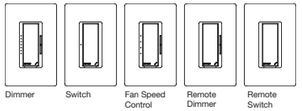
English

RadioRA®-SR

Designer-Style RF Maestro®
Dimmers: SRD-6D, SRD-10D, SRD-10ND
Switch: SRD-8ANS
Fan Speed Control: SRD-2ANF
Remote Dimmer: SD-RD
Remote Switch: SD-RS
120 V~ 50/60 Hz

Installation Instructions

Please Read Before Installing



For Installation Guides, System Setup Guide and Setup tools visit http://www.lutron.com/radiorasr.

Load Specifications:

Control	Load Type	Min. Load	Max. Load
SRD-6D[1]	Incand.	50 W	600 W
	MLV[2]	50 W/VA	450 W/ 600 VA
SRD-10D[1]	Incand.	50 W	1000 W
	MLV[2]	50 W/VA	800 W/ 1000 VA
SRD-10ND[1]	Incand.	10 W	1000 W
	MLV[2]	10 W/VA	800 W/ 1000 VA
SRD-8ANS[3]	Lighting	10 W/VA	8 A
	Motor	0.083 A	1/4 HP 5.8 A
SRD-2ANF[4]	Ceiling Fan	0.083 A	2 A
SD-RD	See Dimmer/Fan Speed Control		8.3 A
SD-RS	See Switch		8.3 A

1 **Dimmer Load Type:** -6D, -10D and -10ND are designed for use with permanently installed incandescent, magnetic low-voltage, or tungsten halogen only. Do not install dimmers to control receptacles or motor-operated appliances.

2 **Low-Voltage Applications:** Use -6D, -10D and -10ND with magnetic (core and coil) low-voltage transformers only. Not for use with electronic (solid-state) low-voltage transformers. Operation of a low-voltage circuit with lamps inoperative or removed may result in transformer overheating and premature failure. Lutron strongly recommends the following:
- Do not operate low-voltage circuits without operative lamps in place.
- Replace burned-out lamps as quickly as possible.
- Use transformers that incorporate thermal protection or fused transformer primary windings to prevent transformer failure due to overcurrent.

3 **Switch Load Type:** -8ANS is designed for use with permanently installed incandescent, magnetic low-voltage, electronic low-voltage, or fluorescent loads and with motor loads up to 1/4 HP (5.8 A).

4 **Ceiling Fan Application (SRD-2ANF):**
DO:
- Use to control one paddle-type ceiling fan (permanent split-capacitor).
- Use the ceiling fan's pull chain to set its speed to the highest setting.

DO NOT:
- Do not use to control fans that use shaded-pole motors (i.e. bath exhaust fans).
- Do not use to control fans that have integrated fan speed controls (i.e. fans that have a remote control), unless the integrated control is removed from the ceiling fan.
- Do not connect to any other motor-operated appliance or to any lighting load type.
- Do not use to control a fan lighting load (i.e. light kit).

Technical Assistance:
USA/CAN: 1.800.523.9466
Mexico: +1.888.235.2910
Other Countries: +1.610.282.3800
24 hours a day, 7 days a week.

Important Notes

WARNING - To avoid the risk of entrapment, serious injury, or death, these controls must not be used to control equipment which is not visible from every control location or which could create hazardous situations such as entrapment if operated accidentally. Examples of such equipment which must not be operated by these controls include (but are not limited to) motorized gates, garage doors, industrial doors, microwave ovens, heating pads, etc. It is the installer's responsibility to ensure that the equipment being controlled is visible from every control location and that only suitable equipment is connected to these controls. Failure to do so could result in serious injury or death.

Codes: Install in accordance with all local and national electrical codes.

Grounding: When no "grounding means" exist within the wallbox, then the NEC® 2008, 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® or Satin Colors® wallplates.

