

## Troubleshooting

Symptom	Possible Cause	Solution
Master Control LEDs do not light.	<ul style="list-style-type: none"> <li>No power available to Master Control.</li> </ul>	<ul style="list-style-type: none"> <li>Ensure Master Control is properly wired and power is turned on.</li> </ul>
All LEDs flash when each Master Control button is pressed.	<ul style="list-style-type: none"> <li>Master Control is not activated to the system.</li> </ul>	<ul style="list-style-type: none"> <li>See "Activating Controls" in the RadioRA® Setup Guide (P/N 044-001)* or the Chronos™ Setup Guide (044-037)*.</li> </ul>
Lights do not respond to a button press.	<ul style="list-style-type: none"> <li>Master Control is not properly programmed.</li> <li>Master Control is out of RF Signal Repeater range.</li> </ul>	<ul style="list-style-type: none"> <li>See "Button Programming" in the RadioRA Setup Guide (P/N 044-001)* or the Chronos Setup Guide (044-037)*.</li> <li>Ensure Master Control is within 30 feet (9 m) of an RF Signal Repeater.</li> </ul>
IR Remote is not working.	<ul style="list-style-type: none"> <li>Batteries weak or dead.</li> <li>Batteries not installed correctly.</li> <li>IR Remote has incorrect codes.</li> </ul>	<ul style="list-style-type: none"> <li>Install fresh batteries in IR Remote.</li> <li>Verify that batteries are installed in the IR Remote correctly.</li> <li>Re-learn the Lutron IR codes to the IR Remote or verify that the correct codes were downloaded.</li> </ul>

\* Also available online at [www.radiora.com](http://www.radiora.com)

## FCC Information

**Note:** 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 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 can 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:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Changes or modifications not expressly approved by Lutron Electronics Co. could void the user's authority to operate this equipment.

## LIMITED WARRANTY

Subject to the exclusions described below, for a period of one year after the date of shipment by Lutron, Lutron warrants each new RadioRA product ("Product") to be free from manufacturing defects. Lutron will, at its option, repair the defective part or provide comparable replacement parts so long as Lutron is promptly notified of the defect within the one year warranty period. Replacement parts provided by Lutron may be new, used, repaired, reconditioned, and/or made by a different manufacturer.

### EXCLUSIONS TO LIMITED WARRANTY

This Warranty does not cover, and Lutron and its suppliers are not responsible for:

- Damage, malfunction or inoperability diagnosed by Lutron or a Lutron approved third party as caused by normal wear and tear, abuse, misuse, incorrect installation, neglect, accident, or interference from radio frequency or infrared sources or obstacles, such as, but not limited to (a) use of incorrect line voltages, fuses or circuit breakers; (b) failure to install, maintain and operate the Product pursuant to the operating instructions provided by Lutron and the applicable provisions of the National Electrical Code and of the Safety Standards of Underwriter's Laboratories; (c) use of incompatible devices or accessories; (d) failure to maintain equipment under specified ambient temperature; (e) unauthorized repairs or adjustments; (f) vandalism; and (g) an act of God, such as fire, lightning, flooding, tornado, earthquake, hurricane or other problems beyond Lutron's control.
- On-site labor costs to diagnose issues with, and remove, repair, replace, adjust, reinstall and/or reprogram the Product, at Lutron's option, all of which will be paid by Customer at the then current service price.
- Where applicable, components and equipment external to the Product, such as, lamps; non-Lutron ballasts, sockets, and fixtures; fixture wiring between ballasts and lamps; building wiring between dimmers or dimmer panels and lamps and between controls and controls, dimmers or dimmer panels; and other manufacturers' equipment not provided by Lutron, such as time clocks; audio-visual equipment; motion detectors; photosensors; driveway sensors; pressure pads; shades; and spas.
- The cost of repairing or replacing other property that is damaged when the Product does not work properly, even if the damage was caused by the Product.

**THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM THE DATE OF SHIPMENT.**

**NO LUTRON AGENT, EMPLOYEE OR REPRESENTATIVE HAS ANY AUTHORITY TO BIND LUTRON TO ANY AFFIRMATION, REPRESENTATION OR WARRANTY CONCERNING THE PRODUCT. UNLESS AN AFFIRMATION, REPRESENTATION OR WARRANTY MADE BY AN AGENT, EMPLOYEE OR REPRESENTATIVE IS SPECIFICALLY INCLUDED HEREIN, OR IN STANDARD PRINTED MATERIALS PROVIDED BY LUTRON, IT DOES NOT FORM A PART OF THE BASIS OF ANY BARGAIN BETWEEN LUTRON AND CUSTOMER AND WILL NOT IN ANY WAY BE ENFORCEABLE BY CUSTOMER.**

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## WARRANTY CLAIMS, TECHNICAL ASSISTANCE AND WARRANTY INFORMATION

Contact the **Lutron Technical Support Center** at the numbers provided below or your local Lutron sales representative with questions concerning the installation or operation of the Product or this Warranty, or to make a warranty claim. Please provide the exact model number when calling.

### USA and Canada (24 hrs/7days)

+1.800.523.9466

Fax +1.610.282.3090

<http://www.lutron.com>

### Other countries (8 a.m. - 8 p.m. ET)

+1.610.282.3800

Fax +1.610.282.3090

These products may be covered under one or more of the following U.S. patents: 4,835,343; 5,838,226; 5,848,054; 5,905,442; 5,982,103; 6,687,487; D453,742; D456,783; D461,782; D465,460; and corresponding foreign patents. U.S. and foreign patents pending. National Electrical Code and NEC are registered trademarks of National Fire Protection Association, Quincy, Massachusetts. Lutron, Claro, Chronos, and RadioRA are registered trademarks and Satin Colors is a trademark of Lutron Electronics Co., Inc.

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Lutron Electronics Co., Inc.  
7200 Suter Road  
Coopersburg, PA 18036-1299, U.S.A.  
Made and printed in the U.S.A. 3/07 P/N 044-111 Rev. A

**LUTRON®**

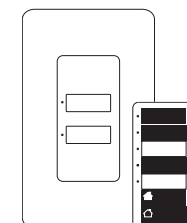
**RadioRA®**

Wireless Home Lighting Control

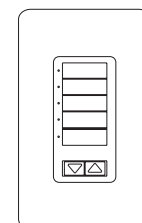
## Installation Instructions for Large Button Wall-Mounted Master Controls

### Please Leave for Occupant

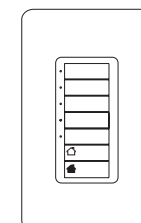
Read all instructions completely before installation.



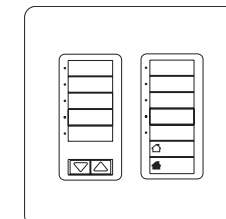
**RALB-2W-SD**  
**RBLB-2W-SD**  
2 Button Master Control with Programming Button Kit (RALK-PGM)



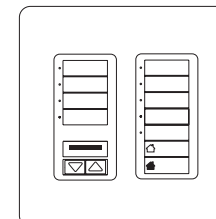
**RALB-5W-RL**  
**RBLB-5W-RL**  
5 Button Master Control with Raise/Lower



**RALB-5W-AO**  
**RBLB-5W-AO**  
5 Button Master Control with All On/All Off



**RALB-10W-RL**  
**RBLB-10W-RL**  
10 Button Master Control with Raise/Lower and All On/All Off



**RALB-9W-IR**  
**RBLB-9W-IR**  
9 Button Master Control with IR, Raise/Lower and All On/All Off

English

044-111

## Large Button Wall-Mounted Master Control

**RALB-10W-RL, RALB-9W-IR**  
**RBLB-10W-RL, RBLB-9W-IR**  
**RALB-2W-SD, RALB-5W-AO, RALB-5W-RL**  
**RBLB-2W-SD, RBLB-5W-AO, RBLB-5W-RL**

120 V~ 50/60 Hz 0.5 W

## Installation

Installing a Wall-Mounted Master Control in a 2-gang wallbox.

✓ Check off Steps as completed.

**Step 1** Turn power off at circuit breaker panel or remove fuse from fusebox.



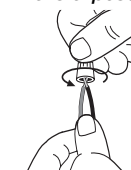
## Important Wiring Information

When making wire connections, follow the recommended strip lengths and combinations for the supplied wire connectors. **Note:** Wire connectors provided are suitable for *copper wire only*. For aluminum wire, consult an electrician.

### Wire Connector:

- Strip insulation 3/8 in. (10 mm) for 14 AWG wire
- Strip insulation 1/2 in. (13 mm) for 16 or 18 AWG wire
- Use to join one 14 AWG supply wire with one 16 or 18 AWG control wire.

