



3380 Isaacs Avenue, Walla Walla, WA 99362
Phone: 509-529-2286 or 800-237-2286
Fax: 509-529-2291 E-mail: isaacs@isaacstech.com
www.isaacstech.com

INSTALLATION & USER GUIDE MODEL

RD811

MULTIPLE OUTPUT RECEIVER (INCLUDING KITS KR801 – KR804)

Description

The Isaacs RD811 Multiple Output Receiver continuously monitors the radio frequency band for signals from valid transmitters (Isaacs transmitters that are specifically programmed to the receiver). A valid transmitter signal causes the RD811 receiver to respond by switching its output relays per the programming established for that particular transmitter. The receiver also provides a relay-output system faults including low transmitter battery voltage and lost communication.

Specifications RD811 Receiver

Power Requirement: 11 – 14 VDC; 180 mA typical, 400 mA maximum

Operation: 902 – 928 MHz frequency-hopping, spread spectrum.

Maximum valid transmitters: 4

Receiver Outputs: SPDT (Form C) relays (Rated 0.5 A@ 12 VDC)

Physical: Weatherproof, polyurethane coated PVC, 4.8 in. diameter x 10.6 in. height (122mm x 269 mm) with 1" FNPT mount fitting

Weight: 2.8 lb. (1.27 kg)

Site considerations

The Isaacs wireless controls achieve maximum range when used as line-of-sight communications. All units should be mounted high enough to allow a minimum ten feet of clearance between the line of sight and the terrain below and any intervening foliage. The line of sight should be clear of all metal buildings and chain-link fences, and preferably clear of all buildings and foliage. Failure to maintain these clearances may reduce range.

The Isaacs PR810 Repeater is available for sites with significant obstacles or extreme range.

Installation

!! SAFETY FIRST !!

DISCONNECT ALL POWER SOURCES BEFORE INSTALLING THE ISAACS SYSTEM.

The installer and user are responsible to ensure safe and effective application of these products.

Mount the receiver(s) and transmitter(s) (models TD810-817) vertically, on rigid conduit masts, with the one-inch NPT fitting at the bottom. Mount all units at least ten feet above grade on vibration-free solid structures. The wiring may be spliced and extended only as specified in this install guide and the transmitter supplements.

The units are weatherproof, but in some environments it is possible for liquids or gases to enter the unit through the base fitting. Where there is such a possibility, before installing a unit on conduit seal the base fitting around the wiring and grommet, with a non-corrosive curing RTV compound such as Dow 748 (Isaacs TS0658).

Transmitters are omnidirectional and, when mounted upright, may point in any direction. The RD811 receiver has better signal-detection capability on the front side (Isaacs label side). If possible, locate the transmitter(s) within the 180 degree arc on the front side of the receiver

Connection

The RD811 receiver requires continuous 12 Volt DC power, normally from a regulated power supply but a battery or solar supply may also be used if it meets the power requirement specification. The power source must be free of voltage surges and spikes, and capable of continuously supplying receiver current.

Connect the RD811 receiver to the power and external control circuits with the #18 lead wires extending from the receiver base. Follow the wire color codes as shown in the diagram on page 3. The wires may be spliced as necessary to reach the power supply and the external circuits, but always ensure that the wire size is adequate to maintain 12 volts DC at the full rated load of the receiver, plus any external devices connected to the power supply. Use care in wire splicing, as poorly made wire splices are a common source of operational problems.

See the listing of Isaacs power supplies and receiver accessories that are available on page 4.

Operation and Maintenance

As shown in the photo below, the six LEDs in the receiver base indicate receiver power (red-illuminated), a fault (yellow-illuminated), and/or output relay(s) energized (green-illuminated). During initial power-up the receiver will self-test and may briefly activate all the LEDs, but only the red LED should remain "on", which indicates the receiver is powered. There will be no further LED activity until the receiver detects a signal from a valid transmitter with its contacts in an active state (green LEDs), or until a fault is detected (yellow LED).

A fault condition at the receiver indicates either a transmitter problem such as low battery voltage, or that the receiver has lost communication with a transmitter for an extended interval (typically set for 2 hours).

