INSTALLATION INSTRUCTIONS

RBAND-PROX OEM-DOOR

MONITORED EDGE RECEIVER

IMPORTANT: READ AND UNDERSTAND ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

The Miller Edge RBand Monitored Wireless system is intended to provide a wirelessconnection between a monitored sensing edge and a motorized operator. RBandmeets the latest UL 325 requirements for monitored devices and has been certified as a UL 325 RecognizedComponent. It is designed for use with operators that comply with UL 325 using a Miller Edge 10K SensingEdge.

The PROX non-contact feature is an enhancement to the normal contact safety edge. This feature allows the edge to detect an obstacle before making contact. The contact safety edge provides the monitoring function required by UL. This version of the RBAND-PROX requires a signal from the operator to indicate that the door is closing.

1. PARTS LIST

Kit Contents:

- RBand Prox Receiver (RBAND-PROX R)
- RBand Prox Transmitter (RBAND-PROX-TX) or RBand Standard Transmitter (RBAND-TX10)
- Mounting Screws

Recommended:

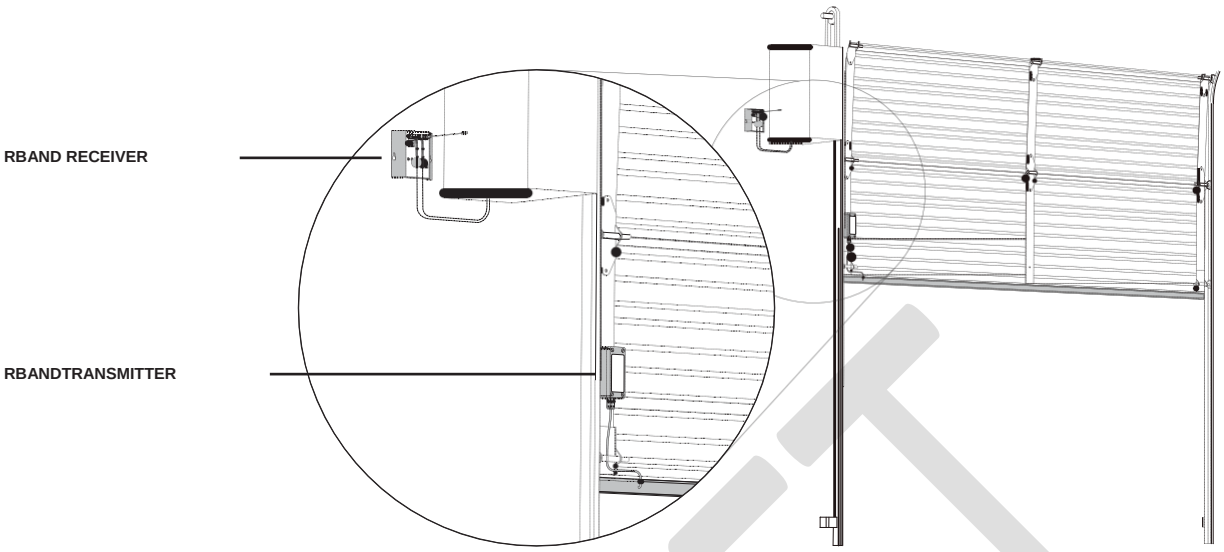
• Multi-meter capable of reading 10KΩ
• Mounting screws for the Receiver

2. RECEIVER: INSTALLATION

2-0. Turn off the power to the operator.
2-1. Determine where to place the Receiver so it is in line of sight with the Transmitter for the entire range of travel [IMAGE 1]. Typically, this will be on the wall below or next to the operator.
2-2. Remove the Receiver cover and mount the base, positioning it for optimum ease of wiring.
2-4. Connect power to the terminals marked **12/24 AC/DC** (without polarity) [IMAGE 2].
2-5. Determine which monitored interface your operator uses. Note: most commercial door operators use the Pulsed interface for monitored devices. Connect the **COM** and the correct output connections (**N.C./P or10K**) to your operator. There are 2 separate relays (channels):**R1** and **R2**.
2-6. Turn on the power to the Receiver. The center power LED should turn on immediately, while the other LEDs may take a few seconds to initialize.

