

Troubleshooting

Symptom	Possible Cause
Light does not turn ON or no LEDs turn ON.	<ul style="list-style-type: none"> Front Accessible Service Switch (FASS™) on Dimmer or Accessory Dimmer(s) are pulled out to the OFF position. Light bulb(s) burned out. Breaker is OFF or tripped.
Light turns ON and Dimmer works, but Accessory Dimmer does not work.	<ul style="list-style-type: none"> Wire connected to the blue screw terminal on the Dimmer is not the same wire connected to the blue screw terminal on the Accessory Dimmer.
Light does not turn ON, LEDs glow dimly.	<ul style="list-style-type: none"> Blue screw terminal miswired to neutral wire or touching ground.
Dimmer keeps turning ON and OFF.	<ul style="list-style-type: none"> Load is less than 50 Watts.

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 and used in accordance with the instructions, may cause harmful interference to radio or television reception. 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. 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.

Technical Assistance

If you have questions concerning the installation or operation of this product, call the **Lutron Technical Support Center**. Please provide exact model number when calling. +1.800.523.9466 (U.S.A., Canada, and the Caribbean)

Other countries call +1.610.282.3800

Fax +1.610.282.3090

Visit our web site at www.lutron.com

Limited Warranty

(Valid only in the U.S., Canada, Puerto Rico, and the Caribbean.)

Lutron will, at its option, repair or replace any unit that is defective in materials or manufacture within one year after purchase. For warranty service, return unit to place of purchase or mail to Lutron at 7200 Suter Rd., Coopersburg, PA 18036-1299, postage pre-paid.

THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND THE IMPLIED WARRANTY OF MERCHANTABILITY IS LIMITED TO ONE YEAR FROM PURCHASE. THIS WARRANTY DOES NOT COVER THE COST OF INSTALLATION, REMOVAL OR REINSTALLATION, OR DAMAGE RESULTING FROM MISUSE, ABUSE, OR IMPROPER OR INCORRECT REPAIR, OR DAMAGE FROM IMPROPER WIRING OR INSTALLATION. THIS WARRANTY DOES NOT COVER INOPERABILITY RESULTING FROM INTERFERENCE, INCORRECT INSTALLATION, OR ENVIRONMENTAL FACTORS. THIS WARRANTY DOES NOT COVER INCIDENTAL OR CONSEQUENTIAL DAMAGES. LUTRON'S LIABILITY ON ANY CLAIM FOR DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE MANUFACTURE, SALE, INSTALLATION, DELIVERY, OR USE OF THE UNIT SHALL NEVER EXCEED THE PURCHASE PRICE OF THE UNIT.

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These products may be covered under one or more of the following U.S. patents: 4,835,343; 4,954,768; 5,248,919; 5,399,940; 5,637,930; 5,736,965; 5,798,581; 5,838,226; 5,848,054; 5,905,442; 5,982,103; 6,687,487; D353,798 and corresponding foreign patents. U.S. and foreign patents pending. Lutron, Claro, RadioRA, and the sunburst logo are registered trademarks and Satin Colors and FASS are trademarks of Lutron Electronics Co., Inc. © 2005 Lutron Electronics Co., Inc.

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English

044-050

RadioRA
Wireless Home Lighting Control

Installation Instructions for Multi-Location Control

Please Leave for Occupant

Read all instructions completely before installation.

Important Notes

- Caution: To avoid overheating and/or possible damage to other equipment, do not use to control receptacles, fluorescent lighting fixtures, motor-operated or transformer-supplied appliances.
- Install in accordance with all national and local electrical codes.
- Do not paint dimmers or wallplates.
- Clean with a *soft damp cloth only*. Do not use any chemical cleaners.
- Do not use where total wattage is under recommended minimum load.

