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# RadioRA<sup>®</sup>-SR

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## Setup guide

A detailed guide for programming and operating a Lutron<sup>®</sup>  
*RadioRA*-SR wireless single room lighting control system

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English

Español

Français

If you have any questions, the Lutron® Technical Support Hotline is ready to help 24 hours a day, 7 days a week. Call us at 800.523.9466 for immediate assistance.

For Installation Guides, Setup Tools, or more information concerning your RadioRA®-SR system, please visit <http://www.lutron.com/radiorasr>.

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## Contact Lutron








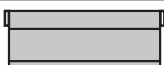
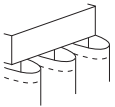
Contact information.....	Back Cover
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# Overview

## About RadioRA®-SR

*RadioRA-SR* is a system of lighting controls, window treatments, keypads, and sensors that communicate wirelessly to provide total control of electric and natural light in a single room. *RadioRA-SR* adds the magic of light control to any home entertainment area. Lutron provides uncompromising reliability through innovative wireless communication technology. Lutron ensures that your system will work every time by combining RF technology, patented by Lutron, with unrivaled quality.

## System components

Zone controls		
	<b>Dimmers</b> Replace existing switches to control individual lights in your room. Remote dimmers available for 3-way dimming.	SRD-6D-* SRD-10D-* SRD-10ND-* SD-RD-*
	<b>Switches</b> Replace existing switches to control individual lights in your room. Remote switches available for 3-way switching.	SRD-8ANS-* SD-RS-*
	<b>Table lamp dimmers</b> Plug in lamp dimmers to control table lamps.	SRD-3LD-**
Keypads		
	<b>Wall-mount keypads</b> Backlit and engravable wall-mount keypads control zone controls, window treatments, and scenes at the touch of a button.	SRD-W3B-* SRD-W5BRL-* SRD-W7B-*
	<b>Pico™ wireless control</b> Battery-powered, retrofit, portable keypads for zone controls and window treatments.	SRD-P3BRL-L* SRD-P3BRL-S*
System enhancements		
	<b>Integrated Scene Controller</b> Communicates with devices such as universal remote controls and touch screens. This allows you to adjust the levels of zone controls and window treatment positions at the same time as your audio and video gear.	SR-NWK-E
	<b>Occupancy and vacancy sensors</b> Provides energy savings by turning lights off when room is unoccupied and turns lights on automatically when you enter the room.	LRF2-OCRB-P-WH LRF2-VCRB-P-WH
Window treatments		
	<b>Sivoia® QS Wireless roller shades</b> Improve your viewing experience by quietly covering windows to eliminate glare and reflections.	
	<b>Sivoia QS Wireless drapery track</b> Showcase your projection screen, adjust the aspect ratio of the viewing area, and enhance the room's décor with curtains controlled by a Lutron® drapery track.	

Note: The minimum system requirement is one (1) zone control or window treatment, and one (1) keypad or Integrated Scene Controller.

\* For available colors and finishes please visit [www.lutron.com/radiorasr](http://www.lutron.com/radiorasr).

\*\* Available in Snow (SW) and Midnight (MN).

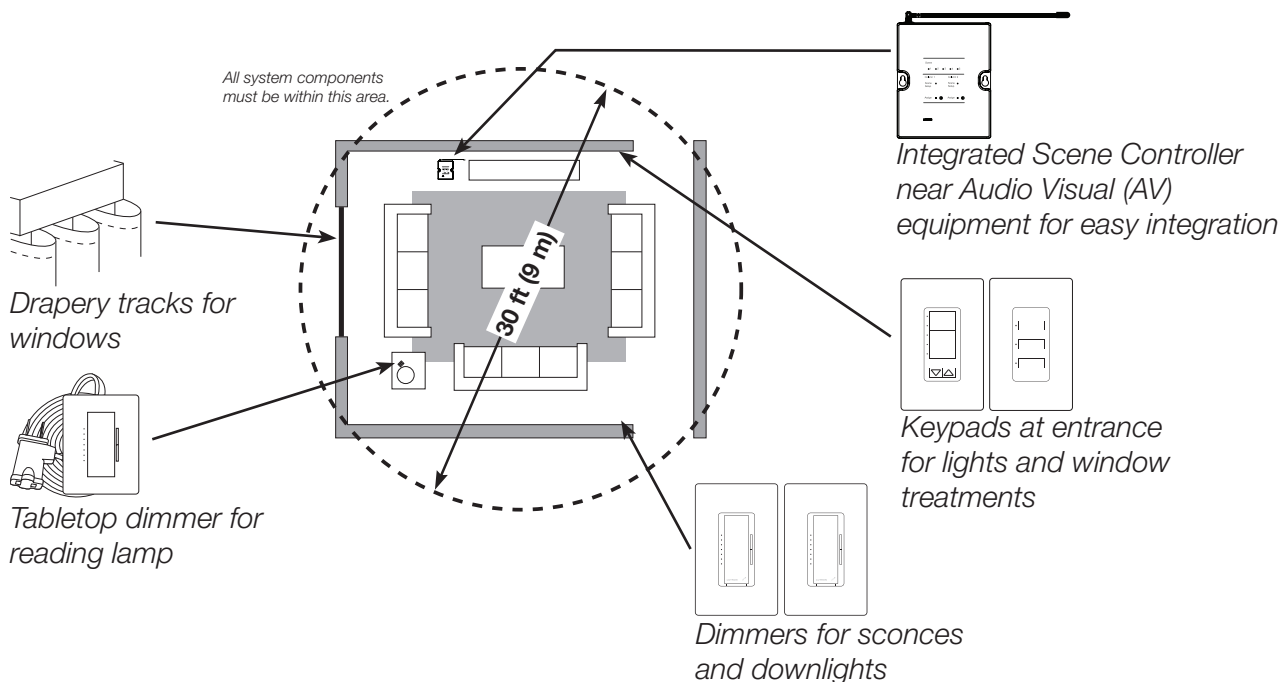
# Planning and design

## System planning

A properly planned RadioRA®-SR system is easy to use and provides the maximum benefits. Planning a system involves making a number of important decisions. Here are some of them:

- Where will I install the dimmers and switches?
- Where will I install the keypads?
- Where will I install the Integrated Scene Controller?
- What universal remotes will control this system?
- How will I program the system to control the lights and window treatments?
- How will I label the keypad buttons?

### Select locations of keypads, dimmers, and window treatments



### System capacities

Maximum devices per system	10 (including the Integrated Scene Controller)
Maximum Integrated Scene Controllers per system	1
RF Range	Devices must be within 30 ft (9 m) of each other (except remote dimmers SD-RD and switches SD-RS)

### Installation

After planning and designing the layout of the system, install the system devices according to the installation instructions that were packaged with each device.

# Planning and design

## System planning (continued)

### Define scenes and engraving

Use the **Programming worksheets** section on page 32 of this guide to help define your programming. Below is a sample worksheet.

**Keypad Type:** 5 button with raise/lower wall mount  
**Location:** Entrance doorway  
**Serial Number:** 0000040224456  
 (Located on the Keypad)


		Zones					
		1	2	3	4	5	6
Scene	Engraving	Downlights	Accents	Lamp	Drapery		
1	Relax	50%	25%	10%	Unaffected		
2	Gaming	60%	50%	70%	Unaffected		
3	Sports	30%	10%	65%	Unaffected		
4	Movie	off	1%	1%	closed		
5	All Off	off	off	off	closed		
6							
7							
<b>Raise/Lower</b>		<b>Always raises/lowers lights while being pressed</b>					

### Identify universal remote control

If you choose to integrate your system with your audio-visual (AV) equipment, you will need to:

- select a universal remote control to integrate with RadioRA®-SR
- add the Integrated Scene Controller to your system

The Integrated Scene Controller provides RS232 or Ethernet control of the *RadioRA-SR* system. A detailed explanation is provided in the **Protocol** section on page 16 of this guide. The manufacturers listed below offer products that are compatible with the *RadioRA-SR* system.

	<ul style="list-style-type: none"> <li>• AMX</li> <li>• HomeLogic®</li> <li>• NetStreams®</li> <li>• RTI</li> <li>• Universal Electronics®</li> <li>• ELAN®</li> <li>• Life ware™</li> <li>• Philips®</li> <li>• Savant</li> <li>• Universal Remote Control</li> </ul>
<p><i>Philips remote shown</i></p>	<p>Names listed above are trademarks of their respective companies.</p>

# Programming keypads

## About assigning devices to a keypad

After all RadioRA®-SR devices have been installed, the keypads must be programmed to control a set of zone controls and/or window treatments. When a button is pressed on a keypad, the assigned controls and window treatments go to specific levels or positions. The combined levels of zone controls and positions of window treatments for a particular scenario are called scenes.

