SC1000W

(HRD0800F)

Integrated UHF RFID Reader

Installation Guide

Version 4.1

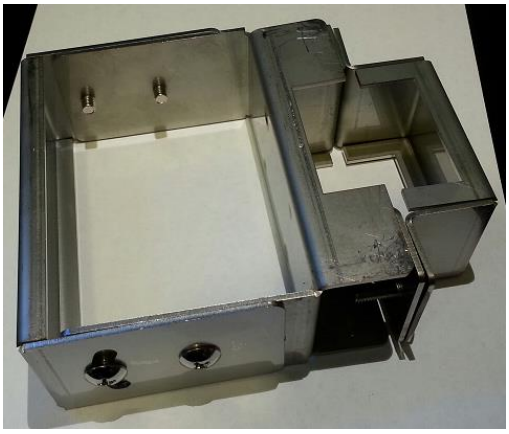
InfinityRFID Inc.

www.infinityRFIDinc.com

SC1000W System Components

All components shown below will be provided at the time of purchase. Please confirm that all components are present before proceeding with installation.

SC1000W Reader



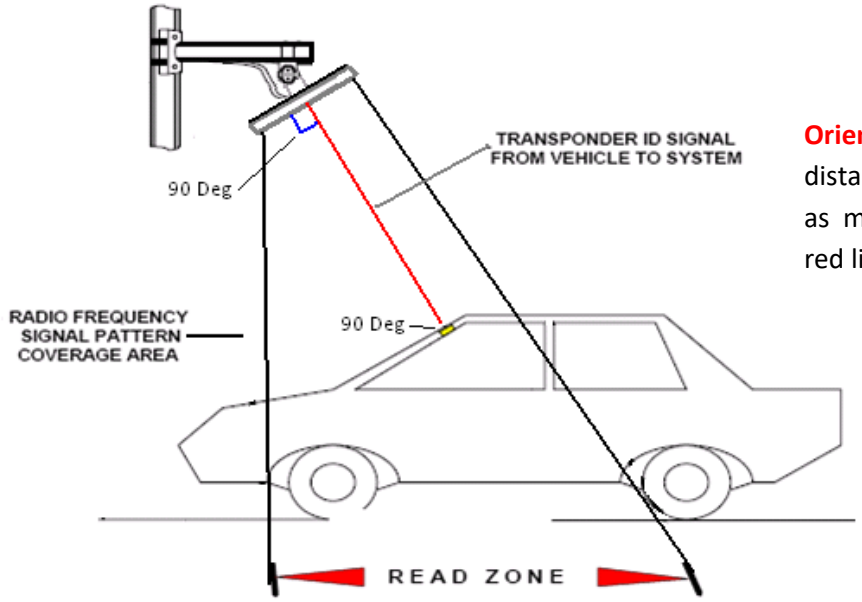
Mounting Bracket

Wiegand Interface

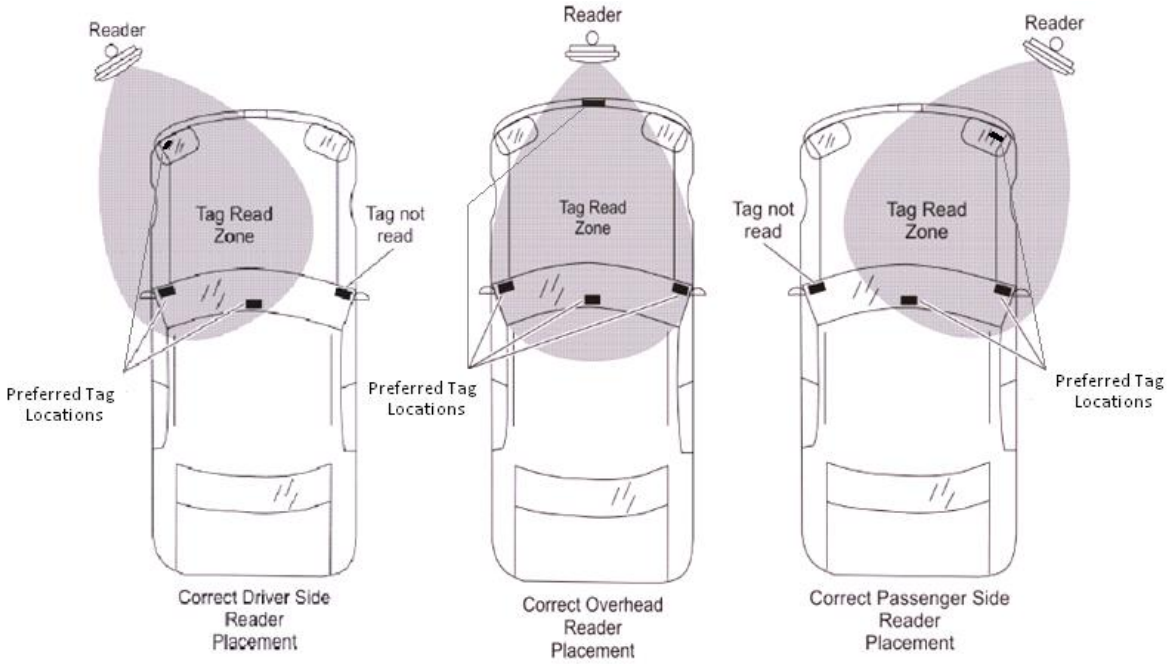
Power Supply

SC1000W Reader Orientation

Site layout plays a large role in where you can mount the reader and may prompt you to use a particular location/orientation. It is very important to be mindful of how reader placement affects where and how you mount the RFID tags/transponders on the vehicle. Here are some examples of reader placement and how they affect tag placement.