The RD811 receiver requires no routine maintenance. Refer to the Isaacs Wireless Troubleshooting Guide if operational problems occur.

System programming

The term "system" refers to the wireless units mated by programming. Only those units that interact because of their unique programming comprise a particular system. Multiple systems may operate in a given area without interference. The components and operation of this specific system are as follows:

Receiver Ser. Nos. _____



FAULT (Yellow)

POWER (Red)

TRANSMITTERS

Model	Ser. No.	Input#	LED "ON" WHEN TX contacts are:
OUTPUT #1 _____			
OUTPUT #2 _____			
OUTPUT #3 _____			
OUTPUT #4 _____			

OUTPUT #1 _____

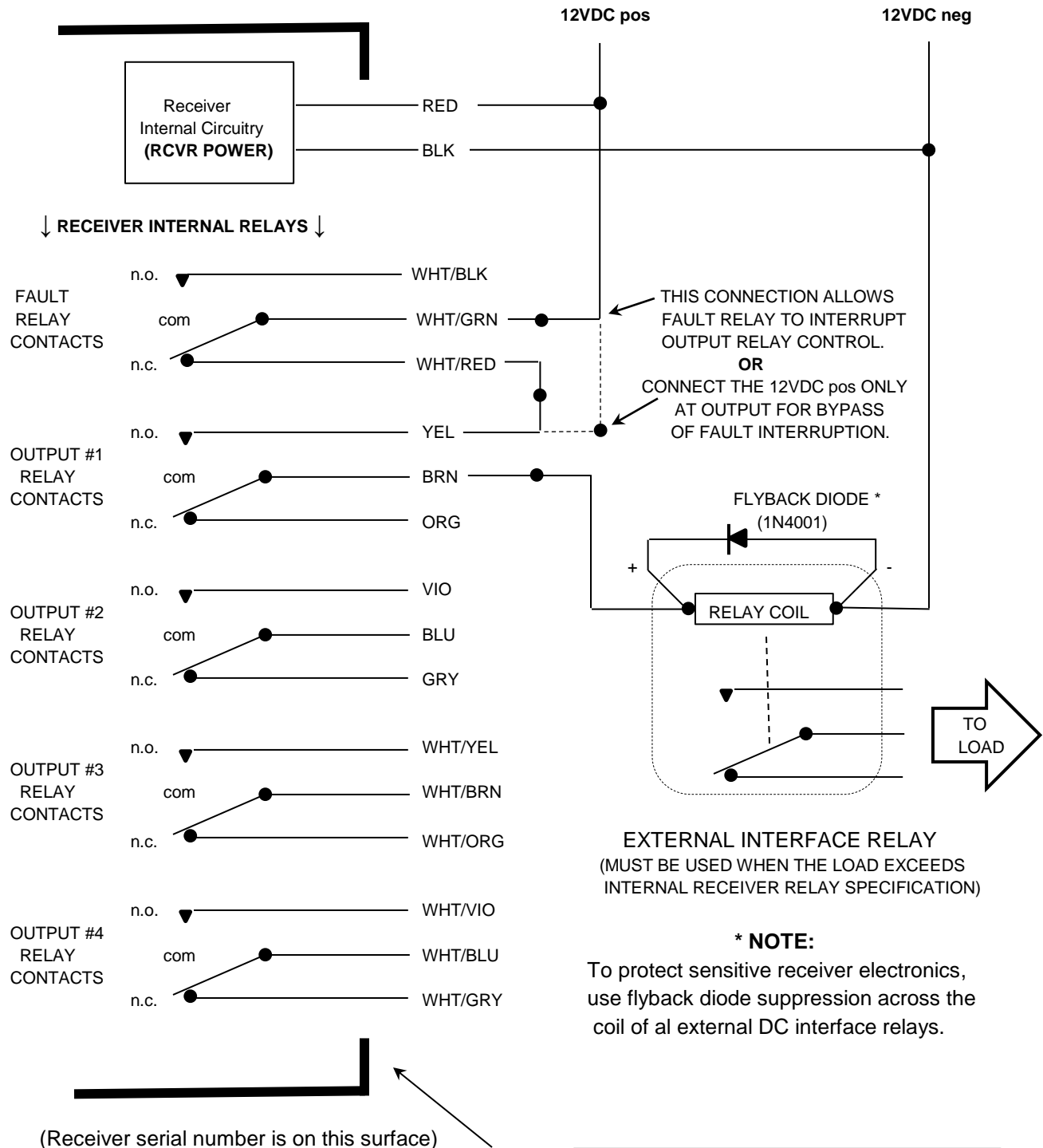
OUTPUT #2 _____

OUTPUT #3 _____

OUTPUT #4 _____

Additional programming information (see pg. 4): YES ___ NO ___

RD811 Receiver Connections (The external relay installation is typical for all outputs)



INTERNAL RECEIVER RELAY SPECS

Five each: Form C relays
 Contact rating: 0.5 Amp @ 12VDC

Additional programming information and notes

LIST OF ISAACS RECEIVER ACCESSORIES AVAILABLE: (KR8xx series kits will have some of these items.)

TS0340B 12VDC power supply, 1.25A

TS0340C 12VDC power supply 3.3A.

TS0380 Surge Suppressor kit

TS0330 Low Voltage Disconnect kit

TZP05078 Interface Relay, 12VDC, SPDT, 25A

TZP05179 Interface Relay, 12VDC, DPDT, 25A

TS0100 Transformer 50VA (480/240VAC to 120VAC)

EX359 Transformer 100VA (480/240VAC to 120VAC)



TS0340B

TS0380

TS0331

TZP05078

Limited Warranty and Disclaimer

Isaacs & Associates, Inc. (Isaacs) warrants goods of its manufacture to be free of defective materials and faulty workmanship when used under normal and proper use and service. Commencing upon the date of shipment, the Isaacs warranty is valid for 12 months. To obtain warranty service, obtain an RGA number from Isaacs and send the product to Isaacs freight prepaid. Isaacs will repair or replace, at its discretion, those items deemed warrantable. This Limited Warranty does not apply in cases of improper installation or operation, misuse, alteration, abuse, accidental damage, tampering, repair by anyone other than Isaacs & Associates, Inc., or damage by, but not limited