### Example:

When watching a movie you would like to dim the lights so that the screen can be viewed easily. Once all the keypads are programmed, the preferred light levels for watching a movie can be recalled by pressing one scene button on a keypad column.

Each RadioRA-SR system contains 16 programmable scenes and one Off scene. The Off scene, when activated, will send all assigned zone controls to the Off state and close all window treatments. Unlike the 16 programmable scenes, the Off scene may not be edited. A keypad can only access a limited number of scenes based on how many scene buttons are part of the keypad column. The Integrated Scene Controller can access all 16 scenes through the RS232 or Ethernet ports.

### Keypad Examples:

- 3 button columns can only access scenes 1,3 and Off
- 5 button columns can only access scenes 1,2,3,4 and Off
- 7 button columns can only access scenes 1,2,3,4,5,6 and Off

*Note: Scenes 7-16 can be accessed through the Integrated Scene Controller by using Integration commands. See the **Protocol** section starting on page 16.*

Programming a keypad column consists of:

- 1) Assigning zone controls, keypads and window treatments to a keypad column according to the **Assigning devices to a keypad** section below.
- 2) Saving the desired zone control levels and window treatment positions for each scene button according to the **Adjusting default levels/positions from a keypad** section on page 9.

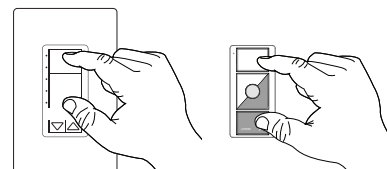
*Note: Once the keypads are programmed, assign all zone controls, keypads, and window treatments to the Integrated Scene Controller according to the **Assigning devices to the Integrated Scene Controller** section on page 12.*

## Assigning devices to a keypad

- 1. Enter assign mode** – press and hold the top and bottom button of the desired column until the Light Emitting Diode(s) (LED) begin(s) to flash (approximately 6 seconds). If a keypad column was previously programmed, all of the LEDs in the column will scroll sequentially. If this is the first time a keypad column is programmed, only the top and bottom LEDs will flash alternately. The LED on the Pico™ wireless control will continue to flash while it is in assign mode.

*Note: The keypad will automatically exit assign mode after 10 minutes.*

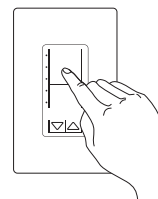
*Note: If assigning devices to a Pico wireless control, skip step 2 and proceed directly to step 3.*



# Programming keypads

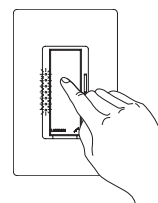
## Assigning devices to a keypad (continued)

- 2. Press each keypad button** between the top and bottom buttons to add the buttons to the column. Once pressed, the LED next to a button will flash in sequence with the other LEDs, indicating that it is now part of the keypad column.

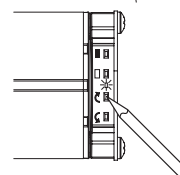


- 3. Assign zone controls and window treatments to the keypad column**

**a. Assign dimmers/switches** – press and hold the tapswitch on the device until the load flashes 3 times (approximately 6 seconds). The LEDs on assigned dimmers/switches will continue to flash while the keypad is in assign mode.



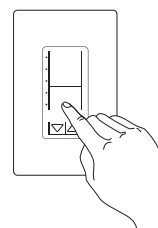
**b. Assign window treatments** – press any button on the drive and the green LED will flash.



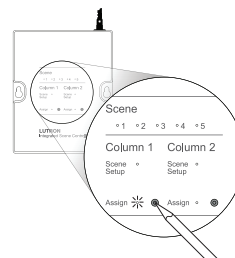
*Note: For consistent operation, it is recommended that all zone controls and window treatments in a single room be assigned to every keypad in that room.*

*Note: If assigning devices to a Pico™ wireless control, skip step 4 and proceed directly to step 5.*

- 4. Assign other keypad columns** – press and hold the bottom button of the keypad column to be assigned until all the LEDs on it begin to flash (approximately 6 seconds). While the first keypad is in assign mode, its LEDs will scroll and the LEDs on assigned keypads will continue to flash simultaneously. Assigning a keypad column to another keypad column is useful for making the LEDs on all keypad columns track each other. All keypads in a room should have the same set of zone controls and window treatments assigned to them.



- 5. Assign the Integrated Scene Controller** – press the Assign button of Column 1 or 2 of the Integrated Scene Controller. The corresponding Assign LED will flash red when Column 1 or 2 on the Integrated Scene Controller has been assigned to a keypad. To assign Column 3 or 4 of the Integrate Scene Controller to a keypad, please refer to the **Assign Column 3 or 4 to a keypad that is in assign mode** section on page 27. Assigning the Integrated Scene Controller to a keypad allows the LEDs on the keypad to track when a scene is selected on Column 1, 2, 3 or 4 of the Integrated Scene Controller. When an Integrated Scene Controller column is assigned to a keypad, the Assign LED on the Integrated Scene Controller will flash green several times to signify that there is a button press occurring on that keypad.



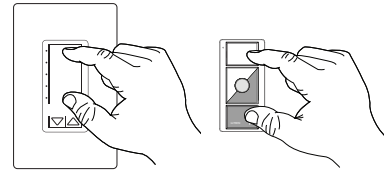
*Note: To unassign a device that is assigned, use the same method to assign it as described in the **Assigning devices to a keypad** section starting on page 5.*



# Programming keypads

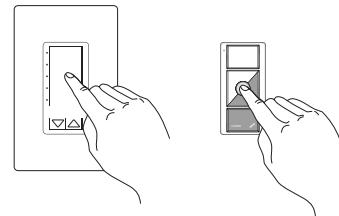
## Assigning devices to a keypad (continued)

- 6. When all devices have been assigned, exit assign mode** by holding the top and bottom buttons of the selected column until the LED(s) stop(s) scrolling or flashing (approximately 3 seconds).



- 7. Program all keypads** – repeat steps 1-4 of Assigning devices to a keypad, starting on page 5, for every keypad in the RadioRA®-SR system. When a second keypad column is assigned to the first keypad column, pressing a scene button on the first keypad column will activate the corresponding LEDs on both the first and second keypad columns. Pressing a scene button on the second keypad column will only activate the corresponding LED on the second keypad column. The first keypad column must also be assigned to the second keypad column in order to allow the LEDs on both keypad columns to be activated when a scene button is pressed on either keypad column.

- 8. Confirm assignment by** individually pressing every button on a keypad. Assigned devices respond to the button press by going to the default level for that scene. During keypad operation, the LED next to the button is illuminated when the corresponding button is pressed. The LED turns off after another button is pressed on that keypad column, on another assigned keypad column, or if a level of a zone control assigned to the keypad column changes.



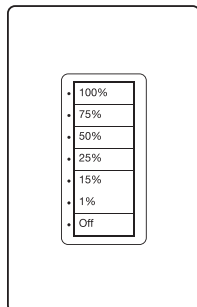
After a button is pressed on a Pico™ wireless control, the LED next to the top button will flash for 1-2 seconds and turn off to conserve battery power.

# Programming keypads

## Default zone control levels and window treatment positions

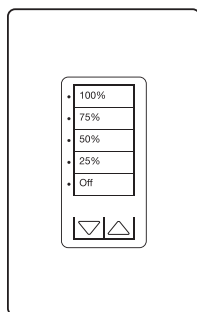
After lights and/or window treatments are assigned to keypad columns, the assigned devices will default to the levels listed below.

### Default levels and positions for a 7 button wall-mount keypad



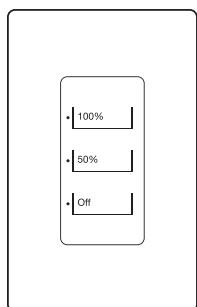
Scene	Dimmers	Switches	Window Treatments
1	100%	On	Open
2	75%	On	3/4 open
3	50%	On	1/2 open
4	25%	On	1/4 open
5	15%	On	Closed
6	1%	On	Closed
Off	0%	Off	Closed

### Default levels and positions for a 5 button wall-mount keypad



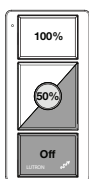
Scene	Dimmers	Switches	Window Treatments
1	100%	On	Open
2	75%	On	3/4 open
3	50%	On	1/2 open
4	25%	On	1/4 open
Off	0%	Off	Closed
Raise/Lower Buttons	Lights raise/lower.	Raise will turn the load on immediately if off. Lower will <u>not</u> turn the load off.	Window treatments will NOT raise/lower from a scene keypad.