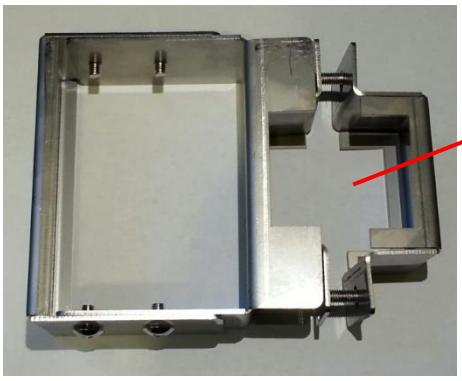
Orientation Note: Minimize the distance between reader and tag as much as possible (shown as red line)



After reader orientation has been selected make sure that all readers to be used at the site are installed in the same orientation to insure consistent tag reads (all on the left/driver's side for example).

*The above example shown is a general recommendation, final location should be decided upon after field testing.

Reader Mounting



Step 1: Install reader mounting bracket by loosening the compression screws and slipping the bracket over the post. Once in the desired location, tighten the mounting screws to secure the bracket in place.

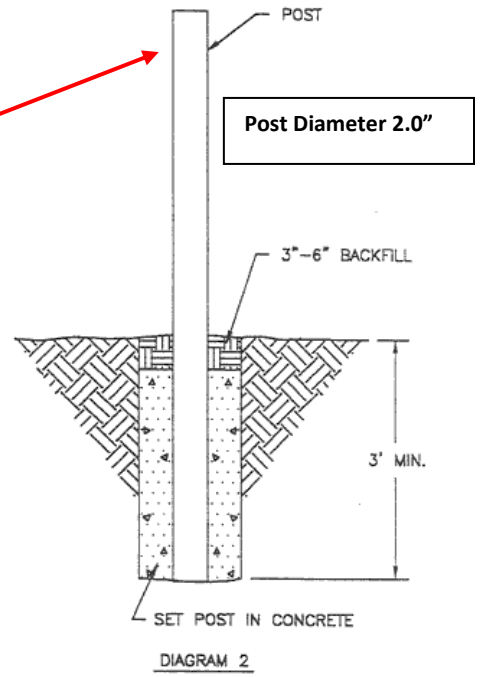
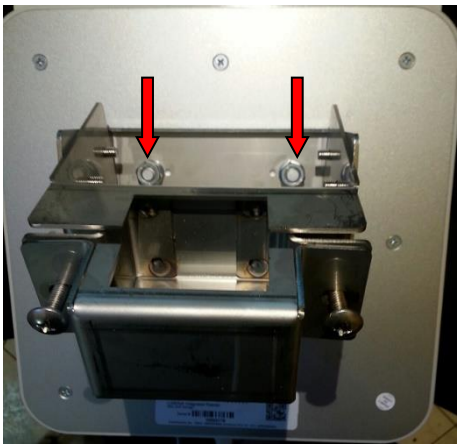
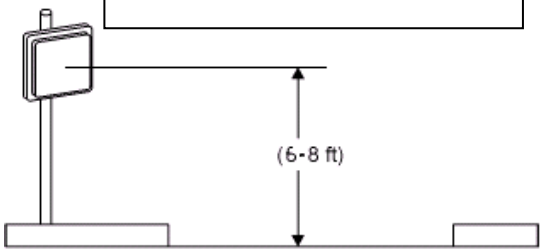