3. PROGRAMMING

3-1. Confirm the Receiver is powered up. Prior to mounting the Transmitter, remove the cover and insert thebatteries, noting their polarity. The **red LEDsmay** blink to indicate that the Transmitter has not beenassociated with the Receiver yet [IMAGE 1].
3-2. To enter **learn** mode, press and hold the Receiver **program button of the desired channel (CH1 or CH2)**until you hear a beep. The **corresponding LED (CH1 or CH2)**will beon.
3-3. Press the Transmitter **program button** for ~2 seconds. The Receiver should **beep**. The programmed channel LED will now blink rapidly to indicate that the receiver is associated to a transmitter that does not have an edge connected. When the edge is connected, the LED should go out. Note that the channel LED will blink every 5 seconds to indicate that it is communicating with the Transmitter. Also, if CH1 is programmed and CH2 is not, the CH2 LED will turn off, but the CH2 output will still be in Fault.
3-4. Repeat these steps to program additional transmitters to either receiver channel. Each receiver channel can accept up to 3 transmitters.
3-5. To erase the programming, press and hold both CH1 and CH2 buttons for 10 beeps and a fast chirp. Release the buttons when you hear the chirp. Repeat steps 3-1 through 3-3 to reprogram the devices.



RBAND-PROX COMMERCIAL DOOR INSTALLATION

4. TRANSMITTER INSTALLATION

3-1. Strip back approximately 2 inches of outer covering of sensing edge cable, then feed through Transmitter**strain relief fitting** [IMAGE 1]. Connect the two sensing edge wires to the removable terminal. Dress thewires with a small service loop and tighten the strain relief. Confirm the LED on the Receiver goes out.

3-2. If you are using a PROX Transmitter, connect the ground lead to a significant piece of metal, preferably a cross-member or a hinge plate.

3-2. Mount unit utilizing the mounting holes at the 4corners of the Transmitter box. Affix lid to Transmitter, noting **alignment pin** [IMAGE 1].

3-2. Test the sensing edge for functionality.

5. TESTING THE PROX FUNCTION

5-1. Raise the bottom of the door to chest height. Change DIP #1 on the receiver to the On position. Note that the Status LED changes color.

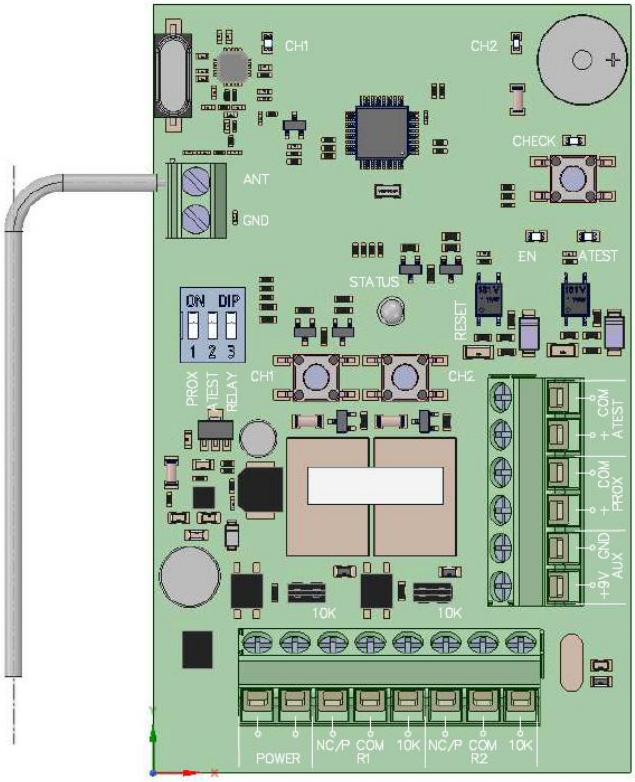
5-2. Bring both hands toward the safety edge at a moderate speed. You should see the channel LED on the Receiver change to Fault when your hand gets to 4-6 inches away. In most cases, the door will stop and reverse just as the edge touches your hands. The detection distance will be greater for larger metal objects.

