Wavecom

Direct Thermal Printer
User Manual

Wavecom Direct Thermal Printer

The Wavecom Direct Thermal printer is powered by a Lithium Ion Battery and features Bluetooth connectivity.

Operating the Printer
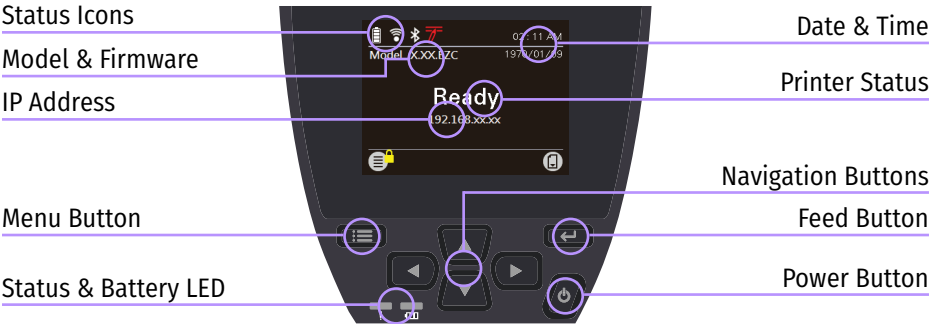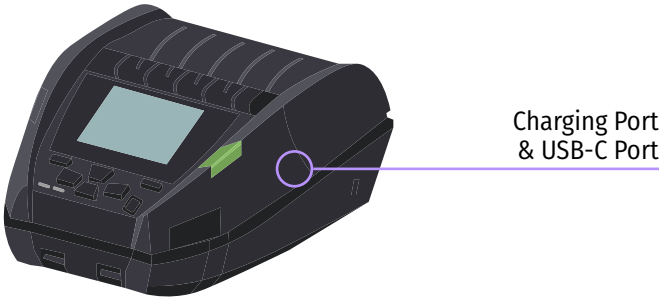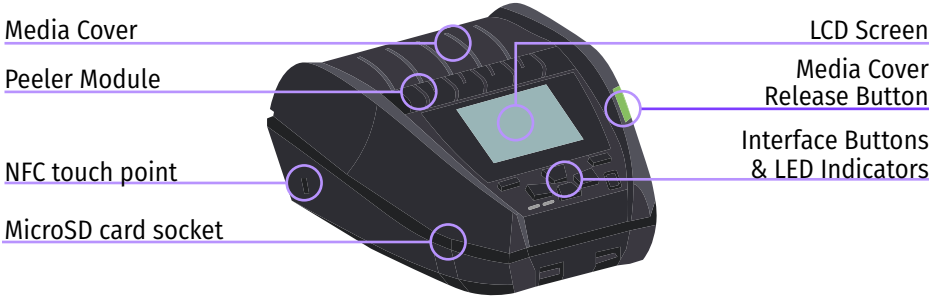
Turning on the Printer

1. Ensure the printer battery is charged
2. Press the power button on on the top of the printer until the printer screen turns on

Connecting the Printer via the WinPATS App

Once the printer is powered on, you can connect your printer to your tablet via Bluetooth using WinPATS.
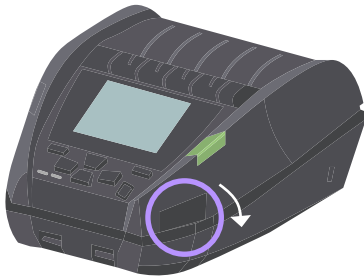
1. First, ensure that your printer is discoverable by the tablet via Bluettoth. Press the MENU button to access the settings menu, then navigate to INTERFACE then BLUETOOTH.
2. Open the WinPATS App, and tap the PRINT icon at the top of the screen.
3. You will be prompted to connect to a printer via Bluetooth - select your printer from the popup menu.
4. The printer should connect. There should be a Blue line under the Print icon in the WinPATS app, at the top of the WinPATS home screen, and a Bluetooth symbol on the top left of the printer screen.
5. Once you have connected your printer, you will be able to print tags directly from your tablet, either from the Inventory or during your test procedures.