Minimum Load Chart

Load Type	Dimmer Type	
	-6D	-10D
Incandescent	50 W	50 W
Magnetic Low-Voltage	50 VA	100 VA

- Do not exceed maximum load rating of dimmers.
- In any multi-location (3-way/4-way) circuit use only one *Dimmer* with up to 9 *Accessory Dimmers*.
- Dimmer may not work with dioded lamps (Sylvania CAPSYLITE® DESIGNER® 16 or Philips PAR-16™ lamps).
- Operate in ambient temperatures between 0 °C (32 °F) and 40 °C (104 °F).
- Dimmer may feel warm to the touch during normal operation.
- Wallbox depth: 3 1/2 in. (90 mm) deep recommended, 2 1/2 in. (63.5 mm) deep minimum. If mounting one control above another, leave at least 4 1/2 in. (114 mm) vertical space between them.
- 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.

Incand. / 120 V Halogen / MLV

Dimmer

RA-6D, RB-6D 120 V~ 50/60 Hz 600 W/VA

RA-10D, RB-10D 120 V~ 50/60 Hz 1 000 W/VA

Accessory Dimmer

RA-AD, RB-AD 120 V~ 50/60 Hz 8.3 A

14. -6D and -10D models may be used with magnetic (core and coil) low-voltage transformers. Do not use to control electronic (solid-state) low-voltage transformers.

15. **CAUTION:** Operating a dimmed low-voltage circuit with all lamps inoperative or removed may result in current flow in excess of normal levels. To avoid possible transformer overheating and premature failure, Lutron strongly recommends the following:

- Do not operate dimmed low-voltage circuits without operative lamps in place.
- Replace burned-out lamps immediately.
- Use transformers with thermal protection or fused primary windings to prevent transformer failure due to excess current.

16. Controls with screw terminals and wire leads may be mixed in the same 3-way or 4-way circuit. The following substitutions may be made in the wiring diagrams:

Screw Terminal Control	Wire Leaded Control
Black screw	Black wire
Brass screw	Red wire
Blue screw	Blue wire
Silver screw*	White wire*

*Silver screw terminal or White wire found on Neutral-connection controls only.

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Using the *RadioRA* Dimmer.

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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:

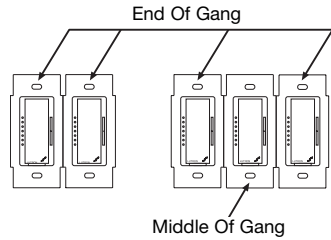
- This device may not cause harmful interference, and
- this device must accept any interference received, including interference that may cause undesired operation.

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Multigang Installation

Lutron Claro® and Satin Colors™ wallplates are available in 1 to 6 gang versions. Purchase Claro® and Satin Colors™ wallplates separately. When combining controls in a wallbox, derating is required; however, no derating is required for Accessory controls. Note: Controls do not have fins that need to be removed for multigang installations.



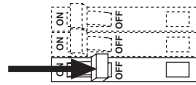
Derating Chart

Model	Not Ganged	End of Gang	Middle of Gang
RA-6D RB-6D	600 W/VA	500 W/VA	400 W/VA
RA-10D RB-10D	1 000 W/VA	800 W/VA	650 W/VA

Installation

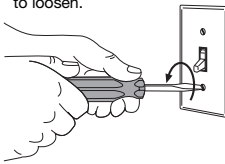
✓ Check off Steps as completed.

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

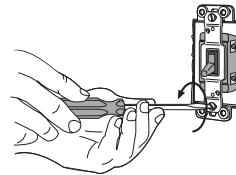


Step 2 Remove switch mounting screws. Remove switch from wall.

Turn screws to loosen.

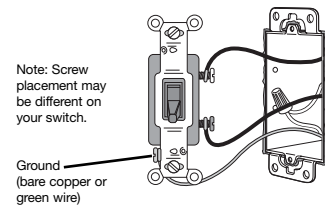


Danger: Verify power to switch is OFF before proceeding.



Step 3 Identify type of circuit.

Single-Location Control



One switch controlling a light fixture.

