MAESTRO Wireless®

Installation

Incandescent/Halogen Dimmer with Radio Frequency Receiver

MRF-600 120 V~ 60 Hz 600 W (Single-Pole)	MRFB-600 120 V~ 60 Hz 600 W (Single-Pole)
MRF-600M 120 V~ 60 Hz 600 W (Multi-Location)	MRFB-600M 120 V~ 60 Hz 600 W (Multi-Location)
MRF-1000M 120 V~ 60 Hz 1000 W (Multi-Location)	MRFB-1000M 120 V~ 60 Hz 1000 W (Multi-Location)

Radio Frequency Wireless Controller with One-Touch Favorite Button

MRF-VCTX   6 V⎓ 1.5 mW
MRFB-VCTX   6 V⎓ 1.5 mW

Accessory Dimmer (Companion Dimmer)

MA-R (8.3 A maximum)   120 V~ 60 Hz
MSC-AD (8.3 A maximum)   120 V~ 60 Hz
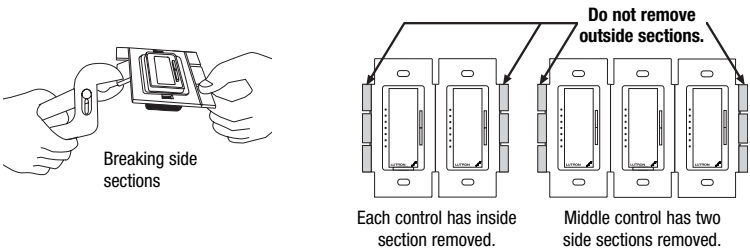
Important Notes:

Please read before installing.

1. **Caution:** To avoid overheating and possible damage to other equipment, do not use to control receptacles, fluorescent lighting fixtures, motor-operated or transformer-supplied appliances, or electronic low-voltage lighting fixtures.
2. Install in accordance with all national and local electrical codes.
3. **DO NOT** use Maestro Wireless® Dimmers for compact fluorescent (Energy Saver) lamps.
4. When no "grounding means" exist within the wallbox then the NEC® 2005, Article 404-9 allows a Dimmer without a grounding connection to be installed as a replacement, as long as a plastic, noncombustible wallplate is used. For this type of installation, cap or remove the green ground wire on the Dimmer and use an appropriate wallplate such as Lutron's Claro® series wallplates.
5. Do not paint Dimmers or Maestro Accessory Dimmers (MA-R, MSC-AD).
6. Maestro Wireless Dimmers are not compatible with standard 3-way/4-way switches. Use only with Maestro Accessory Dimmers (MA-R, MSC-AD).
7. Maestro Accessory Dimmers (MA-R, MSC-AD) can not be used individually and must be used in conjunction with a Maestro Wireless Dimmer in a 3-way/4-way application.
8. In any 3-way/4-way circuit use only one Dimmer with up to 9 Maestro Accessory Dimmers (MA-R, MSC-AD).
9. Do not use where total lamp wattage is less than 60 W or greater than wattage indicated on unit label.
10. Operate between 0 °C (32 °F) and 40 °C (104 °F).
11. Dimmers may feel warm to the touch during normal operation.
12. Recommended wallbox depth is 2.5" (64 mm) minimum.
13. Maximum wire length between the Dimmer and the last Maestro Accessory Dimmer (MA-R, MSC-AD) is 250 feet (76 m).
14. **Clean Dimmers and Wireless Controllers with a soft damp cloth only.** Do not use any chemical cleaners.
15. **DO NOT** use Incandescent/Halogen Dimmers for Electronic Low-Voltage or Magnetic Low-Voltage lighting.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference and
(2) This device must accept any interference received, including interference that may cause undesired operation.
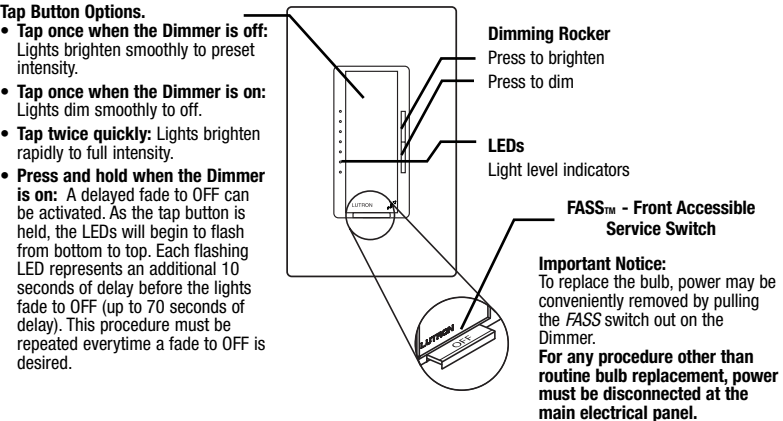
Multigang Installations

