



RT600 BT PRO

High-Performance PIT Tag Stick Reader

Complete User Manual

Product	RT600 BT Pro
RFID Compatibility	FDX-B • HDX • Temperature-Sensing Tags
Connectivity	USB • Bluetooth 4 • BLE • HID
Memory	Up to 100,000 tag IDs with date/time
Protection	IP67

ISO 11784/11785 compatible

Voda IQ | 104 E Idaho Ave, Glens Ferry, ID 83623
info@vodaiq.com | +1 208.366.9663

1. About the RT600 BT Pro

The Voda IQ RT600 BT Pro is a rugged low-frequency RFID stick reader designed for fisheries, wildlife, hatchery, laboratory and field applications. It reads FDX-B and HDX PIT tags and compatible temperature-sensing tags in accordance with ISO 11784/11785. The reader includes a 1.54-inch color display, high-capacity tag memory, USB and Bluetooth communications, continuous scanning and an IP67 enclosure.

Current Voda IQ configuration: The RT600 BT Pro stores up to 100,000 tag IDs with date/time and uses a replaceable 7.4 V lithium-ion battery. Voda IQ lists approximately 15-20 hours of continuous operation for the current product.

2. Main Reader Functions

Function	Purpose
Scan	Read a single PIT tag or compatible temperature tag.
Continuous Scan	Continuously search for tags without pressing OK for every read.
Memory	Display, upload, delete or disable stored tag records.
Settings	Configure Bluetooth, language, DEC/HEX display, beep, vibrator, temperature options, HDX+ and device information.

3. Turning the Reader On and Scanning

1. Press the Power button to turn on the reader.
2. After approximately three seconds, the display shows SCAN.
3. Press OK to begin a reading. The reader searches for a transponder for approximately 20 seconds and displays SCANNING.
4. If no tag is detected, the screen displays NO TAG FOUND.
5. If a tag is detected, the reader displays the tag type and identification information. Compatible temperature tags also display temperature information.

Scanning tip: Read distance depends on tag type, orientation, environmental noise and surrounding materials. Move the stick slowly and keep the sensing end as close to the expected tag location as practical.

4. Continuous Scan

From SCAN, navigate to Continuous Scan and press OK. The reader then scans continuously without requiring OK to be pressed for each reading. If the same tag is read more than once, the reader displays DUP in red. When memory is enabled, a duplicate tag is recorded only once.

5. Memory

The Memory menu provides four functions:

Memory option	Function
---------------	----------

Display	View tag IDs currently stored in reader memory.
Upload	Send memorized ID numbers to an external terminal.
Delete	Delete records stored in reader memory.
Disable	Disable memory recording when stored records are not required.

Duplicate Protection

When the same tag is encountered more than once during a sequence of readings, the RT600 BT Pro identifies the repeated read as DUP. With memory enabled, the duplicate ID is not stored a second time.

6. Downloading Stored Tags to a Computer

The RT600 BT Pro can store up to 100,000 tag IDs with date/time information. Stored records can be transferred to a computer through USB using the reader's Upload function or compatible RT600 data utility.

Using the Reader Upload Function

1. Connect the RT600 BT Pro to the computer with the USB cable.
2. Power on the reader.
3. Navigate to Memory and select Upload.
4. Press OK to send the memorized tag IDs to the connected terminal.
5. When the transfer is complete, verify the records on the computer before deleting reader memory.

Using the RT600 Data Utility

The RT600 data utility can communicate with the reader over USB. The source guide documents functions for synchronizing the reader clock, changing the automatic power-down time, checking the number of stored records, retrieving data, deleting stored records and updating reader firmware.

1. Connect the reader to the PC with the USB cable and switch the reader on.
2. Open the RT600 data utility and select the correct USB/COM port.
3. Use Record Count / Get Count to confirm the number of stored records.
4. Use Get Data to retrieve the stored records.
5. Save or export the data as a CSV file. The source guide shows fields for INDEX, TYPE, COUNTRY ID, TID and TIME.
6. Open the CSV file in Microsoft Excel for review, sorting, filtering or additional project data entry.
7. After confirming that the file has been saved correctly, use Delete All only if you intend to clear the reader memory.

Data safety: Always confirm that downloaded records have been successfully saved before deleting data from the reader.

7. HID Mode - Entering Tags Directly into Excel

HID (Human Interface Device) mode allows the RT600 BT Pro to act like a keyboard. A scanned tag ID can be sent directly to the active field on a connected computer, making it convenient to enter PIT tag IDs directly into Microsoft Excel.

Before scanning: Format the Excel Tag ID column as Text. This prevents Excel from converting long tag numbers to scientific notation, removing leading zeros or otherwise changing the displayed ID.

1. On the RT600 BT Pro, open Settings and navigate to Bluetooth.
2. Select HID as the communication mode.
3. Pair/connect the RT600 BT Pro with the computer using the applicable Bluetooth connection.
4. Open Microsoft Excel and select the cell where the first tag ID should be entered.
5. Format the Tag ID column as Text before collecting data.
6. Scan a PIT tag. In HID mode, the tag information is transmitted as keyboard-style input to the active field.
7. Move to the next row or cell and scan the next tag. If the HID configuration sends Enter/Return after each record, Excel can advance automatically.
8. Save the workbook regularly during field or laboratory data collection.