### Default levels and positions for a 3 button wall-mount keypad



Scene	Dimmers	Switches	Window Treatments
1	100%	On	Open
3	50%	On	1/2 open
Off	0%	Off	Closed

### Default levels and positions for a Pico™ wireless control



Button	Dimmers	Switches	Window Treatments
On/Open	100%	On	Open
Center	50%	On	1/2 open
Off/Closed	0%	Off	Closed
Raise/Lower Buttons	Lights raise/lower.	Raise will turn the load on immediately if off. Lower will <u>not</u> turn the load off.	Window treatments raise/lower.

# Programming keypads

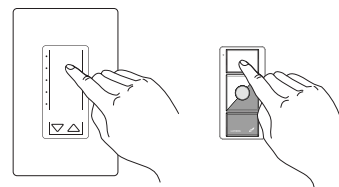
## About adjusting default levels/positions from a keypad

You can customize the default levels or positions of the devices assigned to a keypad column by using the steps below. All other keypad columns or Integrated Scene Controller columns that have those devices assigned to them will access the same, newly customized levels or positions. The column containing the button to be customized must have already been programmed according to the **Assigning devices to a keypad** section on page 5.

## Adjusting default levels/positions from a keypad

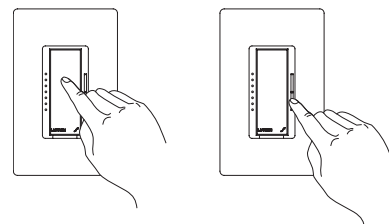
- 1. Press the button** you wish to customize. The lights will dim and the window treatments will move to the default level associated with this button. Wait until the lights and window treatments stop dimming and moving.

*Note: The bottom scene button of a keypad column is the OFF scene and will turn off all the devices assigned to that column. The OFF scene cannot be modified or saved to a different scene.*

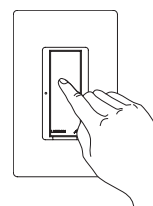


- 2. Adjust** each light and window treatment assigned to that column as follows:

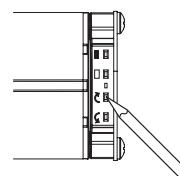
- a. Set levels on dimmers** – use the tapswitch to toggle the lights on or off. Use the raise or lower button on the right side of the dimmer to make adjustments to the desired light levels.



- b. Set switches** – use the tapswitch to toggle the lights on or off.



- d. Set window treatment position** – use the clockwise or counter-clockwise buttons on the window treatment drive to adjust the position.

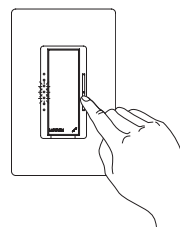


- 3. Making zone controls and window treatments 'unaffected' (optional)** – To make assigned devices not respond to a keypad button press, you may make the devices 'unaffected'. During normal operation when you press a keypad button, a device that is 'unaffected' will ignore the button press. The light level or window treatment position will not change. To make devices 'unaffected', follow the corresponding step on the next page based on the type of device to be made 'unaffected'.

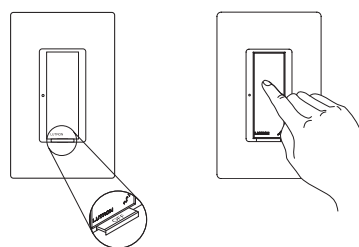
# Programming keypads

## Adjusting default levels/positions from a keypad (continued)

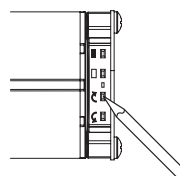
**a. Make a dimmer ‘unaffected’** – if the dimmer is on, press the tapswitch once to turn it off. After the dimmer is completely off, hold the lower rocker until the three middle LEDs turn on (approximately 6 seconds), signifying that the next level save will be ignored. \*\*



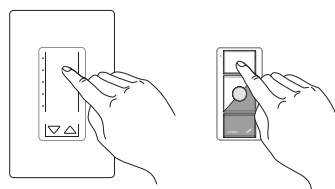
**b. Make a switch ‘unaffected’** – if the switch is on, turn it off using the tapswitch. Pull the FASS™ switch out. Press and hold the tapswitch. While still holding the tapswitch, push the FASS switch in. Continue holding the tapswitch until the LED flashes, signifying that the next level save will be ignored. \*\*



**d. Make a window treatment ‘unaffected’** – if the window treatment is open, close it using either the clockwise or counter-clockwise button. Release the button. After the window treatment is closed, press and hold the same button used to close the window treatment until the green LED blinks quickly (approximately 10 seconds), signifying that the next position save will be ignored. \*\*



**4. Press and hold the selected keypad button** until the LED flashes (approximately 6 seconds) to save the current levels. The LED will blink rapidly for 1-2 seconds to confirm that the save was successful. On keypad columns, the LED will turn back on. On Pico™ wireless controls, the LED will turn off.



\*\* After a device becomes ‘unaffected’, you have 10 minutes to complete the level save for all zone controls and window treatments.

*Note: To change the ‘unaffected’ status of a zone control or window treatment, follow steps 1, 2, and 4 in **Adjusting default levels/positions from a keypad** starting on page 9.*

# Programming occupancy/vacancy sensors

## About assigning sensors

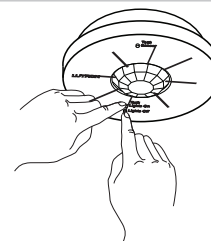
Sensors may be assigned to single or multiple dimmers or switches. When the occupancy sensor detects a person entering the room, the dimmer(s) fade on quickly and the switch(es) turn on. The level that the dimmer(s) turn on to may be programmed to a customized level.

When the occupancy sensor detects that everyone has left the room, the dimmer(s) and/or switch(es) will turn off.

Vacancy sensors can only turn off the dimmer(s) and/or switch(es) when the room is unoccupied. The person must manually turn on the dimmer(s) and/or switch(es) when entering the room.

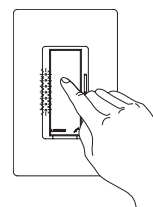
## Assigning sensors

- 1. Enter assign mode** on the sensor by pressing and holding the Lights On and Lights Off buttons on the sensor simultaneously until the orange LED inside the lens flashes (approximately 6 seconds), then release the buttons. While in program mode, the LED will flash once every 2 seconds, indicating the sensor is in assign mode.

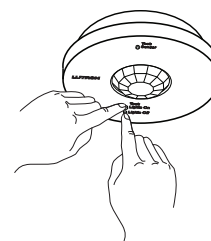


- 2. Assign dimmers/switches** by pressing and holding the tapswitch on the dimmer/switch until the LED(s) on the device flash and the load flashes three times (approximately 6 seconds).

*Note: to unassign a previously assigned dimmer/switch, repeat steps 1-3.*



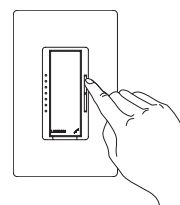
- 3. Exit assign mode** on the sensor by pressing and holding the Lights On and Lights Off buttons on the sensor simultaneously until the LED inside the lens stops flashing (approximately 6 seconds).



- 4. Program the level** that the dimmers will turn on to when the room is entered.

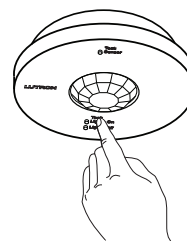
**a. Adjust the level(s) of the dimmer(s)** – adjust the level(s) of the dimmer(s) using the raise or lower rocker on each dimmer.

*Note: switches cannot be adjusted, they always turn on if assigned to an occupancy sensor.*



**b. Save the level(s) of the dimmer(s)** – press and hold the Lights On button on the sensor for 6 seconds to save the level(s) that the dimmer(s) will turn on to when someone enters the room.

**c. Verify the level(s) of the dimmer(s) were saved correctly** – press and release the Lights Off button on the sensor to turn the dimmer(s) and/or switch(es) off. Then press and release the Lights On button and verify that the dimmer(s) turned on to the desired level(s).

