start here

Radio**RA**®2

setup guide

a step-by-step guide for setting up a complete Lutron®
RadioRA 2 wireless home lighting control system

*please leave this setup guide
with homeowner*

Lutron Technical Support Hotline
800.523.9466 US/Canada/Caribbean

24 hours, 7 days a week

☀️**LUTRON**®

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If you have any questions, the Lutron Technical Support Hotline is ready to help 24 hours, 7 days a week. Call us at 800.523.9466 (US/Canada/Caribbean) for immediate assistance.
Or, find information on the internet at **www.lutron.com/radiora2**

overview

about RadioRA® 2

RadioRA 2 is a wireless multi-room control system for lights and shades/draperies. The system is made up of keypads, dimmers, shades/draperies, repeaters, and other devices. Lutron's proven, patented Clear Connect™ RF technology ensures reliable performance.

With the *RadioRA* 2 system, you can create the right ambiance for varied activities, easily monitor and control your lights, reduce energy usage, and increase safety in and around your home.

Manually programmed systems (up to 100 devices) must have 1 Main Repeater and may have up to 4 Auxiliary Repeaters.

Additional qualification is needed for PC Programming and systems over 100 devices. Contact Lutron or your local Lutron representative to learn more about the qualification program. Timeclock programing and integration with third-party equipment (over Ethernet or RS232) require the system to be set up using PC Programming.

▤ Note: Once a system has been programmed using the *RadioRA 2* software, the system cannot be manually programmed. All programming must be performed using the *RadioRA 2* software.

overview

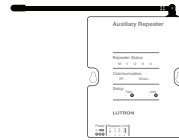## system components*

Main Repeater

Supports system setup, allows integration and PC connectivity (ethernet, RS-232, USB), ensures error-free communication between system components

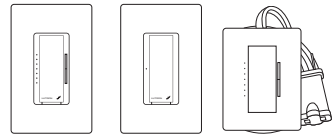*Main Repeater*

Auxiliary Repeater

Extends RF coverage to ensure error-free communication between system components

Auxiliary Repeater

Dimmers/Switches

Replaces a standard light switch Dimmers allow smooth transitions of light and create unique lighting environments
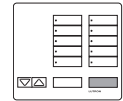
Dimmer Switch Lamp Dimmer

seeTouch® Keypads

Wall-mounted—controls lights and shades/draperies throughout the home Tabletop—convenient, portable control of lights and shades/draperies throughout the home
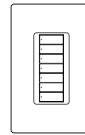
seeTouch *Wall-mounted Keypad*

seeTouch *Tabletop Keypad*

Pico® Wireless Control

Battery-powered, retrofit, portable keypad for convenient control of lights and shades/draperies throughout the home
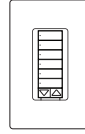
Pico *Wireless Control*

* some systems do not require every component listed

overview

system components* (continued)

Hybrid Keypads
Replaces a standard light switch for dimming control. Buttons control lights and shades/draperies locally and throughout the home

Hybrid Keypad

Radio Powr Savr™
Occupancy Sensor / Vacancy Sensor
Provides energy savings by turning lights off when room is unoccupied and turning lights on automatically (occupancy sensor only) when you enter the room

Radio Powr Savr *Occupancy Sensor*

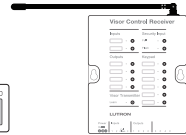Radio Powr Savr *Vacancy Sensor*

Visor Control Transmitter
Controls lights throughout the home from the comfort of your car

Visor Control Receiver
Receives signal from Visor Control Transmitter and transmits to the entire *RadioRA* 2 system

Visor Control Transmitter

Visor Control Receiver

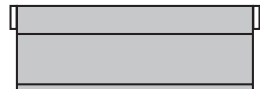### GRAFIK Eye® QS Wireless Control Unit
Powers and controls up to six zones of lights and up to 3 zones of shades/draperies in a room

GRAFIK Eye QS *Wireless Control Unit*

Sivoia® QS Wireless Shades/Draperies
Allows quiet, precise control of daylight

Sivoia *QS Wireless Shades/Draperies*

* some systems do not require every component listed

planning and design

system planning

A properly planned RadioRA® 2 system is easy to use and provides the maximum benefits. Planning a system involves creating lighting areas. A lighting area is a group of lights and shades/draperies that are controlled together. Consider the following questions when designing your system:

- What lighting areas do I want to control?
- What load types do I want to control?
- How many devices do I need in each lighting area?
- How will the keypad buttons control the lighting areas?

Use the following four steps to answer the above questions when designing your system.

system design

1. Identify the lighting areas of the home to be controlled.

Example lighting areas:

- Master suite
- Kitchen / Family Room
- Outdoor/ Entry
- Basement

2. Identify the load types to be controlled.

Example loads:

- Incandescent / MLV (Magnetic Low Voltage)
- Shade/drapery
- Garage door
- ELV (Electronic Low Voltage)
- Switched CFL (Compact Fluorescent Lamp)
- Fluorescent
- Other switched loads

3. Install devices to control as much of the lighting within the areas as possible. This includes in-wall dimmers, table lamp dimmers, and shades/draperies.

4. Place at least one keypad in each lighting area.

Example keypads:

- seeTouch® Wall Keypads
- *seeTouch* Tabletop Keypads
- Pico® Wireless Controls
- Hybrid Keypads
- Other
  - Visor Control Transmitter
  - Touch Screen
  - Universal Remote

planning and design

5. Choose how your keypad buttons will control your light from one of the five ways to control your light.

Ways to control your light		Benefit
1	**Individual device control -** Control of single wall dimmer, table lamp or shade/drapery.	Provides ability to turn on and off an individual light and allows changing level of an individual light or shade/drapery.
2	**Local scene -** Preset scene for all lighting and shading within a room.	Sets all room lighting and shades/draperies to the optimal level for a specific activity, at the touch of a button. Example Scenes: • Read • Watch TV • Relax
3	**Whole home scene -** Illuminates part of or most of the home for a specific activity or mood.	Sets light and shade/drapery levels in multiple areas within the home to ensure that the entire home is in its best light, all at the touch of a button. Example Scenes: • Entertain • Sleep
4	**Room monitoring -** Allows a user to see if lights within a specific room (or entire house) are on or off	Know when lights are left on anywhere in the home—and easily turn them off—all from the convenience of a single location.
5	**Path of light -** Illuminates a convenient path of light to take the user from one location to the next.	Simplifies daily activities. Example: Nighttime path to the bathroom or kitchen.

installing

After planning and designing the layout of the system, install system components according to the Installation Instructions that came with each component.

installing devices

- Dimmers, Switches, and Hybrid Keypads

  📋 Note: Dimmer, Switch, and Hybrid Keypad locations with 3- and 4-way applications must use RadioRA® 2 Remote Dimmers, Remote Switches, or Wall-mounted Keypads.

