MAESTRO®

Electronic Low Voltage Dimmer

MAELV-600 (600W maximum, 5W minimum) 120VAC, 60Hz

Smart Remote

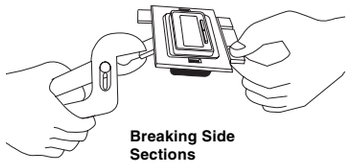
MA-R (8.3A maximum) 120VAC, 60Hz

Important Notes

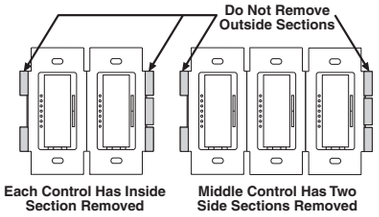
1. **Caution:** To avoid overheating and possible damage to other equipment, do not use to control receptacles, fluorescent lighting fixtures, motor-operated or transformer-supplied appliances.
2. Install in accordance with all national and local electrical codes.
3. When no "ground means" exists within the wallbox, then NEC 380-9 exception to (b) allows a dimmer without a ground connection, to be installed as a replacement. For this type of installation cap or remove the green dimmer ground wire. A dimmer installed under this exception (NEC 380-9 exception to (b)) must be provided with a plastic, noncombustible, UL listed wallplate.
4. Do not paint Dimmers or Smart Remotes (MA-R).
5. Use to control the primary side of electronic transformer-supplied low-voltage lighting, incandescent lamps, or a combination of the two.
6. Some fixture manufacturers do not recommend dimming their solid-state transformers. To determine if a fixture can be dimmed, consult the fixture manufacturer.
7. This product requires a neutral wire in the wallbox. If a neutral wire is not present, contact a licensed electrician for installation.
8. This control is overload protected. If the rated wattage is exceeded, power to the circuit will shut off until the control cools. It this occurs, remove excess load from the circuit.
9. Maestro® Dimmers are not compatible with standard 3-way switches, for use only with Smart Remotes (MA-R).
10. Smart Remotes (MA-R) can not be used individually but must be used in conjunction with a Maestro® Dimmer in a 3-way/4-way application.
11. Only one Maestro® Dimmer can be used in a multi-location circuit with up to nine Smart Remotes (MA-R). The Smart Remotes (MA-R) must be wired on the line side of the Dimmer.
12. In multi-phase applications, use a separate neutral for each phase containing a dimmed circuit.
13. Operate between 0°C (32° F) and 40°C (104° F).
14. Dimmer may feel warm to the touch during normal operation.
15. Recommended wallbox depth is 2 1/2" minimum.
16. Maximum wire length between the Dimmer and the last Smart Remote (MA-R) is 300 feet.
17. **Clean with a *soft damp cloth only*.** Do not use any chemical cleaners.

Multigang Installations

When combining controls in the same wallbox, remove all inner side sections prior to wiring (see below). Using pliers, bend side sections up and down until they break off. Repeat for each side section to be removed. Reduction of Dimmer capacity is also required. Refer to chart below for maximum Dimmer capacity.



Breaking Side Sections

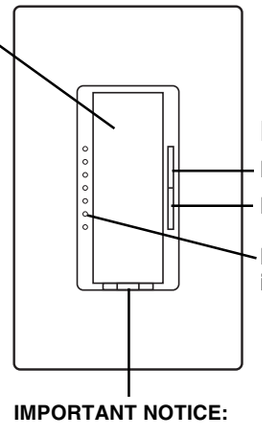


Type of Smart Dimmer	Sides Removed		
	No Sides Removed	1 Side Removed	2 Sides Removed
Electronic Low-Voltage 600W	600W	500W	400W

Operation

Tap Switch Options

- **Tap once -** Lights adjust smoothly to level set by rocker.
- **Tap twice quickly -** Lights adjust rapidly to full.
- **Tap again -** Lights adjust smoothly to off.
- **Fade to OFF -** Press and hold to activate delayed fade to OFF. As tap switch is held the bottom LED will begin to flash indicating a 10 second fade to off. Each subsequently flashing LED represents 10 seconds of delay before dimmer fades to OFF (up to 60 seconds).
- **Locked-in Preset -** Tap 4 times quickly to set the current light level as the "Locked-in" preset (the LEDs will blink twice indicating the preset was locked). When the dimmer is turned ON via this button it will always go to this "Locked-in" light level rather than the previous light level. To unlock the preset, tap the switch 4 times quickly (the LEDs will blink three times indicating the preset was unlocked).



