

RadioRA² 2 Maestro[®] Local Controls

RadioRA² 2 Maestro[®] local controls function much like standard dimmers and switches, but can be controlled as part of a lighting control system. Local lighting controls are useful in locations where single circuits of lighting need to be dimmed or switched. Local fan speed controls are useful in locations where control of a single ceiling paddle fan is needed.

RadioRA² 2 Maestro[®] dimmers incorporate advanced features such as fade on/fade off, delayed long fade to off, and rapid full on.

RadioRA² 2 Maestro[®] local controls include a Front Accessible Service Switch (FASS[™]) for safe lamp replacement. RadioRA² 2 Maestro[®] local controls install in single-pole or multi-location applications. Remote dimmers/switches are available for multi-location control.

Use Lutron[®] Designer (Claro[®] or Satin Colors[®]) wallplates or designer-style wallplates from other manufacturers. Wallplates are sold separately. Lutron[®] Claro[®] and Satin Colors[®] wallplates snap on with no visible means of attachment. RadioRA² 2 Maestro[®] local controls support color change kits.



Dimmer



Switch



Fan Speed



Remote Dimmer



Remote Switch

RadioRA² Maestro² Local Controls

Model Numbers

Dimmers

Incandescent / Halogen / MLV (120 V~)

RRD-6CL-XX	600 W / 600 VA (Incandescent / Halogen / MLV) or 150 W (CFL / LED) Two-Wire Dimmer*
RRD-6D-XX	600 W Incandescent / Halogen, 600 VA MLV
RRD-10D-XX	1000 W / 1000 VA Dimmer
RRD-10ND-XX	1000 W / 1000 VA Neutral Wire Dimmer

Incandescent / Halogen / MLV / ELV (120 V~)

RRD-6NA-XX	600 W / 600 VA Neutral Wire Adaptive Dimmer
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3-Wire Fluorescent / LED (120–277 V~)

RRD-F6AN-DV-XX	6 A Neutral Wire Dimmer
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Switches

Lighting and Motor Loads (120 V~)

RRD-8ANS-XX	8 A Light, 1/4 HP 5.8 A Motor Neutral Wire Electronic Switch
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Lighting and Motor Loads (120–277 V~)

RRD-8S-DV-XX	8 A Light, 1/10 HP 3 A Motor Two-Wire Electronic Switch
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Fan Speed Control

Single ceiling paddle fan only (120 V~)

RRD-2ANF-XX	2 A Fan Speed Control
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Remotes (for multi-location installations)

RD-RD-XX	Remote Dimmer (120 V~)
RD-RS-XX	Remote Switch (120 V~)
RD-RD-277-XX	Remote Dimmer (277 V~) (for use with -F6AN-DV only)
RD-RS-277-XX	Remote Switch (277 V~) (for use with -8S-DV only)

Color Change Kits

RK-D-XX	Dimmer (-6CL, -6D, -10D, -10ND, -6NA, -F6AN-DV)
RK-S-XX	Switch (-8ANS, -8S-DV)
RK-AD-XX	Remote Dimmer (-RD)
RK-AS-XX	Remote Switch (-RS)
RK-F-XX	Fan Speed Control (-2ANF)

* Go to www.lutron.com/LEDtool to see all compatible CFL/LED lamps.

Note: "XX" in the model number represents color / finish code. See **Colors and Finishes** at end of document.

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Specifications

Model Numbers	Dimmer: RRD-6CL, RRD-6D, RRD-10D, RRD-10ND, RRD-6NA, RRD-F6AN-DV Switch: RRD-8ANS, RRD-8S-DV Fan Speed Control: RRD-2ANF Remote: RD-RD, RD-RS, RD-RD-277, RD-RS-277
Power	120 V~ 50/60 Hz: -6CL, -6D, -10D, -10ND, -6NA, -2ANF, -8ANS, -RD, -RS 120-277 V~ 50/60 Hz: -F6AN-DV, -8S-DV 277 V~ 50/60 Hz: -RD-277, -RS-277
Typical Power Consumption	Dimmer / Switch / Fan Speed Control: 0.6 W Test conditions: load is off and nightlight mode is enabled. Remote Dimmer / Switch: 0 W Test conditions: load is off.
Regulatory Approvals	UL, CSA (all except -6CL and -6NA), cUL (-6CL and -6NA only), NOM, FCC, IC, COFETEL, ANATEL (all except -6NA and Remotes)
Environment	Ambient operating temperature: 32 °F to 104 °F (0 °C to 40 °C), 0% to 90% humidity, non-condensing. Indoor use only.
Communications	Dimmers and switches communicate with the system through Radio Frequency (RF) and must be located within 30 ft (9 m) of a repeater. Remote dimmers/switches are not required to be within a specific range of a repeater. System devices operate on frequencies between 431.0 MHz and 437.0 MHz.
ESD Protection	Tested to withstand electrostatic discharge without damage or memory loss, in accordance with IEC 61000-4-2.
Surge Protection	Tested to withstand surge voltages without damage or loss of operation, in accordance with IEEE C62.41-1991 Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.
Power Failure	Power failure memory: should power be interrupted, the control will return to its previous state when power is restored.
Mounting	Requires a U.S. wallbox. 3½ in (89 mm) deep recommended, 2¼ in (57 mm) deep minimum.
Wiring	Uses conventional 3-way and 4-way wiring.
Warranty	www.lutron.com/TechnicalDocumentLibrary/Warranty.pdf

