

RPB-100: Long Range Receiver

The RPB-100 Long Range Receiver

The RPB-100 can be used with the PXL-250W or the PXL-100 with an OB-7. It provides a range of 100 feet when used in conjunction with either mini or standard transmitter cards. There are no switches or jumpers to set; simply install the enclosure and make the wiring connections, and the unit is ready for use.

NOTE: This document provides the instructions for connecting the RPB-100 to the PXL-250W Tiger Controller or the PXL-100 Smart Controller. Please refer to the installation instructions provided by the RPB-100's manufacturer for instructions on enclosure mounting and for providing power to the RPB-100.

Dimensions

Enclosure

- 8.00 inches High x 6.00 inches Wide x 3.50 inches Deep
- 20.30 cm High x 15.25 cm Wide x 8.90 cm Deep

Antenna

- 11 inches High
- 28 cm High

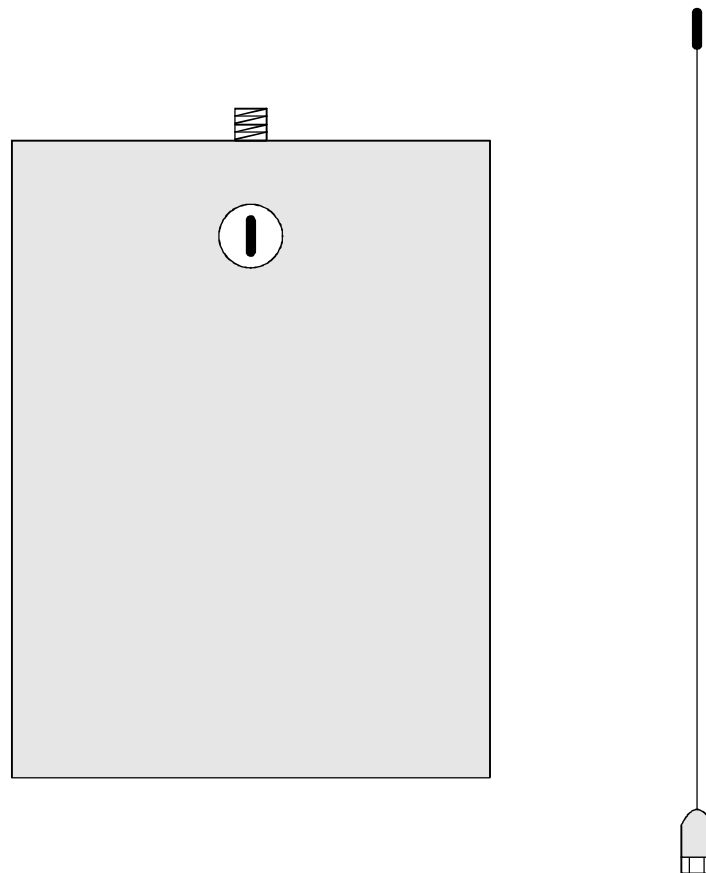


Figure 1 – RPB-100 Long Range Receiver

RPB-100: Long Range Receiver

Connections

The connection between the PXL controller and the RPB-100 is made through a 5 conductor, shielded, stranded, AWG 24 wire cable (such as Belden 9535 or a larger gauge).

Connecting to the RPB-100

The cable connects to P2, pins 1 through 5. The shield is not connected at the RPB-100.

RPB-100 Cable Connections

Pin #	Function	Wire Color
1	Ground	Black
2	Data 1	White
3	Data 0	Green
4	LED	Brown
5	5V Power	Red

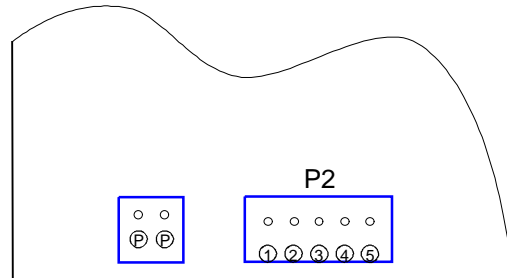


Figure 2 – RPB-100 Connections

Connecting to the PXL-250W

The cable connects to TB5, pins 1 through 7 (excluding pins 2 and 6).

