

Designer-Style RF Maestro™
Dimmer: HQRD-F6AN-DV (120-277 V~ 50/60 Hz)
Switch: HQRD-8S-DV (120-277 V~ 50/60 Hz)
 Typical Power Consumption*: 0.6 W
Remote Dimmers:
 HQD-RD (120 V~ 50/60 Hz)
 HQD-RD-277 (277 V~ 50/60 Hz)
Remote Switches:
 HQD-RS (120 V~ 50/60 Hz)
 HQD-RS-277 (277 V~ 50/60 Hz)
 Typical Power Consumption*: 0.0 W

Important Notes

WARNING - Entrapment Hazard -
 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/switch 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 switch and use an appropriate wallplate such as Lutron® Claro® or Satin Colors® wallplates.

Neutral Wire: -F6AN-DV requires a neutral wire connection in the wallbox where the dimmer 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 4 1/2 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 3 1/2 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 remote dimmers (HQD-RD/HQD-RD-277) and remote switches (HQD-RS/HQD-RS-277) with dimmers/switches. Up to 9 HQD-RD/HQD-RD-277 or HQD-RS/HQD-RS-277 may be used with dimmers or switches. Mechanical 3- or 4-way switches will not work.

RF Device Placement: RF devices must be located within 30 ft (9 m) of an RF signal repeater. Remote dimmers/switches are not required to be within a specific range of a repeater.

System Programming: Programming and activation (addressing) must be done through the HomeWorks QS software.

Technical Assistance:
 U.S.A./Canada: 1.800.523.9466
 Mexico: +1.888.235.2910
 Other Countries: +1.610.282.3800
 24 hours a day, 7 days a week.

*Typical Power Consumption test conditions:
 Dimmer: load is on, nightlight mode enabled.
 Switch: load is off, nightlight mode enabled.
 Remote Dimmer / Switch: load is off.

Multigang Installations

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

When combining dimmers/switches in a wallbox, derating is required. No derating is required for remote dimmers/switches.

Derating Chart

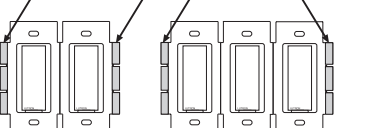
| Control | Load Type | End of Gang | Middle of Gang |
|-----------|------------------------|----------------|----------------|
| -F6AN-DV* | 3-wire Fluorescent/LED | 5 A | 3.5 A |
| | | 50 ballasts | 35 ballasts |
| -8S-DV | Lighting | 8 A (2-gang) | 7 A |
| | | 7 A (3-gang) | |
| | Motor | 1/10 HP 3 A | |

*The maximum load for the -F6AN-DV is either the derated load or the number of ballasts, whichever is **LESS**.

Removing Fins on -RD-277 and -RS-277
 -RD-277 and -RS-277 have fins that need to be removed for multigang installations. -F6AN-DV, -8S-DV, -RD, and -RS do not have fins that need to be removed.



Control Location for Ganging
 Do Not remove outside fins on controls at the end of gang



Each control has inside fins removed. Control at middle of gang has all fins removed.

Installation

WARNING - Shock Hazard -
 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.

- Turn power OFF at fusebox or circuit breaker.
- 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 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.
- Wire controls according to one of the following options:
 - Terminals: (-F6AN-DV, -8S-DV, -RD, -RS) Trim or strip wallbox wires to the length indicated by the strip gauge on the back of the control.
 - Push-In Terminals: Use with 14 AWG (1.5 mm²) solid copper wire only. Do NOT use stranded or twisted wire. Insert wires fully. To release wire, insert small, flat screwdriver into slot below push-in terminal. Push screwdriver in while pulling wire out.
 - OR
 - Screw Terminals: Use with 12 AWG (2.5 mm²) or 14 AWG (1.5 mm²) solid copper wire only. Do NOT use stranded or twisted wire. Wrap wire around screw terminal. Tighten securely to 5 in-lb (0.55 N•m).

- Wire Connectors: Prepare wires. When making wire connections, follow the recommended strip lengths and combinations for the supplied wire connector.

Note: Wire connectors provided are suitable for copper wire only.

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



For single location dimmer installations see **Wiring Diagram 1**.

For single location switch installations see **Wiring Diagram 2**.

For multi-location dimmer installations at 120 V~ see **Wiring Diagram 3**.

For multi-location dimmer installations at 277 V~ see **Wiring Diagram 4**.

For multi-location switch installations at 120 V~ see **Wiring Diagram 5**.

For multi-location switch installations at 277 V~ see **Wiring Diagram 6**.