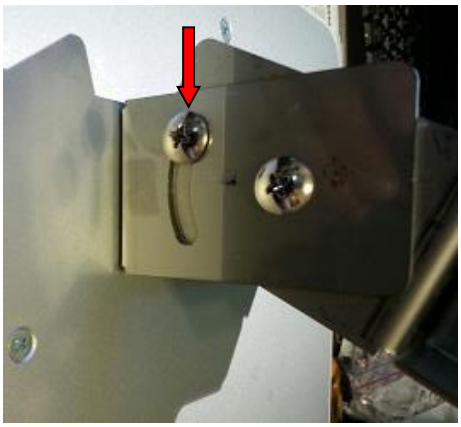
DIAGRAM 2



Step 2: Secure the reader to the mounting bracket by removing the mounting nuts from the mounting bolts located on the back of the reader. Place the reader bolts through the mounting bracket’s supplied holes. Reinstall the mounting nuts/lock washers and retighten.

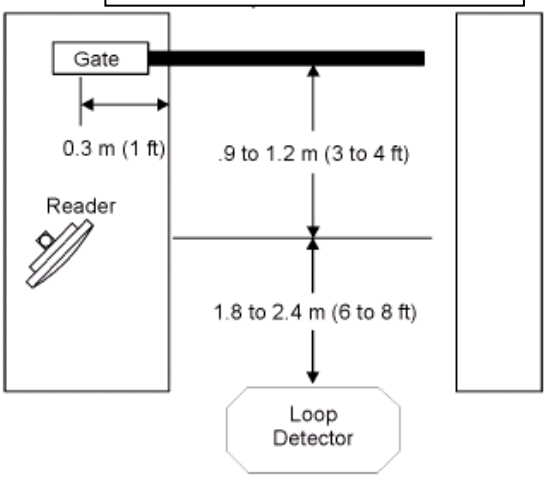
Recommended Reader Height





Step 3: Once the reader is mounted, the reader’s vertical orientation to the roadway can be adjusted using the screws located on each side of the mounting bracket. The specific angle is determined by the average pitch of the vehicle’s tag mounting surface (ex. windshield, headlamp, etc.)

Recommended Distance from Gate



Note: examples shown above are general recommendations, final location should be decided upon after field testing.

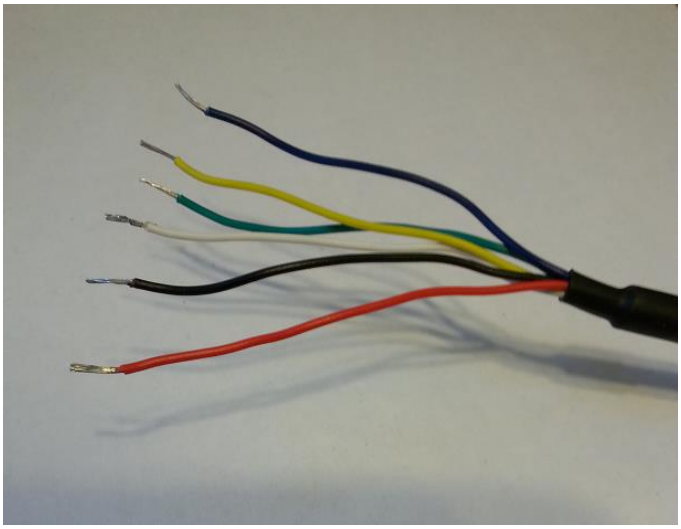
Wiring & Cable Connections

Below are the provisions for the wiring connections on the SC1000W reader system.

