



R8BT

Universal PIT Tag RFID Reader

Complete User Manual

Part Number	R8BT
RFID Compatibility	FDX-B • FDX-A • HDX • EM4102
Connectivity	USB • Bluetooth
Memory	Up to 800 tag codes

ISO 11784/11785 and ISO 14223 compatible

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1. About the R8BT

The Voda IQ R8BT is a handheld universal PIT tag and RFID reader designed for field, laboratory, hatchery, wildlife and research applications. It reads FDX-B (134.2 kHz), FDX-A (125 kHz), HDX and EM4102 transponders, and supports compatible temperature tags. The reader connects by USB or Bluetooth, includes a rechargeable lithium battery and can store up to 800 tag codes.

Important: Read distance varies with tag type, tag orientation, surrounding material and electrical noise.

2. Reader Controls

The R8BT uses four buttons for normal operation.

Button	Name	Function
1	On/Off	Press to power on. Press and hold to power off.
2	Up	Scroll upward through menus and available functions.
3	Down	Scroll downward through menus and available functions.
4	Validate / Enter	Confirm a menu selection or begin a scan when SCAN is displayed.

The OLED display provides four lines of 16 characters. The reader also includes a battery-level indicator, charge-status LED and USB connection for charging and data communication.

3. Powering the Reader On and Off

1. Press the On/Off button (1).
2. The software version appears briefly.
3. The reader then displays SCAN and is ready for use.
4. To turn the reader off manually, press and hold the On/Off button.

To conserve battery power, the reader automatically powers off after approximately two minutes of inactivity.

4. Language Setup

The R8BT supports seven display languages: English, French, Spanish, Portuguese, Italian, German and Polish.

1. Power on the reader.
2. From SCAN, use the Up button (2) to enter Settings.
3. Press Validate (4) to access Language.
4. Use the Down button (3) to scroll through the available languages.
5. Press Validate (4) to save the displayed language.

5. Reading a PIT Tag

1. Power on the R8BT and confirm that SCAN is displayed.

2. Press Validate (4) to start a scan. The reader searches for a transponder for approximately 20 seconds.
3. Hold the reader close to the expected tag location and move it slowly across the area.
4. When a tag is detected, the reader beeps and displays the transponder type and identification number.

If No Tag Is Detected

If no transponder is detected during the scan period, the reader emits three beeps and displays "No transponder found!" The message clears and the reader returns to SCAN. Repeat the scan two or three times, moving the reader slowly over a wider area and keeping the reader as close as practical to the expected tag location.

Scanning tip: Nearby motors, pumps, power supplies, metal structures and other sources of electromagnetic noise can reduce read performance.

6. Continuous Scan

The reader includes a Continuous Scan function. Navigate to Continuous Scan and press Validate (4) to place the reader into continuous scanning mode. This is useful when multiple tags are being presented to the reader in sequence.

7. Using HID Mode with Excel

HID (Human Interface Device) mode allows the R8BT to send a tag code to a computer as keyboard input. This is a convenient way to collect PIT tag numbers directly into Microsoft Excel without manually typing each ID.

Before you begin: Format the Excel destination column as Text. This helps prevent Excel from changing long tag numbers, removing leading zeros or displaying IDs in scientific notation.

Connect the R8BT

Connect the R8BT to the computer using the supported HID connection. Depending on your setup, the reader may be connected through USB or paired through Bluetooth. Configure/select HID mode on the reader or host connection as required.

Enter Tags Directly into Excel

1. Open Microsoft Excel and create or open the worksheet where tag data will be collected.
2. Select the column that will contain the PIT tag numbers and set its number format to Text before scanning.
3. Click the first cell where you want the first tag number entered.
4. Confirm the R8BT is connected in HID mode.
5. Scan a PIT tag with the R8BT.
6. The reader sends the tag ID to the computer as keyboard input and the number appears in the active Excel cell.
7. Move to the next row/cell as needed and scan the next tag. If your HID configuration sends an Enter/Return after each tag, Excel will automatically advance to the next cell.
8. Save the workbook regularly during data collection.

Recommended Excel Layout

Tag ID	Species / Sample	Date	Location	Notes
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982000123456789				
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HID Troubleshooting

Problem	What to check
Tag scans but nothing appears in Excel	Click inside the intended Excel cell and verify that the R8BT is connected in HID mode.
Characters appear in the wrong program	HID sends data to whichever field is active. Click the correct Excel cell before scanning.
Excel changes the tag number	Format the entire Tag ID column as Text before scanning.
Tag IDs overwrite one another	Advance to the next cell after each scan, or configure the HID output to send Enter/Return after the tag code if that option is available in your connection setup.
Bluetooth connection drops	Reconnect/pair the reader, verify the computer's Bluetooth is enabled and keep the reader within normal Bluetooth operating range.

8. Stored Tag Memory

The R8BT has memory capacity for up to 800 tag codes. Stored-memory operation is different from HID live entry. In HID mode, a scanned code is sent immediately to the active field on the connected computer. Stored-memory mode retains tag codes in the reader for later transfer.

Note: The supplied basic source guide and Voda IQ product page confirm the 800-code memory but do not document a complete menu-by-menu procedure for downloading previously stored IDs. Voda IQ should add that procedure here once the exact production firmware workflow is confirmed.

9. Charging the Battery

The R8BT uses a rechargeable lithium-ion battery. Connect the reader to a USB power source using the supplied cable. The charge-status LED is red while charging and green when the battery is fully charged. The display includes a battery-level indicator.

When LOW BATTERY is displayed, recharge the reader. Battery life depends on usage, storage conditions and the frequency of scanning and wireless communication.

10. Specifications

Specification	R8BT
Part Number	R8BT
RFID Compatibility	FDX-B (134.2 kHz), FDX-A (125 kHz), HDX, EM4102
Temperature Tags	Supported compatible temperature tags
Standards	ISO 11784/11785 and ISO 14223
Display	OLED, 4 lines x 16 characters
Languages	English, French, Spanish, Portuguese, Italian, German, Polish
Connectivity	USB and Bluetooth
Memory	800 tag codes
Battery	Rechargeable lithium battery

Product dimensions	7.4 in L x 3.2 in W x 1.30 in H
Weight	0.375 lb
Source-guide nominal 12 mm FDX-A read distance	9 cm
Source-guide nominal 12 mm FDX-B read distance	12 cm
Source-guide storage temperature	-10 C to +60 C
Source-guide operating temperature	-5 C to +40 C

11. Care and Field Use

- Keep the reader and USB connection clean and dry.
- Protect the reader from hard impacts, crushing and prolonged exposure outside the specified temperature range.
- Do not force the USB connector.
- For maximum read performance, scan slowly and keep the reader close to the tag.
- When working around pumps, motors, generators or other electrical equipment, move away from the noise source if read performance decreases.
- Charge the reader before extended field sessions.

12. Quick Troubleshooting

Issue	Recommended action
Reader will not power on	Charge the reader and try again.
No transponder found	Repeat the scan, reduce distance, change reader/tag orientation and move away from electrical noise.
Reader shuts off while idle	Normal power-saving behavior after approximately two minutes of inactivity.
Low battery displayed	Recharge the reader before continued field use.
Excel alters the tag ID	Format the destination column as Text before scanning.
HID scan goes to the wrong place	Click the intended Excel cell or active data-entry field before scanning.

13. Support

For R8BT support, accessories, PIT tags or assistance with reader setup, contact Voda IQ.

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Voda IQ - Passive Electronic Identification