When installing more than one control in the same wallbox, it may be necessary to remove all inner side sections prior to wiring (see below). Using pliers, bend side section up and down until it breaks off. Repeat for each side section to be removed. Removal of Dimmer side sections reduces maximum load capacity. Refer to the Dimmer Capacity Chart below.
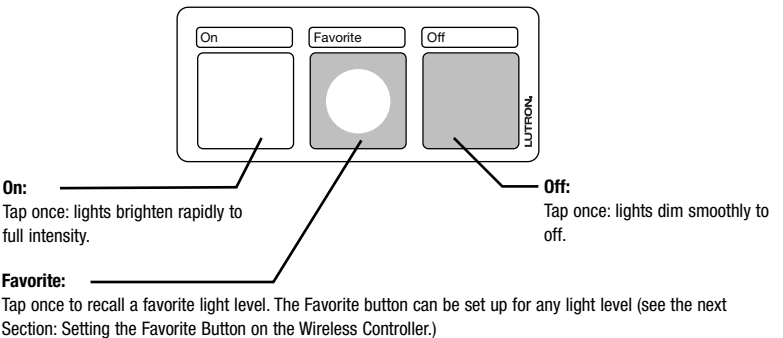

Breaking side sections

Do not remove outside sections.

Each control has inside section removed.

Middle control has two side sections removed.

Dimmer Capacity Chart

Model	Load		
	No Sides Removed	1 Side Removed	2 Sides Removed
MRF-600 MRFB-600	600 W	500 W	400 W
MRF-600M MRFB-600M	600 W	500 W	400 W
MRF-1000M MRFB-1000M	1000 W	800 W	650 W

Wireless Dimmer Operation

Tap Button Options.
- **Tap once when the Dimmer is off:** Lights brighten smoothly to preset intensity.
- **Tap once when the Dimmer is on:** Lights dim smoothly to off.
- **Tap twice quickly:** Lights brighten rapidly to full intensity.
- **Press and hold when the Dimmer is on:** A delayed fade to OFF can be activated. As the tap button is held, the LEDs will begin to flash from bottom to top. Each flashing LED represents an additional 10 seconds of delay before the lights fade to OFF (up to 70 seconds of delay). This procedure must be repeated everytime a fade to OFF is desired.

Dimming Rocker
Press to brighten
Press to dim

LEDs
Light level indicators

FASS™ - Front Accessible Service Switch

Important Notice:
To replace the bulb, power may be conveniently removed by pulling the FASS switch out on the Dimmer. **For any procedure other than routine bulb replacement, power must be disconnected at the main electrical panel.**

Wireless Controller Operation

Important Notes:
1. Meets the Society of Automotive Engineers (SAE) temperature standards:
   -40 °F (-40 °C) to 235 °F (113 °C).
2. Do not paint the Wireless Controller.
3. The range and performance of the Maestro Wireless 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

On:
Tap once: lights brighten rapidly to full intensity.

Off:
Tap once: lights dim smoothly to off.

Favorite:
Tap once to recall a favorite light level. The Favorite button can be set up for any light level (see the next Section: Setting the Favorite Button on the Wireless Controller.)

This Wireless Controller is compatible with most HomeLink® equipped Vehicles. Please see the vehicle manufacturer's instructions for programming information.

Notes:
- The Dimmer(s) must learn the Wireless Controller in order for the Wireless Controller to operate the Dimmer(s). See the Set-Up section.
- Batteries are included and are pre-installed. Battery lifetime is approximately 5 years.