- seeTouch® Wall-mounted and Tabletop Keypads

- Pico® Wireless Controls

- Radio Powr Savr™ Occupancy/Vacancy Sensors

- Sivoia® QS wireless Shades/Draperies

- GRAFIK Eye® QS Wireless control units

- Visor Control Transmitter (VCTX) and Visor Control Receiver (VCRX)

  The Visor Control Transmitter is typically clipped to a car visor. A common installation location for the VCRX is in the garage above the garage door opener.

Tabletop Keypad

Wall-mounted Keypad

Pico wireless control

Dimmers/ Switches

GRAFIK Eye QS Wireless Control Unit

Hybrid Keypad

VCRX

VCTX

Radio Powr Savr Occupancy/Vacancy Sensor

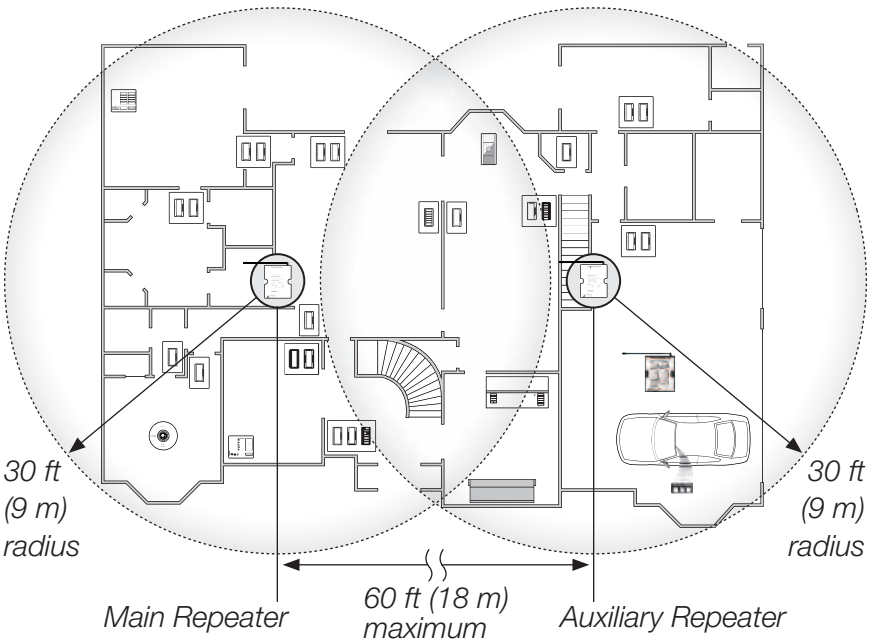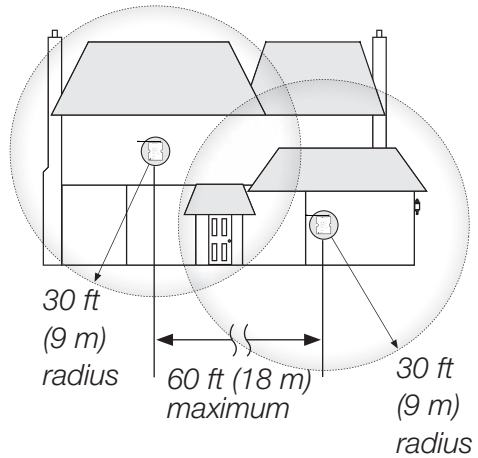*Sivoia QS* wireless Shade/ Drapery
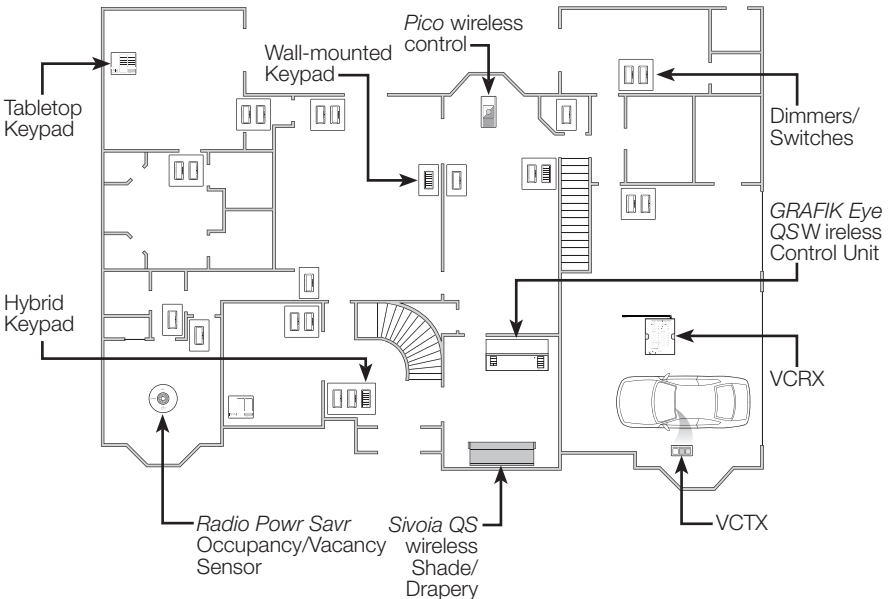
installing

installing repeaters

We recommend installing repeaters in a location that is out of sight and will not be disturbed. Repeaters do not need to be placed in the open. Suggested locations: in a cabinet or closet.

- Main Repeater
- Auxiliary Repeater

Devices must be located within 30 ft (9 m) of a repeater. Multiple repeaters may be necessary to provide adequate coverage.

When using two or more repeaters, be sure to position each repeater within 60 ft (18 m) of another repeater (spheres overlap) for optimum communication.

30 ft (9 m) radius

60 ft (18 m) maximum

30 ft (9 m) radius

30 ft (9 m) radius

30 ft (9 m) radius

Main Repeater

60 ft (18 m) maximum

Auxiliary Repeater

creating the system

system setup

To set up a RadioRA® 2 system, components must be added to the Main Repeater. First, add Auxiliary Repeater(s)*; then add all other system devices.

adding Auxiliary Repeater(s) and devices

1. Enter Add Mode

📑 Note: The first time Add Mode is entered on a main repeater, it will create a new system with a unique system address.

Main Repeater

a. **Press and hold the "Add" button on Main Repeater** for 3 seconds until green "Add" LED begins to rapid-flash (ten times per second) and repeater beeps. Wait 10 seconds.
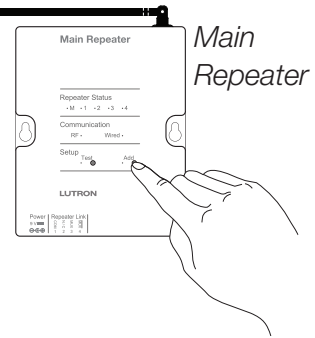
After green "Add" LED begins to normal-flash (once per second) the system is in Add Mode and ready to add new components.