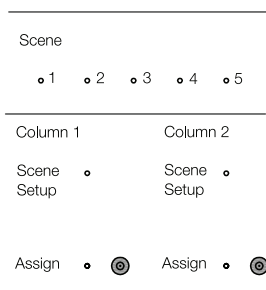


*Note: Please refer to the installation instructions provided with the sensor for additional features.*

# Integration

## About assigning devices to the Integrated Scene Controller

The Integrated Scene Controller provides a single integration point into a RadioRA®-SR system. The Integrated Scene Controller is able to control up to 9 *RadioRA*-SR zone controls or window treatments. The Integrated Scene Controller can be used to activate scenes in the system and set or get zone control levels and window treatment positions. Each *RadioRA*-SR system contains 16 programmable scenes and one OFF scene. A keypad can only access a limited number of these scenes based on how many scene buttons are part of the keypad column. The Integrated Scene Controller can access all 16 scenes through the RS232 or Ethernet ports. This allows 3<sup>rd</sup> party remote controls or touch panels to control *RadioRA*-SR devices.

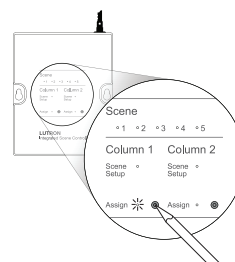


The Integrated scene controller has four internal columns (Columns 1, 2, 3, and 4) that can be programmed like keypad columns. Third-party devices can access these internal keypads to control *RadioRA*-SR devices. These internal keypads are accessible through integration commands explained in the **Protocol** section starting on page 16.

The front of the Integrated Scene Controller is shown on the left. Use the steps below to program Columns 1 and 2. To program Columns 3 and 4, see **Advanced programming** on page 27.

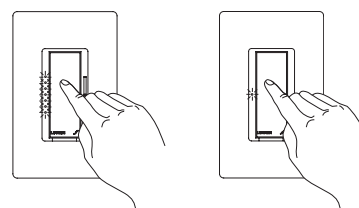
## Assigning devices to the Integrated Scene Controller

- 1. Enter assign mode** on the Integrated Scene Controller by pressing and holding the Assign button of column 1 or 2 until the column's Assign LED flashes rapidly (approximately 3 seconds). When the LED flashes once per second, the column is in assign mode.

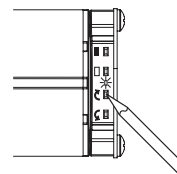


- 2. Assign devices to the Integrated Scene Controller column**

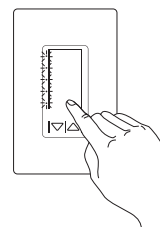
**a. Assign dimmers / switches** – press and hold the tapswitch on the device until the LED(s) on the device flash and the load flashes 3 times (approximately 6 seconds). The LED(s) on assigned dimmers/switches will continue to flash while in assign mode.



**b. Assign window treatments** – press any button on the window treatment drive and the green LED will flash.



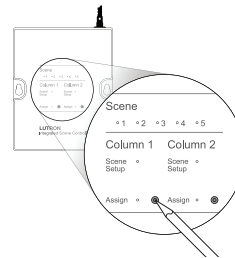
**c. Assign keypad columns** – press and hold the bottom button of the column until the LEDs blink (approximately 6 seconds). Complete the **Assigning devices to a keypad** section, starting on page 5, before assigning the keypad to the Integrated Scene Controller. The LED(s) on assigned keypads will continue to blink while the Integrated Scene Controller is in assign mode.



# Integration

## Assigning devices to the Integrated Scene Controller (continued)

- 3. Exit assign mode** by pressing and holding the Assign button on the selected column until the column's Assign LED stops flashing and is off (approximately 3 seconds).

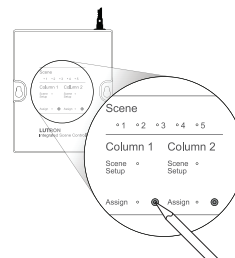


## About adjusting default levels/positions from an Integrated Scene Controller

When the Assign button for Column 1 or 2 is pressed or when a command is sent through RS232 or Ethernet to the Integrated Scene Controller, all of the assigned devices go to a default level or position. The default levels or positions of the devices assigned to an Integrated Scene Controller column can be customized by using the steps below. All other keypad columns or Integrated Scene Controller columns that have those devices assigned to them will access the same, newly customized levels or positions. The column to be adjusted on the Integrated Scene Controller must already have all zone controls, window treatments, and keypads in the system assigned to it.

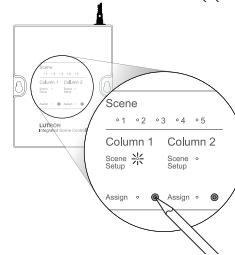
## Adjusting default levels/positions from an Integrated Scene Controller

- 1.** The Integrated Scene Controller must not be in assign mode before entering scene setup mode. The Scene Setup and Assign LEDs should be off. If they are not, press and hold the Assign button until the LEDs stop flashing (approximately 3 seconds).

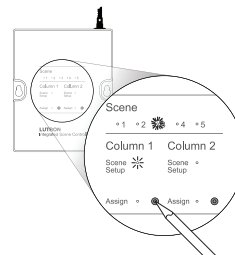


- 2. Enter scene setup mode** on the Integrated Scene Controller by pressing and holding the Assign button on the desired column until the column's Scene Setup LED flashes rapidly (approximately 6 seconds).

*Note: Pressing and holding the Assign button on the Integrated Scene Controller for 3 seconds will enter assign mode. Continuing to hold the Assign button for an additional 3 seconds (6 seconds total) will enter the scene setup mode.*



- 3. Select the scene** to save by tapping (press and release) the Assign button on the desired column multiple times to cycle through the Scene LEDs until the LED corresponding to the scene being programmed turns on solid. This will set the zone controls and window treatments in the room to the corresponding scene.



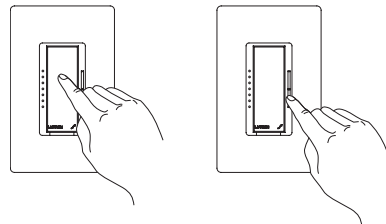


# Integration

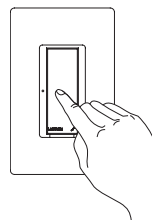
## Adjusting default levels/positions from an Integrated Scene Controller (continued)

**4. Adjust** each zone control and window treatment assigned to that keypad column as follows:

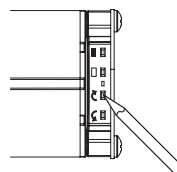
**a. Set levels on dimmers** – use the tapswitch to adjust the lights to go on or off. Use the raise or lower button on the right side of the dimmer to make adjustments to the desired light levels.



**b. Set switches** – use the tapswitch to adjust the lights to go on or off.

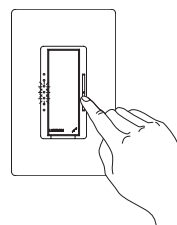


**c. Set window treatment position** – use the clockwise or counter-clockwise buttons on the window treatment drive to adjust the window treatment position.

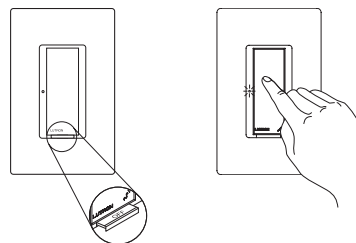


**5. Making zone controls and window treatments ‘unaffected’ (optional)** – To make assigned devices not respond to a keypad button press, you may make the devices ‘unaffected’. During normal operation when you press a keypad button, a device that is ‘unaffected’ will ignore the button press. The light level or window treatment position will not change. To make devices ‘unaffected’, follow the corresponding step below based on the type of device to be made ‘unaffected’.

**a. Make a dimmer ‘unaffected’** – if the dimmer is on, press the tapswitch once to turn it off. After the dimmer is completely off, hold the lower rocker until the three middle LEDs flash (approximately 6 seconds), signifying that the next level save will be ignored. \*\*



**b. Make a switch ‘unaffected’** – if the switch is on, turn it off using the tapswitch. Pull the FASS™ switch out. Press and hold the tapswitch. While still holding the tapswitch, push the FASS switch in. Continue holding the tapswitch until the LED flashes, signifying that the next level save will be ignored. \*\*



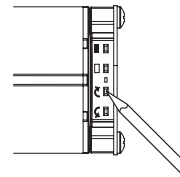
\*\* After a device becomes ‘unaffected’, you have 10 minutes to complete the level save for all zone controls and window treatments.