Multiple Wireless Dimmer Applications

If multiple Maestro Wireless Dimmers are set up to the same Wireless Controller, they will perform as follows:
- Pressing the On button will cause all Dimmers to brighten to full intensity, regardless of whether some are on and some are off.
- Pressing the Off button will cause all Dimmers to fade off.
- To save a favorite light level, adjust all the Dimmers controlled by a Wireless Controller to the desired level, then press and hold the Favorite button for approximately 8 seconds until the Dimmer's LEDs stop blinking. Once a favorite light level is set, pressing the Favorite button will cause each Dimmer to return to the favorite light level.
- Use up to 4 Wireless Controllers for each Wireless Dimmer.
- Control up to 3 Wireless Dimmers with each Wireless Controller.

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 and 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.

Set-Up

Setting Up a Wireless Controller to a Wireless Dimmer

1 Turn Dimmer **ON**

2a Press and hold the Dimmer's tap button. LEDs will blink one at a time, from the bottom up to the top. Ater approximately 8 seconds, the LEDs will start to cycle slowly from top to bottom (set-up mode). Continue to hold the tap button and go to step 2b.

2b Press and hold the On button on the Wireless Controller.

2c Once the Dimmer learns the Wireless Controller, the LEDs on the Dimmer will cycle quickly from top to bottom. Release the Dimmer's tap button to exit set-up mode, and release the Wireless Controller's On button.

3 Repeat steps 1—2c for each additional Dimmer that is to be controlled with the Wireless Controller or for each additional Wireless Controller that is to control the Dimmer.

Setting the Favorite Button on the Wireless Controller

⚠ **Note:** The Wireless Controller must be set up to a Dimmer before the Favorite can be set (see steps 1—2c above).

⚠ **Note:** If a Wireless Controller is set up to multiple Dimmers, each Dimmer must first be adjusted to the desired light level before the Favorite button is pressed and held.

1 Adjust the Dimmer(s) to the desired light level with the dimming rocker.

2 Press and hold the Favorite button for approximately 8 seconds. The light will go to the previous favorite light level. The LED on the Dimmer will blink, indicating the new favorite light level.

3 After approximately 8 seconds, the LED will stop blinking and the lights will go to the new Favorite light level.

4 Release the Favorite button.

⚠ **Note:** Off is a valid "Favorite" light level.

Troubleshooting

Symptoms	Possible Causes
Light does not turn ON or no LEDs turn ON.	• Front Accessible Service Switch (FASS) on the Dimmer (or Accessory Dimmer) is pulled out to the OFF position. • Light bulb(s) burned out. • Breaker is OFF or tripped. • Wiring error. Call **Lutron Technical Support Center** at 1-800-523-9466.
LEDs 1 and 7 blink alternately when a Wireless Controller button is pressed.	• Dimmer failed to learn a Wireless Controller; see Set-Up Section.
Light does not respond to Radio Frequency Wireless Controller.	• Dimmer failed to learn Wireless Contoller; see Set-Up Section. • Dimmer has already received and responded to a command, or is already at the light level, the Wireless Controller is requesting. • Wireless Controller is outside operating range. • Wireless Controller batteries are low. • Wireless Controller batteries are installed incorrectly.
When in set-up mode (tap button held), LEDs 1 and 7 blink alternately.	• Maximum number of Wireless Controllers have been set up to Dimmer. To remove a previously set-up Wireless Controller, perform Set-Up step 2a, **and** press and hold the Wireless Controller's Off button.
Light does not remain ON, LEDs glow dimmly or blink.	• Blue screw terminal is miswired to neutral or touching ground.
Tap switch on Accessory Dimmer does not work when light is at brightest level.	• Load is less than 60 W.

Installation

1 Turning Power OFF
- Turn power OFF at circuit breaker (or remove fuse).

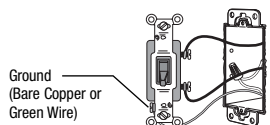### 2 Removing Wallplate and Switch
- Remove the wallplate and switch mounting screws.

