

SINGLE-CHANNEL RADIO RECEIVERS

Model: RC613, RC613L Switching Module

For indoor and outdoor use, suitable for Pool/Spa equipment control

ELECTRICAL RATINGS: 15 A Resistive, 1200 W Tungsten, Motor Load: 1 HP @ 120 VAC, 60 Hz

THIS DEVICE COMPLIES WITH FCC RULES PART 15. Operation of this device is subject to the following two conditions
1) This device may not cause harmful interference. 2) This device must accept any interference that may be received, including interference that may cause undesired operation. FCC rules prohibit adjustments to or modification of receiver and transmitter circuitry except for replacing the remote-control battery. THERE ARE NO OTHER USER SERVICEABLE PARTS.

! WARNING *Risk of Fire or Electric Shock*

- Installation and/or wiring must be in accordance with national and local electrical code.
- Use COPPER conductors ONLY.
- The control panel to be a minimum of 3 M. (in Canada) or 5 ft. (in USA) from the inside wall of the pool, spa, or pond, unless separated from the body of water by a fence, wall or other permanent barrier that will make the unit inaccessible to persons in the water.
- Do NOT exceed maximum current carrying capacity.
- This enclosure does not provide grounding between conduit connections. When metallic conduit is used, you must also install grounding type bushings and jumper wire, in accordance with the (NEC) National Electrical Code requirements.
- This control should not be connected to any equipment which would cause bodily injury or property damage should it be activated unexpectedly.
- Disconnect power at circuit breaker(s) or disconnect switch(es) before installing or servicing.
- Test GROUND FAULT protection regularly. If it fails to reset, DO NOT USE THE POOL or SPA! Contact a qualified service technician.

! WARNING *Risk of Injury*

- Do NOT permit children to operate the Control Unit or use the Pool/Spa unless they are closely supervised at all times.

GENERAL INFORMATION

These Modular Radio Receivers are one-half of a two-part remote-control system. They operate as ordinary ON/OFF switches but they also respond to the signals of a hand-held transmitter - the other half of the system. The modules are designed for indoor or outdoor use, and can handle a variety of residential switching applications. By the push of a button on the face of the transmitter, the user is able to turn ON/OFF the connected load (lights, pump, etc.) from a remote location*, safely and conveniently. In addition, a single RC939 transmitter can operate up to three Receivers and is able to "teach" each Module a different code. (Transmitters are sold separately).

Model RC613 Receiver Module comes with its own manual ON/OFF button and it is intended to be installed at the location of the load. The connected load may be turned ON/OFF using the hand-held transmitter or turned ON/OFF by pushing the red button on the face of the Receiver.

Model RC613L Receiver Module is the same as RC613 except that it comes with extra-long (36 in.) leads.

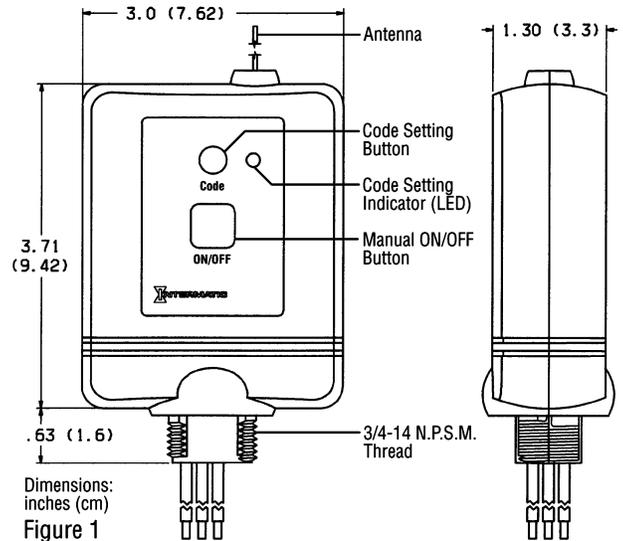
* The open field range is approximately 100 feet, but depends on many factors like the age of the battery, proximity of large metal objects, the location of the receiver and environmental conditions at the time of transmission.



