

I.D.OLOGY
Wireless
***Lightning*ROD Reader**
5678A

Manual



I·D·OLOGY
IDENTIFY WITH IT

1324 West Clairemont Avenue
Eau Claire, WI 54701
Phone: 715-834-9922

IDOLEGY@ID-OLEGY.COM

TABLE OF CONTENTS:

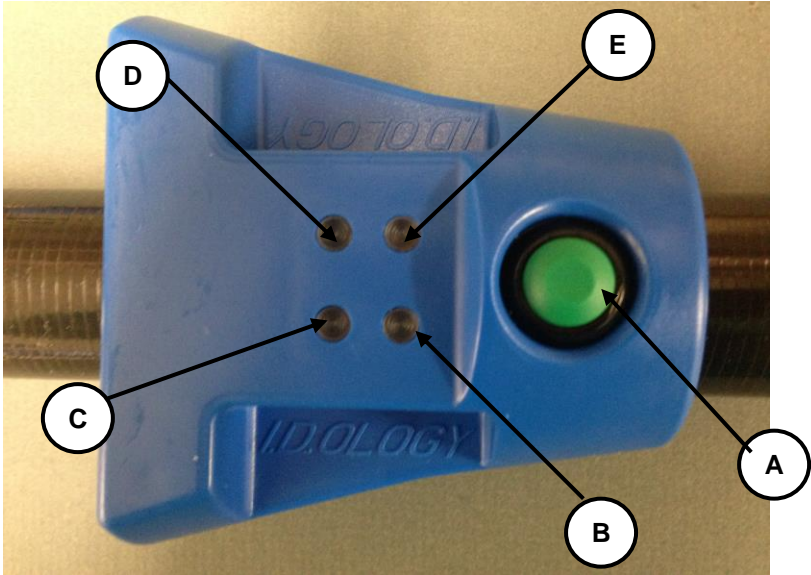
ABOUT THE READER.....	2
OPERATING THE READER.....	3
INSTALLING THE READER SOFTWARE.....	6
STARTING THE SOFTWARE.....	8
LINKING READER TO SOFTWARE.....	9
FEATURES.....	12

ABOUT THE READ ONLY LIGHTNINGROD READER:

This wireless reader handles most functions in an intuitive manner so that the same button that activates the antenna to read, store or transmit all tags.

Since the *Lightning*ROD is an ISO reader it reads all RFID tags that are in compliance with the animal ISO 11784 - 11785 protocol. Its 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 *Lightning*ROD Reader is a Class 2 Bluetooth™ unit that has a transmission link range of 230 feet. Even more important is that the *Lightning*ROD can link when power is applied and it can be deployed either as a point-to-point or a point-to-multipoint solution as might be useful in sales barns.

I.D.ology Wireless *Lightning*ROD Reader



A. Activation Button

Press this button to turn on the reader, and read transponders.

Pressing and releasing this button will turn on the power and the "Power" indicator will light.

Press this button 3 times rapidly to change modes. Then press and hold it for 2 seconds to clear the memory of tags stored without having to link with a computer.

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.

B. Power Indicator

This green light will illuminate to indicate that the *Lightning*ROD is turned on.

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

NOTE: The *Lightning*ROD Reader will automatically turn itself off if no transponders are scanned during a period of three minutes. This is done to conserve battery charge.

C. Read Indicator

This is a red light that will blink whenever the *Lightning*ROD reads a transponder.

Another indication of having read a transponder is a vibration of the handle.

D. Communication Link Indicator

A blue light located on the faceplate will illuminate when a communication link is active between the *Lightning*ROD Reader and a PDA or host computer.

E. Red/Green Bicolor – Recharge

This LED will only illuminate when the recharge power supply is connected to the reader.

This LED will shine red when the recharge power supply is attached to the reader's recharge connector to indicate that the reader is in "Fast Charge" mode. When the reader's internal batteries recharge to approximately 90% of their recharge capacity (in about 90 minutes if batteries are completely dead), this light will turn green to indicate that the reader has entered "Trickle Charge" mode.

The trickle charge mode will continue until the recharge power supply is disconnected from the reader.

NOTE: Fully recharging batteries that are completely discharged (dead) will take about 90 minutes in fast charge and then about 90 minutes in trickle charge.

Installing the Reader Software:

The 'Read Only' *Lightning*ROD program handles communications with a *Lightning*ROD for downloading up to 5000 stored animal IDs. This allows the *Lightning*ROD reader to scan a batch of animals and save the list of scanned IDs to a computer at a later time.

The purpose of the software is to communicate with the *Lightning*ROD reader for the purpose of downloading scanned ID lists from the reader's internal memory.