Neutral Wire: -10ND, -8ANS, and -2ANF **require** a neutral wire connection in the wallbox where the Dimmer/Switch/Fan Speed Control is to be installed. If a neutral wire connection is not available in the wallbox, contact a licensed electrician for installation.

Environment: Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C), 0% to 90% humidity, non-condensing. Indoor use only.

Spacing: If mounting one control above another, leave at least 4½ in (114 mm) vertical space between them.

Wallplates: Lutron® *Claro* and *Satin Colors* wallplates are recommended for best color match and aesthetic appearance. Do not paint controls or wallplates.

Cleaning: To clean, wipe with a clean damp cloth. **DO NOT** use any chemical cleaning solutions.

Wallboxes: Lutron recommends using 3½ in (89 mm) deep wallboxes for easier installation. Several controls may be installed in one multigang wallbox — see Derating Chart.

Remote Dimmers/Switches: Use only Lutron RadioRA®-SR *Maestro* Remote Dimmers (-RD) with -6D, -10D, -10ND, and -2ANF controls. Use only Lutron *RadioRA*-SR *Maestro* Remote Switches (-RS) with -8ANS controls. Up to 9 -RD or -RS controls may be used with a *RadioRA*-SR *Maestro* Dimmer, Switch, or Fan Speed Control. Mechanical 3- or 4-way switches will not work.

RF Device Placement: RF Dimmers, Switches, and Fan Speed Controls must be located within 30 feet (9 m) of controlling keypads. Remote Dimmers and Switches are not required to be within a specific range of controlling keypads.

RF Dimmers, Switches or Fan Speed Controls cannot be controlled by the system until they are programmed in a *RadioRA*-SR system according to the ***RadioRA*-SR Setup Guide**.

Multigang Installations

In multigang installations, several controls are grouped horizontally in one multigang wallbox.

When combining controls in a wallbox, derating is required; however, no derating is required for Fan Speed or Remote Dimmers /Switches.

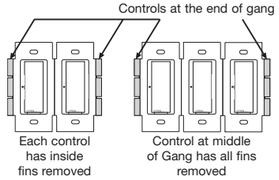
Derating Chart

Control	Load Type	End of Gang	Middle of Gang
SRD-6D	Incand.	500 W	400 W
	MLV	400 W/ 500 VA	300 W/ 400 VA
SRD-10D, SRD-10ND	Incand.	800 W	650 W
	MLV	600 W/ 800 VA	500 W/ 650 VA
SRD-8ANS	Lighting	6.5 A	5 A
	Motor	1/4 HP 5.8 A	1/6 HP 4.4 A

Note: -8ANS controls have fins that need to be removed for multigang installations. -6D, -10D, -10ND, -2ANF, -RD and -RS controls **do not** have fins that need to be removed for multigang installations.

Removing Fins on -8ANS

Control Location for Ganging



Installation

WARNING - To avoid the risk of electric shock locate and remove fuse or lock circuit breaker in the OFF position before proceeding. Wiring with power ON could result in serious injury or death.

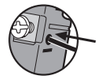
Short Circuit Check: Check the installation for short circuits before installing control(s). With power OFF, install standard mechanical switch(es) between Hot and load. Restore power. If lights or fan do not work or a breaker trips, check wiring. Correct wiring and check again. Install control(s) only when short is no longer present. Warranty is void if control is turned ON with a shorted circuit.

1. Turn power OFF at fusebox or circuit breaker.
2. Prepare wires. When making wire connections, follow the recommended strip lengths and combinations for the supplied wire connector. Note: Wire connector provided is suitable **for copper wire only**.

Wire Connector:
- Strip insulation 3/8 in (10 mm) for 14 AWG or 12 AWG (1.0 mm² or 2.5 mm²) wire
- Strip insulation 7/16 in (11 mm) for 18 AWG (0.75 mm²) wire
- Use to join one or two 14 AWG or 12 AWG (1.5 mm² or 2.5 mm²) wires with one 18 AWG (0.75 mm²) control wire.

