Wireless
ISO-Cane RFID Reader
ICR04-v1.1

Manual

BY

I·D·OLOGY
IDENTIFY WITH IT
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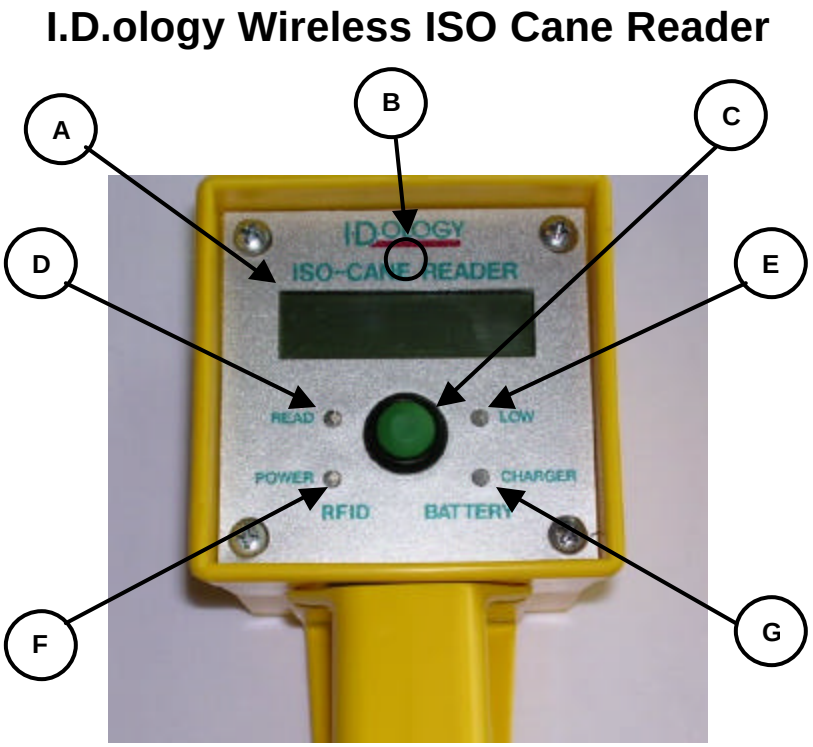
January 2005

Operational Overview

This wireless reader handles most functions in an intuitive manner so that the same button that turns on the reader also links the wireless Bluetooth™ connection and activates the antenna to read, display and store or transmit all tags.

Since it is an ISO reader it reads all RFID tags which are in compliance with the animal ISO 11784- 11785 protocol. The wireless connection provides a simple serial interface or "wireless cable" to the host computer, enabling the transmission of tag IDs and associated data. Thus removing any need for the user to have experience in configuring this wireless technology. A programmer can incorporate the I.D.ology DLL for a PC or a Pocket PC coupled with working examples to aid in integrating the reader with any database software. The I.D.ology ISO-Cane Reader is a Class 1 unit that has a transmission link range of 330 feet. Even more important is that the ISO-Cane links automatically when power is applied and it can be deployed either as a point-to-point or a point-to-multipoint solution.



A. LCD Display
This is a two-line display. The first line displays the last transponder number read by the reader. The second line indicates how many transponder numbers are stored in the Cane Reader's memory.

B. Communication Link Indicator
A green light located behind the faceplate label will illuminate when a communication link is active between the Cane Reader and a host computer. When the wireless communication link is active, the green light will shine through the Cane Reader faceplate label just above the LCD Display.

NOTE: The link light will not be visible when a communication link is not established.

C. Activation Button
Press this button to turn on the reader, to establish a Bluetooth™ link and to read transponders.

Pressing and releasing this button will turn on the power and the "Power" indicator will light. The reader will also attempt to establish a wireless communication link with a host computer.

This button must be pressed and held until a Bluetooth communication link is established as indicated by the "Link" indicator (See item B) After the communications link is established, the Cane Reader will remain powered until the communications link is disconnected.

The button must also be pressed and held whenever reading transponders

To conserve battery charge, the RF transmitter of the Cane Reader is only active when this button is pressed.