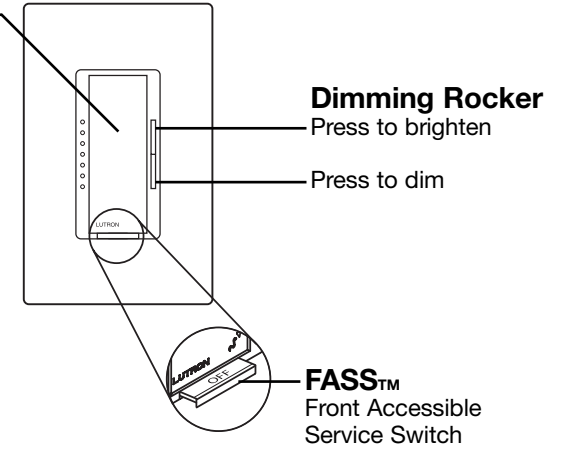
This switch will be a single-pole. The switch will have insulated wires connected to two screws of the same color plus a green ground screw.

Operation

Dimmer/Accessory Dimmer

Tap Button Options

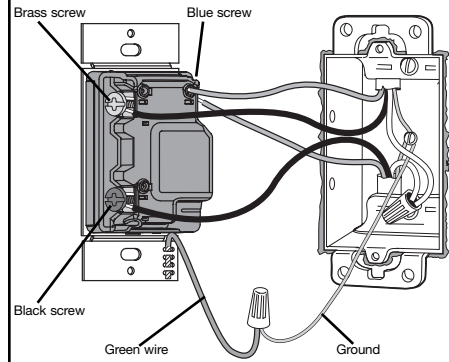
- **Tap once when unit is off** - Lights brighten smoothly to preset intensity.
- **Tap once when unit is on** - Lights dim smoothly to off.
- **Tap twice quickly** - Lights brighten rapidly to full intensity.
- **Long fade to off** - Press and hold for a long fade to OFF.



Important Notice:

To replace bulb, power may be conveniently removed by pulling the FASS™ switch out on both the Dimmer and all Accessory Dimmers. For any procedure other than routine bulb replacement, power must be disconnected at the main electrical panel.

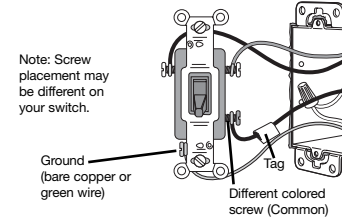
Section C: 4-Way



Replace the 4-way switch(es)

- Connect the **green** ground wire on the Dimmer or Accessory Dimmer to the **bare copper** or **green** ground wire in the wallbox. If a bare copper or green ground connection is not available in the wallbox, contact a licensed electrician for installation.
- Identify the color of the wires that were connected to the **blue** screw terminals in **Sections A & B**. Connect **both** of these wires to the **blue** screw terminal on the Dimmer/Accessory.
- Connect one of the remaining wires removed from the switch to the **black** screw terminal on the Dimmer/Accessory.
- Connect the remaining wire removed from the switch to the **brass** screw terminal on the Dimmer/Accessory.

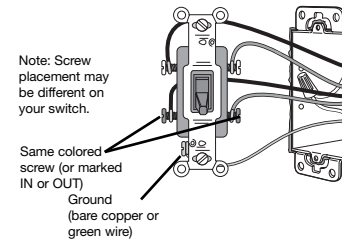
Two-Location Control



Two switches controlling a light fixture.

Both switches will be 3-way. Each switch will have insulated wires connected to three screws plus a green ground screw. One of these wires is connected to a screw of a different color (not green) or labeled COMMON. **TAG** this wire on both switches to identify when wiring.

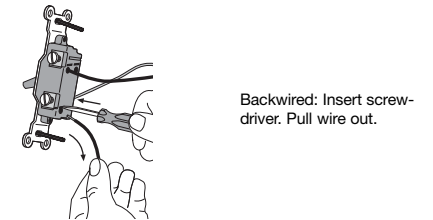
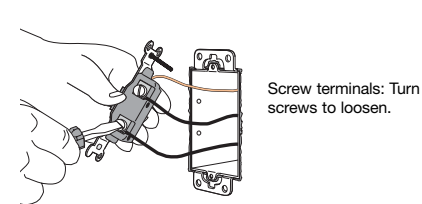
Three-Location (or more) Control



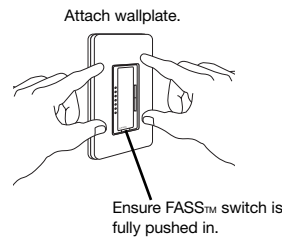
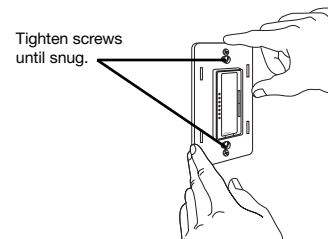
Three or more switches controlling a light fixture.