IMPORTANT NOTICE:
FASS™ - Front Accessible Service Switch - to replace bulb, power may be conveniently removed by sliding FASS switch to the left, on both the Dimmer and any Smart Remotes. **For any procedure other than routine lamp replacement, power must be disconnected at the main electrical panel.**

Troubleshooting

Symptom	Possible Cause
Light does not turn on.	• Front Accessible Service Switch (FASS™) on the Dimmer or Smart Remote is switched to the left (See Step 5). • Light bulb(s) burned out. • Breaker is off or tripped. • Dimmer not wired correctly. • Neutral not wired to Dimmer (white wire).
Lamps flicker with low-voltage loads.	• Wrong load type used. Verify that load is electronic low-voltage.
LEDs do not turn OFF when FASS™ switch on the dimmer is in the OFF position (to the left).	• The yellow and black wires are reversed. See wiring diagram in Step 5 for correct wiring.
Lights cycle OFF and ON.	• Overload protection circuit active – remove excess load to correct.
Dimmer does not respond properly to a Smart Remote.	• Smart Remote is not on the line side of the Dimmer.

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. (800) 523-9466 (U.S.A., Canada, and the Caribbean)
Other countries call (610) 282-3800
Fax (610) 282-3090
Internet: www.lutron.com
email: product@lutron.com

Limited Warranty

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 DAMAGE FROM IMPROPER WIRING OR INSTALLATION. 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.
This warranty gives you specific legal rights, and you may have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitation on how long an implied warranty may last, so the above limitations may not apply to you.
This product is covered under one or more of the following U.S. patents: 4,835,343; 5,248,919; 5,399,940; 5,637,930; DES 353,798 and corresponding foreign patents. U.S. and foreign patents pending. Lutron and Maestro are registered trademarks and FASS is a trademark of Lutron Electronics Co., Inc.
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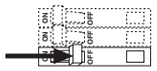
Coopersburg, PA 18036-1299, U.S.A.
Made and printed in the U.S.A. 11/01 P/N 030-735 Rev. A

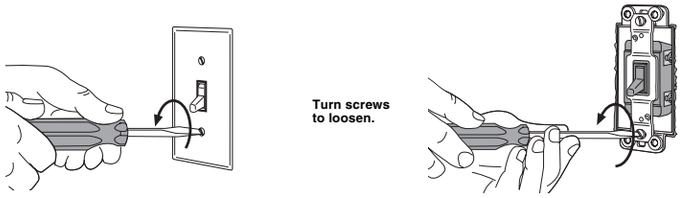
Installation

For installations involving more than one control in a wallbox, refer to Multigang Installations before beginning.

Step 1 **WARNING: Turn power OFF at circuit breaker or remove fuse.**

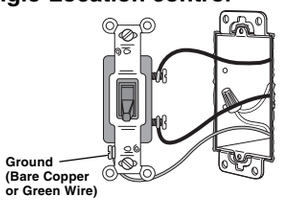


Step 2 **Remove switch mounting screws. Pull switch from wall.**



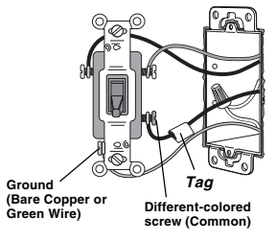
Step 3 **Identify type of circuit:**

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.

Two-Location control

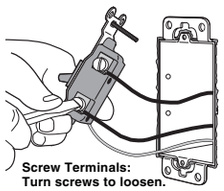


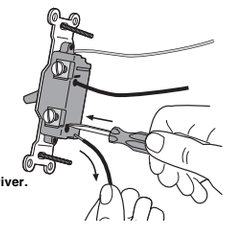
Two switches controlling a light fixture.
Both switches will be 3-way. Each switch will have insulated wires connected to three screws plus a green ground screw. One of these wires is connected to a screw of a different color (not green) or labeled COMMON. **TAG** this wire on both switches to identify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

Multi-Location control

Three switches controlling a light fixture.
Two switches will be 3-way and 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 which are connected to opposite colored screws.