Printer Diagrams

Media Cover

Peeler Module

NFC touch point

MicroSD card socket

LCD Screen

Media Cover
Release Button

Interface Buttons
& LED Indicators

Charging Port
& USB-C Port

Battery Opening Clasp

Belt Clip Loops

Lithium Ion Battery

Status Icons

Model & Firmware

IP Address

Date & Time

Printer Status

Menu Button

Status & Battery LED

Navigation Buttons

Feed Button

Power Button

Model XXX.BZC   1970/01/09
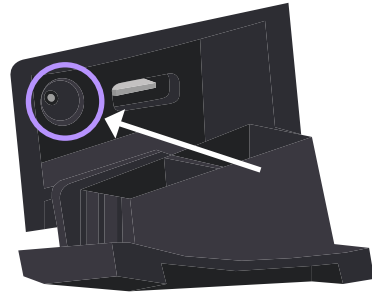02:11 AM
Ready
192.168.XX.XX

3

Charging the Printer

The printer battery will take approximately four to five hours to fully charge. Do not leave the printer unattended while charging.

1. Open the interface cover on the side of the printer

2. Plug the power cable into the power socket, then into a mains power outlet.

The battery status LED indicator will turn amber to indicate the battery is charging. The indicator will turn off when the printer is fully charged.
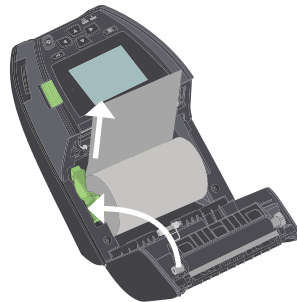
Loading Tags

1. Open the printer top cover by pressing the green release button, and lifting open the cover.

2. Separate the Label Holders by gently pulling them in opposite directions

3. Insert the media between the label holders as shown. Take care to ensure the tags are oriented correctly.

4. Pull the tags through so that it they are exposed when the printer cover is closed, then close the printer cover.

5. Press the MENU button, then navigate to Sensor, then Auto Calibration to calibrate the media sensor. This must be done each time your insert a new roll of tags.

Printer Functions

Button Functions

	Button	Description
☰	**Menu Button**	Enter the Menu screen Variable function (see bottom left of LCD screen)
↵	**Feed Button**	Feed a single tag & align your tag roll Pause the current print job Variable function (see bottom right of LCD screen)
◄►	**Navigation Buttons**	Navigate through menus and user interface
⏻	**Power Button**	Power on & off the printer (press & hold for 3 seconds)

Status Icons

	Status Icons	Description
🔋	**Battery**	Indicates the charge level of the battery
📶	**Wi-Fi**	Indicates that the printer has a Wi-Fi connection
✴	**Bluetooth**	Indicates that the printer has a Bluetooth connection
⊤	**Print Head**	The print head requires cleaning
≡	**Menu**	Press the Menu Button to enter the Menu (*A padlock icon indicates that the Menu is password protected*)
🔽	**Feed**	Feed a single tag & align your tag roll
‹	**Back**	Return to the previous menu/screen
✔	**Enter**	Select the highlighted option on screen
↕	**Arrows**	Scroll up or down

Status LED

	Status LED	Description
🟢	**Flashing Green**	Printer is paused, or is receiving data from another device
🟡	**Solid Amber**	Printer is clearing data
🔴	**Solid Red**	Printer head is open; Cutter Error
🔴	**Flashing Red**	Printer Error

Battery LED

	Battery LED Colour	Description
⚪	**Off**	Printer is ready to use
🟡	**Flashing Amber**	Battery error *(High or low temperature; overvoltage; charge timeout; battery not inserted correctly)*
🟡	**Solid Amber**	Battery is charging Printer head is open or cutter error