SPECIFICATIONS AND OTHER INFORMATION

USEFUL INFORMATION

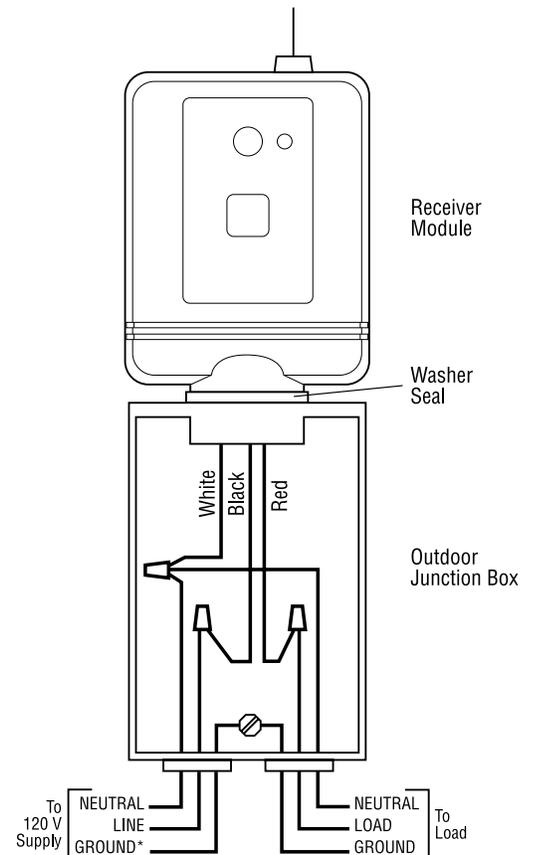
1. Must be mounted upright. Antenna must be up.
2. Radio Receivers are sensitive to heat. Avoid mounting them above heater, air conditioner or exposed to afternoon sun.
3. The higher the Receiver Module, the longer its range. For good range and reliable reception, install modules as high as practical above ground level with antenna at top.
4. Large metal objects divert radio signals. Avoid mounting Receiver Modules on metal wall, fence or near large metal objects.
5. Environmental conditions could affect the operation of the remote-control system. For example, in rain the range may be less than normal.
6. Certain electric equipment like brush type motors or electronic gas heater igniters emit radio signals and can affect the function of the Receiver Module. Avoid mounting modules near such equipment.
7. To prevent electronic interference, install Receiver Modules at least 3 feet apart.



INSTALLATION

Make sure the intended load is within the capacity of the Module, see ratings on page 1 and other model choices on page 3.

1. Securely attach Receiver Module to the top of an outdoor grade junction box.
2. Select the proper location (see Useful Information above) and install Receiver assembly on a vertical surface or other support, using hardware, suitable for the purpose.
3. Prepare the necessary conduit runs as required by the installation layout and pull in the specified conductors.
4. Follow wiring diagram A on the right, make wire connections as shown.
5. Turn ON power and test installation, using the ON/OFF button on face of the Receiver Module. Replace junction box cover, make sure the installation is secure.
6. To link transmitter button with the receiver, see operation instructions on page 3 or follow linking instructions provided with RC939 transmitter.



*Ground connections may or may not be as shown.

Diagram A

OPERATION

Linking an RC939 Transmitter Button with the RC613 Receiver

NOTE: The transmitter must be within 6 feet of the receiver during setup.

1. On the remote (RC939), use a paper clip to press and release the button on the lower right-hand side. The red LED on the remote should be solid red now.
2. On the receiver (RC613), press and hold the blue CODE SET button for 3 seconds.
3. Now, with one-second intervals, tap the button that you want to program on the remote repeatedly until you hear the relay click inside the receiver. (Press at **least** 7 times)
4. Now press a different button on the remote to save your setting. (Red LED should go out)
5. Test the button you just programmed. If it is not working, make sure the red LED on the remote is off and go back to step 1.

NOTE: To clear any existing codes, press and hold the blue CODE SET button on the receiver for 20 seconds, then release. (This will eliminate all stored codes)

Linking Multiple Transmitters with a Receiver

Up to three different transmitters can control a receiver. Follow steps 1 through 5 above for linking each RC939 transmitter with the RC613 receiver.

Excluding a Transmitter Button Link from a Receiver

Follow this procedure to exclude a transmitter button from a receiver:

1. With a paper clip, press the button on the side of the transmitter until the red LED illuminates.
2. Momentarily press the configured ON/OFF button on the transmitter that you want to exclude from the receiver.
3. Momentarily press one of the other buttons on the transmitter. The red LED on the transmitter turns OFF.
4. Momentarily press the button you wanted to exclude to verify it no longer controls the receiver. The button is now excluded.