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Design Features

Dimmer

- On a single-tap, lights fade ON or OFF.
- On a double-tap, lights go to full ON.
- When ON, press and hold the tapswitch to engage the delayed long fade to OFF.
- Light levels can be fine-tuned by pressing and holding the dimming rocker until the desired light level is reached.
- Neutral and two-wire dimmers available.

Switch

- On a single-tap, lights or motors turn ON or OFF.
- Neutral and two-wire switches available.

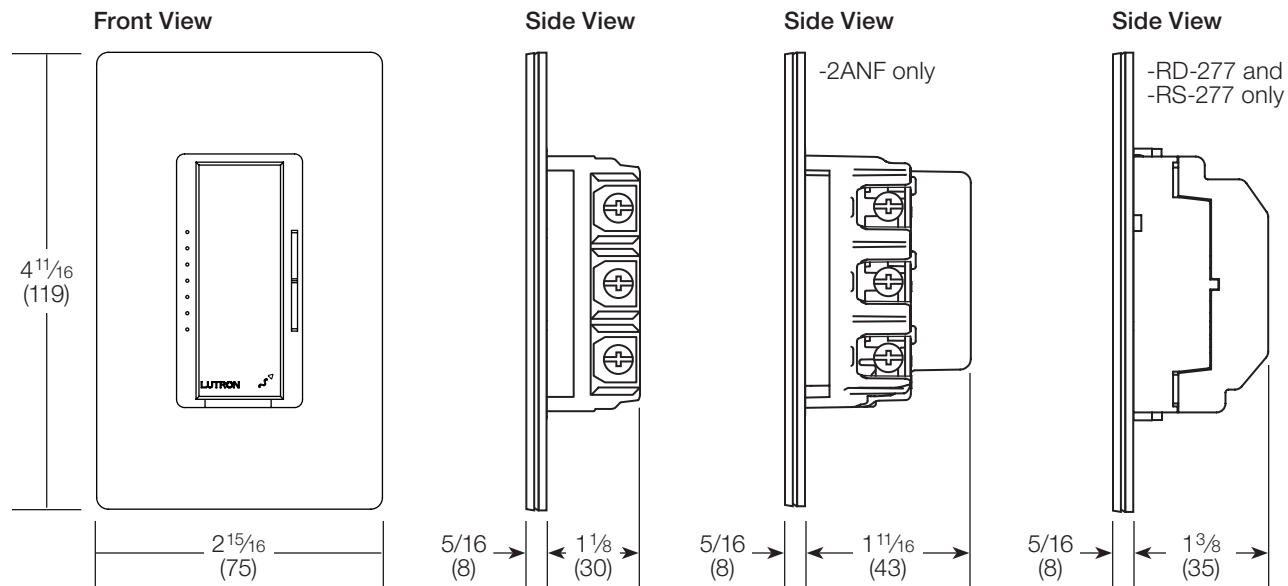
Fan Speed Control

- On a single-tap, fan turns ON or OFF.
- Fan speeds can be selected by pressing and holding the fan speed control rocker until the desired fan speed is reached.
- Controls one paddle-type ceiling fan (Permanent split-capacitor motor) up to 2 A. Not for use with shaded-pole type motors (e.g., bath exhaust fans).
- Provides 4 quiet speeds plus OFF.
- Not for use with fans that have integrated fan speed and/or light control modules.
- Requires a neutral connection.

