

# 900 MHz WIRELESS RF REMOTE MODULE

This 900 MHz wireless RF remote module provides wireless communication for a 2358-010 tracker expansion board revision "N" or higher to a 900 MHz wireless baseboard in a access control system. Use this 900 MHz wireless boards **ONLY** with DoorKing: 1833, 1835, 1837 and 1838 multi-door access controller access control systems. **DO NOT** use with 1838 Access Plus model.

## Antenna Options

Range **WILL VARY GREATLY** depending on individual setup: Antenna height above the ground, background signal interference, physical obstructions (trees, buildings etc.). Adverse weather (rain) **CAN** also affect antenna range.

Cabinet Mounted  
900 MHz Antenna Kit  
P/N 1514-019

Range is Up to **1500 ft**  
direct-line-of-sight.

Externally Mounted  
900 MHz Antenna Kit  
P/N 1514-079

Range is Up to **1500 ft**  
direct-line-of-sight.

900 MHz Wireless  
Dual Band Repeater  
P/N 2332-080

Range is Up to **1500 ft**  
direct-line-of-sight.  
See instruction sheet for  
more information.

900 MHz  
Short Range  
Cabinet Mounted  
Antenna (Supplied)

Range is Up to **300 ft**  
direct-line-of-sight.

## 900 MHz Wireless Enclosure Options

Antenna Mount  
Single Board  
Enclosure  
P/N 2351-080

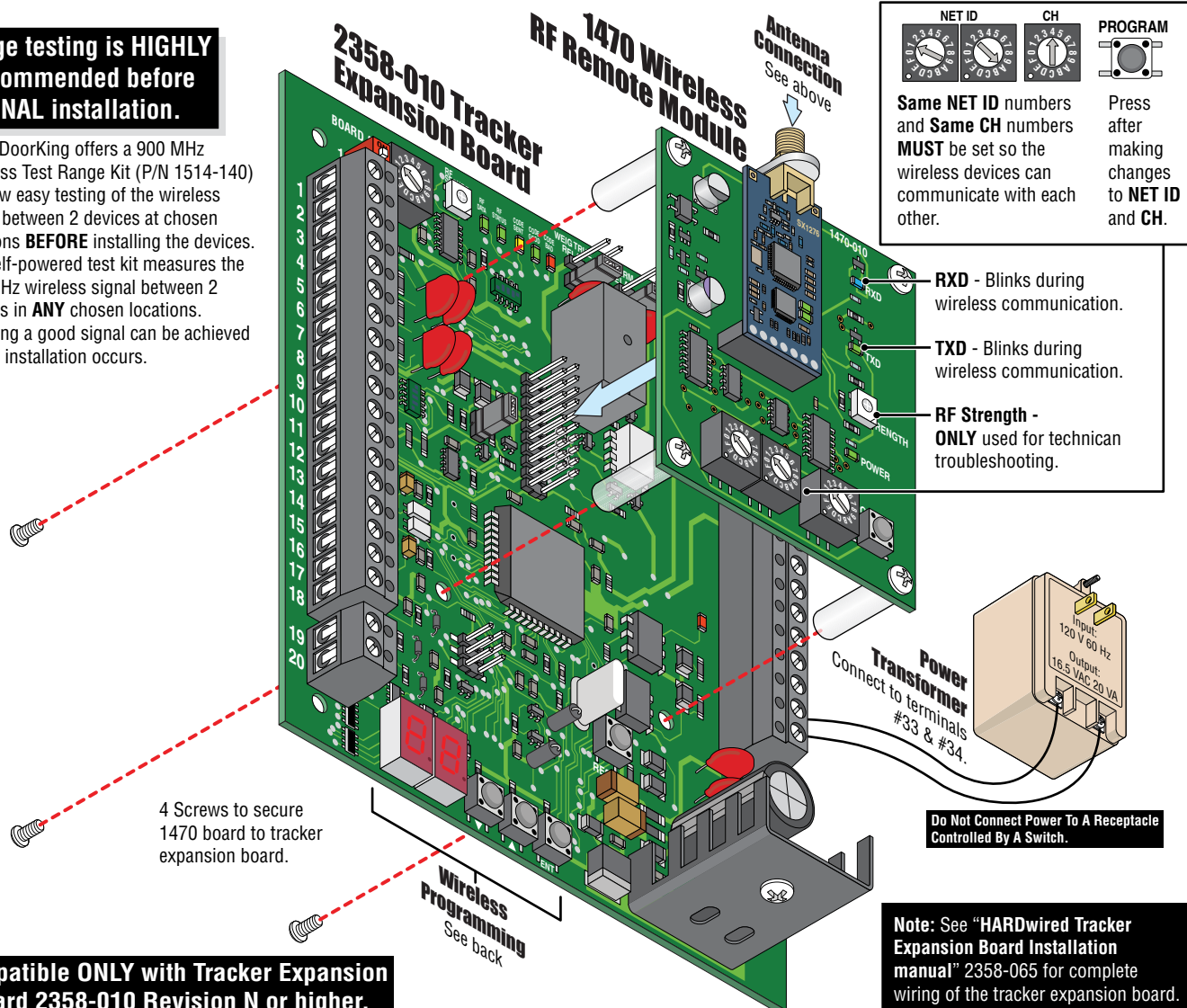
Single Board Enclosure with  
Built-In Card Reader and Lighting  
DK Prox Reader - P/N 1815-333  
HID Reader - P/N 1815-392  
AWID Reader - P/N 1815-292