This software is not required if using the RO *Lightning*ROD reader to scan RFID numbers directly into herd management software designed to accept scanned IDs directly from an RFID scanner. This software is only required when reading data from the *Lightning*ROD memory storage.

a. Install the Software

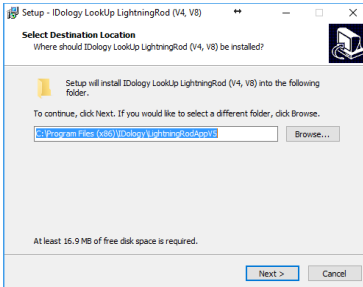
When installing the software there are actually two programs installed. Thus, two independent software installation wizards occur, one right after the other.

The first install wizard is for the actual *Lightning*ROD software. The second install wizard is for a "VISA Runtime Engine" which is a module used to access and manipulate PC communication ports.

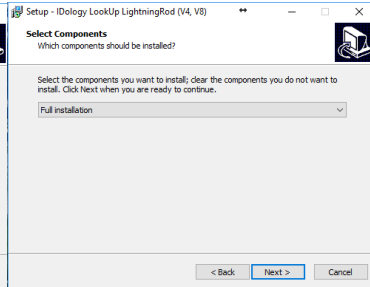
NOTE: Both install wizards must be successfully completed in order for the software to properly communicate with a *Lightning*ROD reader.

Insert Software CD into PC CD Drive

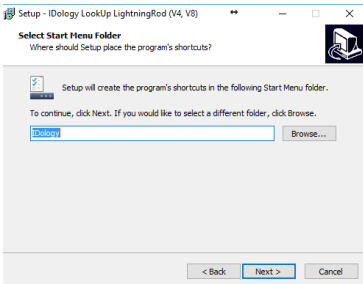
The *Lightning*ROD software installation will automatically begin when the CD drive drawer is closed.



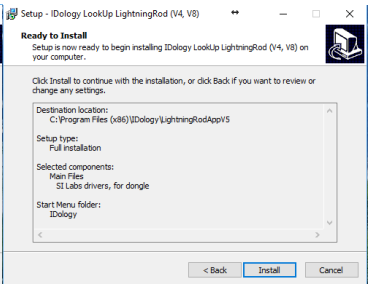
CLICK NEXT



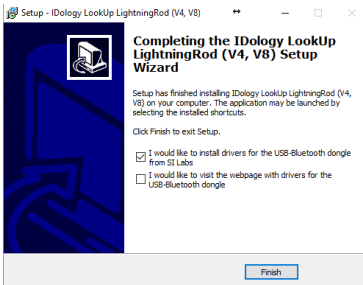
CLICK NEXT



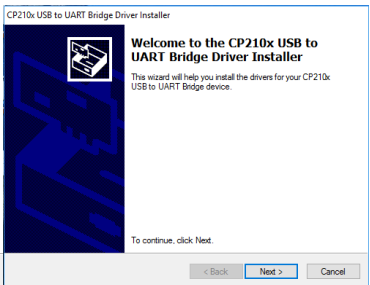
CLICK NEXT



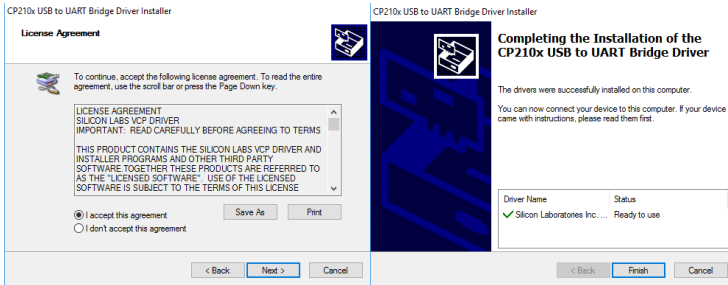
CLICK NEXT



CLICK FINISH



CLICK NEXT



CLICK NEXT

CLICK FINISH

You should now have installed both I.D.ology software and USB Bluetooth Dongle Software. You should now be able to remove your disk and put it in a safe place.

If your computer has built in Bluetooth:

You may be able to use your built-in Bluetooth by opening Devices menu and locating Bluetooth. Once there search for Bluetooth Devices. (Make sure your reader is on.) When you see the reader icon, click on it to pair. Some computers ask for a pairing code. Use 1111 for our reader. This should link your reader with Bluetooth and you can now open your reader software.

Plug in USB Bluetooth Adapter (optional purchase)

If you have purchased a USB Bluetooth Adapter with your reader:

Note: The USB Bluetooth Dongle must be inserted into a USB port of the computer before the reader interface program is started. If not, the program will not properly discover the com port of the USB BT adapter and may indicate a com port error.

Start the software

Push the green button on the reader to turn reader on.
Start the reader software that you just installed.

