



Farpointe Data RER-11 Ranger Edge Receiver User Guide

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Farpointe Data RER-11 Ranger Edge Receiver

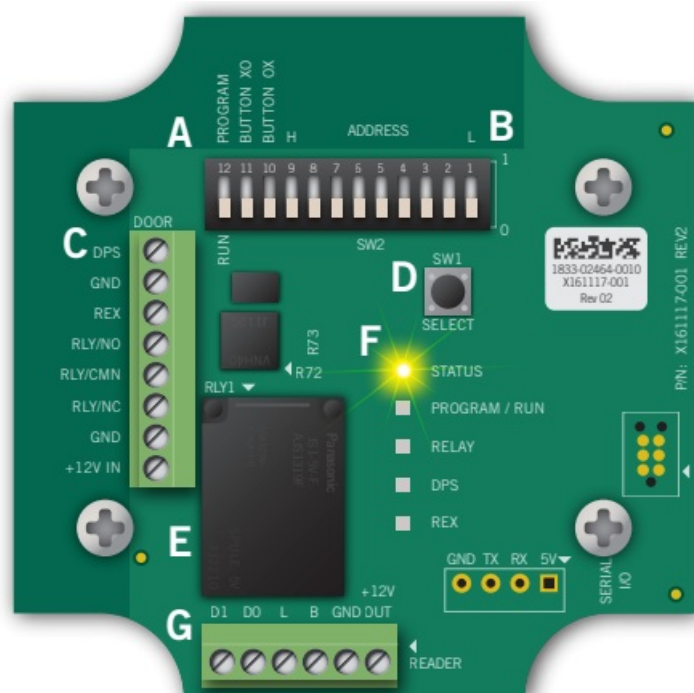


This Quick Start Guide is intended for experienced installing technicians. It is a basic reference to ensure all connections are properly made. Installation and wiring of systems must be in accordance with the National Electrical Code, ANSI/NFPA 70.

Description

Long-Range Transmitters and Receivers with an integrated receive antenna comprise Farpointe Data's high frequency, long-range identification solution known as Ranger. Intended for security access control applications, Ranger's wireless communications are based upon a secure, digital, anti-playback routine. The one-channel Ranger Edge Receiver, model RER-11 natively supports Ranger Long-Range Transmitters with its integrated receive antenna. Additionally, via the on-board Wiegand interface, the Edge Receiver may optionally support a variety of RFID reader and associated card and tag technologies, as well as access applications, including keypads (PIN) and biometrics. The RER-11 offers single location point of control with all configuration done directly on the Receiver, eliminating the requirement for separate mobile smartphone or PC programming devices.

Receiver Layout



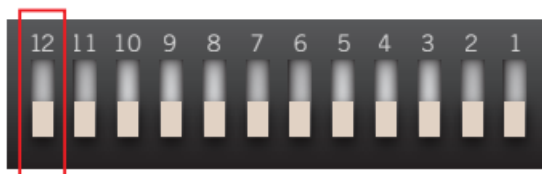
Legend

- 12-Position slide style Dip Switches
- Credential enrollment/ deletion switches orientation
- 8-Position Door terminal block
- Switch 1
- Relay
- LEDs
- 6-Position Wiegand interface terminal block

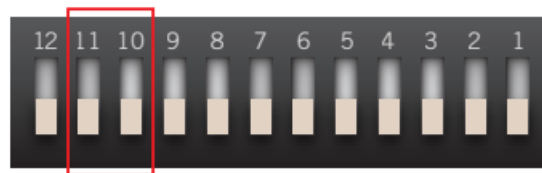
The dip switches are set to the 0-position by default.

12-Position Slide Style Dip Switches Designations

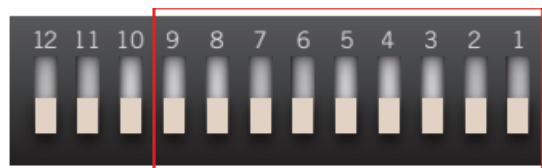
Dip Switch 12: Program/Run Switch



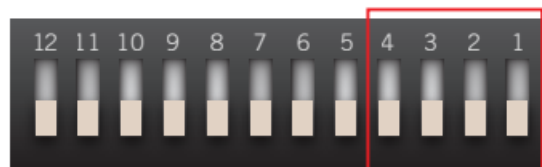
Dip Switches 10 – 11: Transmitter Button Select Switches



Dip Switches 1 – 9: Credential Enrollment/Deletion Switches



Dip Switches 1 – 4: Relay Activation Timing Switches



Cable Requirements

For connection to Wiegand interface, 24 AWG multi-conductor stranded cable with an overall foil shield. Per the SIA's Wiegand specification, maximum cable length is 500 feet (152 m).

Formats

Wiegand is supported, including industry standard 26-bit Wiegand, as well as custom formats with a maximum length of 48-bits.

Grounding

Edge Receiver must connect to earth ground at one point only. Additionally, if multiple power supplies are used, all ground conductors (“commons”) should be connected together at one point and then earth grounded at one point only.