## Installation

Plug the 1470 wireless RF remote module into the **wireless connector** and secure boards with 4 screws to the 2358 tracker expansion board. See the **HARDwired tracker expansion board manual** 2358-065 to connect desired options to tracker board terminals #1- #34 to manage a remote access point. **DO NOT CONNECT ANY WIRES TO TERMINALS #10, #17, #27, #28 or #29 (Used for HARDwire communication line ONLY).** Power transformer must connect to tracker expansion board #33 and #34 (**REQUIRED**). Antenna is **REQUIRED**.

### Range testing is **HIGHLY** recommended before **FINAL** installation.

**Note:** DoorKing offers a 900 MHz Wireless Test Range Kit (P/N 1514-140) to allow easy testing of the wireless signal between 2 devices at chosen locations **BEFORE** installing the devices. The self-powered test kit measures the 900 MHz wireless signal between 2 devices in **ANY** chosen locations. Ensuring a good signal can be achieved before installation occurs.



**Compatible ONLY with Tracker Expansion Board 2358-010 Revision N or higher.**

## Wireless RF Remote Module Tracker Expansion Board Programming ONLY

1. Press a button to activate LED display.
2. Press **ENT** button and then use **▼▲** scroll buttons to display desired “Program Step” number from list below.
3. Press **ENT** button to enter selected program step number.
4. Select desired data while in program step using **▼▲** buttons.
5. Press **ENT** button to **enter** selected data.
6. Press **ENT** button **AGAIN** to **EXIT** programming **OR** after 10 seconds, board will **automatically EXIT** programming.

Program Step	Description	Options	Selection Number	Function	Factory Default
17	1835 Checkin Time (Factory Set)	1 - 5	5	<b>Preset at Factory. Do Not Change. Contact DoorKing tech support.</b> Period Tracker board checks in with 1835 for schedule hold open (minutes).	5 Minutes
18	Low Byte MAC	1 - 99	5	<b>Preset at Factory. Do Not Change. Contact DoorKing tech support.</b> Low Byte Value MAC address used only for 900MHz. Assigned during manufacturing.	5
19	Reset to Factory Defaults	5		<b>Sets all parameters to Factory Default</b>	
20	View RF POT Setting	Adjustable		<b>Sets maximum amount of allowable signal strength loss</b>	
21	View RF Signal Strength	LED Display		<b>Displays current signal strength between Baseboard and Tracker.</b> <ul style="list-style-type: none"> <li>• 80 or lower - <b>GOOD</b>. (74-76 or lower preferred)</li> <li>• 81-85 - Unreliable signal strength.</li> <li>• 86-99 - <b>NO</b> signal.</li> </ul>	
22	Card Code Forwarding (Factory Set)	0 or 1	0 1	<b>Sets Wireless Tracker to act as Repeater</b> <b>Do Not Change. Contact DoorKing tech support.</b> Repeater Mode OFF Repeater Mode ON	0: Off
23	Same Zone Address Relay Delay	0 - 20		<b>Adding relay control delay to Trackers using the same Zone Addresses</b> If more than one tracker board is set to the same address (zone addresses), then change this value to a unique number. Only program this for tracker boards with the same addresses. Start out with a value of 1 then increase the next board to 2, then the 3rd board to 3 etc... This will prioritize the relay access order of the same zone address boards.	0
24	Lost Wireless Communication Options (Factory Set)	0 - 5	0 1 2 3 4 5	<b>When wireless communication is lost with the base for “X” number of minutes defined in step 17, this step will instruct the tracker board what action to take.</b> Does nothing Counts the number of lost communication transactions Reboot the RF module only Set RF module with net ID and channel selected Initialize RF module then reboot RF remote module Restore programming value, sets RF remote module net ID and CH, then reboots RF module address boards.	1: counts the number of lost com trans.
25	View the Number of Lost Wireless Communications	0 - 99		<b>View the number of lost communication transactions with the base.</b> Use the <b>▼▲</b> arrows buttons to change the value.	0
26	Air Busy Wait Time (Factory Set)	0 - 20	2	<b>Preset at Factory. Do Not Change. Contact DoorKing tech support.</b> This value is set to 2. No need to adjust.	2
<b>Error codes on LED Displays for Baseboard and Tracker Board</b>					
<b>E1</b> - Relay connected to 4-pin terminal pins 1 & 2 is on for more than 5 seconds. Relay 1 in 1830 should be set for 00 seconds (0.25 second strike time)					
<b>E2</b> - Relay connected to 4-pin terminal pins 3 & 4 is on for more than 5 seconds. Relay 2 in 1830 should be set for 00 seconds (0.25 second strike time)					
<b>A1</b> - Board address is invalid for Tracker. Board address is improperly set as 0, 1, 2 or 19.					
<b>A2</b> - Dual Mode - Bad Address, 18 or 19 not allowed.					