Two switches will be 3-way and the other(s) will be 4-way. **TAG** the two 3-way switches as in the Two-Location diagram above. The 4-way switch(es) will have insulated wires connected to four screws plus a green ground screw.

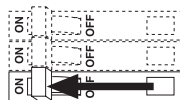
Step 4 Disconnect switch wires.



Step 6 Mount and align Dimmer (and Accessory Dimmers). Attach Claro® or Satin Colors™ wallplate(s) (purchased separately).



Step 7 Turn power ON.

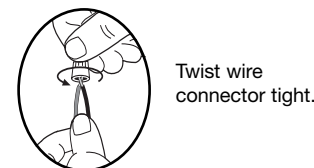


Important Wiring Information

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

Wire Connector:

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

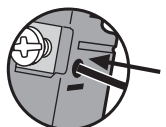


Trim or strip wallbox wires to the length indicated by the strip gauge on the back of the dimmer.

Backwire Holes: Insert wires fully. **NOTE:** Backwire holes are for use with 14 AWG **solid copper wire only**. **DO NOT** use stranded or twisted wire.

OR

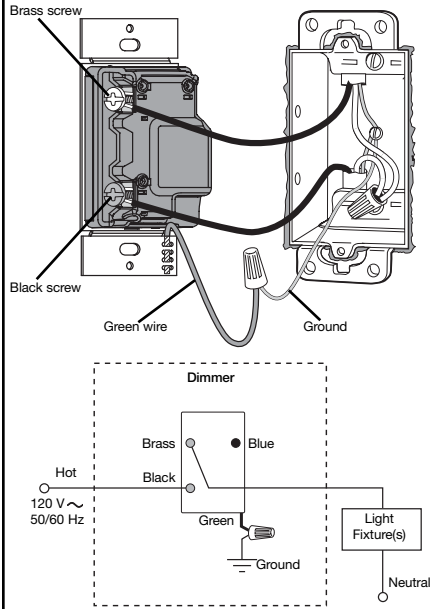
Screw Terminals: Tighten securely. Screw terminals are for use with **solid copper wire only**. **DO NOT** use stranded or twisted wire.



Step 5 Wiring the control.

Use the screw or push-in terminals when making connections on the Dimmer.

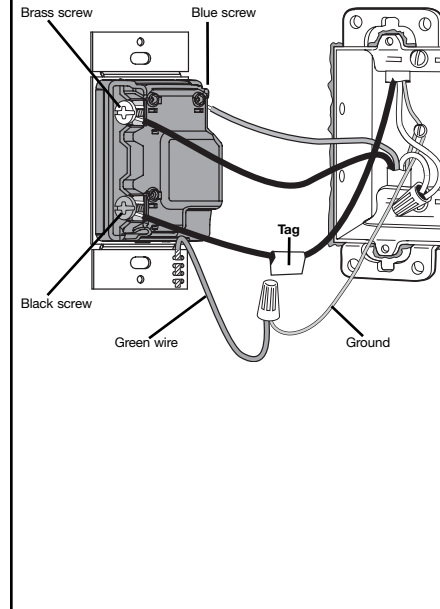
Single-Location Control



Wiring the Dimmer:

- Connect the **green** ground wire on the Dimmer to the **bare copper** or **green** ground wire in the wallbox. If a bare copper or green ground connection is not available in the wallbox, contact a licensed electrician for installation.
- Connect the Hot wire (the wire leading to the circuit breaker or fusebox) removed from the switch to the **black** screw terminal on the Dimmer.
- Connect the remaining wire removed from the switch to the **brass** screw terminal on the Dimmer.
- Tighten the **blue** screw terminal on the Dimmer. It is not used in a single-pole circuit.

