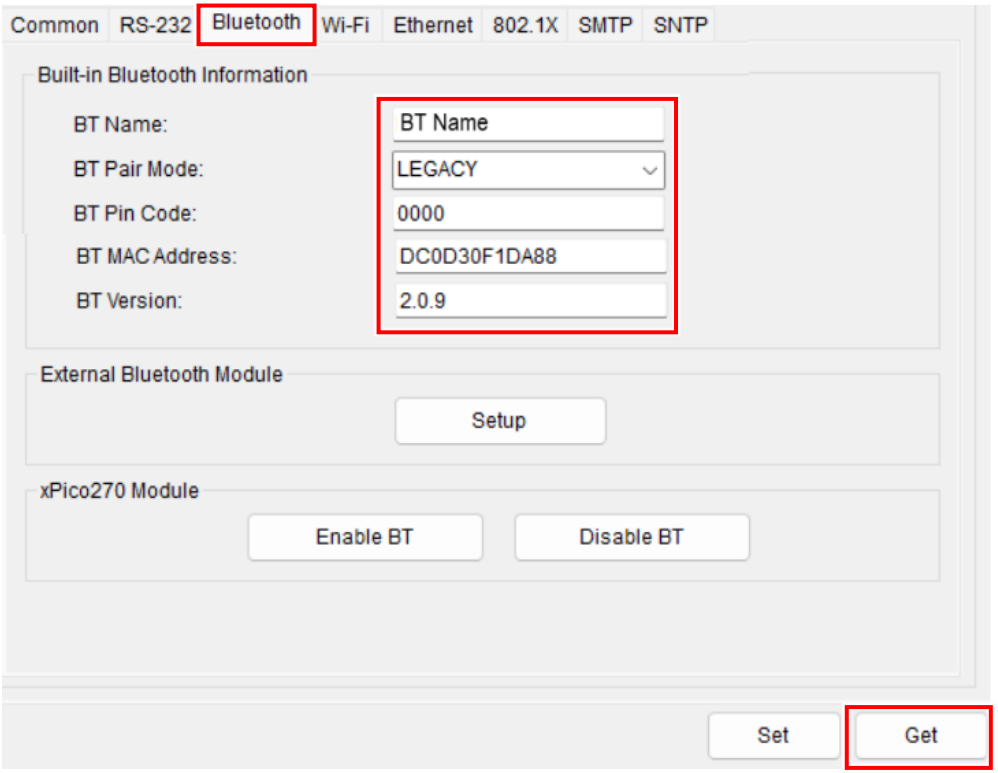
7.3 Configuring Bluetooth

Follow the steps below to configure Bluetooth for your printer:

1. Add the printer to the **TSC Console** main page via the USB port or COM port. For how to add the printer to the **TSC Console** main page, please refer to Launching TSC Console.
2. Double click the printer you want to configure to open the **Printer Configuration** page.