⚠ Danger: Verify power to each switch is OFF before proceeding.

- Carefully remove the switch from the wall (**do not remove the wires**).

### 3 Identifying the Circuit Type and Tagging the Wire on the COMMON Terminal of the Switches

3a - Single-Location Control

Ground (Bare Copper or Green Wire)

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.

Identify the COMMON terminal (step 3b or 3c) before removing wires from the switches.

3b - Two-Location Control

Ground (bare copper or green wire)

Tag

Different colored screw (Common)
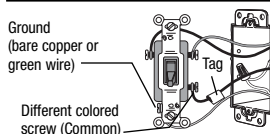
Two switches controlling a light fixture: Both switches will be 3-way. Each switch will have insulated wires connected to three screws plus a green ground screw. One of these wires is connected to a screw of a different color (not green) or labeled COMMON. Tag this wire on both switches to identify when rewiring.

3c - Three or More-Location Control

Note: Screw placement may be different on the switch.

Same colored screw (or marked IN or OUT)

Ground (bare copper or green wire)

Tag
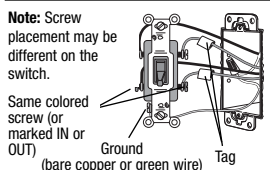
Three or more switches controlling a light fixture: Two switches will be 3-way and any others will be 4-way. Tag the two 3-way switches as in the Two-Location diagram above. The 4-way switch will have insulated wires connected to four screws plus a green ground screw. Tag the two same-color insulated wires that are connected to opposite colored screws. Follow this procedure for each 4-way switch.

4 Disconnecting the Switch Wires

Important Note: The wall switch may have two wires attached to the same screw (see illustrations below for examples). Tape these two wires together before disconnecting. When rewiring, connect wires to the Dimmer the same way they were connected to the switch.

One wire in the backwired hole and one to the screw.

One continuous wire to the screw.

Push-in Terminals: Insert screwdriver. Pull wire out.

Screw Terminals: Turn screws to loosen.

Looped Wire: Turn screw to loosen.
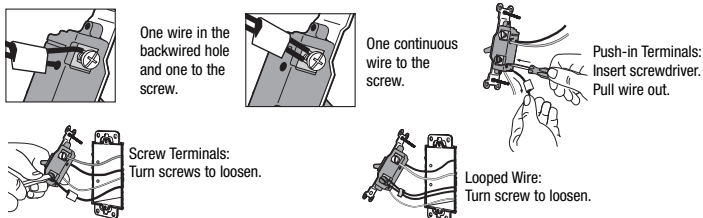
5 Wiring

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:
Use to join #14 AWG or #12 AWG ground wire to #18 AWG Dimmer ground wire.

Twist wire connector tight.

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

Push-in terminals: Insert wires fully.
Note: Push-in terminals 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 #12 AWG or #14 AWG **solid copper wire only.** DO NOT use stranded or twisted wire.

- For installations involving more than one control in a wallbox, refer to Multigang Installations before beginning.
- Use the screw or push-in terminals when making connections on the Dimmer or Accessory Dimmer.
- Wire all controls before mounting.

5a - Single-Location Control, Single-Pole Unit

Brass screw

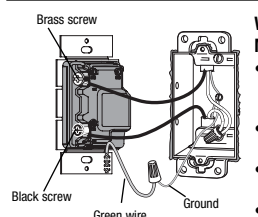Brass screw   Green wire   Ground
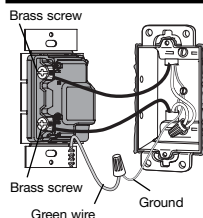
Wiring the Dimmer:
MRF-600, MRFB-600
- Connect the **green** ground wire on the Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 4.)
- Connect either of the wires removed from the switch to one of the **brass** screw terminals on the Dimmer.
- Connect the remaining wire removed from the switch to the other **brass** screw terminal on the Dimmer.