Twist wire connector tight. **Be sure no bare wire is exposed.**



**Step 2** Wire the Control.

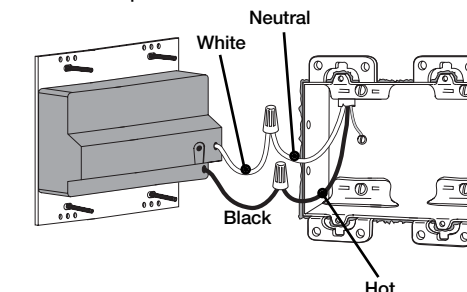
Using the wire connectors provided:

- Connect the **black** control wire to the **HOT** wire coming from the breaker panel.
- Connect the **white** control wire to the **NEUTRAL** wire coming from the breaker panel.

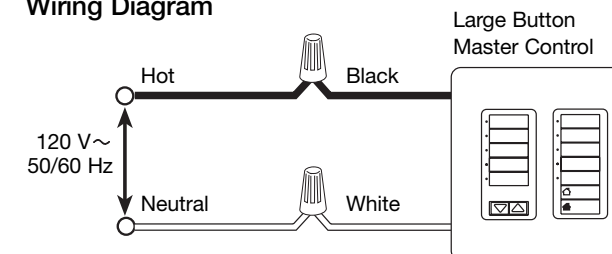


**Note:** Use only Lutron wallplates with these devices.

- Install in accordance with all national and local electrical codes.
- A neutral wire connection is required for the Wall-Mounted Master control.
- Do not paint controls or wallplates.
- Clean with a **soft damp cloth only**. Do not use any chemical cleaners.
- Operate in ambient temperatures between 32 °F (0 °C) and 104 °F (40 °C).
- Recommended wallbox depth is 2 1/2 in. (64 mm) minimum.
- The range and performance of the RadioRA System is highly dependent on a variety of complex factors such as:
  - Distance between system components
  - Geometry of the home
  - Construction of walls separating system components
  - Electrical equipment located near system components
- Do not mix RadioRA "A" and "B" frequency products within the same system. Products with different frequencies **are not** compatible.



### Wiring Diagram



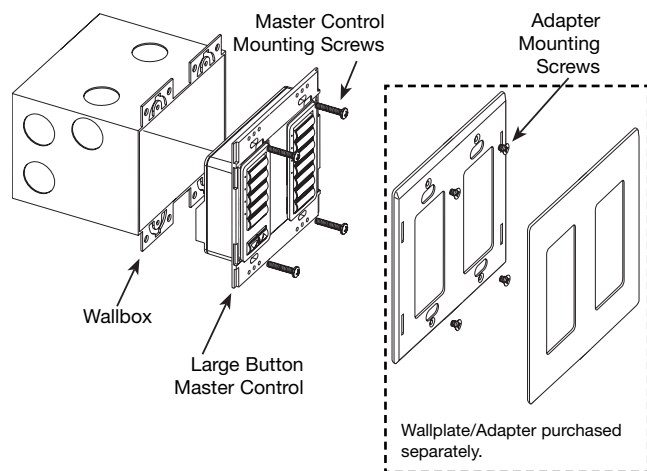
### FCC Information

**Note:** 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. Operation is subject to the following: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

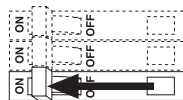
**LUTRON®**

### Step 3 Attach Lutron® Claro® or Satin Colors™ wallplate adapter and wallplate.

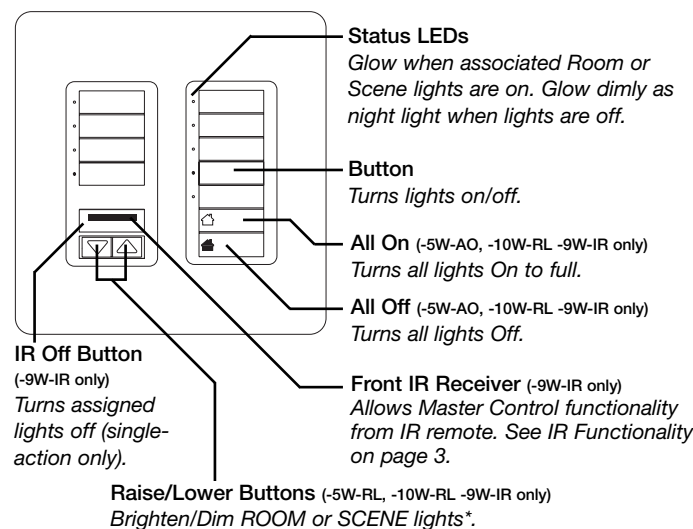
- Loosely install Master Control with mounting screws provided.
- Install wallplate adapter onto front of Master Control.
- Tighten Master Control mounting screws until wallplate adapter is flush to wall (do not over-tighten).
- Snap wallplate onto wallplate adapter, and verify that buttons are aligned properly.
- If buttons are misaligned, loosen mounting screws appropriately.