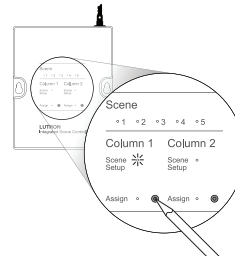
# Integration

## Adjusting default levels/positions from an Integrated Scene Controller (continued)

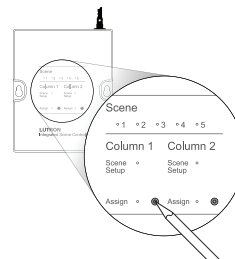
**d. Make a window treatment 'unaffected'** – if the window treatment is open, close it using either the clockwise or counter-clockwise button. Release the button. After the window treatment is closed, press and hold the same button used to close the window treatment until the green LED blinks quickly (approximately 10 seconds), signifying that the next position save will be ignored. \*\*



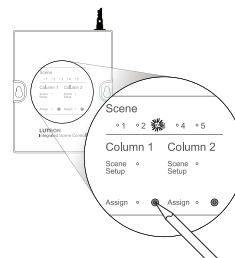
**6. Save the levels** by pressing and holding the column's Assign button until the Scene LED turns off to indicate that the scene levels have been saved (approximately 3 seconds).



**7. Exit scene setup mode** on the Integrated Scene Controller by pressing and holding the Assign button of the selected column until the column's Scene Setup LED stops flashing and turns off (approximately 6 seconds).



**8. Confirm scene setup** by tapping (press and release) the Assign button several times until the LED next to the desired scene turns on to confirm which scene will be activated. All of the assigned devices should go to the appropriate levels or positions for that scene.



\*\* After a device becomes 'unaffected', you have 10 minutes to complete the level save for all zone controls and window treatments.

*Note: To change the 'unaffected' status of a zone control or window treatment, follow steps 1-4, 6, and 7 in **Adjusting default levels/positions from an Integrated Scene Controller** starting on page 13.*

# Integration

## Protocol Basics

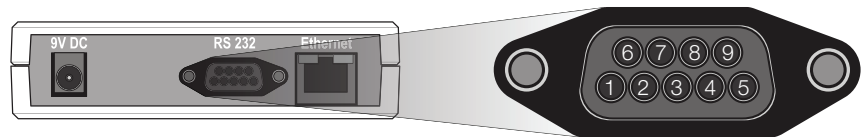
### Connection Information

The Integrated Scene Controller provides both RS232 and Ethernet connections to communicate with external equipment.

#### RS232

The RS232 connection has the following communication settings:

- Baud rate - 38400 (default)
- Data bits - 8
- No parity bit
- 1 stop bit
- No flow control/handshaking



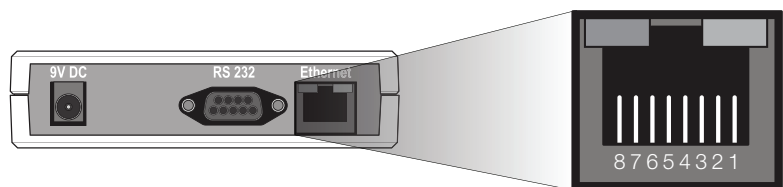
#### Ethernet

Configuring the Integrated Scene Controller to communicate over a network takes not only knowledge of the RadioRA®-SR system, but of networking as well. Installers with limited networking knowledge are advised to contact a networking professional before attempting to connect to the Integrated Scene Controller over a network. The information below will help an installer communicate the Integrated Scene Controller configurations to a network professional. The network professional can make any necessary changes to the networking equipment.

The installer will make any necessary changes to the Integrated Scene Controller using the setup command or Device IP program. The Device IP program will allow the installer to detect the Integrated Scene Controller that is either directly connected to a computer or on the same network. The installer will be able to see and change the IP address of the Integrated Scene Controller. The Device IP program is available on the *RadioRA* Resource Site at <http://resi.lutron.com/radiora>. After entering the address into your web browser, you will be prompted to log in or register (if this is your first time accessing the site). Registration is quick and easy, and you will have immediate access once registered. After you are logged in, go to the **Support** menu and select **Device IP**. Follow the instructions posted to download and set up the Device IP program.

#### Single Ethernet port

- IEEE 802.3 Auto-Sensing 10BaseT/100BaseTX
- Supports MDI/MDIX auto-crossover (no crossover cable needed)
- Female 8P8C “Computer RJ-45” socket
- Green Connect LED, Amber Activity LED
- Use Cat 5 cabling or better



#### Protocols Used

- TCP, UDP, IP, ARP, ICMP, TELNET

#### TCP/IP Settings

- IP Address: 192.168.250.1 (default)
- Subnet: 255.255.0.0
- Gateway: 0.0.0.0

# Integration

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## Protocol

### Basics (continued)

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#### *Telnet Server*

- Used by third party equipment (i.e. universal remote control)
- Limited to transferring 7bit ASCII characters
- Telnet Port number is 23
- The login name is 'nwk'
- There is no password

#### *UDP Multicast Messaging*

- Used by the Device IP tool during device configuration
- There are no user modifiable settings for UDP messaging

### **Rate Limiting**

To ensure that the Integrated Scene Controller processes all commands and queries correctly, the integration device must adhere to the following:

- a. Two-way devices should only send a command after receiving a prompt from the Integrated Scene Controller.
- b. One-way devices that cannot detect the prompt should only send one command every second.

*Note: A raise command followed by a stopraise command, or a lower command followed by a stoplower command, are considered one command when used together.*

### **Integration Operations**

The Lutron® integration protocol allows third-party equipment, such as universal remote controls and software applications, to control, monitor, and query a RadioRA®-SR system.

The protocol supports three basic types of integration operations in a *RadioRA*-SR system:

- Command — executes an action
- Query — requests the current status
- Monitor — returns responses

*Note: Please see **Table of integration operations** on page 29 for a list of available integration operations in a RadioRA-SR system.*

### **Operation Characters**

To help create and manage the different integration operations, three distinct operation characters have been selected to begin each command. All protocol messages will start with one of the following operation characters:

- #** Command — executes an action (e.g. turn a dimmer on/off)
- ?** Query — requests the current status of the system (e.g. determine on/off status of a dimmer)
- ~** Monitor — returns responses from the system when a change has occurred (e.g. if someone turns on a dimmer locally a response is sent out to indicate the change)

*Note to Integrator: Operation characters are not used in any other location in the protocol command string. Therefore, the driver can search for these characters to determine the start of a new command string.*

# Integration

## Protocol

### Basics (continued)

#### Operation Types

Operation characters will be followed by operation types. The three most common operation types are `setupisc`, `output` and `device`:

#### Sent to the Integrated Scene Controller

Integration Operation	Operation Character	Operation Type	Explanation	Example
Command	#	setupisc	Allows control and monitoring of various settings for the Integrated Scene Controller	#setupisc,list prg
		output	Allows control and monitoring of device outputs such as zone controls and window treatments	#output,12,1,75
		device	Allows control and monitoring of device inputs such as button presses and releases	#device,12,50,3
		refresh	Lists out current device levels	#refresh,255,255
Query	?	output	Requests device outputs such as zone controls and window treatments	?output,12
		firmwarerev	Request the software revision number of the Integrated Scene Controller	?firmwarerev

#### Feedback from the Integrated Scene Controller

Monitor	~	output	Reports the levels of zone controls and window treatments that are assigned to the Integrated Scene Controller	~output,12,1,100
		device	Reports the levels of zone controls and window treatments in the active scene on the Integrated Scene Controller	~device,12,3,3
		error	Reports when an incorrect command or query is sent to the Integrated Scene Controller	~error,1,(null), command not found

#### Operation Structure

The protocol structure of the integration operations is made up of three parts, followed by a carriage return.

Operation	Integration ID	Operation-specific Fields
-----------	----------------	---------------------------

1. The Operation is made up of the operation character and type.
2. The Integration ID is assigned to each device in the system during the integration set up, providing a unique user-assigned address for each system device. By default the Integration ID of a device is the serial number found on each device.
3. The Operation-specific Fields contain additional information relevant to the type of operation used.
4. The entire command string must always be followed by a carriage return to execute the operation.

# Integration

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## Protocol

### Communication setup

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The commands in this section will help the integrator set up communication parameters of the Integrated Scene Controller through the link. Many of these commands require a power cycle of the Integrated Scene Controller to take effect. Please follow the directions below carefully. All these commands may be used over either the RS232 link or the Ethernet link.