Live
120 V~
60 Hz

Dimmer
Brass
Brass
Green
Ground

Light Fixture
Neutral
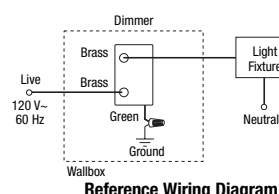
Wallbox

Reference Wiring Diagram

5b - Single-Location Control, Multi-Location Unit

Brass screw

Black screw   Green wire   Ground

Wiring the Dimmer:
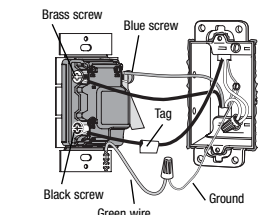**MRF-600M, MRFB-600M, MRF-1000M, MRFB-1000M**
- Connect the **green** ground wire on the Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 4 on other side.)
- Connect either of the wires removed from the switch to the **black** screw terminal on the Dimmer.
- 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.

Live
120 V~
60 Hz

Dimmer
Brass   Blue
Black
Green
Ground

Light Fixture
Neutral

Wallbox
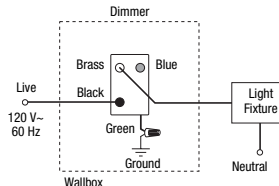
Reference Wiring Diagram

5c - Two-Location Control

One location will be replaced with a Dimmer and the other with an Accessory Dimmer (Companion Dimmer).

Brass screw   Blue screw

Tag

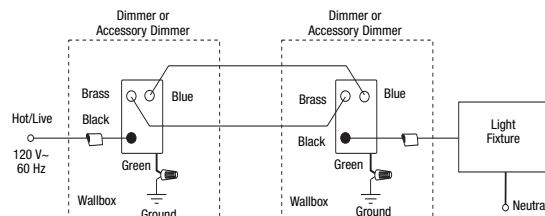Black screw   Green wire   Ground

Wiring the Dimmer:
- Connect the **green** ground wire on the Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 4 on other side.)
- Connect the tagged wire removed from the switch in step 3b to the **black** screw terminal on the Dimmer.
- Connect one of the remaining wires removed from the switch to the **brass** screw terminal on the Dimmer.
- Connect the remaining wire removed from the switch (note wire color) to the **blue** screw terminal on the Dimmer.

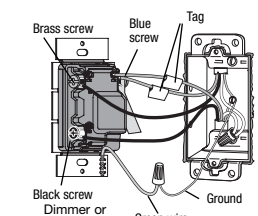**Wiring the Accessory Dimmer (MA-R):**
- Connect the **green** ground wire on the Accessory Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 4 on other side.)
- Connect the tagged wire removed from the switch in step 3b to the **black** screw terminal on the Accessory Dimmer.
- Connect the same color wire connected to the **blue** screw terminal on the Dimmer (wire color noted above) to the **blue** screw terminal on the Accessory Dimmer.
- Connect the remaining wire removed from the switch to the **brass** screw terminal on the Accessory Dimmer.

Blue screw   Brass screw

Tag

Ground   Green wire   Black screw

Reference Wiring Diagram

Hot/Live
120 V~
60 Hz

Dimmer or Accessory Dimmer
Brass   Blue
Black
Green
Wallbox   Ground

Dimmer or Accessory Dimmer
Brass   Blue
Black
Green
Wallbox   Ground

Light Fixture
Neutral

5d - Three or More-Location Control

One location will be replaced with a Dimmer and the others with Accessory Dimmers. Only **one** Dimmer can be used with up to nine Accessory Dimmers (Companion Dimmers).

Brass screw   Blue screw   Tag

Black screw   Green wire   Ground
Dimmer or Accessory Dimmer

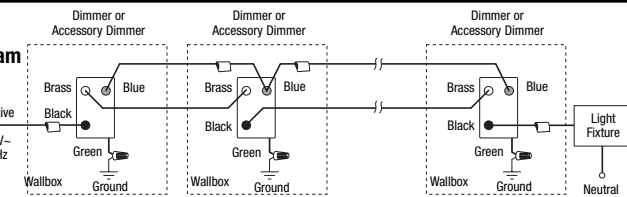**Replace the 4-way switch(es):**
Note: 4-way switches may be replaced with either a Dimmer or an Accessory Dimmer.
- Connect the **green** ground wire on the Dimmer or Accessory Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 4 on other side.)
- Connect both of the tagged wires (noting their color) removed from the 4-way switch in step 3c to the **blue** screw terminal on the Dimmer or Accessory Dimmer (one wire to the screw and the other to the push-in terminal).
- Connect one of the remaining wires removed from the switch to the **black** screw terminal on the Dimmer or Accessory Dimmer.
- Connect the remaining wire removed from the switch to the **brass** screw terminal on the Dimmer or Accessory Dimmer.