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

Push-In Terminals: Insert wires fully. To release wire, insert small, flat screwdriver into slot below push-in terminal. Push screwdriver in while pulling wire out. Push-in terminals are for use with 14 AWG (1.5 mm²) *solid copper wire only*. DO NOT use stranded or twisted wire.

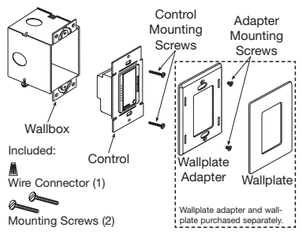


OR

Screw Terminals: Wrap wire around screw terminal. Tighten securely to 5 in-lbs (0.55 N•m). Screw terminals are for use with *solid copper wire only*. DO NOT use stranded or twisted wire.

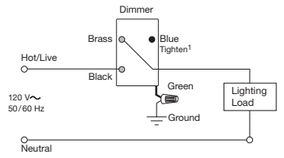
3. Wire controls as follows:
Single location installation: See Wiring Diagrams 1 and 2.
Multi-location installation: See Wiring Diagrams 3 and 4.
4. Push all wires back into the wallbox and loosely fasten the control to the wallbox using the control mounting screws provided. Do not pinch the wires.
5. Attach *Lutron Claro* or *Satin Colors* wallplate adapter and wallplate.
   a. Install wallplate adapter onto front of control(s).
   b. Tighten control mounting screws until wallplate adapter is flush to wall (do not over-tighten).
   c. Snap wallplate onto wallplate adapter, and verify that control is aligned properly.
   d. If control(s) is(are) misaligned, loosen mounting screws appropriately.
6. Restore power. Check for correct local operation (see Dimmer/Fan Operation and Switch Operation).

Mounting Diagram



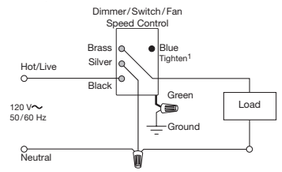
Wiring Diagram 1

Single Location Installation
-6D, -10D



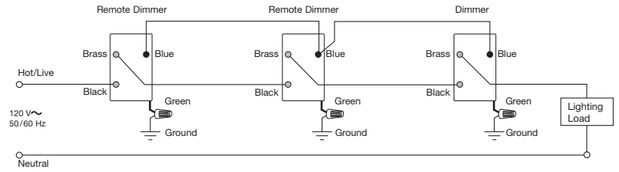
Wiring Diagram 2

Single Location Installation with Neutral
-10ND, -8ANS, -2ANF



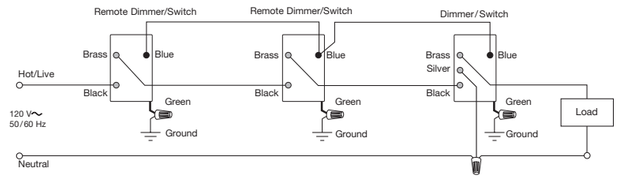
Wiring Diagram 3

Multi-Location Installation[2]
-6D, -10D with SD-RD



Wiring Diagram 4

Multi-Location Installation with Neutral[2, 3]
-10ND, SD-RD, -2ANF -8ANS with SD-RS

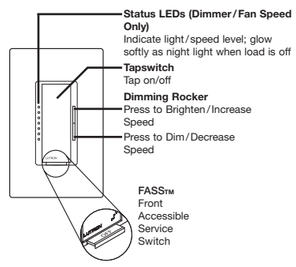


1 When using controls in single location installations, tighten the blue terminal. DO NOT connect the blue terminal to any other wiring or to ground.

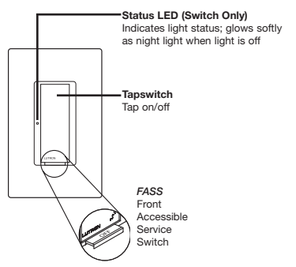
2 Up to 9 *RadioRA*-SR Remote Dimmers/Switches may be connected to the *RadioRA*-SR Dimmer/Switch. Total blue terminal wire length may be up to 250 ft (76 m).