Power

Power required is 12 VDC nominal at 30 mA, and should be applied where indicated on the 8-position Door terminal block (GND and +12V In). If relay is active, then nominal power is 100 mA. If a separate reader is installed, current may be higher. Maximum reader power is 300 mA. If more current is required, a separate power supply should be used. A linear power supply is recommended for best operation.

Mounting

The Edge Receiver may be mounted indoors or outdoors. The enclosure includes pre-drilled holes in the four corners allowing mounting to a flat surface. Use supplied #6 mounting screws, or equivalent security screws, for installation. To maintain outdoor rating of enclosure when wiring, use supplied Heyco®-Tite liquid tight cord grips on cables.

Read Range

Read range is nominally up to 100 feet (30.5 m). For optimal read range, it is important that the Edge Receiver be mounted as far from potential interference sources as possible. These sources may include, but are not limited to, large metal and concrete obstructions, as well as magnetic fields and radio transmissions. Further range varies based on the height a Receiver is installed, how a user may hold a Transmitter when being used, and where the Transmitter is being used. Avoid installing Receiver inside metal enclosures. Read range may vary for each installation.

RER-11 RANGER® EDGE RECEIVER

10.0 8-Position Door Terminal Block Connections

DPS	Door Position Sensor
GND	Ground
REX	Request to Exit device
RLY/NO	Relay Normally Open
RLY/CMN	Relay Common
RLY/NC	Relay Normally Closed
GND	Power, 0VDC (Power supply)
+12V In	Power, +12VDC (Power supply input)

11.0 6-Position Wiegand Interface Terminal Block Connections

D1	Wiegand Data 1 (One), Normally White Conductor
D0	Wiegand Data 0 (Zero), Normally Green Conductor
L	LED, Normally Brown Conductor
B	Beeper, Normally Blue Conductor
GND	Ground (0VDC), Normally Black Conductor
+12V OUT	Power (+12VDC), Normally Red Conductor

Connection

The connection must be done in accordance with NFPA 70. Do not connect to a receptacle controlled by a switch. Connect to a power-limited DC voltage source.

- Operating Temperature: –40° F to 149° F (–40° C to +65° C)
- Operating Humidity: 5% to 95% relative humidity non-condensing

IP Rating: IP67-rated for outdoor use

TECHNICAL NOTES

• Garage Door Applications

Wire the RLY/NO and RLY/CMN connections in parallel to the Garage Door Opener push button switch activator.

- If 12VDC can be found within the garage door opener, it is possible to provide power to the Ranger Edge Receiver by this means. Otherwise a separate power supply will be required.
- A relay timer value of 1 second is typical for this application.

Board Mounting

- The Ranger Edge Receiver can be installed into a third-party device, as permitted.
- Do not mount inside a metal enclosure as this will reduce the operating range of the transmitter.

For information on set-up, please review our Edge Receiver Configuration Reference Document.

SPECIFICATIONS

Power

Operating Voltage	12VDC+/- 10% Nominal
Operating Current	Idle: 30mA, Relay Active: 100mA

Relay

Output Relay	Form C, NO 5 A @ 30 VDC resistive, NC 3 A @ 30 VDC resistive
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Transmitter Interface

Supported Wireless Transmitters	Farpointe Data, Inc. Models WRT-2+, WRT-4+, and WRT-2M
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Reader Interface

Reader Power	12VDC +/- 10%, 300 mA maximum for each reader
Data Inputs	TTL compatible Wiegand inputs
LED Output	TTL levels, high>3 V, Low<0.5 V, 5 mA source/sink maximum
Buzzer Output	Open collector, 12 VDC open circuit maximum, 25 mA sink maximum

Environmental

Temperature	-55 to 85° C storage, 0 to 70° C operating
Humidity	5 to 95% RHNC

Mechanical

Dimensions	3" × 3", 0.9" height
Enclosure	Hammond box, P/N: 1555E2GY (UL Listed), included, with 4ea #6 × 1/4", self-tapping PCBA mounting screws

Power

FCC Compliance Statement: This device complies with part 15 of the FCC rules. 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. Caution: Changes or modifications not expressly approved by Farpointe Data could void the user's authority to operate the equipment. Product can be used without license conditions or restrictions in all European Union countries, including Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Spain, Sweden, United Kingdom, as well as other non-EU countries, including Iceland, = Norway, and Switzerland. This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause unde-sired operation of the device. Cet appareil est conforme à Industrie Canada exempts de licence standard RSS (s). Le fonctionnement est soumis aux deux conditions suivantes : (1) ce dispositif ne peut pas provoquer d'interférences et (2) ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.

Details on compliance and certifications can be found at:

<https://www.farpointedata.com/resources/certifications.php>.

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Documents / Resources

	<p>Farpointe Data RER-11 Ranger Edge Receiver [pdf] User Guide RER-11, Ranger Edge Receiver, RER-11 Ranger Edge Receiver, Edge Receiver, Receiver</p>
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References

- [Farpointe Data - RFID Readers and Credentials for Electronic Access Control](#)
- [Farpointe Data Compliance & Certifications](#)