2. Add Auxiliary Repeater(s)*

📑 Note: If system does NOT require Auxiliary Repeater(s), skip ahead to step 3.

a. **Press and hold the "Add" button on Auxiliary Repeater** to be added for 3 seconds until green "Add" LED begins to rapid-flash.

When Auxiliary Repeater has been added successfully, the Main Repeater will beep once and the "Add" LED on the Auxiliary Repeater will normal-flash. The Repeater Status LED corresponding to the repeater that was added will also turn on for each repeater .

To add another Auxiliary Repeater (4 Auxiliary Repeaters maximum), repeat step 2.

> ❷ If a device does not respond as described, consult the troubleshooting section starting on page 31.
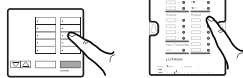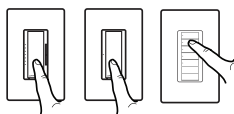
* Auxiliary Repeater(s) are required when devices extend beyond the range of the Main Repeater

creating the system

3. **Add devices**

When device has been successfully added, the repeater will beep.

Sivoia® QS Shades/ Draperies

Tabletop keypads must be plugged in during set up and programming.

Press and hold any button except raise/lower or learn for 3 seconds, (on GRAFIK Eye® QS control unit, press and release OK button) until all LEDs normal-flash (once per second). Devices with outputs, such as dimmers, will flash the load 3 times to indicate the device has been successfully added.
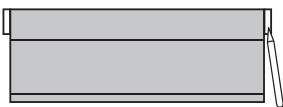
Press and hold any button for 3 seconds, until the green LED rapid-flashes (ten times per second) for 2 seconds, then normal-flashes.

Check LED feedback on devices:
- Slow-flash (on 3 seconds, off 1 second)—device is unaddressed.
- Normal-flash—device is addressed.
- No flash—device cannot hear repeater. See **troubleshooting** section starting on page 31.

Pico® wireless control

Radio Powr Savr™ occupancy/ vacancy sensor

Press and hold **bottom button** for 6 seconds, until LED rapid-flashes for 1 second.

The *RadioRA* 2 Design and Setup PC tool must be used to add occupancy/ vacancy sensors.

4. **Exit Add Mode**

a. **Press and hold the "Add" button on any Repeater** for 3 seconds until "Add" LED begins to rapid-flash. After LED turns off (can take up to 30–60 seconds), system has exited Add Mode.

Note: To remove an individual device from the system, follow the steps in **resetting devices to factory settings** starting on page 29.

choosing room/scene buttons

about choosing room/scene buttons

Keypad button LEDs can be configured to show the status of the lights or shades/draperies programmed to the keypad button. They can be configured to provide Room Status (default) or Scene Status.

Room Status	Scene Status
Button LED is on when at least one of the devices assigned to the button is on at any level.	Button LED is only on when all of the devices assigned to the button are at exactly their programmed level.
ways to control your lighting areas	**ways to control your lighting areas**
Individual device control - Control of single wall dimmer, table lamp or shade/drapery. **Room monitoring -** Allows a user to see if lights within a specific room are on or off.	**Local scene -** Preset scene for all lighting and shading within a room. **Whole home scene -** Illuminates part of or most of the home for a specific activity or mood. **Path of light -** Illuminates a convenient path of light to take the user from one location to the next.
common applications	**common applications**
Bedside Keypad: Program a "Basement" button to verify the basement lights are off and a "Hall" button to make sure hall light is left on at night for the kids.	Wall-mounted Keypad: Use "Entertain" button to set the light level in common areas of the home for entertaining guests. Bedside Keypad: Use "Pathway" button to illuminate a soft path of light from the bedroom to the bathroom at night.

⊟ Best Practice: The top button on a wall keypad should create the brightest of the column's lighting scenes – with each button below the top creating a progressively lower light level. The bottom button should be very low or an "off" scene.
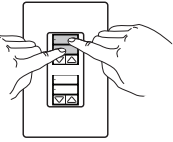
⊟ Best Practice: Use a consistent programming method on all of your keypads.

choosing room/scene buttons

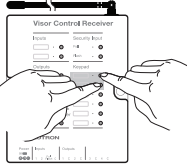## button configuration

1. **Enter Button Configuration**

| RRD-W2RLD Keypads ONLY	Visor Control Receiver	All other keypads (including Hybrid Keypad)
	Only the "Keypad" column canb e configured ont he Receiver.	Tabletop keypads must be plugged in during set up and programming.
Press and hold top 2 buttons for 6 seconds, until all LEDs turn on (solid or flashing).	**Press and hold top 2 buttons** in "Keypad" column for 3 seconds, until all LEDs turn on (solid or flashing).	**Press and hold top 3 buttons** in rightmost column for 3 seconds, until all LEDs turn on (solid or flashing).
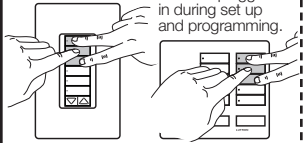
2. **Configure each button as either Scene or Room Status**

📑 By default, all buttons are set to Room Status, indicated by the LEDs normal-flashing (once per second).
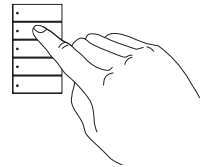
a. **Press and release a button to toggle button configuration** between Scene and Room Status.

LED status	Button
Normal-flash	☀ Room (default)
On solid	✿ Scene

3. **Exit Button Configuration**

a. **Press and hold the top 3 buttons** of rightmost column (top 2 buttons on RRD-W2RLD keypad and Receiver "Keypad" column) until all LEDs turn off (3-6 seconds) to exit Button Configuration.
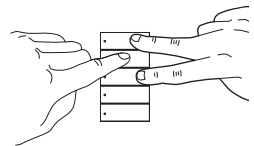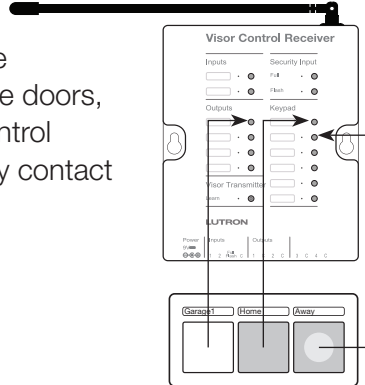
about programming

about programming

After all components have been added to the RadioRA® 2 system and keypad buttons have been configured as Scene or Room Status, program the keypads so that each button controls a light or a group of lights. Programming a button consists of assigning devices (e.g. dimmers and switches) to buttons and setting light levels.
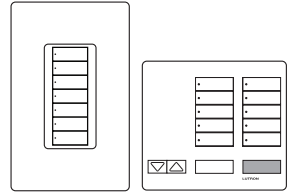

Tabletop keypads must be plugged in during set up and programming.