3 Neutral wire Dimmers/Switches/Fan Speed Controls must be connected on the Load side of a multi-location installation.

Dimmer/Fan Operation



Switch Operation



Lamp Replacement

WARNING - For any procedure other than routine lamp replacement, power must be disconnected at the main electrical panel. Working with power ON could result in serious injury or even death.

For routine lamp replacement, remove power from the fixture(s) by pulling the *FASS* switch out on both the Dimmer/Switch and all Remote Dimmers/Switches.

Troubleshooting Guide

Symptom	Probable Cause and Action
No lights at all or no fan response	**Power not present** • Circuit breaker OFF or tripped. Perform Short Circuit Check. • *FASS* is in the OFF position. Move *FASS* to the ON position by fully pushing it in. Check both the Dimmer/Fan Control/Switch and all of the Remote Dimmers/Switches. **Wiring** • Wires shorted. Make sure the blue terminal is not grounded or shorted to any other wires. • Wiring error. Check wiring to be sure it agrees with installation instructions and wiring diagrams. **Lamps burned out or not installed** • Replace or install lamps. **Dioded lamps** • If dioded lamps are being used, replace with non-dioded lamps. **Fan setting** • Make sure the fan is set to its highest speed using the pull-chain. **Fan Speed Control Wrong Load Type** • Make sure that only a single ceiling paddle fan (permanent split-capacitor motor) rated at 2 A or less is connected to the control. • Make sure that no lighting load (i.e. light kit) is connected to the control.
Lights/fan turn ON when Tapswitch is pressed, then turn OFF	**Wiring** • Wiring error. Check wiring to be sure it agrees with installation instructions and wiring diagrams. **Tapswitch stuck** • Tapswitch stuck at another location. Check to see that tapswitches are not sticking for all control locations in the circuit.
Light turns ON and OFF continuously	**Load is less than minimum load requirement** • Make sure the connected load meets the appropriate minimum load requirement for that control. See Load Specifications.
Lights/fan don't switch ON/OFF when Tapswitch on Dimmer/Switch/ Fan Speed Control/ Remote is pressed	**Wiring** • Wires shorted. Make sure the blue terminal is not grounded or shorted to any other wires. • Wiring error. Check wiring to be sure it agrees with installation instructions and wiring diagrams. • Neutral-based product installation location. Check that neutral-based products are connected on the load side of a multi-location installation (see Wiring Diagram 4).
Lights/fan don't switch ON/OFF from Keypad	**Improper programming** • Program according to the ***RadioRA*-SR Setup Guide**. **Out of RF range** • Reposition to be within 30 feet (9 m) of controling keypad. **Wiring** • Wires shorted. Make sure the blue terminal is not grounded or shorted to any other wires. • Wiring error. Check wiring to be sure it agrees with installation instructions and wiring diagrams.
Wallplate is warm	**Solid-state control dissipation** • Solid-state dimmers, switches, and fan controls internally dissipate about 2% of the total connected load. It is normal for dimmers, switches, and fan controls to feel warm to the touch during operation.
Control is buzzing or humming	It is normal for dimmers, switches, and fan controls to emit a slight buzzing or humming sound.

Returning Devices to Factory Settings

Note: Returning a control to its Factory Settings will remove the control from the system and erase all programming.

Step 1 : Triple tap the main button on the control. DO NOT release after the third tap.
Step 2 : Keep the button pressed on the third tap (for approximately 3 seconds) until the status LEDs start to scroll up and down quickly.
Step 3 : Release the button and immediately triple tap the button again. The status LEDs will scroll up and down slowly.

The control has now been returned to Factory Settings.

Warranty: For Warranty information, please see the enclosed Warranty, or visit www.lutron.com/resiinfo.

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LUTRON®