5-3. In most cases the default sensitivity setting (5) is appropriate. If you determine that you want additional sensitivity, change the setting on the transmitter. Note that setting the sensitivity too high may cause false triggers on nearby objects.

6. CONNECTRING THE PROX ENABLE WIRES

6-1. The OEM version of the PROX device is intended for use with specific operators.
<insert connection instructions for the different operator brands>

6-2. Confirm that the door will close fully. If the Prox detects the floor before the doors closes, reduce the sensitivity on the dial in the Transmitter.



LED INDICATORS

Initial Power

• No Transmitters Programmed:
CH1 &CH2 red LEDs **on**
STATUS green LED **on**

CH1 or CH2 LED

1 relay programmed and the other empty -> empty relay = Relay in SAFETY; LED switche

R1 Prog	R2 Prog	R1 OUT	R1 LED	R2 OUT	R2 LED
NO	NO	SAFETY	ON	SAFETY	ON
YES	NO	S.EDGE STATUS	S.EDGE STATUS	SAFETY	OFF
NO	YES	SAFETY	OFF	S.EDGE STATUS	S.EDGE STATUS
YES	YES	S.EDGE STATUS	S.EDGE STATUS	S.EDGE STATUS	S.EDGE STATUS

STATUS LED

• Proximity sensor disabled: **Green on**
• Proximity sensor enabled: **Yellow on**

EN LED

• **On**when proximity sensor enabled

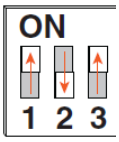
ATEST LED

• **On** when in **test** mode

CHECK LED
(both channels programmed)

• Programmed: Check LED flashes every5 seconds

DIP SWITCH SETTINGS



Switch 1: Controls PROX feature. Ref section 6.
Switch 2: ATEST Polarity. Turn on for Normally Closed operators. Otherwise, leave off.
Switch 3: Used to enable pulse mode output:
• N.C. or 10K Operator: Set to **off**
• Pulse Operator: Set to **on**

TABLE 1.CONNECTORS

For Normally Closed gate operators,please reference page x.

9-PIN OPERATOR CONNECTOR

Power
12/24 AC/DC Constant power source
12/24 AC/DC Constant power source
Relay Output 1
NC/P-N.C. monitored input / Pulse monitored input
COM-Monitored input Common
10K - 10K monitored input
Relay Output 2
NC/P-N.C. monitored input / Pulse monitored input
COM-Monitored input Common
10K - 10K monitored input

6-PIN ACCESSORY CONNECTOR

AUX
+9V„ Auxiliary constant power source
GNDAuxiliary constant power source (ground)
PROX ENABLE
(+)+12/24VDC: Switched power source
(-). „ COM: Switched power Common
ATEST CONTROL
A TEST -+12/24VDC: Switched powersource
(-). -COM: Switched power Common

IMAGE 2. RBAND PROX RECEIVER PCB & CONNECTIONS

7. TROUBLESHOOTING

7-0. If the CH1/2 LED is blinking quickly, check the safety edge and the connection to the Transmitter. If the Receiver does not react to the Transmitter, you can check the RF signal strength:

7-1. Press the **check button** on the Receiver for ~2 seconds [IMAGE 2]; 4 beeps will be heard. You then will heara beep every 1-1/2 seconds during the **check** process. Wait about 30 seconds; if no other beeps occur, yoursystem is functioning. 3 quick beeps indicates a communication error. The channel LED will blink 1 per second to indicate that it is in Check Mode.

7-2. The Check LED will blink to indicate the signal strength. When first enabled, the Check function will be assigned to the first transmitter programmed to CH1. To check another transmitter, activate the edge connected to that transmitter. The **check LED**indicates the signal quality; 3-5 flashes is ideal. Less than 3 flashes meansthere is a weak signal.