- Take special precautions to protect the system's components by locating them in a weatherproof enclosure (not supplied).
- In the weatherproof enclosure, provide a properly protected 115VAC power outlet for the purposes of powering the reader through the supplied plug in transformer.
- Once an appropriate weatherproof enclosure with power outlet has been installed, route the reader cable so that is safely enters the enclosure and maintains the enclosure's weatherproof capabilities.

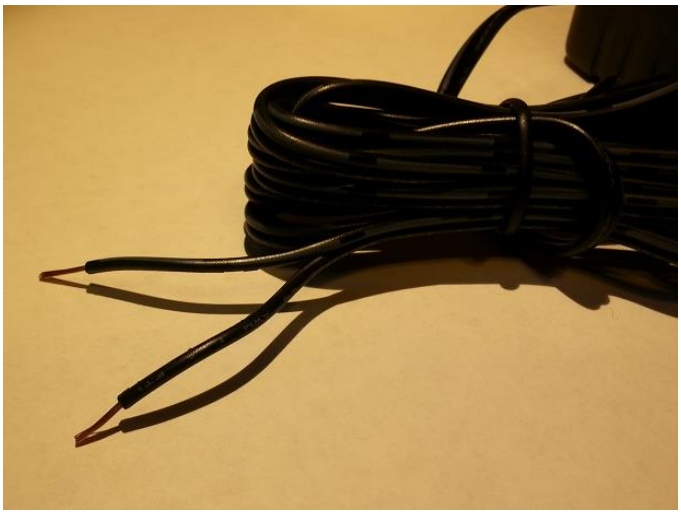
Reader Cable Index

Color	Function
Blue	Arming Loop
Yellow	Com
Green	TXD
White	RXD
Black	-12 VDC (GND)
Red	+12 VDC