LIST OF AVAILABLE MODELS AND COMPONENTS

Model	Description	Ratings (60 Hz)
RC613	Single-Channel Receiver	15 A Resistive, 10 A (1200 W) Tungsten, 1 HP (16 A FLA) @ 120 VAC, Single-Pole Single-Throw Contacts
RC613L	Single-Channel Receiver with 36 in. Lead	15 A Resistive, 10 A (1200 W) Tungsten, 1 HP (16 A FLA) @ 120 VAC, Single-Pole Single-Throw Contacts
RC613R	Heavy-Duty Single-Channel Receiver and Relay Assembly	20 A Resistive @ 120/240 VAC, 12.5 A (1500 W) Tungsten, 1 1/2 HP @ 120 VAC; 3 HP @ 240 VAC, Double-Pole Single-Throw Contacts
RC939	3-Channel Transmitter with replaceable CR2032 Lithium Battery	

TROUBLESHOOTING

Symptom	Possible Cause(s)	Corrective Action
No response to ON/OFF button on receiver. (No click, controlled device does not operate.)	No power to receiver black and white wires.	Check for tripped circuit breaker at power panel. Verify that receiver is correctly wired.
	Faulty receiver.	Replace receiver.
Controlled device is always ON and can't be turned OFF by the ON/OFF button on the receiver.	Receiver is wired incorrectly.	Correct per installation diagram.
	Faulty receiver.	Replace receiver.
Receiver clicks when its ON/OFF button is pressed, but the controlled device doesn't operate.	The controlled device is inoperative. Perhaps due to a switch, thermostat, etc. on the controlled device.	Determine what is preventing the correctly powered device from operating.
	Receiver is wired incorrectly.	Correct per installation diagram.
	Faulty receiver; never any voltage output from red wire.	Replace receiver.
Transmitter LED doesn't light when buttons are pressed.	Low battery.	Replace CR2032 battery.
	Faulty Transmitter.	Replace transmitter.
Transmitter LED lights when buttons are pressed and ON/OFF button on receiver functions, but transmitter does not cause receiver to operate.	Transmitter button(s) and Receiver are not correctly linked.	First, try all 3 buttons on (all) transmitter(s). Repeat the steps of "Linking RC939 Transmitter to RC613 Receiver" to correctly link the desired transmitter button to the receiver.
	Faulty Transmitter and/or Receiver.	If possible, test with known good components, then replace as required.
No response to transmitter signal some times.	Weak battery.	Replace battery.
	Appliance with brush type motor is in use.	Relocate appliance and/or connect to another circuit.
	Other radio transmitter (police, etc.) is operating nearby.	Link a different transmitter button with the receiver (see page 3, Operation instructions).
	Receiver is at edge of range.	Mount receiver closer or higher.
Insufficient Range.	Weak battery.	Replace battery.
	Antenna too close to ground.	Relocate receiver module.
	Transmitter is held too close to ground.	Hold transmitter at least 3 ft. above ground.
	Weak signal due to obstruction.	Relocate receiver module.
Nuisance operation.	Other radio transmitter (police, etc.) is operating nearby.	Link transmitter button with the receiver (see page 3, Operation instructions).
	Fluctuating supply voltage due to surge, etc.	If frequent, install surge suppressor.
	Faulty receiver.	Replace receiver module.

LIMITED ONE-YEAR WARRANTY

If within the warranty period specified, this product fails due to a defect in material or workmanship, Intermatic Incorporated will repair or replace it, at its sole option, free of charge. This warranty is extended to the original household purchaser only and is not transferable. This warranty does not apply to: (a) damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use; (b) units which have been subject to unauthorized repair, opened, taken apart or otherwise modified; (c) units not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) sealed lamps and/or lamp bulbs, LED's and batteries; (f) the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear; (g) transit damage, initial installation costs, removal costs, or reinstallation costs.

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This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased or (b) completing a warranty claim online at www.intermatic.com. This warranty is made by: Intermatic Incorporated, Customer Service 7777 Winn Rd., Spring Grove, Illinois 60081-9698. For warranty service go to: <http://www.intermatic.com> or call 815-675-7000.

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