



QUICK START GUIDE

433-MHz RANGER[®] LONG-RANGE WRT-2+/WRT-4+/WRT-2M WIRELESS RADIO TRANSMITTERS

This Quick Start Guide is intended for experienced installation technicians. It is a basic reference to ensure all installations are properly made.

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. Intended for security access control applications, Ranger's wireless communication is based upon a digital routine. Ranger Transmitters are available in two- or four-button configurations, with each button 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.¹

The WRT-2+ and WRT-4+ Transmitters 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. These Transmitters ship standard with a proximity module offering technology support of certain *Pyramid Series Proximity*[®], *HID*[®] or *AWID*[®] standard 125-kHz proximity readers, or with a contactless smartcard module (such as *MIFARE*[®] Classic, as well as *MIFARE*[®] DESFire[®]) offering technology support of certain contactless smartcard readers, such as *CONEXT*[®].² The WRT-2M Transmitter does not include a proximity or contactless smartcard module. Instead it can be fitted with an adhesive disc tag, such as Farpointe's model PDT-1—that adheres to the back of the Transmitter—which also allows it to be used as a close-range access credential. Disc tags, which are sold separately, are available in the same proximity or contactless smartcard formats as noted above.

2.0 Transmitter Layouts

(see Figure 1)

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 Time-Out

Transmitters include physical buttons. When activated properly with a press and release, the Transmitter button will provide a physical click and the LED will flash. When a button is held down continuously the Transmitter will transmit its code once and then shutdown, returning to normal operation once the button is released. This preserves the Transmitter battery, and prevents interference with other Transmitters that may be in the field.

5.0 Battery Replacement

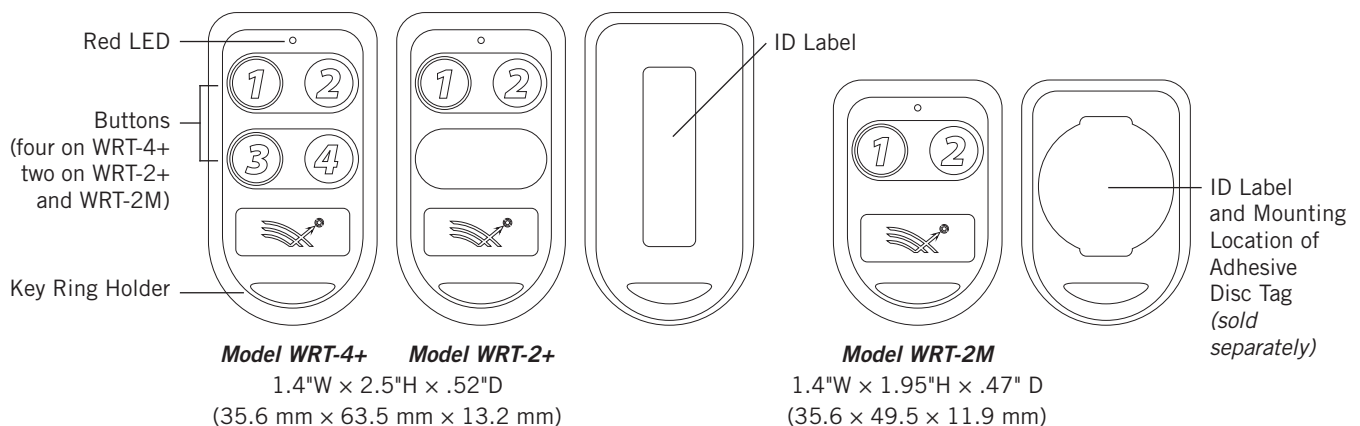
Transmitters include a replaceable CR2032, 3.3V, lithium battery³, enclosed in a tamper-proof battery compartment. The battery should be replaced when a button press does not result in a flash of the LED, reliable read range, and/or an output from the Receiver. To replace the battery, follow the directions 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.⁴
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.

6.0 Range⁵

Read range between the Transmitter and Receiver depends on the Receiver model being used. Please review the Ranger Receiver datasheet for more information.

Figure 1



QUICK START GUIDE

433-MHz RANGER® LONG-RANGE WRT-2+/WRT-4+/WRT-2M WIRELESS RADIO TRANSMITTERS

7.0 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 potentiometer	Adjustable potentiometer should be set to the maximum setting (certain models only)
Some buttons not working/Receiver capability	Receiver Model WRR-22 only works with buttons 1 and 2
Prox insert not working/Compatibility	Support with HID® and AWID® 125-kHz Proximity Protocol readers must be requested on PO. With WRT-2M, does not include a proximity or contactless smartcard module. Adhesive disk tags are sold separately.
Red LED does not flash upon button press	Check that battery is installed correctly and is not dead (fully discharged)

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

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

Access Control Performance Levels Conforming to UL STD 294:

Destructive Attack	Line Security	Endurance	Standby Power
Level I	Level I	Level IV	Level I

Grade Classification Certified to CAN/ULC STD 60839-11-1:

Risk Level	Application	Skill/Knowledge of Attackers	Typical Examples
Grade 1	Grade 1	Grade 1	Grade 1

Many Farpointe Data Readers carry the following certifications:



Only WRT-2+ and WRT-4+ are ETL Listed

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.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Details on compliance and certifications can be found at:

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

NOTES

- Warning: Contains Coin Battery. Always completely secure the battery compartment. If the battery compartment does not close securely, stop using the Transmitter, remove the battery, and keep all components away from children.
- For security-relevant physical smartcard credential applications, users should consider MIFARE® DESFire®-based product families.
- This lithium coin-cell battery is widely available, and commonly used in electronic devices, including cameras and remote controls. Do not ingest this battery and keep it away from children.
- Immediately dispose of used batteries and keep away from children. Do NOT dispose of batteries in household trash. Recycle when possible.
- 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.

⚠ WARNING

- **INGESTION HAZARD:** This product contains a button cell or coin battery.
- **DEATH** or serious injury can occur if ingested. Even used batteries may cause severe injury or death.
- A swallowed button cell or coin battery can cause **Internal Chemical Burns** in as little as **2 hours**.
- **KEEP** new and used batteries **OUT OF REACH OF CHILDREN**.
- **Seek immediate medical attention** if a battery is suspected to be swallowed or inserted inside any part of the body. Call a local poison control center for treatment information.



Farpointe Data reserves the right to change specifications without notice.

© 2012-2025 Farpointe Data, Inc. All rights reserved. Farpointe Data®, Pyramid Series Proximity®, Delta®, Ranger®, and CONEKT® are the registered U.S. trademarks of Farpointe Data, Inc. MIFARE and MIFARE DESFire are registered trademarks of NXP B.V. AWID is a registered trademark of Applied Wireless Identifications Group. HID and the HID logo are registered trademarks of HID Global Corporation, an ASSA ABLOY company. All other trademarks are the property of their respective owners.

Farpointe Data, Inc.
2195 Zanker Road
San Jose, CA 95131 USA
Office: +1-408-731-8700
Fax: +1-408-731-8705
support@farpointedata.com



May-19-2025

www.farpointedata.com

P/N: 01602-001 · Rev. 3