Ranger Long-Range Wireless Radio Transmitter (433-MHz)

These Operating Instructions are a basic guide in the proper use and care of the Ranger Transmitters. Additional information may be downloaded from the Farpointe Data website found at www.farpointedata.com; under Products > Ranger ® Long Range Transmitters and Receivers.

The Ranger Long-Range Wireless Radio Transmitter is compliant with the following organizations:

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.

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.
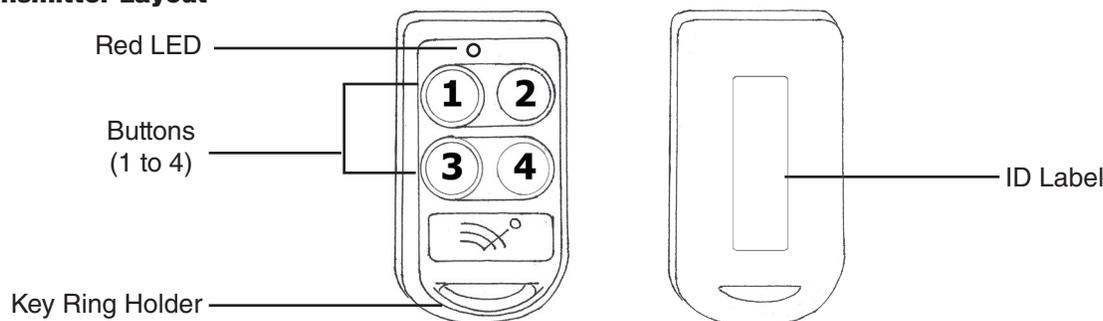
1.0 Description

Wireless Radio Transmitters and Long Range Receivers with an integrated receive antenna comprise Farpointe Data's high frequency, long-range identification solution known as Ranger[1]. Intended for security access control applications, Ranger's wireless communications are based upon a secure, digital, anti-playback routine[2].

Ranger Transmitters are available in either a two or four-button configuration, with each corresponding to its own Wiegand output on the Ranger Receiver. Each Transmitter includes an integrated red LED, used to indicate both positive button press and battery strength

They are also equipped standard with a potted proximity or contactless smartcard module allowing the Transmitter to also be used as a close-range access credential. Transmitters ship standard with a proximity module compatible with *Pyramid Serie*s Proximity® readers. They can be ordered custom with a proximity module compatible with either HID's or AWID's standard 125-kHz proximity readers, or a contactless smartcard module (Mifare® 1K or 4K) compatible with Delta® Multi-Technology Contactless Smartcard Readers.

2. Transmitter Layout

Red LED
Buttons (1 to 4)
Key Ring Holder
ID Label

Model WRT-4+ shown
Size: 2.5 x 1.4 x .52-inches (63.5 x 35.6 x 13.2 mm)

[1]Models include the WRT-2+, WRT-2+H, WRT-2+A, WRT-4+, WRT-4+H, WRT-4+A, WRT-2+S1, WRT-2+S4 WRT-4+S1, and WRT-4+S4
[2] Eliminates the risk of code sniffing and unauthorized duplication.

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3.0 Output Formats

Transmitters are sequentially coded in either the industry standard 26-bit Wiegand format or custom Wiegand formats, with exact number sequences. As a cross reference the Transmitters' internal ID number is printed on the ID label found on the back of the Transmitter. Specific coding details, including format, facility code, and ID range can be found on the Transmitter shipping box, as well as the shipment's packing list.

4.0 Battery Replacement

Transmitters include a replaceable CR2032, 3.3V, lithium battery[1]. The battery should be replaced when a button press does not result in a flash of the LED, reliable read range, and/or an output from the Receiver. To replace the battery, follow the directions below:

1. Using a coin, place it in the gap (2-piece unit) near the key ring holder and twist to pop the transmitter open.
2. Remove the old battery.[2]
3. Insert the new CR2032, 3.3V, lithium battery. Be sure the plus (+) side of the battery is facing up (visible when installed).
4. Snap both pieces together.

5.0 Range[3]

Maximum read range between the Transmitter and Receiver is up to 150-feet (45.7 m).[4]

6.0 Enrollment

Transmitter must be clicked twice within a Receiver's read range to be learned upon initial Receiver power up. This synchronizes the transmitter and receiver rolling codes. If the transmitter is clicked more than five times outside of the Receivers read range the transmitter and receiver will be desynchronized . To re-sync click twice again within read range.

7.0 Time-Out

Ranger transmitters make use of a time-out feature to preserve battery life and prevent interference with other transmitters on the field. When a button is held down continuously the transmitter will transmit the code once and shutdown and will power up once the button is released.

8.0 Troubleshooting

Issue/Possible Cause	Corrective Action
No data received/Transmitter not enrolled	Transmitter must be clicked twice to be learned by the Receiver upon initial Receiver power up
Short Read Range/Receiver Knob	Adjustable knob should be set to the maximum setting
Some Buttons not working/Channel Jumper	Jumper must be set to channel 'A' for buttons 1 & 2. Jumper must be set to channel 'B' for buttons 3 & 4
Prox insert not working/Compatibility	Compatibility with HID and AWID readers must be requested on PO

Should any of the corrective actions mentioned above not improve performance, please contact Farpointe directly.

1. This lithium battery is widely available, and commonly used in electronic devices, including cameras and remote controls.
2. Dispose of the battery according to local requirements. Recycle when possible.
3. For best performance the Transmitter should be used as far from interference sources as possible. These sources may include, but are not limited to, large metal obstructions, such as duct work and appliances, as well as magnetic fields and radio emissions.
4. The read range between the Transmitter and Receiver may be adjusted at the Receiver. As shipped, the Receiver is set for the maximum read range. This may be reduced to a minimum of several feet by an adjustment on the Receiver.

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