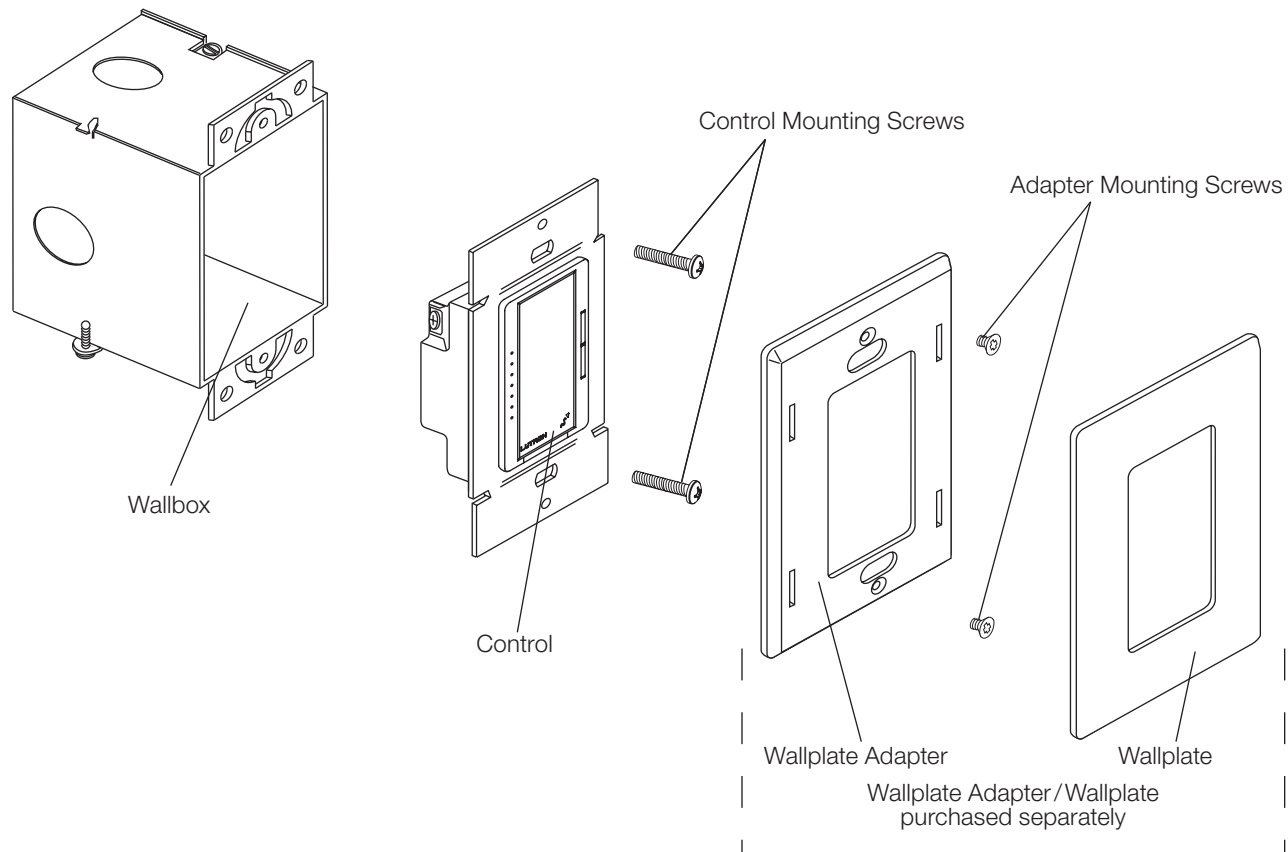
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Dimensions

All dimensions are shown as: in (mm)



Mounting and Parts Identification


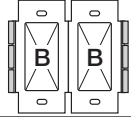
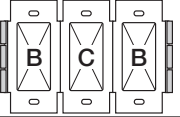


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Ganging and Derating

When combining controls in the same wallbox, derating is required (see **Load Type and Capacity**). No derating is required for remote dimmers, remote switches, or fan speed controls. -8ANS, -RD-277, and -RS-277 have fins that need to be removed for multigang installations.

Load Type and Capacity

Do not remove outside fins on ends of ganged controls (shaded areas).					
Load Type	Minimum Load	A Not Ganged	B End of Gang	C Middle of Gang	Neutral Connection
RRD-6CL¹					
Incandescent/Halogen/CFL/LED	see <i>Mixing Lamp Types</i> , page 8				No
MLV ^{2,3}	50 W/VA	450 W/600 VA	400 W/500 VA	300 W/400 VA	
RRD-6D¹					
Incandescent/Halogen	50 W	600 W	500 W	400 W	No
MLV ²	50 W/VA	450 W/600 VA	400 W/500 VA	300 W/400 VA	
RRD-10D¹					
Incandescent/Halogen	50 W	1000 W	800 W	650 W	No
MLV ²	50 W/VA	800 W/1000 VA	600 W/800 VA	500 W/650 VA	
RRD-10ND^{1,4}					
LED	Varies ⁵	150 W	150 W	150 W	Yes
Incandescent/Halogen	10 W	1000 W	800 W	650 W	
MLV ^{2,3}	10 W/VA	800 W/1000 VA	600 W/800 VA	500 W/650 VA	
RRD-6NA^{1,4}					
LED	Varies ⁵	150 W	150 W	150 W	Yes
Incandescent/Halogen/ELV	5 W	600 W	500 W	400 W	
MLV ^{2,3}	5 W/VA	450 W/600 VA	400 W/500 VA	300 W/400 VA	

