

## Zūm® Wired J-Box Load Controller with Net and Link Communication

The Crestron® [ZUMNET-JBOX-16A-LV](#) and [ZUMNET-JBOX-DALI](#) load controllers:

- Provide a sophisticated, wired lighting control solution for Zūm® commercial lighting systems.
- Facilitate communication between rooms via the [CBL-CAT5E-ZUMNET-P](#) cables (sold separately) for daisy-chained network expansion.
- Connect to Zūm Link devices for in-room communication.
- Mount directly to a 4 in. square junction box.

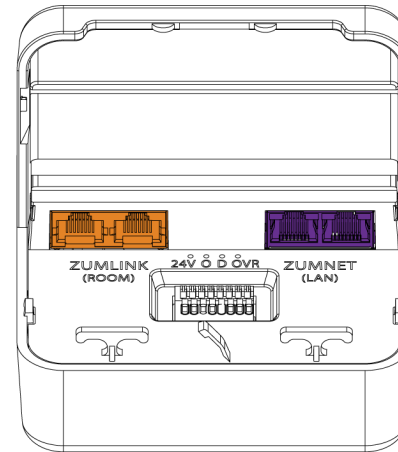
The ZUMNET-JBOX-16A-LV and ZUMNET-JBOX-DALI load controllers are functionally similar. For simplicity within this guide, the term "ZUMNET-JBOX" is used except where otherwise noted.

For more information about the Zūm Net and Zūm Link load controllers for wired applications, refer to the following product pages:

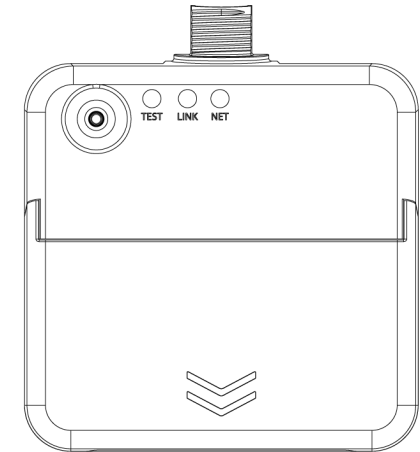
- [ZUMNET-JBOX-16A-LV](#): 0-10V Dimmer, 16A, 100-277V
- [ZUMNET-JBOX-DALI](#): DALI® Load Controller, 100-277V
- [ZUMLINK-JBOX-16A-LV](#): 0-10V Dimmer, 16A, 100-277V
- [ZUMLINK-JBOX-20A-SW](#): High Inrush Switch, 20A, 100-277V
- [ZUMLINK-JBOX-20A-PLUG](#): Plug Load Switch, 20A, 100-240V

**NOTE:** ZUMLINK-JBOX devices allow for in-room lighting control through compatible keypads and sensors. Two RJ-45 ports on the device and the [CBL-CAT5E-ZUMNET-P](#) cables (sold separately) allow for connection to a Zūm Net device and for in-room device daisy-chaining.

ZUMNET-JBOX Open



ZUMNET-JBOX Closed



### In the Box

- 1 ZUMNET-JBOX-16A-LV or ZUMNET-JBOX-DALI, Zūm® NET Wired J-Box Load Controller

#### Additional Items

- 5 Yellow Wire Nut, 22-10 AWG (2049245)
- 1 Locknut (2047626)
- 1 Tie Wrap (2005429)