The Visor Control Receiver can be programmed so that lights, garage doors, etc. can be activated by Visor Control Transmitter buttons remotely or by contact closure inputs.

Shade keypad columns and Pico® wireless controls are programmed as a column of buttons. See **programming keypad columns** starting on page 19.
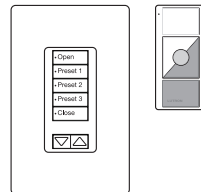
programming buttons

program buttons

1. **Enter Program Mode**

a. **Press and hold the top and bottom buttons** of rightmost column ("Keypad" column on Visor Control Receiver) for 3 seconds until the top button's LED begins to normal-flash (once per second).
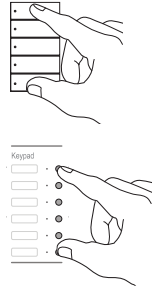
2. **Select button to program**

a. **Press and release button to be programmed.**

📑 Note: The top button in chosen column will be selected by default, indicated by the top button's LED normal-flashing. To program a different button, press and release desired button.

📑 Note: Raise/lower buttons cannot be programmed.

📑 Note: If the All On button on a tabletop keypad is selected, all the LEDs on the tabletop keypad will begin to scroll up. If the All Off button is selected, all the LEDs will begin to scroll down.
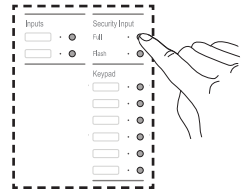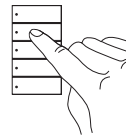
programming buttons

Steps 3-7 cover assigning devices to the selected button and setting the levels for those devices. To assign the devices, follow the step appropriate to that device:

|	Hybrid		
Step 3	Step 4	Steps 5-6	Step 7
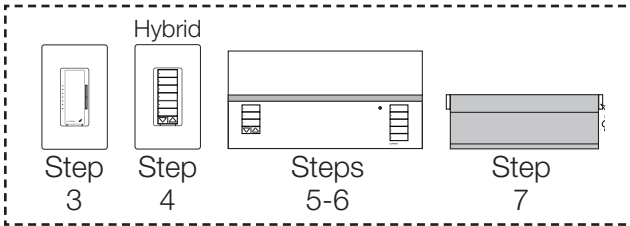
3. **Assign dimmers/switches and set level(s)**

a. **Press and hold the main button on dimmer/switch to be assigned** for 3 seconds.

When device has been assigned successfully, load connected to the device will flash 3 times and then LED(s) will normal-flash (once per second).
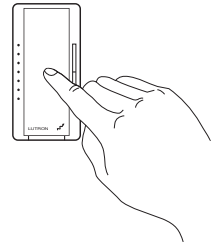
📋 Note: To unassign a device, press and hold the main button on device to be unassigned for 3 seconds until load flashes 3 times and LEDs turn off.

b. **Adjust level of assigned device** to desired setting using the raise/lower buttons on the dimmer, or use the main button on the dimmer or switch to turn the device off.
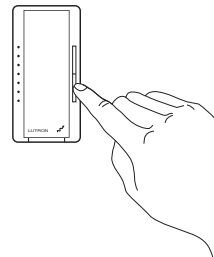
📋 Note: Devices assigned to a "Room" button cannot be set to Off.

📋 Note: To assign additional dimmers or switches to currently selected button repeat steps 3a-3b.

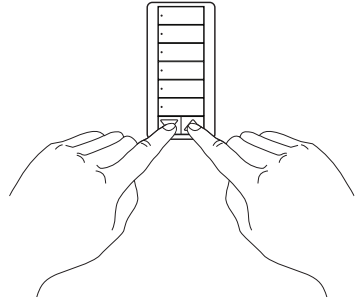📋 Note: To program another button start at step 2.

programming buttons

4. Assign Hybrid Keypad(s) and set level(s)

a. **Press and hold the raise and lower buttons on Hybrid Keypad to be assigned** for 3 seconds.

When device has been assigned successfully, load connected to the device will flash 3 times and then LED(s) will normal-flash (once per second).

📄 Note: When a button on a Hybrid Keypad is assigned to the local Hybrid Keypad load, the LED of the button being programmed will flash 2 times followed by a single flash of all the LEDs.

📄 Note: To unassign load, press and hold the raise and lower buttons on Hybrid Keypad to be unassigned for 3 seconds until load flashes 3 times.

b. **Adjust level of assigned Hybrid Keypad(s)** to desired setting using the raise/lower buttons on the Hybrid Keypad. To toggle off the device, press and release both the raise and lower buttons.

📄 Note: Devices assigned to a "Room" button cannot be set to Off.

📄 Note: To assign additional Hybrid Keypads to currently selected button repeat steps 4a–4b.

📄 Note: To program another button start at step 2.
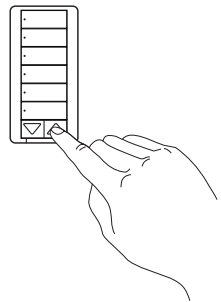
programming buttons

program buttons (continued)

Either individual zones or a single scene on a GRAFIK Eye® QS
control unit can be assigned to a button, but not both on the same
unit. Step 5 covers assigning control unit zones to a button, and
step 6 covers assigning a control unit scene to a button.

5. Assign GRAFIK Eye QS control unit zone(s) and set levels

📋 Note: Either GRAFIK Eye® zones or a
GRAFIK Eye scene can be assigned to a
button, but not both on the same unit.

a. **Simultaneously press the raise and lower
buttons of zone to be assigned.**

When zone has been assigned successfully,
the zone's LED bargraph will normal-flash
(once per second).
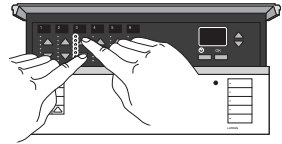
📋 Note: To unassign a zone, simultaneously
press the raise and lower buttons on zone to
be unassigned until the zone's bargraph has
only the middle 3 LEDs lit.

b. **Adjust level of assigned zone(s)** to desired
setting using the zone raise/lower buttons.
While adjusting levels, the zone LEDs track the
level and do not flash. Tapping another zone
resumes flashing on the previous zone. After
3 seconds of inactivity, the assigned zones
resume flashing.
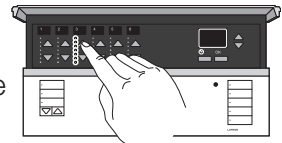
📋 Note: To assign additional zones to currently
selected button repeat steps 5a–5b.