Connecting to the PXL-250 @ TB5

Pin #	Function	Wire Color
1	Data 0	Green
2	not used	–
3	5V Power	Red
4	Ground	Black
5	LED	Brown
6	not used	–
7	Data 1	White
4	Shield	Silver

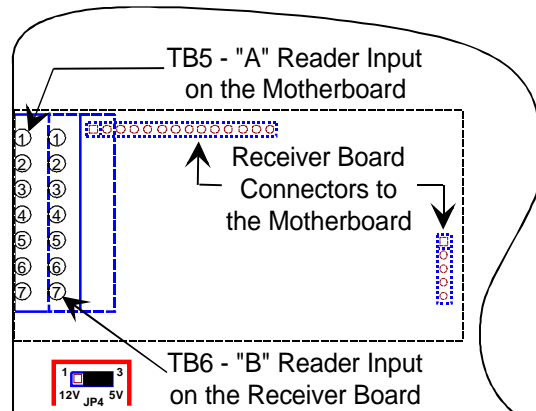


Figure 3 – PXL-250W Connections

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Connecting to the Design 5 PXL-100

For the RPB-100 to work with a PXL-100, the PXL-100 must have an OB-7 Wiegand Interface option board installed. The cable connects to J2 on the OB-7, pins 1 through 6.

Connecting to the PXL-100 @ OB-7, J2

Pin #	OB-7 PCB Marking	Function	Wire Color
1	LED	LED	Brown
2	BEEPER	not used	–
3	5 V	5V Power	Red
4	0 V	Ground	Black
5	M IP B	Data 1	White
6	M IP A	Data 0	Green
4	0 V	Shield	Silver

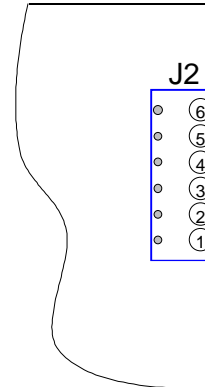


Figure 4 – PXL-100/OB-7 Connections

NOTE: Please contact customer support at Keri Systems for information regarding connecting an RPB-100 to a Design 4 PXL-100. A Design 4 PXL-100 can be identified by the location of its power connection made at the middle of the left edge of the printed circuit board.

Installation Verification

If desired, following installation, receiver operation can be verified within the *Doors* program. Perform the following steps to verify receiver operation.

1. Enter the *Doors* program.
2. Click on the Operate > Start Monitor pull-down menu option.
3. Click on the Monitor button.
4. Click on the View Window 1 button (its default definition is to show all events that occur).
5. Activate a key tag within the range of the receiver.
6. An “Unknown Key” message will appear in the monitor view window, verifying the key was read and its data was transferred to the controller.

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Troubleshooting the Receiver Installation

Problem	Probable Cause	Corrective Action
The controller does not recognize the RPB-100.	1. One or more of the receiver's wiring connections are incorrect.	<ul style="list-style-type: none">• Power down the controller and the receiver and verify the wiring connections are correct per the instructions provided in the Connections section on pages 2 and 3.
	2. Insufficient power is being provided to the RPB-100.	<ul style="list-style-type: none">• Verify the power supply voltage and wiring for the RPB-100 is correct (refer to the RPB manual provided with the RPB unit).
	3. The battery in the key tag is weak or dead.	<ul style="list-style-type: none">• Verify battery strength or replace the battery.
	4. PXL-100 ONLY – JP9 on the OB-7 is installed.	<ul style="list-style-type: none">• Refer to the OB-7 Quick Start Guide and verify there is not a jumper across JP9.
The RPB-100 has a short transmission range.	1. The RPB-100 is not grounded properly.	<ul style="list-style-type: none">• Connect the RPB-100 to a good earth ground.
	2. The antenna is shielded by metal.	<ul style="list-style-type: none">• Relocate the enclosure or the antenna away from metal surfaces.
	3. The battery in the key tag is weak or dead.	<ul style="list-style-type: none">• Verify battery strength or replace the battery.