Step 4 **Disconnect switch wires.**



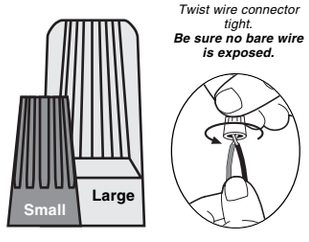


Important Wiring Information

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.

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

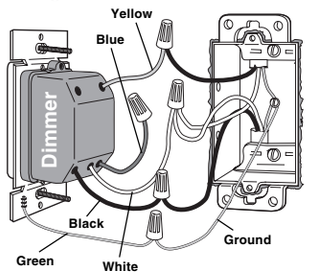
Large:
- Strip insulation 1/2" for 10, 12 or 14 AWG wire
- Strip insulation 5/8" for 16 or 18 AWG wire
- Use to join one or two 12 or 14 AWG supply wires with one 10, 12, 14, 16, or 18 AWG control wire.



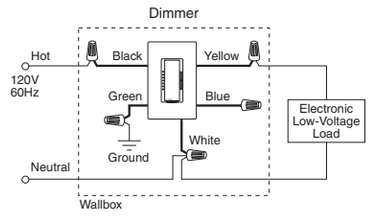
Twist wire connector tight.
Be sure no bare wire is exposed.

Step 5 **Wiring the controls:**
NOTE: Actual wire locations on Dimmer and Smart Remotes may vary from illustrations.

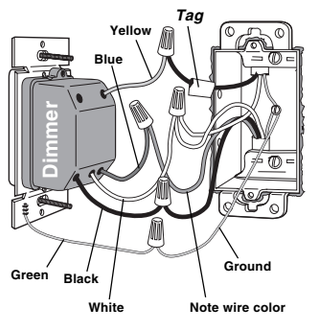
Single-Location control



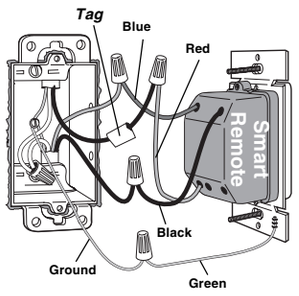
Wiring the Dimmer:
- Connect the **green** wire on the dimmer to the green or bare copper ground wire in the wallbox.
- Connect the **yellow** wire on the dimmer to the wire going to the lighting load.
- Connect the **black** wire on the dimmer to the other wire removed from the switch.
- Connect the **white** wire on the dimmer to neutral.
- Cap off the **blue** wire on the dimmer. It is not used in a single-pole circuit.



Two-Location control

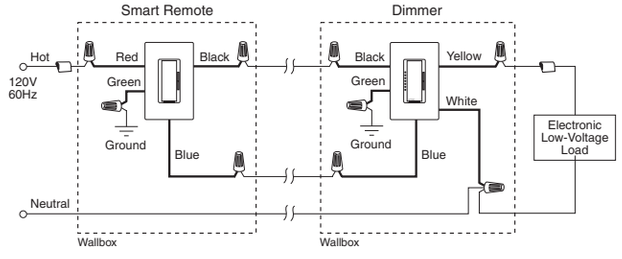


Wiring the Dimmer:
- Connect the **green** wire on the dimmer to the green or bare copper ground wire in the wallbox.
- Connect the **yellow** wire on the dimmer to the tagged wire removed from the switch. This wire must be going to the lighting load.
- Connect the **black** wire on the dimmer to either of the remaining wires removed from the switch.
- Connect the **white** wire on the dimmer to neutral.
- Connect the **blue** wire on the dimmer to the remaining wire removed from the switch (note wire color).

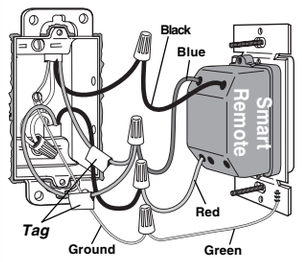


Wiring the Smart Remote (MA-R):
- Connect the **green** wire on the Smart Remote to the green or bare copper ground wire in the wallbox.
- Connect the **red** wire on the Smart Remote to the tagged wire removed from the switch.
- Connect the **blue** wire on the Smart Remote to the same color wire that was connected to the **blue** wire on the dimmer noted above.
- Connect the **black** wire on the Smart Remote to the remaining wire removed from the switch.