## Zūm® Wired J-Box Load Controller with Net and Link Communication



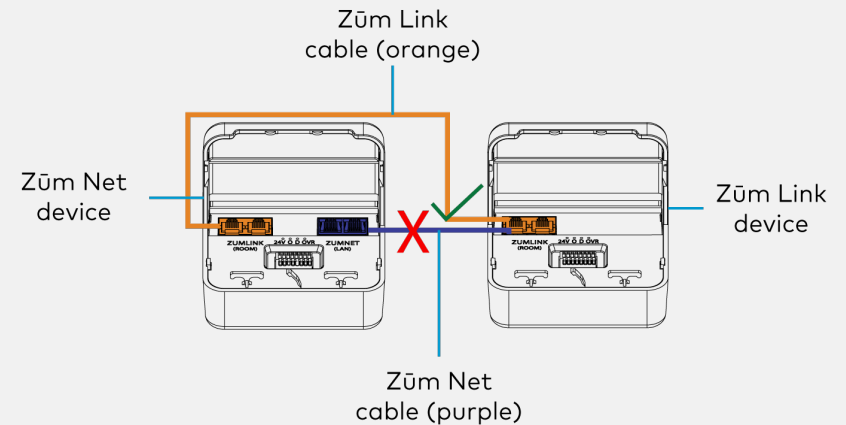
### Installation

**WARNING:** To avoid fire, shock, or death, turn off the power at the circuit breaker or fuse and test that the power is off before wiring!

#### NOTES:

- Install and use this product in accordance with appropriate electrical codes and regulations.
- A licensed electrician should install this product.
- The product should project 4.40 in. (112 mm) from the junction box when installed.
- For use where temperatures are between 32° to 104°F (0° to 40°C)
- For Chicago plenum compliant installations:
  - Ensure that the junction boxes and other electrical components are rated for Chicago plenum.
  - Separate the high voltage lines from the low voltage cables.
  - Install two junction boxes: one junction box for the high voltage lines and one junction box for the low voltage cables.

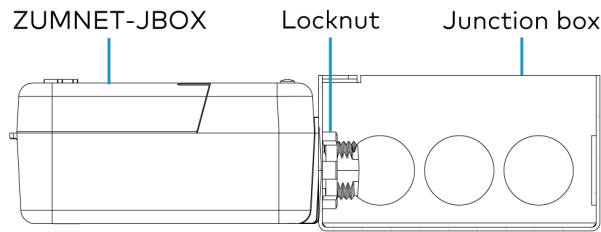
- Do **NOT** connect other network devices or the purple ports on the Zūm Net device to the orange ports on a Zūm Link device. This connection may damage network devices.



## Zūm® Wired J-Box Load Controller with Net and Link Communication

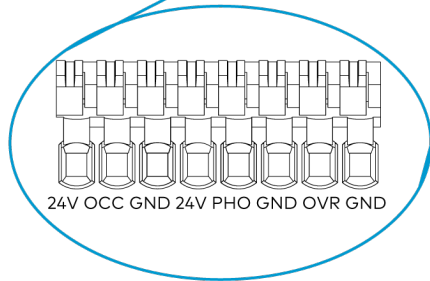
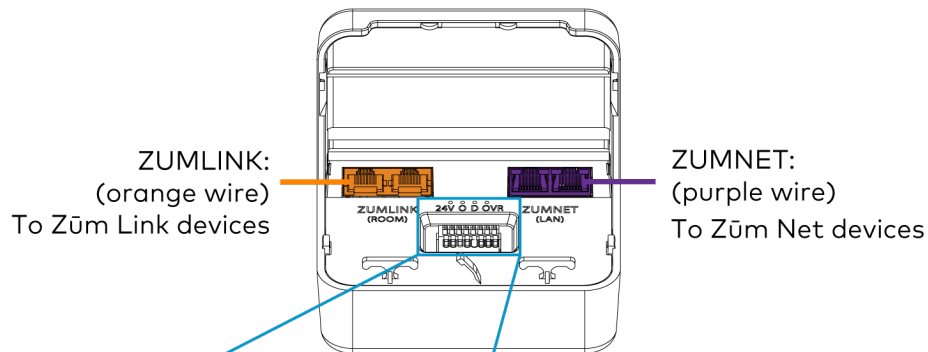
To install a ZUMNET-JBOX:

1. Turn the power off at the circuit breaker.
2. Mount the ZUMNET-JBOX to the junction box using the included locknut.



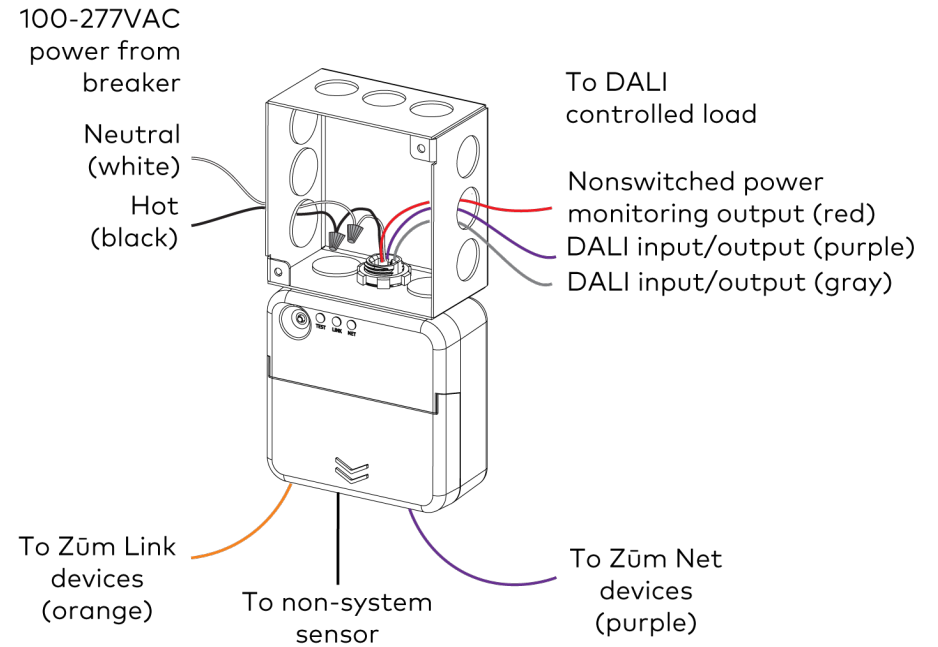
3. Wire the ZUMNET-JBOX as shown in the following diagrams.

### ZUMNET-JBOX Wiring to Other Zūm Net and Zūm Link Devices



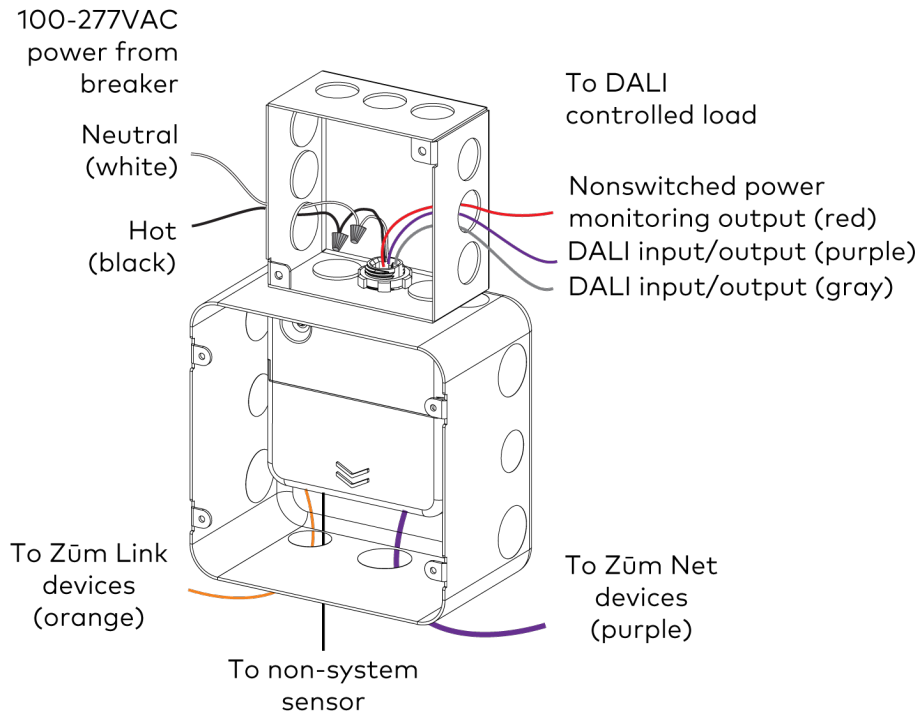
- 24V: Power for occupancy sensor and daylight sensor
- OCC: To occupancy sensor
- GND: To ground
- PHO: To photosensor
- OVR: To override input