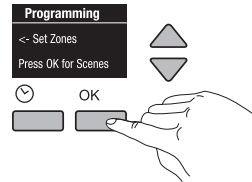📋 Note: To program another button start at
step 2.

programming buttons

**program buttons** (continued)

6. **Assign control unit scene**

📝 Note: Either GRAFIK Eye® zones or a *GRAFIK Eye* scene can be assigned to a button, but not both on the same unit.

a. Press the OK button to enter the Scenes menu.

Programming
<- Set Zones
Press OK for Scenes

b. Use the Master raise/lower buttons to select the desired scene number, then press OK to confirm the selection.

When the scene has been assigned successfully, all zone bargraph LEDs will flash at their scene preset levels and loads will go to the assigned scene.

Programming
▲
Scene 11
▼
press OK to save

Programming
▲
Scene 11
▼
Assigned
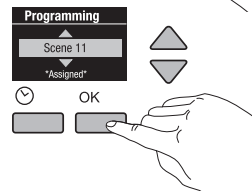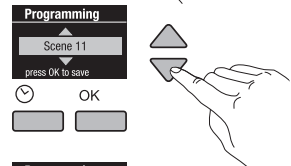
📝 Note: When a zone in a scene has a preset level of OFF, there will be no zone bargraph LEDs flashing.

📝 Note: To switch back to zones, use the Master raise/lower buttons to select "Zones", then press OK to switch.

📝 Note: Scenes are only programmable locally at the *GRAFIK Eye QS* control unit.

📝 Note: To unassign a scene, press the OK button then use the Master raise/lower buttons to select "Unassign", then press OK to complete the unassignment.

📝 Note: To program another button start at step 2.

---

programming buttons

7. **Assign Sivoia® QS wireless shades/ draperies and set levels**

a. **Press and hold the open button (▯) or close button (▮) on electronic drive unit (EDU)** to be assigned for 3 seconds.

When shade/drapery has been assigned successfully, the EDU's green LED will rapid-flash (ten times per second).

📋 Note: To unassign a shade/drapery, press and hold the open button or close button for 3 seconds. The EDU's LED will flash twice in 2 seconds, then turn off for 8 seconds.

b. **Adjust level of assigned shade/drapery** to desired setting using the raise/lower buttons (🔼 and 🔽).

To raise shade/drapery to the fully open position, double-tap the open button (▯). To lower shade/drapery to the fully closed position, double-tap the close button (▮).

📋 Note: To assign additional shades/draperies to currently selected button repeat steps 7a–7b.

📋 Note: To program another button start at step 2.

8. **Exit Program Mode**

a. **Press and hold the top and bottom buttons** of rightmost column ("Keypad" column on Visor Control Receiver) for 3 seconds until all LEDs rapid-flash (ten times per second) to exit Program Mode.
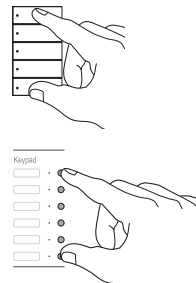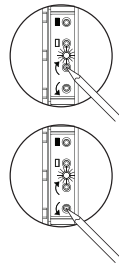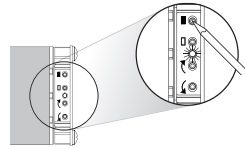
programming keypad columns

about column programming

Shade keypad columns are shipped pre-configured from Lutron, and typically have engraving for shades/draperies (eg. open, preset, close). GRAFIK Eye® QS optional shade columns are pre-configured as RadioRA® 2 shade keypad columns. Only shades/draperies can be programmed to shade keypad columns.

Pico® wireless controls are available in "Lights" and "Shades" versions. The "Lights" version can control lighting and shades/draperies. The "Shades" version can control only shades/draperies.

program columns

1. Enter Program Mode

a. **Press and hold the top and bottom buttons** of a column for 3 seconds until the corresponding LED(s) begin to normal-flash (once per second).

📄 Note: A shade/drapery already assigned to this column will close and its green LED will rapid-flash (ten times per second). An unassigned shade/drapery will open and its green LED will flash twice in 2 seconds, then turn off for 8 seconds.

Tabletop keypads must be plugged in during set up and programming.
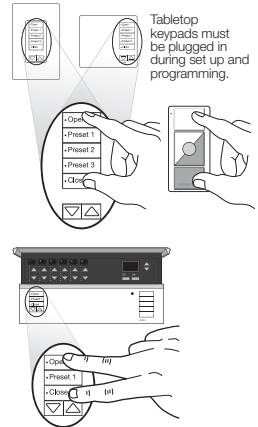
# programming keypad columns

program columns (continued)

2. **Assign shades/draperies, dimmers, and switches.** Shades/draperies, dimmers, and switches can be assigned to a column either at the keypad column (shades/draperies only) or at the load (shades/draperies, dimmers, and switches).

a. **At keypad column:** (for shade keypads and Pico® wireless controls only)

   i. Tap the Open button to wiggle the next shade/drapery or tap the Close button to wiggle the previous shade/drapery. The wiggling shade/drapery is the selected shade/drapery.
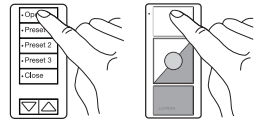

   ii. Tap the Lower button to assign the selected shade/drapery. The shade/drapery will close and its green LED will rapid-flash (ten times per second) once it is assigned.
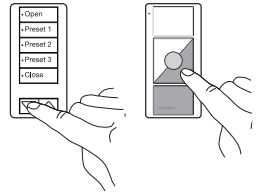
b. **At load:**

   • Shade/Drapery (for shade keypads and light or shade *Pico* wireless controls)

   i. Tap any button on the shade/drapery. The shade/drapery will close and its green LED will rapid-flash once it is assigned.
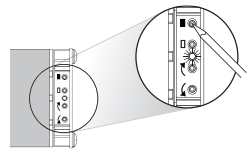
   • Dimmer/Switch (for light *Pico* wireless controls only)

   i. Press and hold the main button on the dimmer/switch to be assigned for 3 seconds. When device has been assigned successfully, load connected to the device will flash 3 times and then LED(s) will normal-flash (once per second).
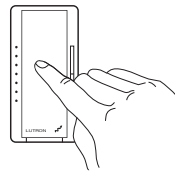
📋 Note: To unassign a device, press and hold the main button on device to be unassigned for 3 seconds until load flashes 3 times and LEDs turn off.

programming keypad columns

**program columns** (continued)

**3. Set presets for shades/draperies (dimmer/switch: skip step 3)**

a. **Tap the preset button** you wish to program. The corresponding preset button LED will rapid-flash (ten times per second) and assigned devices will go to their preset level. The selected preset button LED will then turn on solid for a shade keypad or turn off for a Pico® wireless control.
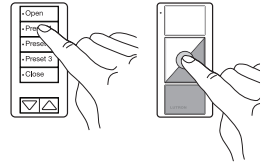
b. **Select shade/drapery to adjust**