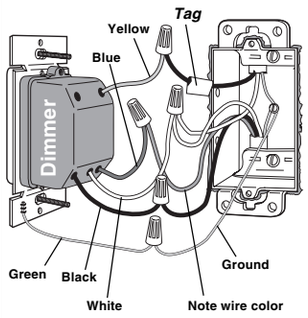
NOTE: Only one MAELV-600 can be used per multi-location circuit. The Smart Remote(s) (MA-R) must be wired on the line side of the dimmer.



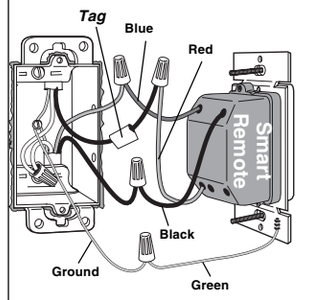
Multi-Location control or more



Wiring a Smart Remote (MA-R): (replaces the 4-way switch(es))
- Connect the **green** wire on the Smart Remote to the green or bare copper ground wire in the wallbox.
- Connect the **blue** wire on the Smart Remote to both of the tagged wires (noting their color) removed from the 4-way switch.
- Connect the **black** wire on the Smart Remote to one of the remaining wires removed from the switch.
- Connect the **red** wire on the Smart Remote to the remaining wire removed from the switch.

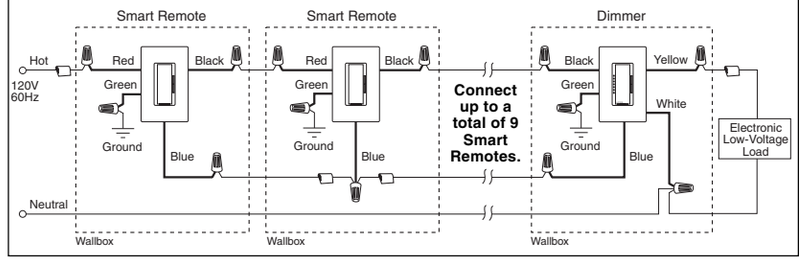


Wiring the Dimmer: (replaces a 3-way switch)
Note: The Dimmer MUST be on the load side of the Smart Remotes.
- Connect the **green** wire on the dimmer to the green or bare copper ground wire in the wallbox.
- Connect the **yellow** wire on the dimmer to the tagged wire removed from the switch. This wire must be going to the lighting load.
- Connect the **blue** wire on the dimmer to the same color wire that was connected to the **blue** wire on the Smart Remote noted above.
- Connect the **black** wire on the dimmer to the remaining wire removed from the switch.
- Connect the **white** wire on the dimmer to neutral.

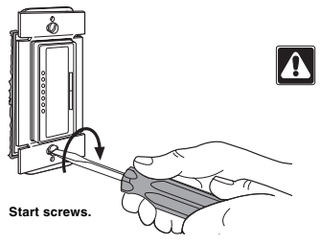


Wiring another Smart Remote (MA-R): (replaces a 3-way switch)
- Connect the **green** wire on the Smart Remote to the green or bare copper ground wire in the wallbox.
- Connect the **black** wire on the Smart Remote to the tagged wire removed from the switch.
- Connect the **blue** wire on the Smart Remote to the same color wire that was connected to the **blue** wire on the dimmer noted above.
- Connect the **red** wire on the Smart Remote to the remaining wire removed from the switch.

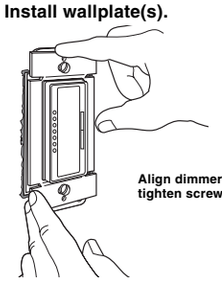
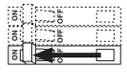
NOTE: Only one MAELV-600 can be used per multi-location circuit. The Smart Remote(s) (MA-R) must be wired on the line side of the dimmer.



Step 6 **Mount and align Dimmer (and Smart Remote). Install wallplate(s).**



Caution: Do not overtighten mounting screws.



Step 7 **Turn power ON.**