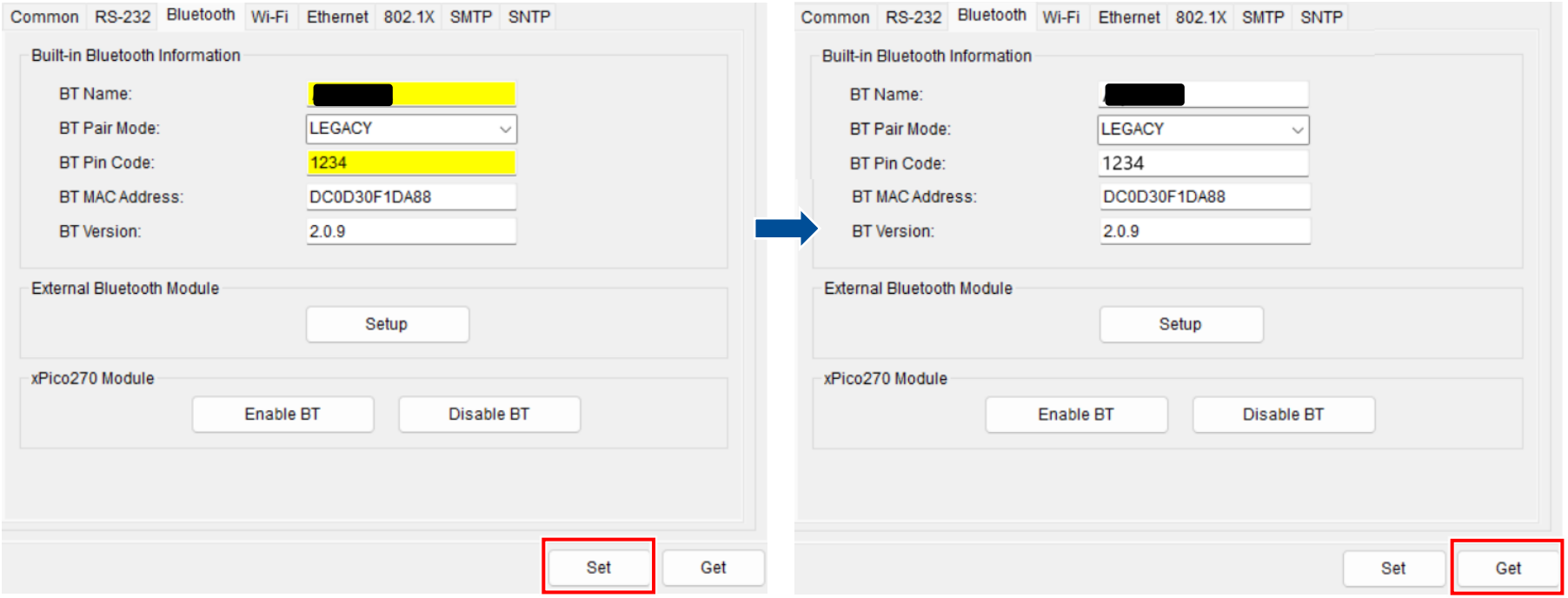


3. Select the **Bluetooth** tab. Press the **Get** button to read the Bluetooth configuration.



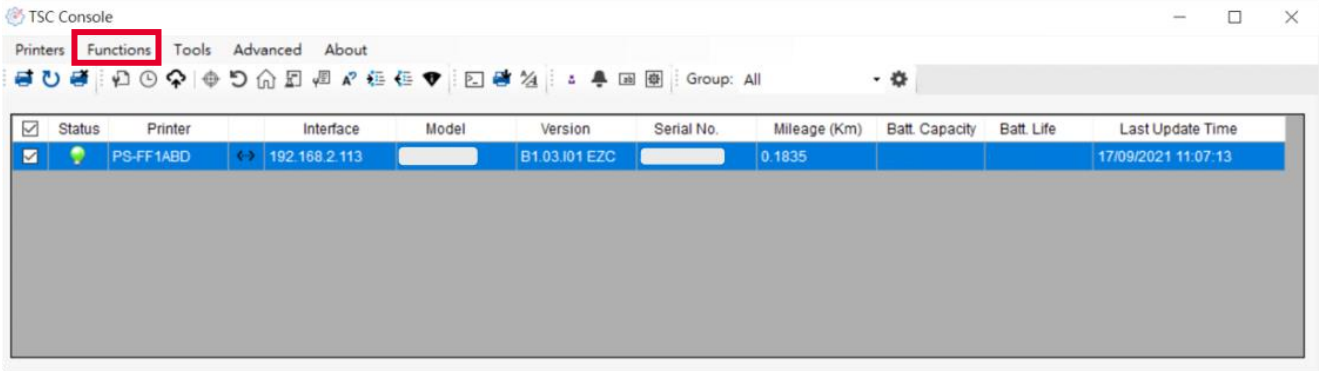
4. Enter the new Bluetooth local name or Bluetooth PIN code in the field. The field will be marked in yellow when the value is revised.