Tap the Open button to wiggle the next shade/drapery or tap the Close button to wiggle the previous shade/drapery. The wiggling shade/drapery is the selected shade/drapery.
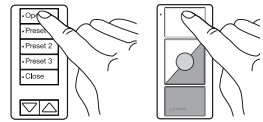
c. **Set shade/drapery level**

i. Press the raise or lower button on the column to adjust the level of the shade/drapery.

ii. Press and hold the preset button for 3 seconds until the LED rapid-flashes (ten times per second).
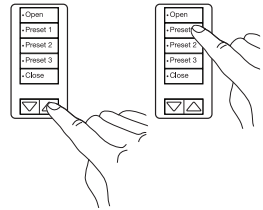
📝 Note: To program another preset button, repeat steps 3a–3c.

📝 Note: If any other preset button is tapped while a preset button is selected, the currently selected preset will not be saved.

📝 Note: To exit preset adjust mode without saving the preset, tap the selected preset button.
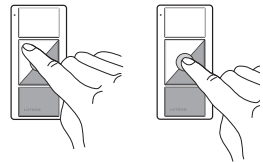
4. Exit Program Mode

a. **Press and hold the top and bottom buttons** of the column for 3 seconds until LED(s) stop flashing to exit program mode.
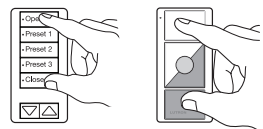
programming Visor Control Receiver

Receiver (VCRX) learning Transmitter (VCTX) buttons

1. Enter Learn Mode

a. **Press and hold the "Learn" button on VCRX** for 3 seconds until "Learn" LED turns on solid.
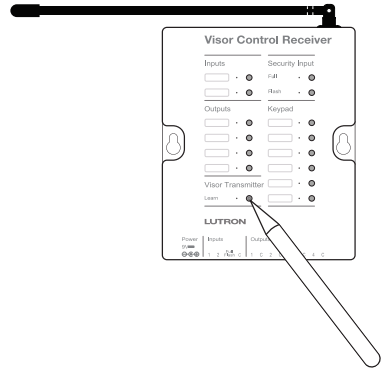
2. VCRX button learns VCTX button

a. **Press and release button on VCRX** that is to learn a VCTX button. The selected button's LED will turn on solid.
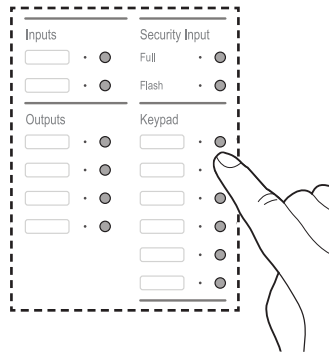
b. **Press and hold a VCTX button** for 3 seconds until LED next to selected VCRX button begins to rapid-flash (ten times per second), then release the VCTX button. The "Learn" LED will also rapid-flash while the VCTX button is pressed.

programming Visor Control Receiver

Receiver (VCRX) learning Transmitter (VCTX) buttons (continued)

When the VCRX button has learned the VCTX button, the LED next to selected VCRX button will turn off when the VCTX button is released.

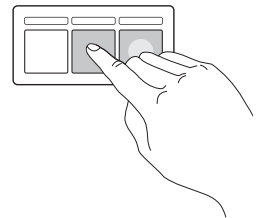📑 Note: To verify that the VCRX button has learned the VCTX button, press and release the VCTX button again. The LED next to the VCRX button will rapid-flash (ten times per second) if the VCTX button was learned.

📑 Note: To learn additional VCTX buttons, repeat step 2.

3. **Exit Learn Mode**

a. **Press and release the "Learn" button on VCRX** to exit Learn Mode. The Learn LED will turn off.

remove all VCTXs

To remove **ALL** VCTXs that have been learned follow these steps:

a. Triple tap and hold the Learn button. DO NOT release the button after the third tap.

b. Keep the button pressed on the third tap until the Learn LED starts to rapid-flash (approximately 3 seconds).

c. Release the button. Immediately (within 1/2 second) triple tap it again and release. The Learn LED will rapid-flash again. When the LED stops flashing, all VCTXs have been removed.

Visor Control Receiver

Inputs   Security Input
Full
Flash
Outputs   Keypad

Visor Transmitter
Learn

LUTRON
Power   Inputs   Outputs

3X
+
hold,
then
3X
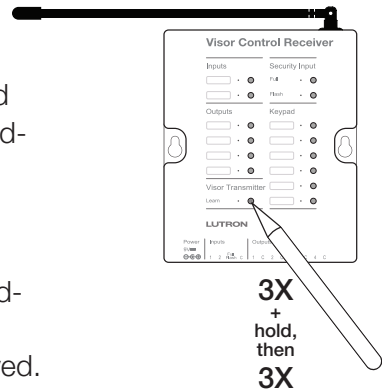
programming shortcuts

saving new levels on previously programmed keypad buttons

1. **Select keypad button**

a. **Press and release keypad button to be programmed.** Assigned lights and shades/draperies go to levels previously programmed.
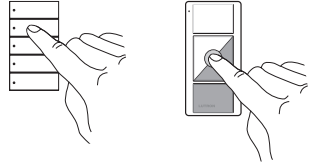
2. **Adjust levels**

a. **Use raise, lower, or tapswitch** to adjust level of assigned devices.
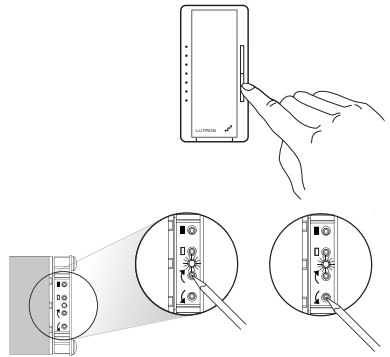
3. **Save levels**

a. **Press and hold same keypad button** for 6 seconds until LED rapid-flashes (ten times per second) for 2 seconds.

programming shortcuts

about copying button programming

Any programmed button in a button column can be copied to another button. A button can be copied to a button on the same keypad or Visor Control Receiver (VCRX), or a button on a different keypad/VCRX.

📝 Note: Prior to copying buttons, make sure to enter and exit Program Mode at least once on each keypad or VCRX that you will be copying to. See steps 1 and 7 of **programming buttons** starting on page 13.

copy button programming

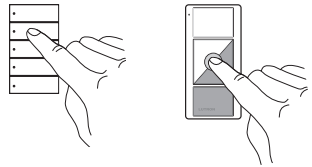**1.** **Enter Program Mode on a previously programmed button column to be copied**

a. **Press and hold the top and bottom buttons** of rightmost column for 3 seconds until top button's LED begins to normal-flash (once per second).