### Step 4 Turn power ON.



## Operation of the Master Control



\* By default, the last ROOM or SCENE button pressed will select the lights affected by the Raise/Lower. This setting may be changed to allow a double-tap of a ROOM or SCENE button to select the affected lights. See Raise/Lower Methods on page 3.

**NOTE:** Master Controls will not operate until they have been programmed.

For detailed instructions on programming your Master Control, refer to the Setup and Installation Guide for a RadioRA® Chronos™ System Bridge and Timeclock (P/N 044-037) that is included with a Chronos or the RadioRA Setup Guide (P/N 044-001) that is included with an RF Signal Repeater.

## Advanced Features

Advanced Features are available on all -10W-RL and -9W-IR models, and on -5W-RL, -5W-AO, and -2W-SD models shipped after March 1, 2007. Note: Not all features are available on every model.

### Backlight Enable/Disable (applies to all models)

Allows the user to turn the Master Control button backlighting on or off. Backlighting is enabled by default.

### Raise/Lower Selection (applies to -5W-RL, -9W-IR, and -10W-RL)

Allows the user to choose the method that selects the lights affected by the Raise/Lower buttons. The choices are last button pressed or double-tap. Last button pressed is enabled by default.

### Front IR Enable/Disable (applies to -9W-IR only)

Allows the user to enable or disable the front IR receiver. The front IR receiver is enabled by default.

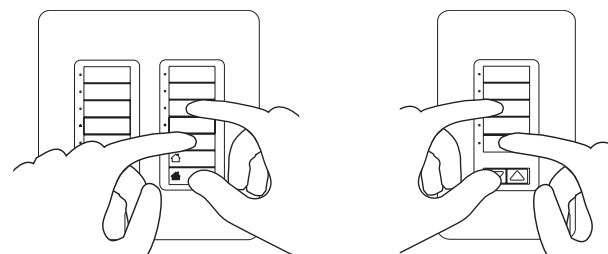
### IR Mapping Selection (applies to -9W-IR only)

Allows the user to choose between two different IR mapping setups.

## Accessing Advanced Features

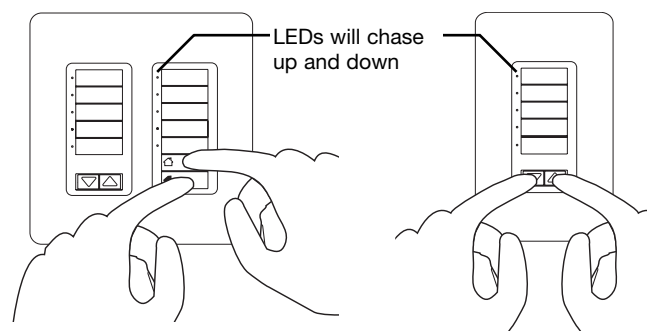
### Step 1 Enter ROOM/SCENE Assignment Mode

Simultaneously press and hold the 3rd, 5th, and ALL OFF or Lower buttons in the right most column until a single LED in each column begins to flash (approximately 3 seconds).



### Step 2 Enter Advanced Features Selection Mode

Simultaneously press and hold the ALL ON and ALL OFF or Raise and Lower buttons in the right most column until the LEDs chase up and down in the column. The Button 5 LED will begin flashing to indicate Advanced Features Selection Mode is active.



### Step 3 Change Advanced Features

**Button 1** enables and disables the button backlighting on the Master Control:

- LED Solid: backlighting enabled (default)
- LED Flashing: backlighting disabled

**Button 2** selects the Raise/Lower method [-5W-RL, -9W-IR, and -10W-RL only] (see *Raise/Lower Methods*):

- LED Solid: last button pressed (default)
- LED Flashing: double-tap

**Button 3** enables and disables front IR receiver (-9W-IR only\*):

- LED Solid: front IR enabled (default)
- LED Flashing: front IR disabled

**Button 4** selects between IR mapping schemes (-9W-IR only\*):

- LED Solid: IR Mapping Scheme 1 (default)
- LED Flashing: IR Mapping Scheme 2

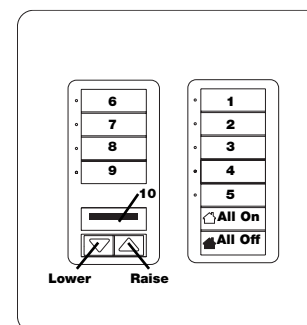
\* See IR Mapping below, and IR Installations at right.