To locate the software:

On your PC, Click on start>All

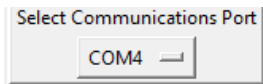
Programs>I.D.ology>Lookup LightningROD

The software when installed created a folder in your documents called I.D.ology.

This is where your software is stored.

When the software is first launched, it will discover available com ports on your device.

After the available communications ports are discovered, the program prompts for the selection of the PC communication port that is currently linked with the LCD-LightningROD Reader.



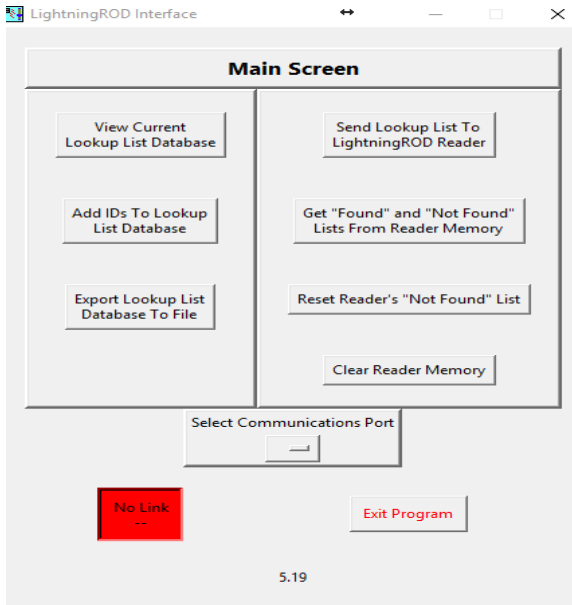
Click on the selection button. It will expand to display a select list of available communications ports. Click on the communications port that has an active Bluetooth link with the LCD-LightningROD reader.

ONCE YOU HAVE SELECTED THE COMMUNICATION PORT,

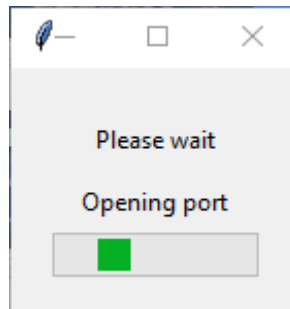
CLICK ON THE RED NO LINK BOX.



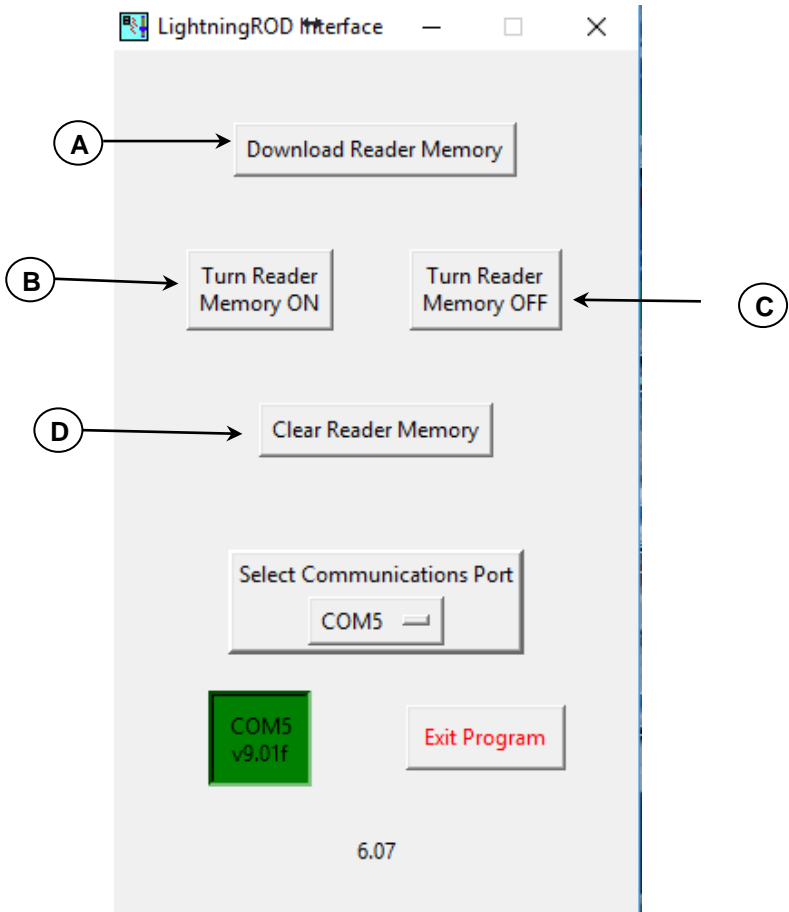
When the program is launched, it will first discover the available communications ports of the host PC.