Settings Menu

Menu Option	Second Level Menu Option	Description	Default Value
Setting	*Changing these settings will be overwritten when printing via WinPATS. We recommend leaving these settings at their default values.*		
Sensor	Auto Calibration	Set the media sensor type and calibrate the selected sensor automatically	
	Manual Calibration	In case Auto Calibration fails, you can use the Manual Calibration function to set the tag length, gap size, and black line size to complete the calibration.	
	Threshhold Detect	Set the sensor sensitivity (Fixed or Auto)	Auto
	Maximum Length	Set the maximum length for label calibration	152mm
	BMark Transmitter	Set the upper or lower black mark sensor as the main transmitter	Back side
	Advanced	Set the parameters for Auto Calibration	0mm
Interface	Wifi	Check the Wifi Status & Configuration	
	Bluetooth	Set the Bluetooth Status & Configuration	
File Manager	DRAM	DRAM Use this menu to show, delete and run (.BAS) the files saved in the printer DRAM memory.	
	FLASH	Use this menu to show, delete and run (.BAS) the files saved in the printer Flash memory.	
	CARD	Use this menu to show, delete and run (.BAS) the files saved in the SD card on printer. (Unavailable unless an SD card is inserted).	
Diagnostic	Print Config.	Print current printer configuration to the label. The configuration printout contains print head test pattern, which is useful for checking the dot damage on the print head heater.	
	Dump Mode	Captures the data from the communications port and prints out the data received by printer. In the dump mode, all characters will be printed in 2 columns. The left side characters are received from your system and the right side data are the corresponding hexadecimal value of the characters. It allows users or engineers to verify and debug the program. *Dump mode requires 4" wide paper width.*	
	Print Head	Check print head's temperature and bad dots.	
	Display	Check LCD's color state.	
	Sensor	Check sensors intensity and reading state.	

8

Menu Option	Second Level Menu Option	Description	Default Value
Advanced	Language	Setup the language on display.	English
	Printer Information	Check the printer serial number, printed mileage (m), printed labels (pcs), etc.	
	Battery	Check the battery information and to set the warning for discharge times.	550 discharges
	Initialization	Restore printer settings to defaults.	
	Power Manager	Setup the brightness for display, standby mode, display turns off time and sleep mode.	Brightness: 50 Standby: ON Display Off: 120s Sleep Mode: OFF
	Date & Time	Setup the date and time on display.	
	Security	Set the password for locking the menu. The default password is 8888.	Disabled
	Print Head Maintenance	Check print head status and to set the settings for print head care.	Disabled
	Key Sounds	Toggle Printer key sounds	ON
	Contact Us	Access TSC contact information for technical support. We recommend contacting Wavecom first as we can help diagnose issues involving both WinPATS and the printer.	

Troubleshooting

Issue	Possible Causes	Troubleshooting Procedures
No power	The battery is not properly installed. The battery out of power. The battery is damaged.	Remove and reinstall the battery. Switch the printer on. Charge the battery. Replace the battery with a new battery.
Not printing	The Bluetooth connection between your tablet and your printer has been disconnected.	Connect the printer to your tablet via WinPATS again. Unpair and repair the printer via your tablet's Bluetooth settings menu.
No print on tag	Tags are not loaded correctly Wrong variety of tags.	Reload your tags, taking care to follow the instructions and orient the tag roll correctly. Check that you are using 'direct thermal tags'.
Printer status displays 'Carriage Open'	The printer cover is open.	Open and close the print cover using the green tab.
Printer status displays 'No Paper'	Roll of tags are empty. Tags are not loaded correctly. The Media sensor is not calibrated.	Load a new roll of tags Reload your tags, taking care to follow the instructions and orient the tag roll correctly. Calibrate the media sensor
Printer status displays 'Paper Jam'	Media sensor is not set properly. The media size is set incorrectly. A tag is stuck in the printer mechanism.	Calibrate the media sensor. Set the media size correctly. Remove the tag from the printer mechanism.
Poor print quality	Media is loaded incorrectly Dust or adhesive accumulation on the print head. Print density is not set properly. Print speed is not set properly. Print head element is damaged.	Reload the tag roll Clean the print head. Clean the platen roller. Adjust the print density and print speed. Run the printer self-test and check the print head test pattern if there is dot missing in the pattern. Make sure the print cover is closed properly.
Print does not align to label	Wrong label size setup.	Set the correct label size.
Irregular printing	The printer is in Hex Dump mode.	Turn the printer off and on to bypass Hex Dump mode.
Printer skips labels when printing	Label size is not set correctly. Sensor sensitivity is not set correctly. The media sensor is covered with dust.	Check if the label size is setup correctly. Calibrate the sensor using the Auto Gap option. Clean the sensor using air to remove any dust.