5. Press the **Set** button to set the new Bluetooth name or Bluetooth PIN code.
   Press the **Get** button to confirm that the new settings have been correctly written into the printer.

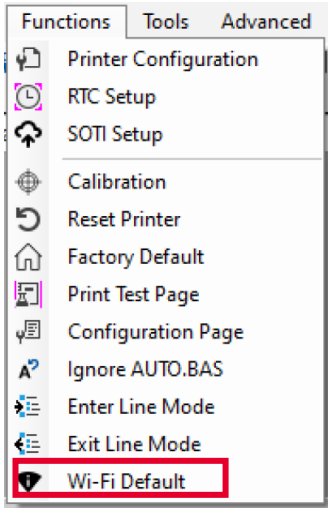


7.4 Initializing Printer's Wi-Fi Settings

1. Go to the **TSC Console** main page.
2. Select the **Functions** tab.

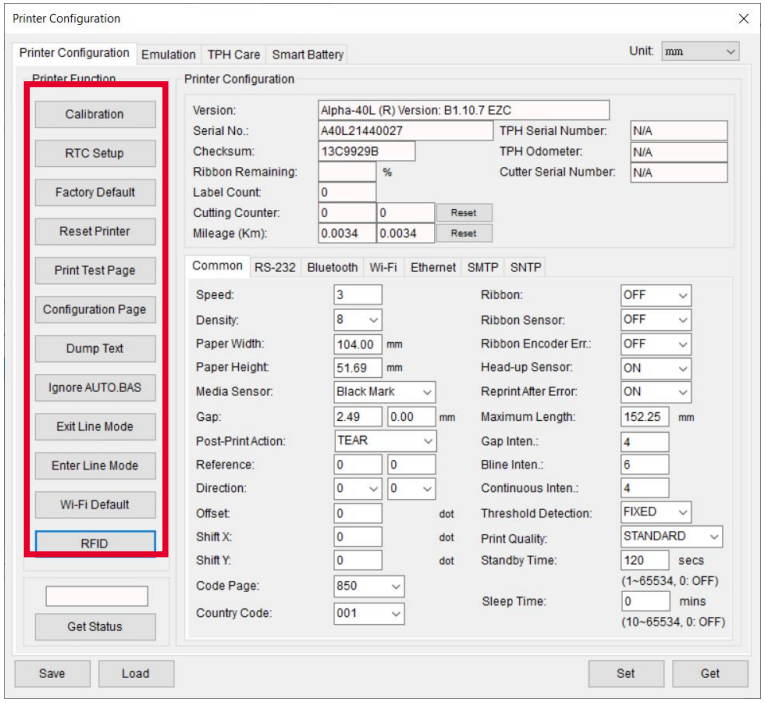


3. Select **Wi-Fi Default** to restore the Wi-Fi settings to factory default values.



7.5 Printer's Main Functions

The function buttons are located on the left side of the **Printer Configuration** page. You can use the function buttons to manage and configure the printer.