This will start your communication between the reader and the software. You will see the below box appear as it is working. Once done this box will disappear.



Once the box disappears you will see your software will now be linked. It should look like the image below.

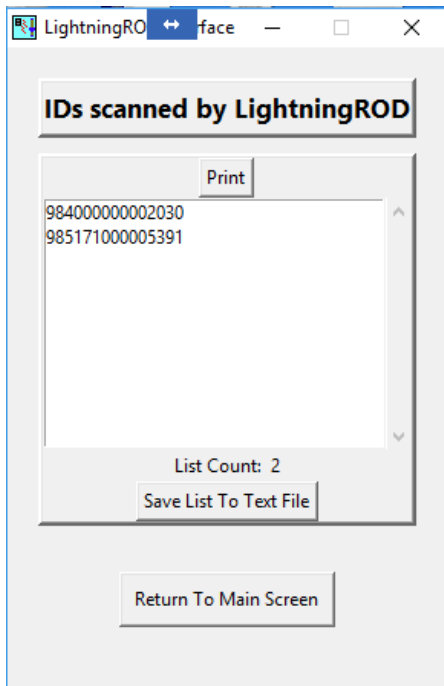


A. Download Reader Memory

Clicking on this button will initiate a download of all ID numbers stored in the LightningROD Reader's memory.

NOTE: downloading the ID list from the reader's memory does not clear the reader's memory. Only clicking on the "Clear Reader Memory" button will clear the reader's memory.

After the ID list is downloaded from the reader's memory, the program will display the "ID List" screen.



B. Turn Reader Memory ON

Click on this button to enable the reader's memory logging feature. The reader will save scanned IDs to its internal memory.

NOTE: The reader will only store a scanned ID to it's internal memory if the ID number is not already in it's memory. No duplicates stored.

C. Turn Reader Memory OFF

Click on this button to disable the reader's memory logging feature. The reader will no longer save scanned IDs to its internal memory.

D. Clear Reader Memory

Click on this button to clear the memory of a linked reader.

NOTE: Turning off the memory of the reader does not clear the reader's memory. If an ID list is in the reader's memory, it can still be downloaded even though the reader's memory is disabled.

Features

ISO RFID Reader	Tested with and reads all Animal ISO compatible tags
Long Read Distance	12 to 15 inches with good quality tags in quiet environment
Large Memory	Stores up to 5000 tags
Positive Operator Interface	Indicator lights to show read and operational status
Vibrating Handle - Read Alert	Vibrator provides tactile and auditory read alert – special - for noisy environments
Long Range Class 2 Bluetooth	Links with host up to 230 ft. (over a football field in distance)
Wireless Cable Device	Searches and links when power is applied within Bluetooth range
Simple conventional Links	Integrates with Bluetooth communication systems
Environmentally Rugged	300 psi rated fiberglass shell and cold room operation with rain or dust seals
Sleep Mode	Bluetooth and RFID reader both have sleep modes

Long battery life	Depending on environment 12 to 18 hours of operation reading over 6000 tags
Rechargeable Battery Pack	Separate battery recharger
Ni Metal Hydride Batteries	Powerful and rechargeable power module

Specifications

RFID Reader Operating Freq.	134.2 kHz
RFID Tag Protocol	ISO 11784 & ISO 11785
Compliant tags	both FDX and HDX
RFID RF Power	1.75 Watts
Bluetooth™ Wireless	Transmission Carrier Freq. 2.4 to 2.4835 Giga Hertz hopping Bluetooth™ frequency
Modulation Method	GFSK, 1Mbps, 0.5BT Gaussian
Transmission Power	Class 2 (max 20dBm) SPP compatible
Freq. Hopping	1600 hops/sec, 1MHz channel
Receiving Signal Range	-84 to -20dBm
Receiving IF Frequency	1.5 MHz center frequency
Physical Characteristics	Length 24"- 36" depending on options
	Width 3.5" Height 2"
	Weight 32 oz.
Environmental Characteristics	Operating Temperature -17° to 75° C (-0° to +165° F) Storage Temperature -20° to 75° C (-0° to +165° F) Relative Humidity 5% to 95% (non-condensing) Sealed for Rain & Dust
Resistance	
Battery Type Ni Metal Hydride	6.0v, 2100 mAh Battery Life 12 to 18 hours, application dependent
Recharging Time:	2 hours

Regulatory Approvals

FFC Part 15 Class B SYAICR04
Industry Canada RSS-210 Certification 5678A-ICR04

ISO Cane Reader Bluetooth Passkey

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When establishing a Bluetooth communications link with an ISO Cane Reader, enter this passkey when prompted by the Windows operating system.

The use of the passkey ensures secure communications between the ISO Cane Reader and the host computer.

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