Section A: Line side

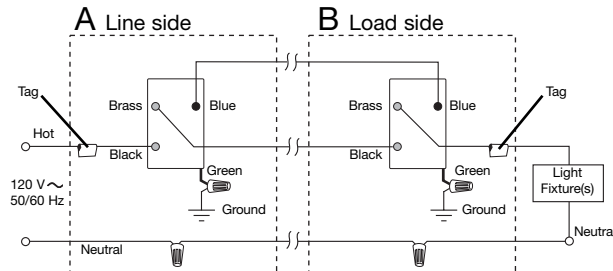


Wiring the Dimmer/Accessory on Line side:

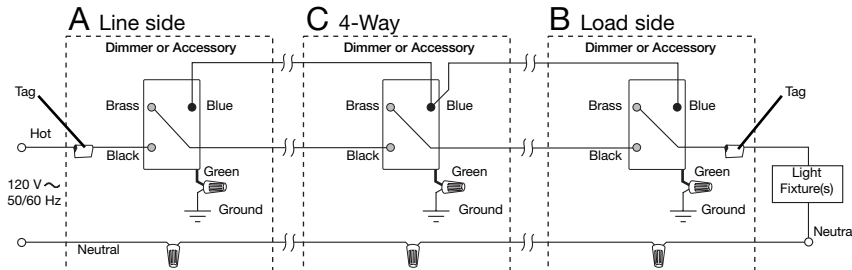
- Connect the **green** ground wire on the Dimmer/Accessory to the **bare copper** or **green** ground wire in the wallbox. If a bare copper or green ground connection is not available in the wallbox, contact a licensed electrician for installation.
- Connect the tagged wire removed from the switch to the **black** screw terminal on the Dimmer/Accessory.
- Connect one of the remaining wires removed from the switch to the **brass** screw terminal on the Dimmer/Accessory.
- Connect the remaining wire removed from the switch (note wire color) to the **blue** screw terminal on the Dimmer/Accessory.

Multi-Location Control

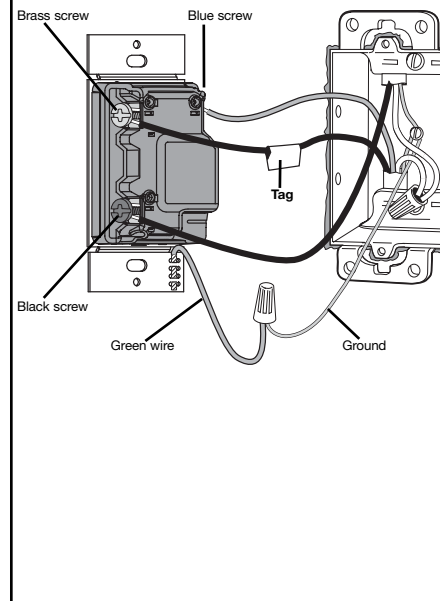
For **Two-Location Control** wiring, follow **Sections A & B**. One location will be replaced with a Dimmer and the other with an Accessory Dimmer.



For **Three-Location (or more) Control** wiring, follow **Sections A, B & C**. One location will be replaced with a Dimmer and the others with Accessory Dimmers. **Only one Dimmer** can be used with up to 9 Accessory Dimmers.



Section B: Load side



Wiring the Dimmer/Accessory on Load side:

- Connect the **green** ground wire on the Dimmer/Accessory to the **bare copper** or **green** ground wire in the wallbox. If a bare copper or green ground connection is not available in the wallbox, contact a licensed electrician for installation.
- Connect the tagged wire removed from the switch to the **brass** screw terminal on the Dimmer/Accessory.
- Identify the color of the wire that was connected to the **blue** screw terminal in Section A. Connect the same color wire to the **blue** screw terminal on the Dimmer/Accessory.
- Connect the remaining wire removed from the switch to the **black** screw terminal on the Dimmer/Accessory.