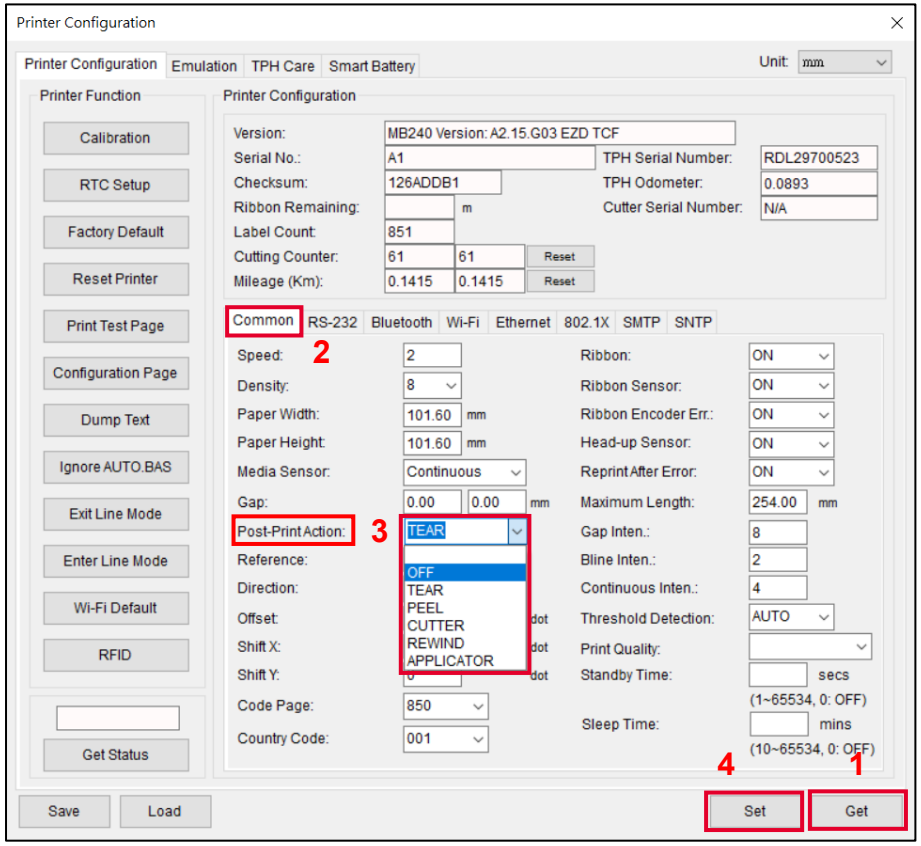
Item	Description
Calibration	Detects the media type and label size.
RTC Setup	Synchronizes the printer with the real time clock on the computer.
Factory Default	Restores the printer's settings to factory default values.
Reset Printer	Re-starts the printer.
Print Test Page	Prints test page based on the specified label size and sensor type.
Configuration Page	Prints the printer's configurations.
Dump Text	Activates Dump Mode.
Ignore AUTO BAS	Ignores the AUTO BAS file when the printer boots up.
Exit Line Mode	The printer will leave line mode and enter page mode.
Enter Line Mode	The printer will leave page mode and enter line mode.
Wi-Fi Default	Restores the Wi-Fi settings to factory default values.

7.6 Configuring Optional Kits

If you install an optional kit on the printer, such as cutter, peeler, or media rewinder, you need to configure the kit after finishing the calibration so that the kit works properly.

To configure the kit:

1. Add the printer to the **TSC Console** main page via the USB port or COM port.
2. Set up the wired or wireless connection between the printer and your computer.
3. Double click the printer you want to configure on the **TSC Console** main page to enter the **Printer Configuration** page.
4. Select **Get** to get printer's information.
5. Select the **Common** tab.
6. In the drop-down list for the **Post-Print Action** field, select the corresponding item based on what kind of kit you have installed on the printer.
7. Select **Set** to finish the configuration.



8 Troubleshooting

Problem	Possible Cause	Recovery Procedure
Power indicator or display does not illuminate.	▪ The battery is not properly installed. ▪ No power.	▪ Re-install the battery. ▪ Recharge or replace battery as necessary.
The printer has no response.	▪ The interface cable is not connected to the interface port. ▪ The host device and printer is not connected via the Wi-Fi network or Bluetooth. ▪ The port specified in the Windows driver is not correct	▪ Re-connect the interface cable or try another interface cable. ▪ Re-configure the Wi-Fi network or Bluetooth and connect again. ▪ Select correct port in the driver. ▪ Check your program ensuring that you enter the PRINT command at the end of the file and there must be CRLF at the end of each command line.
The printer prints blank labels.	▪ The media roll is not loaded correctly. ▪ The media type is not correct.	▪ Follow the instructions to re-load the media roll. ▪ Use thermal type paper.
“Carriage Open” appears on the display.	The media cover is open.	Close the media cover.
“Out of Paper” appears on the display.	▪ Media is used up. ▪ The media roll is not properly installed. ▪ Black mark sensor is not calibrated.	▪ Install a new media roll. ▪ Re-install the media roll. ▪ Calibrate the black mark sensor.
“Paper Jam” appears on the display.	▪ Gap sensor or black mark sensor is not correctly configured. ▪ Media size is not correct. ▪ Labels may be stuck in the printhead mechanism.	▪ Calibrate the black mark sensor. ▪ Check if the media in use is applicable. ▪ Check if the printhead mechanism is clear of labels.
I cannot download files to printer’s memory (FLASH / SD card).	▪ The FLASH memory or SD card is full. ▪ The SD card is damaged. ▪ SD card is not correctly inserted.	▪ Delete files you do not need from the FLASH memory or SD card. ▪ Eject and insert the SD card again. ▪ Try another SD card. ▪ Check if the SD card is in supported format and capacity.