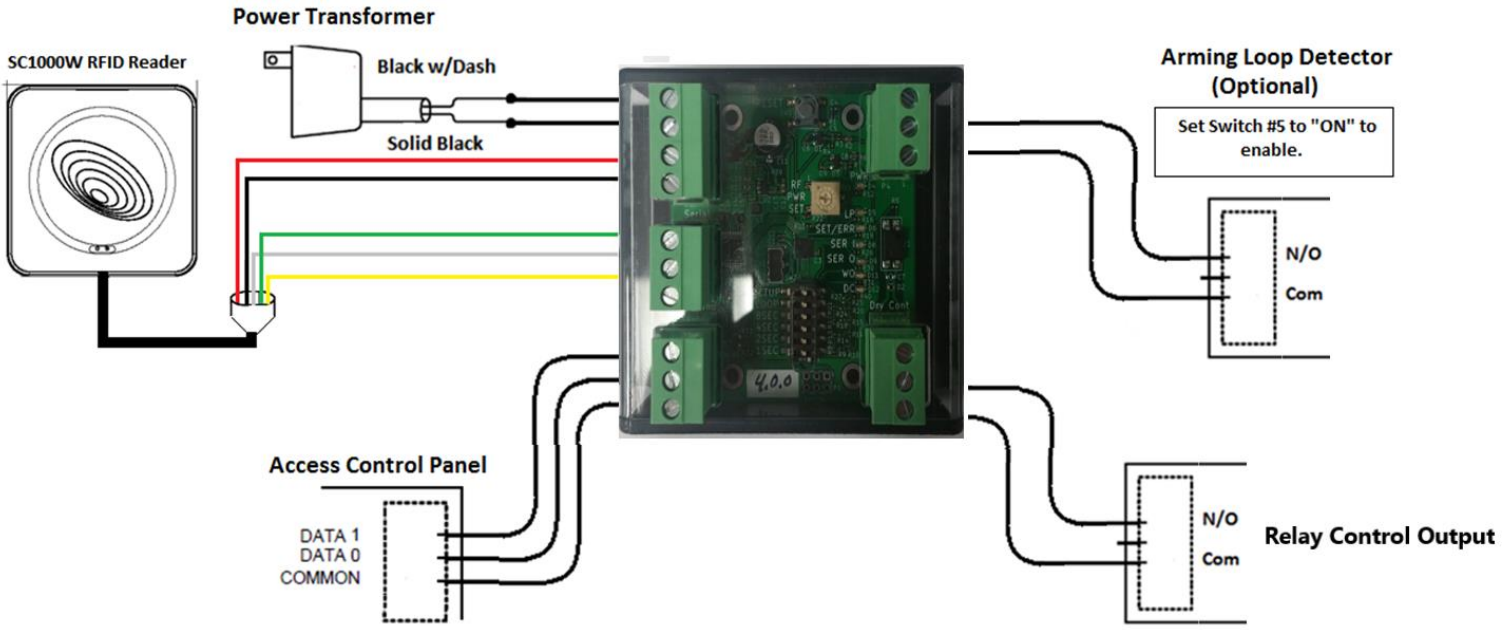


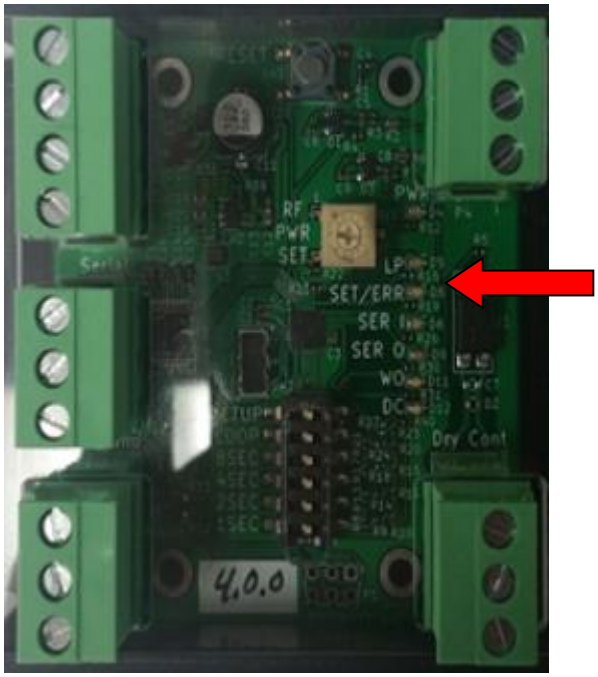
Power Supply Connections

Color	Function
Solid Black	-12 VDC (GND)
Black w/Dash	+12 VDC



Reader Wiring Diagram



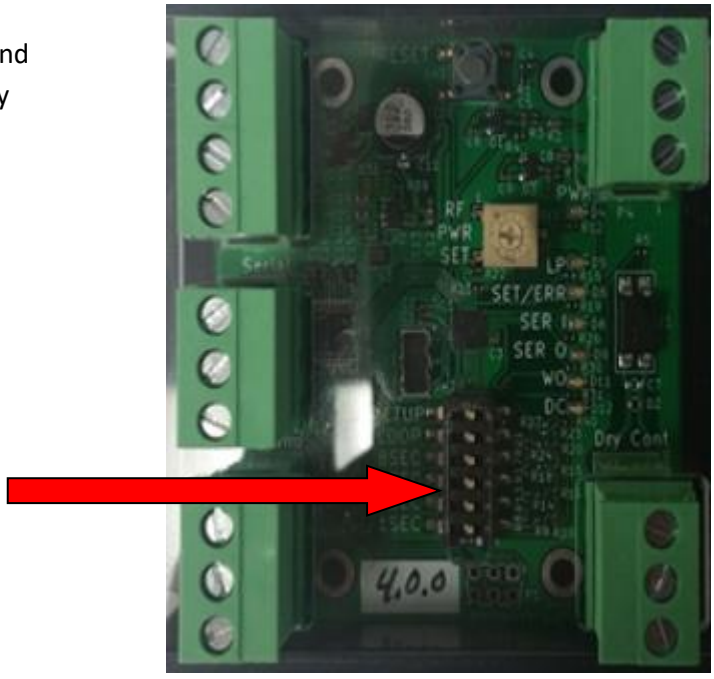


Wiegand Interface LEDs

Green (PWR)	Power (Solid when power present)
Green (LP)	Arming Loop (Solid when active)
Blue (SET/ERR)	Programming Mode (Solid when in use)
Red (SER 1)	Data Received from Reader (Flash)
Yellow (SER 0)	Data Transmitted to Reader (Flash)
Orange (W0)	Wiegand Data Output (Flash)
Orange (DC)	Relay Control Output (Flash)