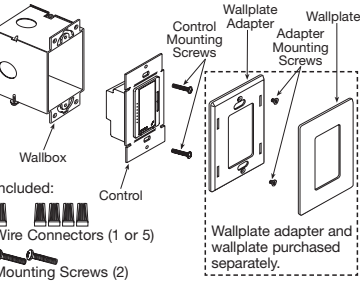
- Push all wires back into the wallbox and loosely fasten the control to the wallbox using the control mounting screws provided. Do not pinch the wires.

- Attach the Lutron Claro or Satin Colors wallplate adapter and wallplate. See **Mounting Diagram**.

- Install wallplate adapter onto front of control(s).
- Tighten control mounting screws until wallplate adapter is flush to wall (do not over-tighten).
- Snap wallplate onto wallplate adapter, and verify that control is aligned properly.
- If controls are misaligned, loosen mounting screws appropriately.

- Restore power. Verify correct local operation. See **Dimmer Operation** or **Switch Operation**.

Mounting Diagram



Lamp Replacement

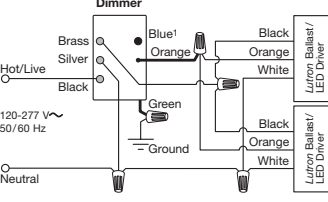
WARNING - Shock Hazard - For any procedure other than routine lamp replacement, power must be disconnected at the main electrical panel. Working with power ON could result in serious injury or death.

For your safety during routine lamp replacement, remove power from the fixture(s) by moving the FASS™ switch into the OFF position on the dimmer/switch and all remote dimmers/switches.



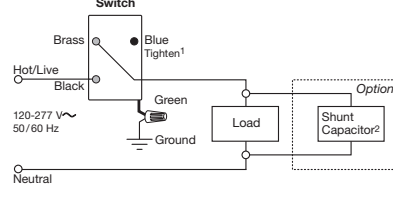
Wiring Diagram 1

Single Location Dimmer Installation¹
 -F6AN-DV



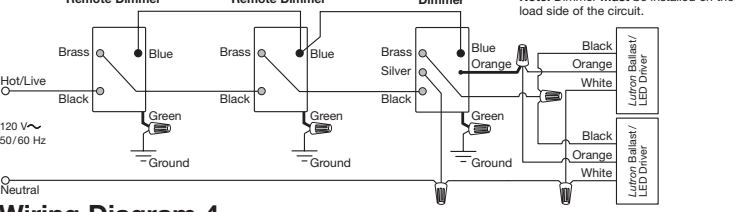
Wiring Diagram 2

Single Location Switch Installation¹
 -8S-DV with optional shunt capacitor²



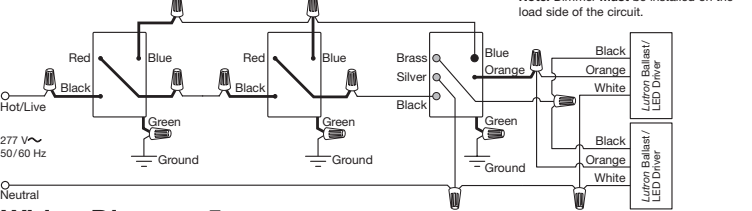
Wiring Diagram 3

Multi-Location Dimmer Installation³ (120 V~)
 -F6AN-DV with -RD



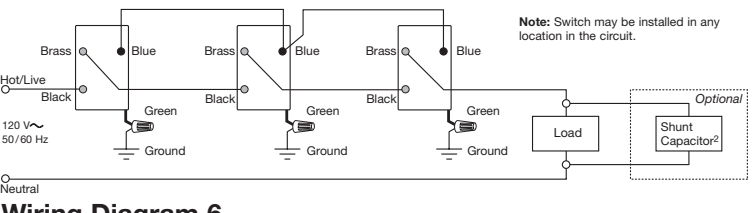
Wiring Diagram 4

Multi-Location Dimmer Installation³ (277 V~)
 -F6AN-DV with -RD-277



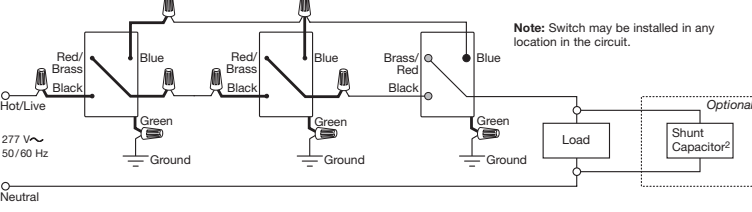
Wiring Diagram 5

Multi-Location Switch Installation³ (120 V~)
 -8S-DV with -RS and optional shunt capacitor²



