

# 900 MHz WIRELESS DUAL BAND REPEATER

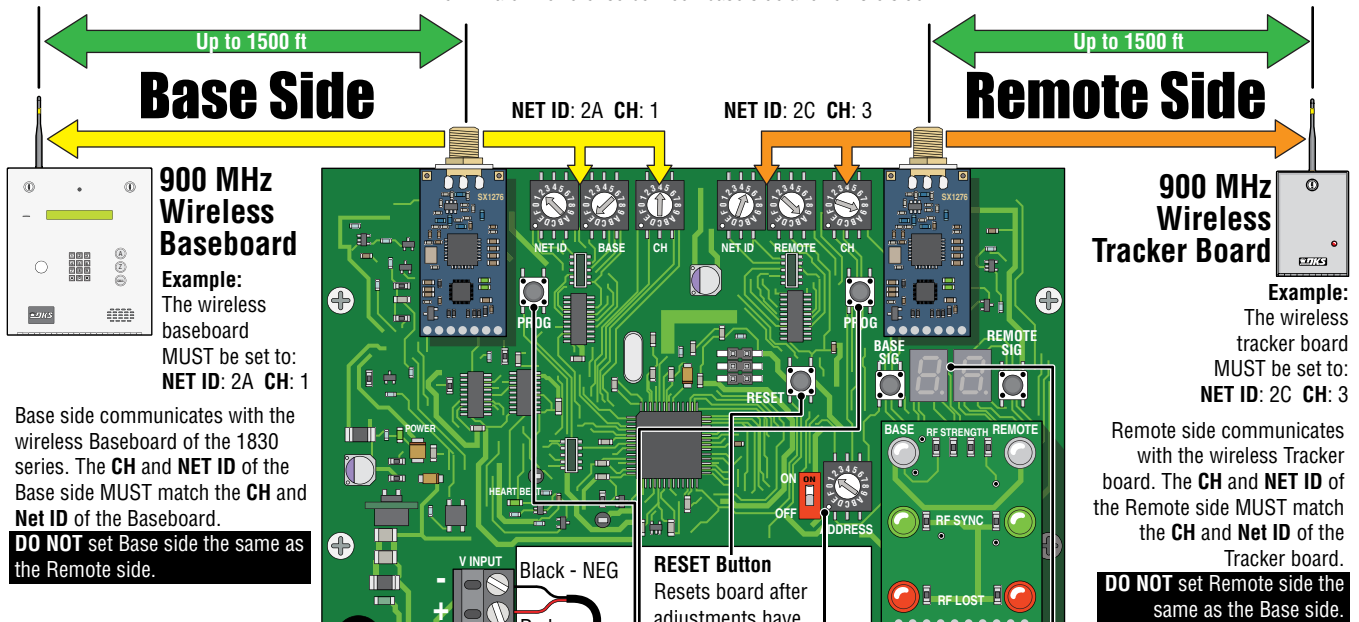
DoorKing Part Number  
**2332-080**

The 900 MHz wireless dual band repeater (DBR) extends the wireless communication range between an access control system (900 MHz wireless baseboard) and 900 MHz wireless tracker expansion board. It gets installed between the wireless devices that are too far or obstructed from each other to reliably communicate with each other. It will receive a signal sent to it and repeat that signal to the next wireless device. ONLY 1 DBR can be used in the same communication line of a tracker expansion board. The signal range of a DBR is **Up to 1500 ft direct-line-of-sight** with no signal interference. See **"900 MHz Wireless Baseboard Manual"** for complete access control system wireless setup information.

## Installation

**TIP:** It is best to keep the CHs at least **2 numbers** away from each other **if possible** for signal separation. This helps eliminate interference between base side and remote side.

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



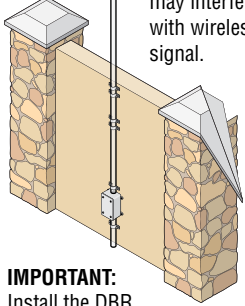
**900 MHz Wireless Baseboard**  
Example: The wireless baseboard **MUST** be set to: **NET ID: 2A CH: 1**

Base side communicates with the wireless Baseboard of the 1830 series. The **CH** and **NET ID** of the Base side **MUST** match the **CH** and **Net ID** of the Baseboard.  
**DO NOT** set Base side the same as the Remote side.

**900 MHz Wireless Tracker Board**  
Example: The wireless tracker board **MUST** be set to: **NET ID: 2C CH: 3**

Remote side communicates with the wireless Tracker board. The **CH** and **NET ID** of the Remote side **MUST** match the **CH** and **Net ID** of the Tracker board.  
**DO NOT** set Remote side the same as the Base side.

**Antenna**  
1/2" thick wall PVC conduit recommended (not supplied). Metal conduit may interfere with wireless signal.



**IMPORTANT:** Install the DBR so the antenna is in a location that is **NOT** surrounded by metal and is in free air as high as possible above the ground. Minimum 15 ft above ground recommended.

**Wire Polarity Matters!**  
Power Transformer  
18 GA. Wire 100 ft max  
16 GA. Wire 200 ft max

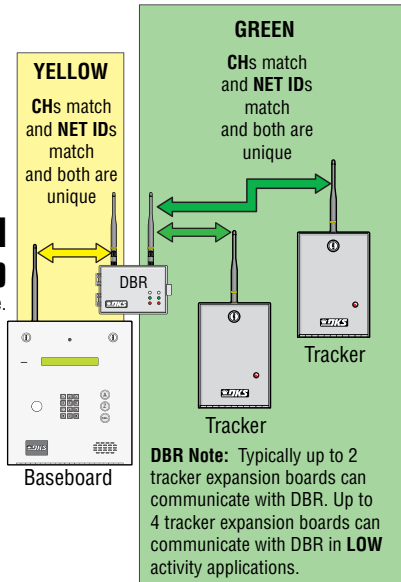
**RESET Button**  
Resets board after adjustments have been made.