Recommended Excel Layout

Tag ID	Tag Type	Date	Time	Species / Sample	Notes
982000123456789	FDX-B				

8. Bluetooth, BLE and HID Settings

From Settings, select Bluetooth to choose the communication mode. The source guide identifies three choices: Off, BLE and HID. Bluetooth can be switched off to reduce power consumption. BLE provides low-energy wireless communication. HID is intended for keyboard-style data entry to a compatible host device.

9. Language

Seven display languages are available: English, French, Spanish, Italian, Portuguese, German and Polish. Navigate to Settings > Language, cycle to the desired language and press OK to confirm.

10. Decimal and Hexadecimal Display

The DEC/HEX setting controls how tag identification numbers are displayed. The source guide documents decimal display plus two hexadecimal conversion modes. Mode 1 converts the full 15-digit decimal number to hexadecimal. Mode 2 separates the three-digit country/ICAR code from the remaining 12 digits before conversion/display.

11. Beep and Vibrator

The Beep setting turns the audible confirmation signal on or off when a tag is read. The Vibrator setting independently enables or disables vibration feedback.

12. Temperature Tag Functions

Celsius / Fahrenheit

Use the °C/°F setting to select the temperature unit shown by the reader.

Reference Temperature

The Temp REF function allows a reference temperature to be stored. The source guide describes taking five successive temperature readings for a reference animal; the reader averages the five readings and can display the current reading together with the stored reference temperature on future scans. Reference temperatures for up to five animals can be stored.

The source guide notes that subcutaneous temperature-sensing tags may not exactly match rectal temperature and recommends establishing reference measurements under controlled conditions.

13. Equine Temperature Function

The Equines setting can be switched on or off. The source guide describes this function as a correction intended for temperature-sensing tags implanted in equine muscle.

14. HDX+ Mode

HDX+ is a specialized HDX-only mode. When enabled, the source guide states that HDX read distance can increase by approximately 30%. HDX+ is not compatible with FDX-B reading, so disable HDX+ when both FDX-B and HDX tags need to be detected.

15. About / Firmware Version

The About menu displays the installed program/firmware version.

16. Charging and Battery Replacement

The USB connector used for charging and computer connection is accessed by unscrewing the large cap/screw at the bottom of the reader handle. The current Voda IQ RT600 BT Pro uses a replaceable 7.4 V lithium-ion battery.

Battery Replacement

1. Unscrew the large lower cap/screw at the base of the reader handle.
2. Using a small screwdriver, remove the two screws securing the battery module.
3. Gently pull the battery module out and note its original orientation.
4. Insert the replacement battery module in the same orientation and press it gently into place.
5. Confirm the reader can power on, then reinstall the two small screws and the lower cap.

Service recommendation: If you are unsure about battery replacement, contact Voda IQ before opening or servicing the reader.

17. Specifications

Specification	RT600 BT Pro
Product	RT600 BT Pro
Working frequency	134.2 kHz / ISO 11784/11785

Supported tag protocols	FDX-B, HDX, compatible ISO temperature tags; source guide also lists EM4105, Atria ISO Thermic, MSD Thermochip and Fever Check
Display	1.54-inch color TFT, 240 x 240 pixels
Memory	Up to 100,000 IDs with date/time
Communications	USB, Bluetooth 4, BLE, HID
Protection	IP67
Battery	Replaceable 7.4 V lithium-ion
Current Voda IQ continuous battery runtime	Approximately 15-20 hours
Weight	430 g (source guide)
Operating temperature	-5°C to +50°C (source guide)
Typical HQ12 read distance	Approximately 8-10 in / 20-24 cm at best orientation (current Voda IQ listing)
Source-guide 2 x 12 mm glass tag range	18-20 cm
Source-guide 27 mm HDX ear tag range	55-60 cm
Source-guide 27 mm FDX-B ear tag range	24-36 cm
Certifications listed by Voda IQ	CE, FCC, UKCA, RoHS

18. Troubleshooting

Issue	Recommended action
Reader will not power on	Charge the battery. If necessary, inspect/reseat the replaceable battery module.
No tag found	Reduce the distance to the tag, move the stick slowly, change orientation and move away from electrical noise.
FDX-B tags are not detected	Check whether HDX+ is enabled. HDX+ is an HDX-only mode and must be disabled for FDX-B reading.
Duplicate appears in red	The same tag has been read again. With memory enabled, the duplicate is not stored twice.
Nothing appears in Excel in HID mode	Confirm HID is selected, the reader is paired/connected and the intended Excel cell is active.
Excel changes the PIT tag number	Format the Tag ID column as Text before scanning or importing data.
Cannot download stored records	Confirm the USB connection and correct COM/USB port in the RT600 data utility.
Bluetooth battery use is too high	Use BLE when appropriate or turn Bluetooth off when wireless communication is not needed.

19. Care and Field Use

- Keep the lower USB/battery cap properly secured during field use to maintain environmental protection.
- Rinse or wipe away dirt and debris after field work; do not use harsh solvents on the housing.
- Protect the display and controls from hard impacts.
- Charge the battery before extended sampling sessions and carry a charged replacement battery when appropriate.
- Keep the sensing end close to the tag and scan slowly for maximum read performance.
- Avoid strong electrical noise sources when possible.

20. Voda IQ Support

For RT600 BT Pro support, reader setup, firmware/data questions, PIT tags or replacement components, contact Voda IQ.

Website	www.vodaiq.com
Email	info@vodaiq.com
Phone	+1 208.366.9663
Address	104 E Idaho Ave, Glens Ferry, ID 83623

Voda IQ - Passive Electronic Identification