¹ Dimmer Load Type:
 • -6CL: designed for use with permanently-installed incandescent, MLV, tungsten halogen, CFL, or LED only.
 • -6D, -10D, -10ND: designed for use with permanently-installed incandescent, LED, MLV, or tungsten halogen only.
 • -6NA: designed for use with permanently-installed incandescent, LED, ELV, MLV, or tungsten halogen only.
Note: Do not install dimmers to control receptacles or motor-operated appliances.

² Low-Voltage Applications:
 • -6CL, -6D, -10D, -10ND: use with magnetic (core and coil) low-voltage transformers only. Not for use with electronic (solid-state) low-voltage transformers.
 • -6NA: use with electronic (solid-state) or magnetic (core and coil) transformers; do not mix ELV and MLV load types on a single control. 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 soon as possible.
 • Use transformers that incorporate thermal protection or fused transformer primary windings to prevent transformer failure due to overcurrent.

³ Do not mix CFL or LED loads with MLV loads.

⁴ Power Boosters/Load Interfaces: -10ND, -6NA can be used to control power boosters/load interfaces. For a list of compatible power boosters/load interfaces see **Compatible Power Boosters and Load Interfaces**, page 8.

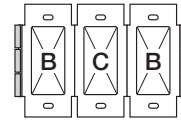
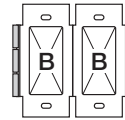
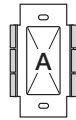
⁵ Minimum load depends on lamp and is not limited to a particular wattage. Refer to the LED Product Selection Tool at www.lutron.com/ledtool

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Load Type and Capacity (continued)

Do not remove outside fins on ends of ganged controls (shaded areas).



Load Type	Minimum Load	A Not Ganged	B End of Gang	C Middle of Gang	Neutral Connection
RRD-F6AN-DV^{1,2,3}					
Fluorescent/LED Drivers	0.05 A	6 A	5 A	3.5 A	Yes
	1 ballast	60 ballasts	50 ballasts	35 ballasts	
RRD-2ANF⁴					
Ceiling Fan	0.083 A	2 A	2 A	2 A	Yes
RRD-8ANS^{1,5}					
Lighting	10 W	8 A	6.5 A	5 A	Yes
Motor	0.08 A	1/4 HP 5.8 A	1/4 HP 5.8 A	1/6 HP 4.4 A	
RRD-8S-DV^{5,6}					
Lighting	40 W/VA	8 A	8 A (2-gang); 7 A (3-gang)	7 A	No
Motor	0.4 A	1/10 HP 3 A			

Note: Do not install dimmers to control receptacles or motor-operated appliances.

¹ Power Boosters/Load Interfaces: -F6AN-DV, -8ANS can be used to control power boosters/load interfaces. For a list of compatible power boosters/load interfaces see **Compatible Power Boosters and Load Interfaces**, page 8.

² Fluorescent Dimmer Load Type: -F6AN-DV: designed for use with permanently installed 3-wire 120 V~ or 277 V~ line voltage control fluorescent ballasts or LED drivers. Use with only Hi-lume[®], Hi-lume[®] 3D, Compact SE™, Eco-10[®], or EcoSystem[®] (H3D-, FDB-, ECO-, HL3-, EC5-, L3D). Do NOT use with any other ballasts or drivers. Do not install to control receptacles or motor-operated appliances.

³ Maximum Load: The maximum load for the -F6AN-DV is either the derated load or the number of ballasts, whichever is LESS.

⁴ Ceiling Fan Application: -2ANF

- 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 use to control fans that use shaded-pole motors (e.g., bath exhaust fans).
- Do not use to control fans that have integrated fan speed controls (e.g., 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 (e.g., light kit).

⁵ Switch Load Type:

- -8ANS, -8S-DV: designed for use with permanently installed 120 V~ incandescent, MLV, ELV, tungsten halogen, fluorescent, CFL, LED, or motor loads.

- -8S-DV can also be used with permanently installed 277 V~ MLV or fluorescent loads.

⁶ Shunt Capacitor: Some -8S-DV installations may require the use of a shunt capacitor; this is especially necessary for load types sensitive to leakage current (e.g., fluorescent ballasts). If load flickers, install a shunt capacitor. Optional shunt capacitor must be installed inside the load fixture or in a separate J-box. For shunt capacitor installation see Wiring Diagram 4, 9, or 10.