to, low voltage, voltage surges, or lightning. This Limited Warranty applies to Isaacs manufactured goods only. All other products, accessories or attachments used in conjunction with Isaacs manufactured goods, including batteries, will be covered solely by their own warranty, if any. Isaacs will not be liable for any direct, incidental, consequential, or accidental damage or loss whatsoever, caused by the malfunction of its manufactured goods due to products, accessories, or attachments of other manufacturers, including batteries, used in conjunction with Isaacs goods. Isaacs & Associates, Inc. will not be liable for any direct, incidental, consequential, or accidental damages resulting from use of Isaacs products or caused by any defects, failure or malfunction, whether a claim for damages is based on warranty, product design, system engineering, contract negligence or otherwise. It is the sole responsibility of the purchaser to consider and analyze the product and its design for fitness for a particular purpose. Isaacs & Associates, Inc. does hereby disclaim any liability for damages due to failure of the goods or system to perform as anticipated. Isaacs & Associates, Inc. does not authorize any person to act on its behalf to modify, vary or extend this warranty.

THE FORGOING IS THE BUYERS SOLE REMEDY AND IS EXCLUSIVE AND EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, OBLIGATIONS OR LIABILITIES, WHETHER WRITTEN, ORAL, EXPRESS, OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE.

Warranties for Products Manufactured by Others: Materials, products and systems manufactured by others and sold by Isaacs carry those manufacturer warranties only. Isaacs and Associates, Inc. hereby disclaims any warranties or liabilities for said materials, products or systems.

Specifications and Technical Assistance: While we provide application assistance, personally and through our literature, it is the customer's responsibility to determine suitability of the product to the application and correctness of the assistance. Specifications may change at any time and without notice. The information supplied is believed to be accurate and reliable. We assume no responsibility for its use.