Problem	Possible Cause	Recovery Procedure
Poor Print Quality	▪ Media is not loaded correctly. ▪ Dust or adhesive accumulation on the printhead. ▪ Print density is not properly configured. ▪ Media type is not compatible. ▪ Printhead element is damaged.	▪ Reload the media. ▪ Clean the printhead and platen roller. ▪ Adjust the print density and print speed. ▪ Run printer self-test and check the printhead test pattern if there is dot missing in the pattern. ▪ Use proper media type.
Missing printing on the left or right side of label	Wrong label size configuration	Set the correct label size.
Gray line on the blank label	▪ The printhead is dirty. ▪ The platen roller is dirty.	▪ Clean the printhead. ▪ Clean the platen roller.
Irregular printing	The printer is in Hex Dump mode.	Turn off and on the printer to skip the dump mode.
Skip labels when printing	▪ The label size is not properly configured. ▪ Sensor is not configured properly. ▪ The media sensor is dirty.	• Check if the label size is correct. • Calibrate the sensor using Auto Gap or Manual Gap options. • Clean media sensor using a blower.
RTC time is not correct when rebooting the printer.	The RTC battery has no power.	Check the RTC battery.

9 Maintenance

This section provides cleaning and maintenance procedures.

Cleaning:

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the print head and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

Disinfecting:

Disinfecting the printer helps protect yourself and other users and helps prevent virus from spreading.

IMPORTANT:

- Set the printer power switch to O (Off) prior to performing any cleaning or disinfecting tasks. Leave the power cord connected to keep the printer grounded and to reduce the risk of electrostatic damage.
- Do not wear rings or other metallic objects while cleaning any interior area of the printer.
- Use only the cleaning agents recommended in this document. Use of other agents may damage the printer and void its warranty.
- Do not spray or drip liquid cleaning solutions directly into the printer. Apply the solution on a clean lint-free cloth and then apply the dampened cloth to the printer.
- Do not use canned air in the interior of the printer as it can blow dust and debris onto sensors and other critical components.
- Only use a vacuum cleaner with a nozzle and hose that are conductive and grounded to drain off static build up.
- All reference in these procedures for use of isopropyl alcohol requires that a 99% or greater isopropyl alcohol content be used to reduce the risk of moisture corrosion to the printhead.
- Do not touch printhead by hand. If you touch it careless, please use 99% Isopropyl alcohol to clean it.
- Always taking personal precaution when using any cleaning agent.

9.1 Cleaning Supplies

The following supplies are recommended for cleaning the printer:

- Cotton swab
- Lint-free cloth
- Brush with soft and non-metallic bristles
- Vacuum cleaner
- 75% Ethanol used for disinfection
- 99% Isopropyl alcohol used for cleaning the printhead and platen roller
- Genuine printhead cleaning pens
- Chlorine free detergents