2. **Press and release a previously programmed button to be copied**
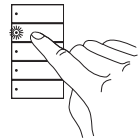
3. **Paste programming to new button**

a. **Press and hold the button to be pasted to** for 6 seconds until that button's LED rapid-flashes (10 times per second) for 2 seconds. The copied button's LED will also rapid-flash for 2 seconds.
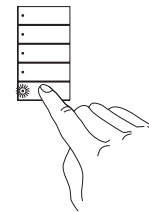
The "pasted to" button will now be normal-flashing. The "pasted to" keypad is now in Program Mode, and the "copied from" keypad has exited Program Mode.

📝 Note: To copy additional programming repeat steps 1 - 3.

4. **Exit Program Mode**

a. **Press and hold the top and bottom buttons** of last keypad pasted to for 3 seconds until all LEDs rapid-flash to exit Program Mode.
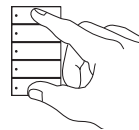
optional: configuring VCRX inputs

about configuring VCRX inputs

The VCRX input contact closures can be configured to accept maintained or momentary contact closures.
The security input is always a maintained contact closure input.

Maintained (toggle action)

Open   Close   Open
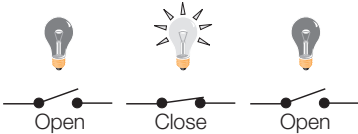
Momentary (single action)

Open   Close   Open
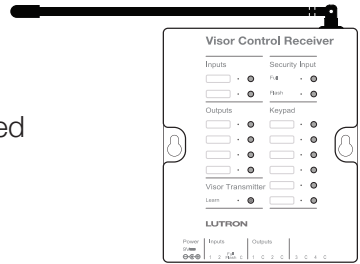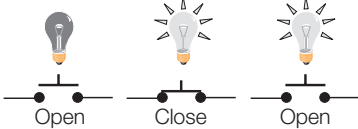
VCRX

configure VCRX inputs

1. Enter Advanced Program Mode

a. **Press and hold the top and bottom buttons of "Inputs" column** for 10 seconds until the Input LEDs begin to rapid-flash (ten times per second).
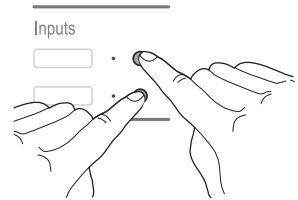
Inputs

2. Change the input closure type

a. **Press and release an input button to change its type.**

LED status	Input Closure Type
Normal-flash	Momentary (default)
On solid	Maintained
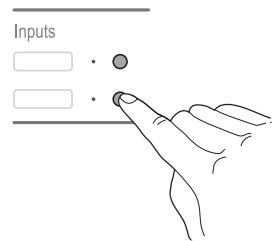
Inputs

3. Exit Advanced Program Mode

a. **Press and hold the top and bottom buttons of "Inputs" column** for 3 seconds until all LEDs rapid-flash to exit Advanced Program Mode.

Inputs
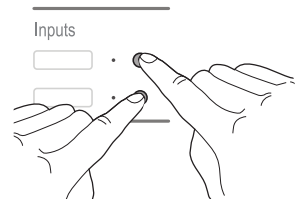
optional: testing RF signal quality

about testing RF signal quality

Test Mode provides a method for determining whether the repeaters and devices are communicating effectively. An acceptable signal ensures error-free communication.

Test Mode:

Verify repeaters can communicate with each other (only systems with multiple repeaters)

testing RF signal quality

1. **Enter Test Mode**

a. Press and hold the "Test" button on any repeater for 3 seconds until repeater beeps.
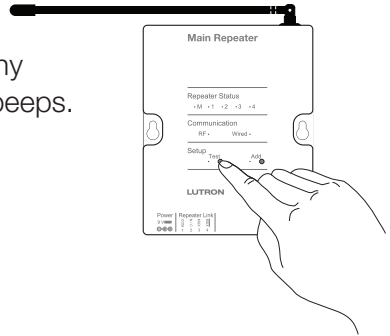
optional: testing RF signal quality

testing RF signal quality (continued)

2. **Verify repeaters can hear each other.**

Repeater Status
• M   • 1   • 2   • 3   • 4

Check Repeater Status LEDs to verify signal quality. Every repeater will show the status of the Main Repeater and 4 Auxiliary Repeaters.

Main Repeater

Repeater Status
• M • 1 • 2 • 3 • 4
Communication
RF •   Wired •
Setup   Test   Addr
LUTRON
Power   Repeater Link
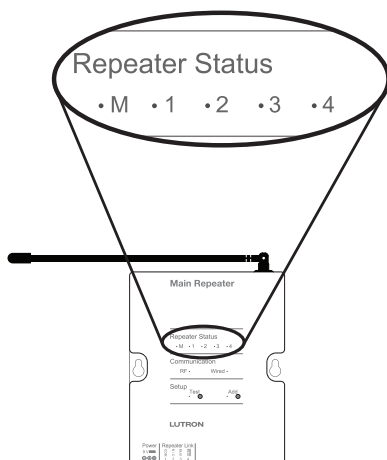
| Repeater Status LED	Feedback	Action
Green or flashing* green	Repeater is within acceptable signal quality.	No action required.
Red or flashing* red	Repeater is unable to hear the other repeaters or has unacceptable signal quality.	Ensure all repeaters are powered. If all repeaters are on, locate the repeater with the red flashing Repeater Status LED and reposition until the LED flashes green. Do NOT unplug repeaters. Additional repeaters may need to be added to the system.
Off	Repeater is not addressed to the system.	No action required.

* Flashing: Only one Repeater Status LED flashes per repeater. The flashing LED shows which repeater you are looking at (M, 1, 2, 3, 4).

3. **Exit Test Mode**

a. **Press and hold the "Test" button on any repeater** for 3 seconds until green "Test" LED stops flashing, and Repeater Status LEDs turn off.

> ❷ If a device does not respond as described, consult the troubleshooting section starting on page 31.

resetting devices to factory settings

about resetting devices to factory settings

Resetting a device to factory settings will remove it from the system and will clear its programming. After being returned to factory settings, the device will need to be reprogrammed as part of a RadioRA® 2 system. To reset a device to factory settings, perform the steps below.

reset devices to factory settings

This procedure covers dimmers, switches, keypads, visor control receivers, Pico® wireless controls, occupancy/vacancy sensors, and repeaters.
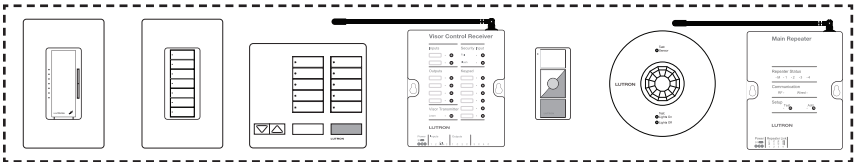
1. Triple tap and hold any button[1] on the device. DO NOT release the button after the third tap.