7-3. To exit **check** function, press the **check button**, or system will time-out after 5 minutes. There will be aseries of beeps heard upon exiting.

8. ERASING THE RECEIVER

If you need to replace a Transmitter or you have any other programming issues, you may need to erase theReceiver.

8-1. To erase any Transmitters programmed into the Receiver, use the twoprogram buttons[IMAGE 2].

8-2. Press and holt the twoprogram buttons at the same time for several seconds; you will hear a series of 10beeps followed by a rapid chirping sound.

8-3. When the chirping stops, release the twoprogram buttons. Wait ~10 seconds and you will hear 2 beeps. TheReceiver is now ready to be reprogrammed.

9. NORMALLY CLOSED OPERATION

<are there any N/C door operators? Albany, others?>

10. RECEIVER: SPECIFICATIONS & CONTROLS

Power: 12-24 VAC/DC nominal (11-30 V max); 100 mA max current draw. Power may be supplied from theoperator or alternatively from an external supply.
Dimensions: 4.74”L x 3.74”W x 1.87”H
Cable Connections: Screw clamp type terminal blocks for 18-26 AWG wire
Operator Wiring: Screw clamp type terminal blocks for 18-26 AWG wire
Program Buttons: Used to associate a Transmitter with the desired receiver channel
Check Button: Used to determine signal strength
RX Indicator Lights:

- Check LED:
    1. Blinks every ~5 seconds to indicate working properly if both channels are programmed
    2. After **check** button is pressed, blinks to indicate signal strength; 4 or 5 blinks is ideal
- CH1 and CH2 LEDs:
    1. Off when the associated edge is **learned** and has no faults
    2. On solid: No Transmitters **learned in both outputs**or edge activated
    3. Blink: Safety edge not connected
- STATUS LED: **Green on** when proximity sensor is disabled and **Yellow on** when proximity sensor is enabled
- EN LED: **On** when proximity sensor is enabled
- A TEST LED: **On** when in **test** mode

Connections:

- Power (2): Positive and ground, or AC
- Relay Output 1:
    1. NC/P: Normally Closed/Pulse
    2. COM: Common
    3. 10K: 10K termination
- Relay Output 2:
    1. NC/P: Normally Closed/Pulse
    2. COM: Common
    3. 10K: 10K termination
- AUX (2): Auxiliary constant power source
- PROX (2): Connect to switched DC power (+ and Com) for Normally Closed monitoring
- A TEST (2): Connect to switched DC power (+ and Com) for Normally Closed monitoring

11. TRANSMITTER: SPECIFICATIONS & CONTROLS

Transmitter Frequency: 916 MHz, FSK modulation
TX Indicator Lights:

- Green LED: blink every 5 seconds
- Red LED: Blink when Prox is enabled
    - Press PROG button for status

Mounting: 4 corner screws (provided)
Power Source: Batteries: 2 AA, 3.6V lithium, 2 year life expectancy
Dimensions:1.80”L x 4.78”W x 1.75”H
Program Button: Momentary push button is used to associate the Transmitter to the Receiver.

12. FCC COMPLIANCERX

Receiver
Model: RBAND-PROX R
FCC ID: U5Z-RBPROX-R
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.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules:
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1. Re-orient or relocate the receiver antenna
2. Increase the separation between the equipment and the receiver
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
4. Consult the dealer or an experienced radio/TV technician for help
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

13. FCC COMPLIANCE PROX TX

Model: RBAND-PROX T
FCC ID: U5Z-RBPROX-T
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.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules:
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which may be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
1. Re-orient or relocate the receiver antenna
2. Increase the separation between the equipment and the receiver
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
4. Consult the dealer or an experienced radio/TV technician for help
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

According to the manufacturer, this receiver will be mounted on the wall next to a garage door, close to the transmitter part of the safety edge wireless system, therefore during its normal use, the separation distance between the evice and the body of nearby users will be greater than 20cm. In order to perform the assessment a conservative separation distance of 20cm has been used.