Brass screw   Blue screw

Tag

Ground   Black screw   Green wire
Dimmer or Accessory Dimmer

Replace the 3-way switches:
- Connect the **green** ground wire on the Dimmer or Accessory Dimmer to the **bare copper** or **green** ground wire in the wallbox. (See Important Note 4 on other side.)
- Connect the tagged wire removed from the switch in step 3c to the **black** screw terminal on the Dimmer or Accessory Dimmer.
- Connect the same color wire connected to the **blue** screw terminal on the Dimmer or Accessory Dimmer that replaced a 4-way switch (wire color noted above) to the **blue** screw terminal on the Dimmer or Accessory Dimmer.
- Connect the remaining wire removed from the switch to the **brass** screw terminal on the Dimmer or Accessory Dimmer.

Reference Wiring Diagram

Dimmer or Accessory Dimmer   Dimmer or Accessory Dimmer   Dimmer or Accessory Dimmer

Hot/Live
120 V~
60 Hz

Brass   Blue   Brass   Blue   Brass   Blue
Black   Black   Black
Green   Green   Green
Wallbox   Ground   Wallbox   Ground   Wallbox   Ground
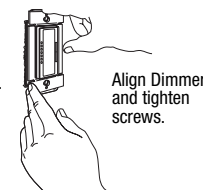
Light Fixture
Neutral

6 Mounting Dimmer (and Accessory Dimmer) to Wallbox
- Form wires carefully into the wallbox, mount and align Dimmer (and Accessory Dimmer).
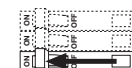- Install wallplate.

Start screws.
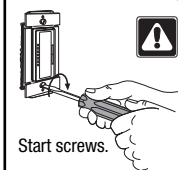
⚠ Caution: Do not overtighten mounting screws.

Align Dimmer and tighten screws.

7 Turning Power ON
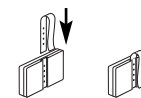- Turn power ON at circuit breaker (or replace fuse).

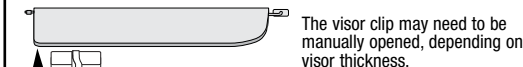### 8 Optional Wireless Controller Mounting Methods

Car Visor Mounting

The Wireless Controller can be mounted to a vehicle's visor, using the supplied visor clip.

1. Attach the visor clip to Wireless Controller.

2. Mount the Wireless Controller to vehicle's visor.

The visor clip may need to be manually opened, depending on visor thickness.

Wall Mounting

1. Attach a wall clip to the wall using the supplied screws and wall anchors. When mounting the Wireless Controller horizontally, make sure that the end stop is at the bottom. Note: Drill pilot holes for the wall anchors using a 3/16 in drill bit.

Horizontal Mounting   or   Vertical Mounting

End stop
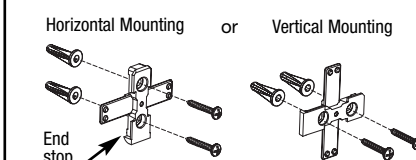
2. Slide Wireless Controller onto wall clip. The wall clip slides into the channel on the back of the Wireless Controller.

Horizontal Mounting   or   Vertical Mounting
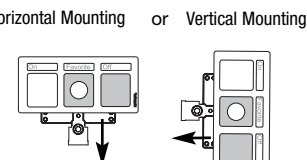
? Technical Assistance

For questions concerning the installation or operation of this product, call the **Lutron Technical Support Center**. Please provide exact model number when calling.

☎ **U.S.A. and Canada (24 hrs/7days) 1-800-523-9466**   Fax +1-610-282-3090

Other countries 8am – 8pm ET +1-610-282-3800

🌐 **http://www.lutron.com**

Limited Warranty

030-968
030-968