2. Keep the button pressed on the third tap until the LED(s) start to rapid-flash (approximately 3 seconds). Dimmer LEDs will ramp up and down rapidly and the load will flash at the same rate.

3. Release the button and immediately (within 1/2 second) triple tap it again. Dimmers and switches will normal-flash their loads. All other devices will rapid-flash their LED(s)[2] again. When the loads/LED(s) stop flashing, the device has been returned to factory settings.
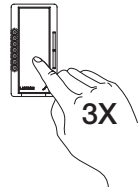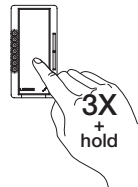
1 Any button except raise, lower, or learn.
2 Dome on occupancy/vacancy sensors.

resetting devices to factory settings

reset Sivoia® QS wireless EDU to factory settings

1. Press and hold the close limit button (▮) on the electronic drive unit (EDU) for 5 seconds. The green LED on the drive will flash quickly for 2 seconds and then stay on.
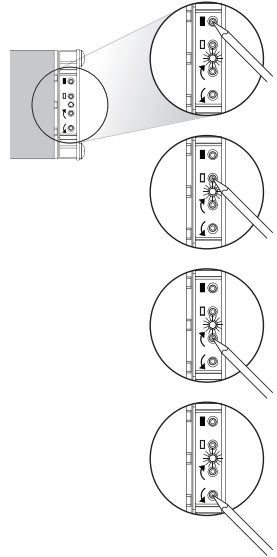
2. Press and hold the open limit button (▯) for 5 seconds. The green LED on the drive will flash and then stay on.

3. Press and hold the clockwise button (↻) for 5 seconds. The green LED will flash and then stay on.

4. Press and hold the counter-clockwise button (↺) for 5 seconds. The LED will flash blue briefly and the drive will now reset to factory settings.

📋 Note: If the time between steps exceeds 1 minute the EDU will return to normal operation. Begin at step 1 to reset the EDU to factory settings.

reset GRAFIK Eye® QS Wireless control unit to factory settings

1. Press and hold master lower and scenes 1, 3, and 5 on the *GRAFIK Eye* QS Wireless control unit for 5 seconds until the display reads "Erase Database?".

2. Press OK to confirm. The control unit will now reset to factory settings.

troubleshooting
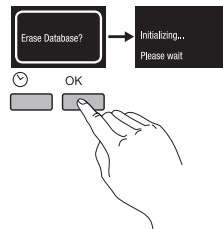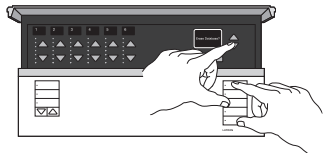
	Symptom	Possible Cause	Remedy
Creating the System	After entering Add Mode, "Add" LED on Main or Auxiliary Repeater is:		
	Rapid-flashing green (10 times per second)	Entering Add Mode. Repeater is listening for neighboring systems within RF range.	This is normal. Wait 10 seconds for the repeater to finish.
	Normal-flashing green (1 time per second)	Repeater is addressed with acceptable signal quality.	Move on to the next device or exit Add Mode if finished.
	Rapid-flashing red for 5 seconds, then turns off	Repeater has been addressed, but with unacceptable signal quality.	Optimize system communications following the steps in **testing RF signal quality** starting on page 27.
		Your system has encountered a neighboring system within RF communication range also in Add mode.	Discontinue activating your RadioRA® 2 system until activation of the neighboring system is complete.
		System has been programmed using the *RadioRA* 2 Design and Setup PC tool, and cannot enter Add Mode manually.	System must be programmed using the *RadioRA* 2 Design and Setup PC tool.
		Main Repeater is out of RF range or is not powered.	Move the Main Repeater to be within RF range. Additional repeaters may be necessary to provide adequate coverage.
	Main Repeater only: Solid red for 5 seconds, then turns off	System has been programmed using the *RadioRA* 2 Design and Setup PC tool, and cannot enter Add Mode manually.	System must be programmed using the *RadioRA* 2 Design and Setup PC tool.

troubleshooting

	Symptom	Possible Cause	Remedy
Creating the System	After attempting to add a device, the repeaters beep 3 times.	The system is out of device addresses.	If the system has less than the maximum number of devices, use the RadioRA® 2 software to recover missing device addresses.
	While attempting to add a Dimmer or Switch, the device turns on or off, but does not flash the light(s) it controls; or, one device LED flashes, but does not flash the light(s) it controls.	Dimming or switching control is out of RF communication range of nearest system Repeater.	Move a system Repeater closer to the control in question. Additional repeaters may be necessary.
		System not in Add Mode.	Place system in Add Mode.
	While attempting to add a Keypad, the Keypad LEDs rapid-flash for approximately 5 seconds then go out.	Keypad is out of RF communication range of nearest system Repeater	Move a system Repeater closer to the Keypad. Additional repeaters may be necessary.
		System not in Add Mode.	Place system in Add Mode.
	While attempting to add a device, the LEDs remain Off.	Device is out of RF communication range of nearest system Repeater.	Move a system Repeater closer to the device in question. Additional repeaters may be necessary.
		Device may be part of another system.	If device should be in this system, reset the device to factory settings. Follow the steps in **resetting devices to factory settings** starting on page 29.

	Symptom	Possible Cause	Remedy
Programming Buttons	After entering Program Mode on a Keypad, dimmer, switch, or other device LEDs are not normal-flashing.	Device has not been assigned to the button.	Assign the device to the button following step 2 in **programming buttons** on page 13.
	When attempting to assign a dimmer to a Keypad button, all of the dimmer's LEDs flash dimly.	Dimmer has not been added to the system.	Add the dimmer to the system following the steps in **adding Auxiliary Repeater(s) and devices** on page 8.
Programming VCRX	After entering Program Mode on a VCRX, dimmer, switch, or other device LEDs are not normal-flashing.	Device has not been assigned to the VCRX button.	Assign the device to the VCRX button following step 2 in **programming buttons** on page 13.

Worldwide Technical and Sales Assistance

If you have questions concerning the installation or operation of this product, call the Lutron Technical Support Center.

Please provide the exact model number when calling. Model number can be found on the product packaging. Example: RRD-6D

U.S.A., Canada, and the Caribbean:	800.523.9466
Mexico:	+1.888.235.2910
Other countries call:	+1.610.282.3800

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