### Step 4 Exit Advanced Features Selection Mode

Simultaneously press and hold the ALL ON and ALL OFF or Raise and Lower buttons in the right most column until the LEDs chase up and down in the column.

## IR Functionality (-9W-IR only)

When the Master Control receives one of the supported Lutron IR codes it will simulate the corresponding button press\* as shown in the table below:



Supported IR Codes	Scheme 1 (default) for use with 3rd party IR remotes	Scheme 2 for use with Lutron IR remotes
IR Scene 1	Button 6	Button 6
IR Scene 2	Button 7	Button 7
IR Scene 3	Button 8	Button 8
IR Scene 4	Button 9	Button 9
IR Scene 5	Button 10	Button 1
IR Scene 6	Button 1	Button 2
IR Scene 7	Button 2	Button 3
IR Scene 8	Button 3	Button 4
IR Scene 9	Button 4	Button 5
IR Scene 10	Button 5	N/A
IR Scene 16	All On	All On
IR Off	All Off	Button 10

\* If a column of buttons is configured as ROOM buttons, the IR Scenes for those buttons will toggle the zones. If the column is configured as SCENE buttons, the IR Scenes for those buttons will only be single-action.

## Raise/Lower Methods (-5W-RL, -9W-IR, and -10W-RL only)

### Last Button Pressed

Raise/Lower Buttons will affect the last ROOM/SCENE Button pressed on the Master Control OR on an IR remote (-9W-IR only).

### Double Tap

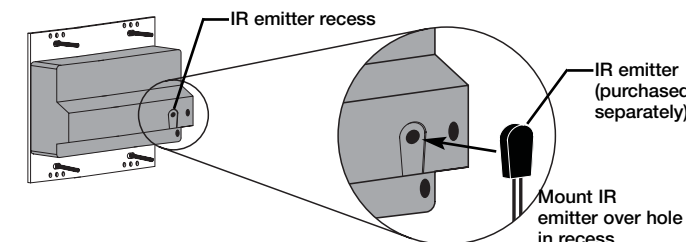
Raise/Lower Buttons will affect the last ROOM/SCENE Button that was double tapped on the Master Control. For the -9W-IR only, the last ROOM/SCENE button pressed on an IR remote will still be affected by the Raise/Lower Buttons on the IR remote. In this mode, the Raise/Lower Buttons on the Master Control will work independently of the IR Raise/Lower Buttons.

### Example:

- Double tap Scene 4 on the Master Control
- Press IR Scene 3 on the IR remote
- The Raise/Lower Buttons on the IR remote will affect the lights in IR Scene 3
- The Raise/Lower Buttons on the Master Control will affect the zones in Scene 4.

## IR Installations (-9W-IR only)

An integral feature of the RadioRA® lighting control system is to utilize master controls to receive IR signals and communicate to the rest of the RadioRA system via radio frequency (see IR Mapping at left). The master controls can accept IR into the front or back of the unit, leading to the potential to have both electric light and power conductors and Class 2 circuit conductors in the same wallbox.



## Solution...

The 2002 National Electrical Code® (NEC®) Article 725-55 (D) provides the specific rules governing Class 2 conductors and electric light and power conductors within the same wallbox. It states that electric light and power conductors may be allowed in the same enclosure as Class 2 circuit conductors, provided they are both introduced for connection to the same equipment, and if one of the following requirements is also met:

- The electric light and power conductors are routed to maintain a minimum of 1/4 inch (6.4 mm) of separation from the Class 2 circuit conductors, or:
- The circuit conductors operate at 150 V or less, and meet the following requirement:
  - Class 2 circuits are installed using types CL3, CL3R, CL3P or permitted substitute cables and the cable conductors extending beyond the jacket are separated by a minimum of 1/4 inch (6.35 mm), or by a nonconductive sleeve/barrier, from all other conductors.

## Understand though...

The NEC is a document subject to interpretation. Your local city, county, municipality or state authorities have the final authority to approve or disapprove any installation. They must always be consulted for verification of the code, and the manner in which it will be applied in your area, prior to installation.