Specifications

Resolution	8 dots/mm (203 dpi)
Print Speed	Up to 127mm (5")/second
Print Dimensions	2,794mm (L) x 72mm (W)
Processor	32-bit RISC CPU
Memory	128 MB SDRAM, 128 MB Flash, microSD card reader for Flash memory expansion, up to 32GB
Power	7.4V DC, 3,030 mAh Li-ion rechargeable smart battery
Interface	Type C USB 2.0 + MFi Bluetooth 5.0 + Passive NFC tag
Printer Language	TSPL-EZC (EPL2, ZPL2, CPCL), or ESC-POS
Operating Environment	**Operation:** -20 - 50°C, 10 - 90% non-condensing **Storage:** -30 - 70°C, 10 - 90% non-condensing **Charging:** 0 - 40°C, 10 - 90% non-condensing
Dimensions	117mm (W) x 173mm (H) x 79mm (D); 745g

Wavecom Direct Thermal Tags

The Wavecom Direct Thermal Printer must be used with direct thermal tags. These are available in rolls of 150 tags.

Order Information:

Direct Thermal Tags (White) *(150 Tags per Roll)*	Order Code: WCM27421

Maintenance

This section explains the methods to clean and maintain your printer. Your 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 cleaning the print head and supply sensors ensures your printer prints smoothly and extends the life of your printer.

Before Undertaking Maintenance

- Set the printer power switch to O (Off) prior to performing any cleaning. Leave the power cord connected to keep the printer grounded 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 the print head. If you touch it by accident, use 99% Isopropyl alcohol to clean the print head.
- Always take precautions when using any cleaning agent.

Cleaning Tools

- Cotton swab
- Lint-free cloth
- Brush with soft non-metallic bristles
- Vacuum cleaner
- 99% Isopropyl alcohol (for printhead and platen roller cleaning)
- Genuine printhead cleaning pen
- Mild detergent (without chlorine)

Cleaning Processes

Printer Component	Method	Cleaning Interval
Print Head	1. Always turn off the printer before cleaning the print head 2. Allow the print head to cool for at least one minute before beginning cleaning 3. Use a cotton swab and 99% isopropyl alcohol (or a suitable print head cleaning pen) to clean the print head surface	The Print Head should be cleaned each time a roll of tags is replaced.
Platen Roller	1. Turn off the Printer 2. Rotate the Platen Roller and wipe thoroughly with the lint-free cloth using 99% isopropyl alcohol.	The Platen Roller should be cleaned each time a roll of tags is replaced.
Peel Bar	Wipe thoroughly with the lint-free cloth using 99% isopropyl alcohol.	As needed
Sensor	Use the soft bristle brush or a vacuum cleaner to remove dust. Clean the upper and lower media sensors to ensure reliable operation.	Monthly
Exterior	Clean the exterior surfaces with a clean, lint-free cloth (water dampened if needed). If neccessary, use a mild detergrent of desktop cleaning solution, then use 75% ethanol.	As needed
Interior	Clean the interior of the printer by removing any dust or lint with a vacuum cleaner, or use a soft bristle brush to remove dust, then wipe with 75% ethanol.	As needed

Safety Information

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 a fault occurs. Do not use liquid or aerosol cleaners. Using a damp cloth is suitable for cleaning.
4. Charge the product near an easily accessible mains outlet to allow quick disconnection in the event of a charging fault.
5. The product must be protected against moisture.
6. Ensure the product is handled and transported carefully.
7. Make sure to follow the correct power rating and power type indicated on the compliance label provided by the manufacturer.
8. Ensure the product is only used within the safe operating environment temperature and humidity.

WARNING:

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

CAUTION:

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.

Disclaimer – E&OE

All specifications may be subject to be change by Wavecom Pty. Ltd. without prior notice.

Updated Specifications & Model changes may be found on the Wavecom website: - www.wavecom.com.au

At the time of developing this manual, all care and consideration for accuracy has been implemented. Wavecom accepts no responsibility for any errors or omissions in this document. This is partly based on the fact that Electronics & Electrical testing and specifications worldwide are constantly changing and that Local, State and National Regulatory Authorities may also have differing or additional requirements. It is strongly recommended the Purchaser check Local Regulatory Standards that may be applicable in your region.

No part of this document may be Reproduced, Copied, Modified or Utilised in any way or form without the permission of Wavecom Instruments in writing.

Purchase Information

Date of Purchase

Sold By

Wavecom Instruments Pty. Ltd.

257 Grange Road, Findon,
South Australia, Australia 5023

service@wavecom.com.au

(+61) 08 8243 3500

(+64) 0800 164 888

www.wavecom.com.au

www.winpats.app

SOUTH
AUSTRALIA