Set **ADDRESS** to the same as wireless tracker board.

Press **PROG** buttons after setting the **CH** and **NET IDs** on **EACH** side.

### Dual Band Repeater Setup

See back page for an example.



**DBR Note:** Typically up to 2 tracker expansion boards can communicate with DBR. Up to 4 tracker expansion boards can communicate with DBR in **LOW** activity applications.

**BASE SIG** Press to display base side signal strength.  
**REMOTE SIG** Press to display remote side signal strength.

**RF STRENGTH LEDs (Base/Remote)**  
Off in normal operation. When signal is displayed (press base/remote SIG button) it is either green-good, yellow-weak or red-NO. When signal is displayed, LED blinks until signal is received, once received, it stays lit.

**Note:** Signal display is terminated if either Base or Remote **PROGRAM** button is pressed or the number of minutes is reached as selected by the SIG button.

**RF SYNC LEDs (Base/Remote)**  
Off in normal operation. Blinks green everytime data is received over the air.

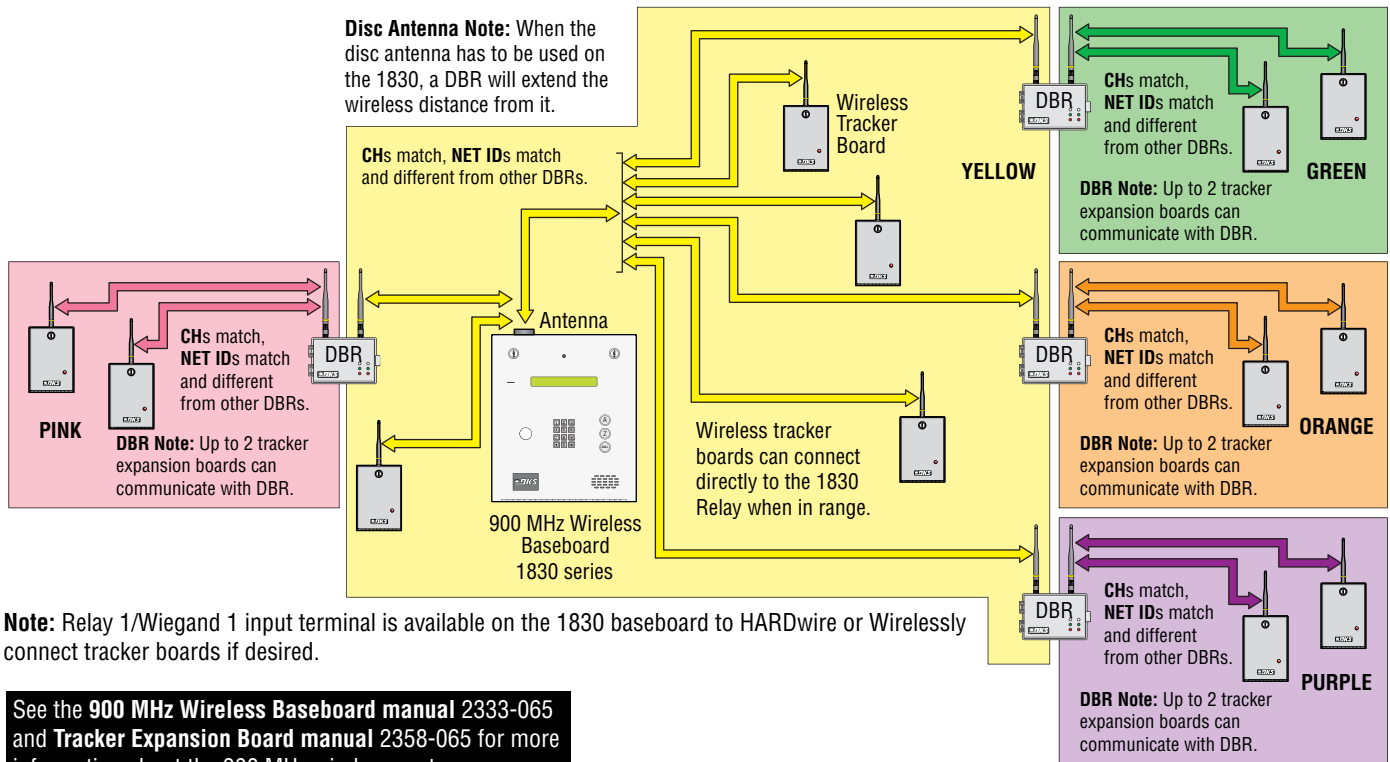
**RF LOST LEDs (Base/Remote)**  
Off in normal operation. Blinks when no air data is detected after six minutes and stays lit after NO air data is received for 10 minutes.

**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.

# Example of Dual Band Repeater Layout

There are many combinations of wireless configurations that a DBR can extend the signal distance between.

**Relay 2/Wiegand 2 Wireless input.** Board Addresses 3-10. Zone Addresses can be used if needed.



**Note:** Relay 1/Wiegand 1 input terminal is available on the 1830 baseboard to HARDwire or Wirelessly connect tracker boards if desired.

See the **900 MHz Wireless Baseboard manual 2333-065** and **Tracker Expansion Board manual 2358-065** for more information about the 900 MHz wireless system.

**Programming Note (#17 Checkin Time):** When tracker expansion boards are going through a repeater, at least 1 tracker expansion board must be set to check in every 15 min (the default setting is 5 min.). This helps to keep the repeater active on the network. If this is not set properly, and there is no traffic for 20 minutes, the repeater will reboot, potentially missing a card read.

## 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.