9.2 Cleaning Procedures

Component	Method	Recommended Cleaning Schedule
Printhead	1. Power off the printer before cleaning the printhead. 2. Leave the printhead to cool down for at least one minute. 3. Wet a cotton swab with the 99% Isopropyl alcohol and then wipe across the printhead head. You can also use the genuine printhead cleaning pen to clean the printhead.	Clean the printhead when you load new media.
Platen Roller	1. Power off the printer. 2. Use a piece of 99% Isopropyl alcohol saturated lint-free cloth to wipe the platen roller while rotating the platen roller.	Clean the platen roller when you load new media.
Peel Bar	Use a piece of 99% Isopropyl alcohol saturated lint-free cloth to wipe the peel bar.	Clean as needed.
Sensor	Use the brush with soft and non-metallic bristles or vacuum cleaner to remove the dust or particles in order to optimize the print quality or sensor calibration.	Clean the sensor monthly.
Exterior	Use a piece of water-dampened lint-free cloth to wipe the surface. If necessary, you can apply the chlorine free detergent. After finishing cleaning, use the 75% ethanol to disinfect the surface.	Clean as needed.
Interior	Use the brush with soft and non-metallic bristles or vacuum cleaner to remove the dust or particles. After finishing cleaning, use the 75% ethanol to disinfect the interior.	Clean as needed.

10 Agency Compliance and Approvals

2014/30/EU(EMC), 2014/35/EU(LVD), 2011/65/EU(RoHS 2.0)

EN 55032 Class B

EN 55024

EN61000-3-2:2014

EN61000-3-3:2013

EN 60950-1

FCC part 15B, Class B

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/ TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This Class B digital apparatus complies with Canadian ICES-003

Cet appareil numérique de la classe B est conforme à la norme NMB**-003 du Canada.**

	AS/NZS CISPR 22 Class B AS/NZS CISPR 32 Class B
	10 C.F.R. Section 430.23(aa) (Appendix Y to Subpart B of part 430)
	TP TC 004/2011 TP TC 020/2011
	LP0002
	KN 32/35
	IS 13252(Part 1)/ IEC 60950-1

Important safety instructions:

1. Read all of these instructions and keep them for later use.
2. Follow all warnings and instructions on the product.
3. Disconnect the power plug from the AC outlet before cleaning or if fault happened.
   Do not use liquid or aerosol cleaners. Using a damp cloth is suitable for cleaning.
4. The mains socket shall be installed near the equipment and easily accessible.
5. The unit must be protected against moisture.
6. Ensure the stability when installing the device, Tipping or dropping could cause damage.
7. Make sure to follow the correct power rating and power type indicated on marking label provided by manufacture.
8. Please refer to user manual for maximum operation ambient temperature.

WARNING:

Hazardous moving parts, keep fingers and other body parts away.

CAUTION:

(For equipment with RTC (CR2032) battery or rechargeable battery pack)

Risk of explosion if battery is replaced by an incorrect type.

Dispose of used batteries according to the Instructions as below.

1. DO NOT throw the battery in fire.
2. DO NOT short circuit the contacts.
3. DO NOT disassemble the battery.
4. DO NOT throw the battery in municipal waste.
5. The symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

Caution: The printhead may be hot and could cause severe burns. Allow the printhead to cool.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

CE Statement:

This equipment complies with EU radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator & your body.

All operational modes:

2.4GHz: 802.11b, 802.11g, 802.11n (HT20), 802.11n (HT40)

5GHz: 802.11a,

The frequency, mode and the maximum transmitted power in EU are listed below:

2400 MHz – 2483.5 MHz: 19.88 dBm (EIRP)

5150 MHz – 5250 MHz: 17.51 dBm (EIRP)

5150-5350MHz for Only indoor use

5470-5725MHz for indoor/outdoor use

Restrictions In AZE

National restrictions information is provided below

Frequency Band	Country	Remark
5150-5350MHz	**Azerbaijan**	**No license needed if used indoor and power not exceeding 30mW**
5470-5725MHz		

Hereby, TSC Auto ID Technology Co., Ltd. declares that the radio equipment type [Wi-Fi] IEEE 802.11 a/b/g/n is in compliance with Directive 2014/53/EU

The full text of the EU declaration of conformity is available at the following internet address: http:// www.tscprinters.com

RF exposure warning (Wi-Fi)

This equipment must be installed and operated in accordance with provided instructions and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be providing with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

SAR Value: 0.736 W/kg

RF exposure warning (For Bluetooth)

The equipment complies with FCC RF exposure limits set forth for an uncontrolled environment.