Wiegand Interface Module Programming

Switch 1	Switch 2	Switch 3	Switch 4	Wiegand Delay
Off	Off	Off	Off	0
On	Off	Off	Off	1
Off	On	Off	Off	2
On	On	Off	Off	3
Off	Off	On	Off	4
On	Off	On	Off	5
Off	On	On	Off	6
On	On	On	Off	7
Off	Off	Off	On	8
On	Off	Off	On	9
Off	On	Off	On	10
On	On	Off	Off	11
Off	Off	On	Off	12
On	Off	On	On	13
Off	On	On	Off	14
On	On	On	On	15



Wiegand Retransmission Delay

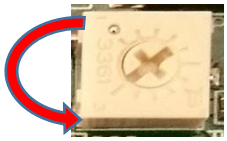
The S2W has an adjustable wiegand output retransmission delay from 0-15 seconds. This is set by the bottom 4 dipswitches shown above. When the switch is set the left it is in the “On” position. Please use the chart to the left to select the designed amount of retransmission delay in seconds.

Note - The power to the S2W module must be cycled for any switch changes to take effect.

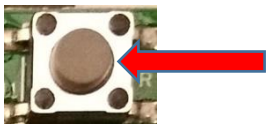
Beeper Enable/Disable

From the factory, the SC1000W will beep when it reads an RFID tag. To turn toggle this feature (turn on or off) perform the following steps:

1. Place the module in programming mode by setting switch 6 to “On”(left).
2. Turn the adjustment pot counter-clockwise to the minimum setting.



3. Press the button just above the range adjustment to toggle the setting.

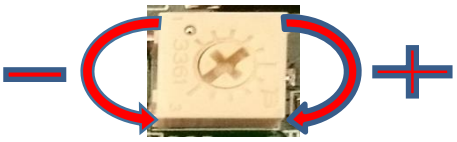


4. Return the antenna range setting to its original position and place the module into operating mode by setting switch 6 to “off” (right)

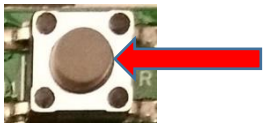
Antenna Range Adjustment

The S2W has an antenna range adjustable located on the circuit board just left of the LED Display. To adjust the range perform the following steps:

1. Place the module in programming mode by setting switch 6 to “On”(left).
2. Locate the adjustment pot and turn clockwise to increase range or counter-clockwise to decrease range. The LED display will show the relative power setting (Max is all LEDs on)



3. To send the new range setting to the reader press the button just above the range adjustment.



4. Once the desired range is set, place the module into operating mode by setting switch 6 to “off” (right)

Reader Specifications

Part Number	SC1000W (HRD0800F)
FCC ID	XVY-IDRO900MA
Dimensions	10.25” x 10.25” x 1.5”
Polarization	Circular Polarized
Frequency range	902Mhz ~ 928 Mhz
Supported Protocol	ISO 18000-6C/EPC C1 G2, ISO 18000-6B
Read Range	20 – 30 Feet (Depending on Tag)
Anti-Collision	Up to 100 tags/second
Environment	Operating Temp : - 20 C to + 50 C Storage Temp : - 20 C to + 80 C
Connectivity	26-Bit Wiegand (D0, D1, GND)
Power Supply	12V DC, 3A
RF Output Power	Adjustable 13-30 dBm with 1 dB steps Power Accuracy +/- 0.5dBm
Weight	< 31.0 oz. (Reader Only)

Office

17057 Chatsworth Street #B

Granada Hills. CA 91344

Shipping

18017 Chatsworth Street #127

Granada Hills, CA 91344

818-923-5132

www.infinityRFIDinc.com