#### **Set the communication baud for the RS232 link**

The default baud for the RS232 link is 38400. The new baud can be any of the following allowed rates: 9600/19200/38400/115200. To change the baud use the following command:

```
#setupisc,rs232 baud,<new baud>
```

Example:

To set the RS232 baud to 9600 use the following command.

```
#setupisc,rs232 baud,9600
```

*Note: Cycle power to the device after sending this command for the settings to take effect.*

#### **Set the network parameters for the Ethernet/IP link**

By default the device leaves the factory with the following network settings:

IP address: 192.168.250.1

IP netmask: 255.255.0.0

IP gateway: 0.0.0.0

Use the following command to modify these parameters:

```
#setupisc,ethernet ip,<ip address>,<ip netmask>,<ip gateway>
```

Example:

To set the IP address of the device to 192.168.2.1, netmask to 255.255.255.0 and gateway to 0.0.0.0 use the following command.

```
#setupisc,ethernet ip,192.168.2.1,255.255.255.0,0.0.0.0
```

*Note: The IP address, netmask, and gateway parameter fields must be entered every time, even if only one parameter is being changed.*

*Note: Cycle power to the device after sending this command for the settings to take effect.*

*Note: The network parameters can also be changed by using the DeviceIP tool explained in the **Ethernet** section on page 16.*

#### **Reset the Integrated Scene Controller over the link**

Use this command to force a reset over the communication link.

```
#setupisc,reset,IREALLYWANTTO
```

*Note: To prevent loss of configuration data, do not reset or cycle power to the Integrated Scene Controller while it is in assign mode.*

# Integration

## Protocol

### Verify assignments and set up Integration IDs

The commands in this section will help the integrator verify the assigns to the columns in the Integrated Scene Controller and change the Integration IDs of devices that can be controlled and monitored. An Integration ID is a unique, user-defined number that identifies a device within a system.

#### **List the current devices assigned to the Integrated Scene Controller**

This command allows the integrator to list the devices assigned to the Integrated Scene Controller for diagnostic and archival purposes.

```
#setupisc,list prg
```

*Note: This command will list the zone controls, keypads, and window treatments assigned, the Integration IDs and the Columns the devices are assigned to. For each assigned device, it lists a parameter known as the component number. In a device with more than one zone, each zone will be assigned a unique component number. You will only use this number if you modify the integration ID of an output assigned to a zone.*

Example:

```
#setupisc,list prg
```

```
-Column---Type-----
```

```
1          0 (Scene)
```

```
2          0 (Scene)
```

```
3          0 (Scene)
```

```
4          0 (Scene)
```

```
-Integration Id--Serial Number--Component--Type-----Column--Property Number-
```

```
0000417714180  0000417714180  3          Zone      1          00
```

```
0000417702151  0000417702151  3          Zone      1          01
```

```
0000417682215  0000417682215  3          Zone      1          02
```

```
0000420994225  0000420994225  3          Zone      1          03
```

```
0000417701141  0000417701141  3          Zone      1          04
```

```
0000417700131  0000417700131  0          Control  1
```

```
Total Devices:6, Total Load Devices:5
```

# Integration

## Protocol

### Verify assigns and set up Integration IDs (continued)

#### **Change the integration ID of a zone that is assigned to the Integrated Scene Controller**

Each zone control, keypad and window treatment that is assigned to the Integrated Scene Controller is given an Integration ID which, by default, is the serial number.

This command allows the integrator to change the Integration IDs of zone controls and window treatments assigned to the Integrated Scene Controller. This is strongly recommended because it is easier and faster to enter the Integration ID of a zone control or window treatment than the serial number, and limits the amount of typing errors. Please see the Integration ID worksheet below to track the Integration ID and serial number of each zone control and window treatment and which column of the Integrated Scene Controller they are assigned to.

```
#setupisc,set id,<serial number>,<component number>,<new Integration ID>
```

Example:

To set the Integration ID of a zone control (component 3) to 12 when the serial number is 0000123456789, use the following command. The zone control must be assigned to the Integrated Scene Controller before you can change the Integration ID. If you unassign a device, the Integration ID of the device will revert back to its serial number.

```
#setupisc,set id,0000123456789,3,12
```

#### **Integration ID Worksheet**

	Integration ID	Serial Number	Integrated Scene Controller Column			
			1	2	3	4
Example:	0000000000012	0000123456789	4	4		

# Integration

## Protocol Control/Command

There are two ways to adjust the levels of zone controls and positions of window treatments in the space:

1. Send commands directly to each zone control or window treatment. While this method affords maximum control in a space, it is harder to set up and it will stagger the action if multiple zone controls or window treatments are being adjusted at the same time.
2. Send commands to the Integrated Scene Controller, which in turn will select scenes in the room. This method is easiest to set up and all zone controls and window treatments will respond to commands at the same time. See the **Rate Limiting** section on page 17.

### **Send commands directly to zone controls and window treatments in the room**

To directly control an output device, the integrator must know the Integration ID of each device that is to be controlled. The Integration ID is either the user-defined number in the table on page 21, or the unique serial number that can be found on a label on the back of each device. The serial number of a device assigned to the Integrated Scene Controller can also be found by following the procedure in the **List the current devices assigned to the Integrated Scene Controller** section on page 20.

Use the command string below to send zone controls and window treatments assigned to the Integrated Scene Controller to a specified scene or to raise/lower the current levels/positions.

```
#output,<Integration ID>,<command>,<action>
```

Operation	Command	Action
Set level	1	Level (0% to 100%) (required) Fade time in seconds (max 600, default 2) (optional) Delay time in seconds (max 600, default 0) (optional)
Start raise	2	—
Start lower	3	—
Stop raise/lower	4	—

Examples:

Send zone control or window treatment with Integration ID 12 to 75% with a fade time of 10 seconds and no delay.

```
#output,12,1,75,10
```

Send zone control or window treatment with Integration ID 12 to 50% with a fade time of 2 seconds and 1 second delay.

```
#output,12,1,50,2,1
```



# Integration

## Protocol

### Control/Command (continued)

#### **Send commands to the Integrated Scene Controller to select a scene**

Use the following command to select scenes by simulating button presses on the Integrated Scene Controller. After the action is complete, the Integrated Scene Controller will retrieve the levels of devices assigned to it and report the levels using the monitoring commands.

```
#device,<Integration ID>,<component number>,<command>
```

*Note: For proper system operation, a start raise/lower command must be followed by a stop raise/lower command sent to the same integration ID. Otherwise, the zone controls will raise to 100%/open or lower to low end/closed.*

*Note: Component numbers 0 (Column 1), 20 (Column 2), 40 (Column 3) and 60 (Column 4) are special numbers that are only used by the Integrated Scene Controller to report that no scene is currently active in the corresponding column.*

Command	Action
3	Press
4	Release

Scene	Component Number			
	Column 1	Column 2	Column 3	Column 4
1	1	21	41	61
2	2	22	42	62
3	3	23	43	63
4	4	24	44	64
5	5	25	45	65
6	6	26	46	66
7	7	27	47	67
8	8	28	48	68
9	9	29	49	69
10	10	30	50	70
11	11	21	51	71
12	12	32	52	72
13	13	33	53	73
14	14	34	54	74
15	15	35	55	75
16	16	36	56	76
17 (OFF)	17	37	57	77
Raise Button	18	38	58	78
Lower Button	19	39	59	79
No scene (for monitoring only)	0	20	40	60

# Integration

---

## Protocol Control/Command (continued)

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Examples:

Select Scene 3 in the group of devices associated with Column 1.

```
#device,12,3,3
```

Select Scene 3 in the group of devices associated with Column 4.

```
#device,12,63,3
```

Select Scene 0 (OFF) in the group of devices associated with Column 3.

```
#device,12,57,3
```

Start raising the group of devices associated with Column 2.

```
#device,12,38,3
```

Stop raising the group of devices associated with Column 2.

```
#device,12,38,4
```

### ***Listing out current device levels***

The current levels of devices assigned to the Integrated Scene Controller can be listed out by using the following command:

```
#refresh,255,255
```

## Query

---

The current status of devices within a RadioRA-SR system can be requested through the Integrated Scene Controller.