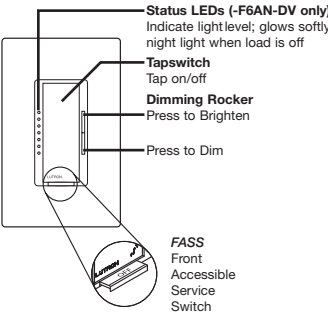
Wiring Diagram 6

Multi-Location Switch Installation³ (277 V~)
 -8S-DV with -RS-277 and optional shunt capacitor²

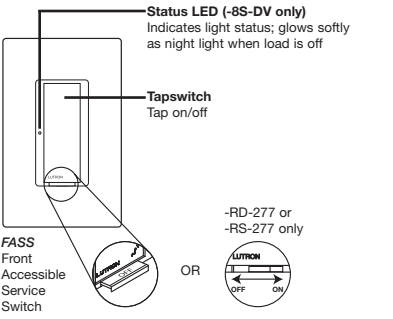


- When using controls in single location installations, tighten the blue terminal without any wires attached. DO NOT connect the blue terminal to any other wiring or to ground.
- Shunt capacitor must be installed inside the load fixture or in a separate J-box.
- Up to 9 remote dimmers/switches may be connected to a dimmer/switch. Total blue terminal wire length may be up to 250 ft (76 m).

Dimmer Operation



Switch Operation



Troubleshooting Guide

| Symptom | Probable Cause and Action |
|--|---|
| Lights don't turn ON/OFF when tapswitch on dimmer/switch or remote dimmer/switch is pressed | <p>Power not present</p> <ul style="list-style-type: none"> Circuit breaker OFF or tripped. Perform short circuit check. FASS is in the OFF position. Move FASS to the ON position. Check the dimmer/switch and all of the remote dimmers/switches. See Lamp Replacement. <p>Wiring</p> <ul style="list-style-type: none"> 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. For -8S-DV, increase load to meet the appropriate minimum load requirement or use HQRD-8ANS. See Load Specifications. <p>Lamps burned out or not installed</p> <ul style="list-style-type: none"> Replace or install lamps. <p>Dioded lamps</p> <ul style="list-style-type: none"> If dioded lamps are being used, replace with non-dioded lamps. |
| Load flickers or tapswitch does not work even if load is greater than 40 W (-8S-DV only) | <p>Leakage current</p> <ul style="list-style-type: none"> Install a shunt capacitor. See Wiring Diagram 2, 5, or 6. |
| Light turns ON and OFF continuously or lights turn ON when tapswitch is pressed, then turn OFF | <p>Load does not meet the minimum load requirement</p> <ul style="list-style-type: none"> Increase load to meet the appropriate minimum load requirement for that control. See Load Specifications. Install a shunt capacitor with -8S-DV. See Wiring Diagram 2, 5, or 6. |
| Load flickers (-8S-DV only) | <p>Load does not meet the minimum load requirement</p> <ul style="list-style-type: none"> Increase load to meet the appropriate minimum load requirement for that control. See Load Specifications. Install a shunt capacitor. See Wiring Diagram 2, 5, or 6. |
| Lights don't turn ON/OFF from a keypad | <p>Verify other lights or system devices respond to that keypad.</p> <ul style="list-style-type: none"> If not, the issue may not be with the dimmer/switch but may be the keypad or system programming. <p>Device is not communicating with the system.</p> <ul style="list-style-type: none"> Device is out of range of an RF signal repeater. The device is in the Factory Default Settings mode and has not been activated into the system. Use the HomeWorks QS software to verify activation or reactivate the device and transfer its database. <p>Device is not properly programmed</p> <ul style="list-style-type: none"> Program the device using the HomeWorks QS software. |
| Wallplate is warm | <p>Solid-state control dissipation</p> <ul style="list-style-type: none"> Solid-state dimmers/switches internally dissipate about 2% of the total connected load. It is normal for dimmers/switches to feel warm to the touch during operation. |

Returning Dimmers / Switches to Factory Settings

Note: Returning a dimmer/switch to its factory settings will remove it from the system and erase all programming from it.

Step 1 : Triple tap the tapswitch on a control. DO NOT release after the third tap.

Step 2 : Keep the tapswitch pressed on the third tap (for approximately 3 seconds) until the LEDs on the dimmer start to scroll up and down quickly, or the LED on the switch flashes quickly.

Step 3 : Release the tapswitch and immediately triple tap the tapswitch again. The LEDs on the dimmer will scroll up and down slowly. The LED on the switch will flash slowly.

The control has now been returned to factory settings and needs to be reprogrammed into a system.

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

Lutron Electronics Co., Inc.
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 Printed in the U.S.A. 10/2010 P/N 043-355 Rev. A

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