The equipment must not be co-located or operating in conjunction with any other antenna or transmitter.

Canada, Industry Canada (IC) Notices

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.

Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been evaluated for and shown compliant with the IC Specific Absorption Rate (“SAR”) limits when installed in specific host products operated in portable exposure conditions. **(For Wi-Fi)**

This device has also been evaluated and shown compliant with the IC RF Exposure limits under portable exposure conditions. (Antennas are less than 20 cm of a person's body). **(For Bluetooth)**

Canada, avis de l'Industry Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.
Son fonctionnement est soumis aux deux conditions suivantes : (1) cet appareil ne doit pas causer d'interférence et (2) cet appareil doit accepter toute interférence, notamment les interférences qui peuvent affecter son fonctionnement.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil sans fil est inférieure à la limite d'exposition aux fréquences radio de l'Industry Canada (IC). Utilisez l'appareil sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce périphérique a été évalué et démontré conforme aux limites SAR (Specific Absorption Rate – Taux d'absorption spécifique) par l'IC lorsqu'il est connecté à des dispositifs hôtes spécifiques opérant dans des conditions d'utilisation mobile. **(Pour le Wi-Fi)**

Ce périphérique a également été évalué et démontré conforme aux limites d'exposition radio-fréquence par l'IC pour des utilisations par des opérateurs mobiles (les antennes sont à moins de 20 cm du corps d'une personne). **(Pour le Bluetooth)**

NCC 警語:

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。(即低功率電波輻射性電機管理辦法第十二條)

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。

前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。(即低功率電波輻射性電機管理辦法第十四條)

設備名稱 (equipment name)：可攜式熱感條碼印表機 型號 (Type Designation)：Alpha-3R 系列						
單元Unit	限用物質及其化學符號 Restricted substances and its chemical symbols					
	鉛Lead (Pb)	汞Mercury (Hg)	鎘Cadmium (Cd)	六價鉻 Hexavalent chromium (Cr^{+6})	多溴聯苯 Polybrominated biphenyls (PBB)	多溴二苯醚 Polybrominated diphenyl ethers (PBDE)
內外塑膠件	○	○	○	○	○	○
內外鐵件	–	○	○	○	○	○
包材	○	○	○	○	○	○
滾輪	○	○	○	○	○	○
皮帶(皮帶扣)	○	○	○	○	○	○
橡膠按扭	○	○	○	○	○	○
說明書	○	○	○	○	○	○
電路板	–	○	○	○	○	○
晶片電阻	–	○	○	○	○	○
積層陶瓷表面黏著電容	○	○	○	○	○	○
IC	○	○	○	○	○	○
電源供應器	–	○	○	○	○	○
鋰電池	○	○	○	○	○	○
車用充電器	○	○	○	○	○	○
印字頭	–	○	○	○	○	○
馬達	–	○	○	○	○	○
插座	–	○	○	○	○	○
線材	–	○	○	○	○	○

Note 1：“Exceeding 0.1 wt %” and “exceeding 0.01 wt %” indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考1.〝超出0.1 wt %〞及〝超出0.01 wt %〞係指限用物質之百分比含量超出百分比含量基準值。

Note 2：“○” indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考2.〝○〞係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 3：The “−” indicates that the restricted substance corresponds to the exemption.

備考3.〝—〞係指該項限用物質為排除項目。

Revision History

Date	Description	Technical Writer
2023/11/15	Official release.	Peter Yao
2024/01/18	▪ Revised format and layout ▪ Updated the specifications from page 5 to 7.	Peter Yao

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