### ***Request device outputs***

The device outputs for zone controls and window treatments can be requested using the command below:

```
?output,<Integration ID>,1
```

Example:

To request the output of a device with an Integration ID of 12:

```
?output,12,1
```

### ***Request the software revision of the Integrated Scene Controller***

The software revision of the Integrated Scene Controller can be requested using the command below:

```
?firmwarerev
```

Example:

```
?firmwarerev
```

```
~FIRMWAREREV,1.9 [Release]
```

```
~FIRMWAREDATE,April 06 2009 14:22:54
```

# Integration

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## Protocol Monitor

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A touchscreen may use the following feedback to represent the state of a RadioRA®-SR system to the user:

1. After a command is issued to the system through the Integrated Scene Controller, it will report the target levels of devices assigned to it.
2. When a zone control or window treatment is modified locally (using buttons on the zone control or window treatment), the new level will be reported.
3. After a button is pressed on an assigned keypad, the Integrated Scene Controller will report the target levels of all zone controls and window treatments in the system and it will report the scene selected on the keypad.

*Note: In the **Monitor** section of this guide, the Integration ID refers to the Integration ID of the Integrated Scene Controller, which is also its serial number. The serial number of the Integrated Scene Controller can be found on the back of the device.*

### **Using the levels of zone controls and window treatments reported by the Integrated Scene Controller**

For the convenience of the integrator, zone control and window treatment levels are reported using the same command format that is provided to control them individually.

```
~output,<Integration ID>,1,<target level>
```

Examples:

When the tapswitch of a dimmer (with Integration ID 12) is pressed to turn off the dimmer, the following is reported:

```
~output,12,1,0
```

When a dimmer (with Integration ID 12) is raised to full on, the following is reported:

```
~output,12,1,100
```

When a scene is activated through the Integrated Scene Controller to set a dimmer (with Integration ID 12) to 50%, a dimmer (with Integration ID 13) to 100% and a shade (with Integration ID 14) to 25%, the following will be reported:

```
~output,12,1,50
```

```
~output,13,1,100
```

```
~output,14,1,25
```

*Note: Since this is a two-way system, any zone control or window treatment that is powered down will not report a level.*

*Note: The Integrated Scene Controller always reports the target level, which is the level that the zone controls or window treatments will go to at the end of the fade and delay time.*

# Integration

---

## Protocol

### Monitor (continued)

---

#### **Using the scene information reported by the Integrated Scene Controller**

For the convenience of the integrator, scene selections within a group of devices are reported from the Integrated Scene Controller using the same command format that is provided to activate them through the Integrated Scene Controller.

```
~device,<Integration ID>,<component number>,3
```

Use the table on page 23 to determine which button was selected in which column of the Integrated Scene Controller.

The Integration ID reported is the Integration ID of the keypad that sent the command or the zone control or window treatment whose local level change invalidated the current scene.

Examples:

When Scene 3 is pressed on a keypad with an Integration ID of 12 (which is assigned to column 1 of the Integrated Scene Controller), the following is reported to indicate that Scene 3 is active for devices assigned to Column 1:

```
~device,12,3,3
```

When Scene 3 is pressed on a keypad with an Integration ID of 12 (which is assigned to column 3 of the Integrated Scene Controller), the following is reported to indicate that Scene 3 is active for devices assigned to Column 3:

```
~device,12,43,3
```

When the tapswitch of a dimmer with an Integration ID of 12 is pressed to turn off the dimmer (which is assigned to column 1 of the Integrated Scene Controller), the following is reported to indicate that there is no active scene for column 1:

```
~device,12,0,3
```

## Error reporting

---

If the Integrated Scene Controller does not understand an integration string command or query, it generates an `~error` response. String processing stops after one bad argument, so errors will only come from the first bad argument in the string. The Error commands evaluate syntax only; they are not returned for valid commands sent to bad integration ID numbers, incorrect components, or incorrect component/action combinations. The description field will be helpful in diagnosing and troubleshooting problems.

All errors are formatted as follows:

```
~error,<bad token number>,<bad token string>,<description>
```

Example:

```
~error,1,(null),command not found
```

# Integration

---

## Protocol

### Advanced programming

---

The commands in this section are used to set up the Integrated Scene Controller using the link. These commands allow you to do the following:

1. Enter assign mode to assign zone controls, window treatments, and keypads to Columns 3 or 4, since this is not possible using the buttons on the front of the Integrated Scene Controller.
2. Exit assign mode.
3. Assign Column 3 or 4 to a keypad that is in assign mode.
4. Save the current levels of zone controls and window treatments associated with Column 3 or 4 to a selected scene.

*Note: These commands will also work for Columns 1 and 2, as an alternative to pressing buttons on the front of the Integrated Scene Controller.*

#### **Enter assign mode for Column 3 or 4**

This command will allow you to enter assign mode for Column 3 or 4 to assign zone controls and window treatments using the link.

```
#setupisc,begin prg,<column number 3 or 4>
```

Example:

To enter assign mode for Column 3 on the Integrated Scene Controller:

```
#setupisc,begin prg,3
```

*Note: You must now walk around and assign all zone controls and window treatments to this column according to step 2 of the **Assigning devices to the Integrated Scene Controller** section on page 12.*

#### **Exit assign mode for Column 3 or 4**

This command will allow you to exit the assign mode of column 3 and 4 using the link.

```
#setupisc,end prg,<column number 3 or 4>
```

Example:

To exit assign mode for Column 3 on the Integrated Scene Controller:

```
#setupisc,end prg,3
```

*Note: You must exit using the same column number you used to enter assign mode.*

#### **Assign Column 3 or 4 to a keypad that is in assign mode**

This command will allow you to assign column 3 or 4 on the Integrated Scene Controller to a keypad that is in assign mode. This will allow the Integrated Scene Controller to recognize button presses that originate on this keypad.

```
#setupisc,assign col,<column number 3 or 4>
```

Example:

To assign Column 3 on the Integrated Scene Controller to a keypad:

```
#setupisc,assign col,3
```

*Note: The keypad that you want to assign the Integrated Scene Controller Column to must already be in assign mode.*

# Integration

---

## Protocol

### Advanced programming (continued)

---

#### **Save levels of devices to a scene button**

This command will allow you to save the current levels of zone controls and window treatments to any scene button on an Integrated Scene Controller column (see the table on page 23 for a list of programmable buttons on the Integrated Scene Controller and their associated component numbers). First, complete step 4 in the **Adjusting default levels/positions from an Integrated Scene Controller** section on page 14. Then, execute the save command string below:

```
#setupisc,scene save,<button number>
```

Example:

To save the current levels/positions of zone controls and window treatments to button number 41 which is on Column 3 of the Integrated Scene Controller:

```
#setupisc,scene save,41
```

*Note: The command will only work on zone controls and window treatments that are assigned to the Integrated Scene Controller column that contains the button to be saved.*

#### **List the IP address, Subnet Mask, and Gateway settings of the Integrated Scene Controller**

This command allows the integrator to list the IP address, Subnet Mask, and Gateway settings of the Integrated Scene Controller.

```
#setupisc,list ip
```

#### **List the RS232 settings of the Integrated Scene Controller**

This command allows the integrator to list the RS232 settings of the Integrated Scene Controller.

```
#setupisc,list 232
```

### Command (sent to the Integrated Scene Controller)

String	Action	Example
#output,<Integration ID>,<command>,<action>	Send commands directly to zone controls and window treatments in the room.	#output,1,2,1,75,10
#device,1,<component number>,<command>	Send commands to the Integrated Scene Controller to select a scene.	#device,1,3,3
#refresh,255,255	Request the Integrated Scene Controller to report current known levels.	#refresh,255,255
#setupisc,reset,IREALLYWANTTO	Restart the Integrated Scene Controller over the link.	#setupisc,reset,IREALLYWANTTO
#setupisc,set id,<serial number>,<component number>,<new Integration ID>	Change the Integration ID of a device that is assigned to the Integrated Scene Controller.	#setupisc,set id,0000123456789,3,12
#setupisc,begin prg,<column number 1, 2, 3 or 4>	Enter assign mode for Column 3 or 4.	#setupisc,begin prg,3
#setupisc,end prg,<column number 1, 2, 3 or 4>	Exit assign mode for Column 3 or 4.	#setupisc,end prg,3
#setupisc,assign col,<column number 3 or 4>	Assign Column 3 or 4 to a keypad.	#setupisc,assign col,3
#setupisc,col type,<column type 0 or 1> 0: Scene 1: Preset	Set up the column to use scenes or shade presets.	#setupisc,col type,0
#setupisc,scene save,<button number>	Save levels of devices to a scene button on the Integrated Scene Controller.	#setupisc,scene save,41
#setupisc,rs232 baud,<new baud>	Set the communication baud for the RS232 link.	#setupisc,rs232 baud,9600
#setupisc,ethernet ip,<ip address>,<ip netmask>,<ip gateway>	Set the network parameters for the Ethernet/IP link.	#setupisc,ethernet ip,192.168.2.1,255.255.255.0,0.0.0.0
#setupisc,list prg	List the current devices assigned to the Integrated Scene Controller.	#setupisc,list prg
#setupisc,list ip	List the IP address, Subnet Mask, and Gateway settings of the Integrated Scene Controller.	#setupisc,list ip
#setupisc,list 232	List the RS232 settings of the Integrated Scene Controller.	#setupisc,list 232
#refresh,255,255	List out current device levels.	#refresh,255,255