See the **900 MHz Wireless Baseboard manual 2333-065**  
and **Tracker Expansion Board manual 2358-065**  
for **ALL** tracker expansion board programming and wiring.

## Important Notices

### FCC – United States

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 and Regulations. 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.

### Notice:

DoorKing does not provide a power transformer on units sold outside of the United States. Use only transformers that are listed by a recognized testing laboratory to power the access control system. **An Inherently Protected Transformer must be used to power this device.** These systems require a 16.5-volt, 20 VA transformer.

### Listing:

This product has been tested to and found to be in compliance with the UL 294 Safety Standard and Certified to CAN/ULC-S319-05 by Intertek Testing Services NA Inc. (a Nationally Recognized Testing Laboratory) and is ETL listed.

#### Performance Levels

Destructive Attack:	Level I
Line Security:	Level I
Endurance:	Level IV
Standby Power:	Level I (Level II with 12 VDC, .7 Ah, SLA battery, required for Canadian certification)
Single Point Locking Device with Key Locks:	Level I

## Glossary for UL 294

**ACCESS CONTROL SYSTEM:** A collection of means, measures and specific practices that when combined, form or compose a systematic approach, which enables an authority to control access to areas and resources in a given physical facility. An access control system, within the field of physical security, is generally seen as the second layer in the security of a physical structure.

**ALARM:** A condition indicating a state of alert or tamper detection.

**ALARM SIGNAL:** A transmission of an alarm condition or alarm report.

**CONTROLLED AREA:** A room, office, building, facility, premises, or grounds to which access is monitored, limited, or controlled.

**EQUIPMENT:** Any part of an electronic access control system, such as access control units, reader interface modules, access point actuators, access point sensors, keypads, and the like.

**PROTECTED AREA:** A room, office, building, facility, premise or grounds to which access is monitored, and limited and/or controlled, whereby the authorized person of the Access Control System may grant access to non-authorized persons.

**RESTRICTED AREA:** A room, office, building, facility, premise or grounds to which access is monitored, and limited and strictly controlled, whereby only the administrator of the Access Control System shall issue credentials that will lead to access.



Conforms To UL STD 294  
Certified To CAN/ULC-S319-05

## Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices are used in a normal manner with a well-constructed network, DoorKing wireless products should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. DoorKing, Inc. accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using DoorKing wireless products, or for failure of DoorKing wireless products to transmit or receive such data.

## Safety and Hazards

Do not operate DoorKing wireless products in areas where cellular modems are not advised without proper device certifications. These areas include environments where cellular radio can interfere such as explosive atmospheres, medical equipment, or any other equipment which may be susceptible to any form of radio interference. DoorKing wireless products can transmit signals that could interfere with this equipment. Do not operate DoorKing wireless products in any aircraft, whether the aircraft is on the ground or in flight. In aircraft, DoorKing wireless products **MUST BE POWERED OFF**. When operating, DoorKing wireless products can transmit signals that could interfere with various onboard systems.

The driver or operator of any vehicle should not operate DoorKing wireless products while in control of a moving vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some states and provinces, operating such communications devices while in control of a vehicle is an offence.

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