D. Read Indicator

This is a red light that will blink whenever the Cane Reader reads a transponder.

Other indications of having read a transponder include an audible tone or vibration a new transponder number displayed on the LCD screen and the count of transponders read being incremented by one.

E. Low Battery Indicator

This yellow light will illuminate to indicate that the Cane Reader batteries are low on power and need to be recharged.

NOTE: When the Cane Reader is turned off (the "Power" light is not lit), it is normal for this indicator to flash briefly when pressing and releasing the activation button. This indicates that the battery power circuit is functioning properly.

F. Power Indicator

This green light will illuminate to indicate that the Cane Reader is turned on.

If this light is not lit, pressing and releasing the activation button will turn the unit on.

NOTE: The Cane Reader will automatically turn itself off if no transponders are scanned for more than ten minutes. This is done to conserve battery charge.

G. Battery Charging Indicator

This will be lit when the battery charger is attached to the reader.

This light will be red when the unit is charging and will turn green when the Cane Reader's batteries are fully charged.

Changes not expressly approved by **I.D.ology** could void the user's authority to operate the equipment.

Note: 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 output on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This product complies with FCC radiation exposure limits set forth for an uncontrolled environment.

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

Features

ISO RFID Reader	Tested with and reads all Animal ISO compatible tags
Long Read Distance	8 to 12 inches with good quality tags in quiet environment
Large Memory	Stores up to 1000 tags
Displays Tags	Last tag read is displayed on LCD screen
Counts and displays	Counts and displays the count of the number of different tags read
Positive Operator interface	Indicator lights to show read and operational status
Vibrator Read Alert	Vibrator alerts operator of read in noisy environments
Long Range Class 1 Bluetooth	Links with host up to 330 ft. (over a football field in distance)
Wireless Cable Device	Automatically searches and links when power is applied in range
Simple conventional Links	Integrates with Bluetooth communication systems
Environmentally Rugged	Cold room operation and rain or dust sealed to IP-64 standards
Sleep Mode	Bluetooth and RFID reader both have sleep modes
Long battery life	Depending on environment 12 to 18 hours of operation
Ni Metal Hydride Batteries	Powerful and rechargeable power module
DLL Available	Dynamic Link Libraries constructed to link with all PC and PPC programs

Specifications

RFID Reader Operating Frequency	134.2 kHz
RFID Tag Protocol	ISO 11784 & ISO 11785 Compliant tags
RFID RF Power	0.6 Watts
Bluetooth Transmission Carrier Frequency	2.4 to 2.4835 Giga Hertz hopping Bluetooth™ frequency
Bluetooth Modulation Method	GFSK, 1Mbps, 0.5BT Gaussian
Bluetooth Transmission Power	Class 1 (max 20dBm) SPP compatible
Bluetooth Hopping	1600 hops/sec, 1MHz channel
Bluetooth Receiving Signal Range	-84 to -20dBm
Bluetooth Receiving IF Frequency	1.5 MHz center frequency
Physical Characteristics	Length 16”-43” depending on options
	Width 3.5” Height 9”
	Weight 2 lbs to 3 lbs depending on options
Environmental Characteristics	Operating Temperature -10º to 75º C (+14º to +165º F)
	LCD Display stops functioning at 0º C but reader and link still work.
	Storage Temperature -20º to 75º C (-4º to +165º F)
	Relative Humidity 5% to 95% (non-condensing)
	Rain & Dust Resistance IP-64 compliant
	Drop Spec. Withstands 4’ drop 15 times onto concrete
Power	Battery Type Ni Metal Hydride 7.5v, (5 x 2000 mAh cells)
	Battery Life 12 to 18 hours, application dependant
	Recharging Time: 4 hours

Key Accessories

Carrying Holster
Vehicle Charger
Stationary 110v Charger
Bluetooth™ Interfacing Dongle for PC
Custom Bluetooth™ Interface Dongle for Unix
Transport Tracker Software for PPC
Transport Tracker Software for Windows™ 98 – XP2
DLL Software for PC and Pocket PC systems