### Query (sent to the Integrated Scene Controller)

String	Action	Example
?output,<Integration ID>,1	Request device outputs such as zone controls and window treatments	?output,1,2,1
?firmwarerev	Requests the latest software revision number of the Integrated Scene Controller.	?firmwarerev

### Monitor (received from the Integrated Scene Controller)

String	Definition	Example
~output,<Integration ID>,1,<target level>	Reports the levels of zone controls and window treatments.	~output,1,2,1,100
~device,<Integration ID>,<component number>,3	Reports which scene was selected and which device initiated that scene.	~device,1,2,3,3
~error,<bad token number>,<bad token string>,<description>	Reports errors in a string command.	~error,1,(null),command not found

Text within angle brackets "<text>" identifies that the text is a variable which is different for each system and circumstance.

Note: The entire command string must always be followed by a carriage return to execute the operation.

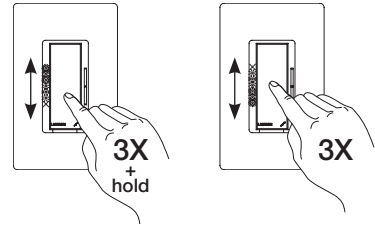
# Resetting devices to factory settings

## About resetting devices to factory settings

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

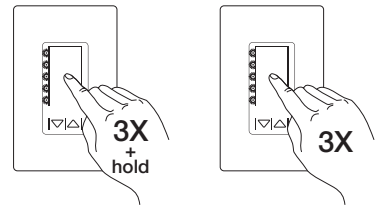
## Reset zone controls to factory settings

1. Triple tap and hold the tapswitch on a zone control. **DO NOT** release the button after the third tap.
2. Keep the button pressed on the third tap until the status LEDs start to scroll up and down quickly (approximately 3 seconds).
3. Release the button and immediately triple tap it again. The status LEDs will scroll up and down slowly. When the LEDs stop scrolling, the device has been returned to factory settings.



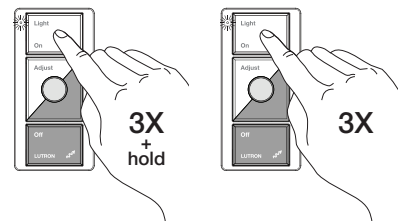
## Reset keypads to factory settings

1. Triple tap and hold any scene button on a keypad. **DO NOT** release the button after the third tap.
2. Keep the button pressed on the third tap until all the LEDs start to flash slowly (approximately 3 seconds).
3. Release the button and immediately triple tap it again. The status LEDs will flash quickly. When the LEDs stop flashing, the device has been returned to factory settings.



## Reset Pico™ wireless controls to factory settings

1. Triple tap and hold either the top or bottom button on a *Pico* wireless control. **DO NOT** release the button after the third tap.
2. Keep the button pressed on the third tap until the LED next to the top button turns on solid (approximately 3 seconds).
3. Release the button and immediately triple tap it again. The LED next to the top button will flash quickly. When the LED stops flashing, the device has been returned to factory settings.

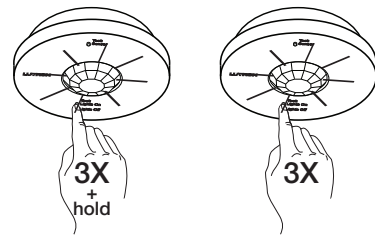




# Resetting devices to factory settings

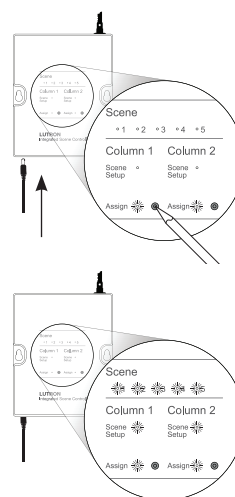
## Reset sensors to factory settings

1. Triple tap and hold either the Lights On or Lights Off button on a sensor. DO NOT release the button after the third tap.
2. Keep the button pressed on the third tap until the sensor lens starts to flash quickly (approximately 3 seconds).
3. Release the button and immediately triple tap it again. The sensor lens will flash slowly. When the lens stops flashing, the sensor has been returned to factory settings.



## Reset Integrated Scene Controller to factory settings

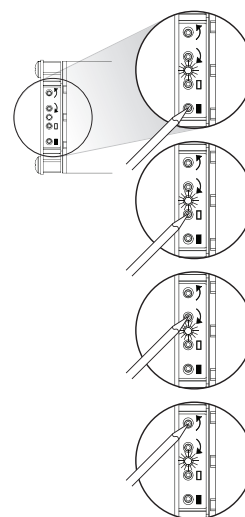
1. Remove power from the Integrated Scene Controller by unplugging the power supply cord.
2. Press and hold the Assign button for either Column 1 or 2 before returning power to the Integrated Scene Controller. Plug the power supply cord back in and continue to hold the Assign button until both Assign LEDs continuously flash red.
3. Release the Assign button. Then press and release it again.
4. The Integrated Scene Controller will take several seconds to reset. All LEDs will flash red once, and the green Scene LEDs will turn on for 3 seconds. When the green LEDs turn off, reset is complete.



## Reset window treatments to factory settings

1. Press and hold the close limit button (■) on the window treatment drive 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 window treatment drive will now reset to factory settings.

*Note: Resetting a window treatment to factory settings will clear out any assignments to keypads, but will not affect the close or open limits of the window treatment.*



# Programming worksheets

Programming worksheets (make copies as needed)

Keypad Type: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_

		Zones					
		1	2	3	4	5	6
Scene	Engraving						
1							
2							
3							
4							
5							
6							
7							
Raise/Lower		Always raises/lowers lights while being pressed					

Keypad Type: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Serial Number: \_\_\_\_\_

		Zones					
		1	2	3	4	5	6
Scene	Engraving						
1							
2							
3							
4							
5							
6							
7							
Raise/Lower		Always raises/lowers lights while being pressed					

# Troubleshooting

## Troubleshooting guide

Symptom	Possible Cause	Remedy
Dimmers do not dim Switches do not turn on or off LEDs on dimmers or switches are not lit	Lamp is burned out.	Replace lamp.
	FASS™ is pulled out.	Push FASS in.
	Power is turned off.	Turn circuit breaker on.
A zone control or window treatment will not assign to a keypad	Devices are too far from each other.	Make sure that all RadioRA®-SR devices, except remote dimmers (SD-RD) and remote switches (SD-RS), are within 30 ft (9m) of each other.
Keypad buttons do not send lights or shades/drapes to the correct level or position Keypad buttons do not activate lights or shades/drapes	System is programmed incorrectly.	Program the keypads according to the <b>Programming keypads</b> section starting on page 5.
Integrated Scene Controller is not responding to commands	Network parameters are not set up correctly.	Check IP address, telnet settings, or RS232 connections settings.
	Integrated Scene Controller is not plugged in.	Plug in Integrated Scene Controller.
	Command strings are incorrect.	Verify that the command string matches the desired string in the <b>Table of integration operations</b> on page 29.
Dimmer load does not flash when assigned to keypad or Integrated Scene Controller	Compact fluorescent load.	Verify that the compact fluorescent load is dimmable. Use the LEDs on the dimmer as an indicator that it is assigned.
	Devices are too far from each other.	Make sure that all <i>RadioRA</i> -SR devices, except remote dimmers (SD-RD) and remote switches (SD-RS), are within 30 ft (9m) of each other.

English

Español

Français

# Contact Lutron

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## Contact information

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English

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