### ZUMNET-JBOX-DALI Wiring

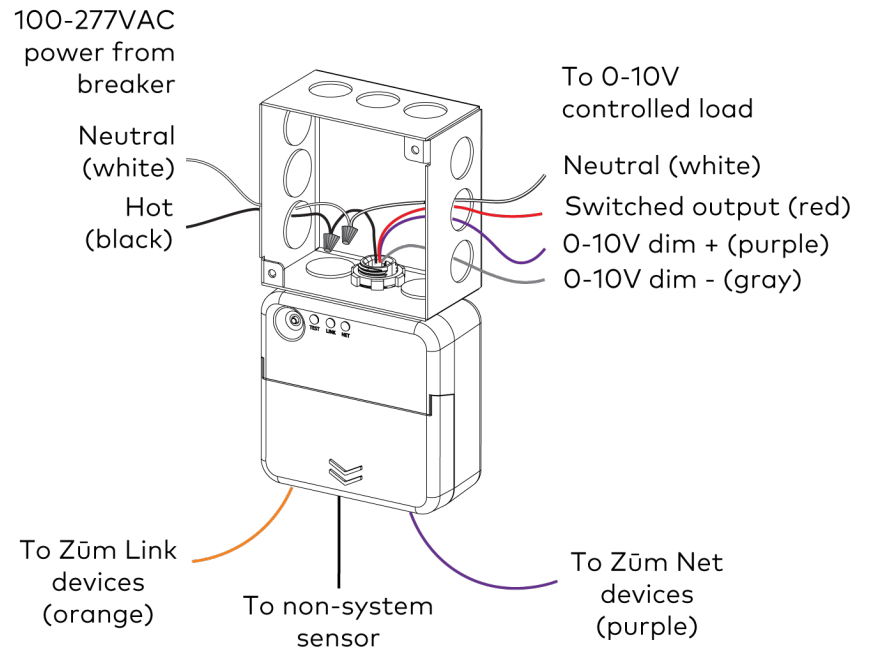


## Zūm® Wired J-Box Load Controller with Net and Link Communication

### ZUMNET-JBOX-DALI Wiring to Meet Chicago Electric Code

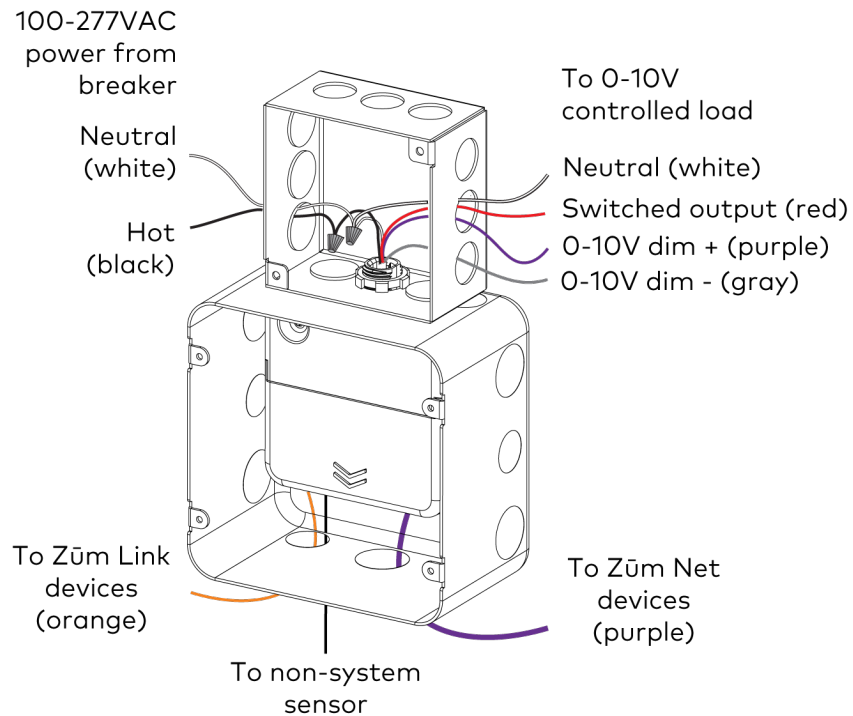


### ZUMNET-JBOX-16A-LV Wiring

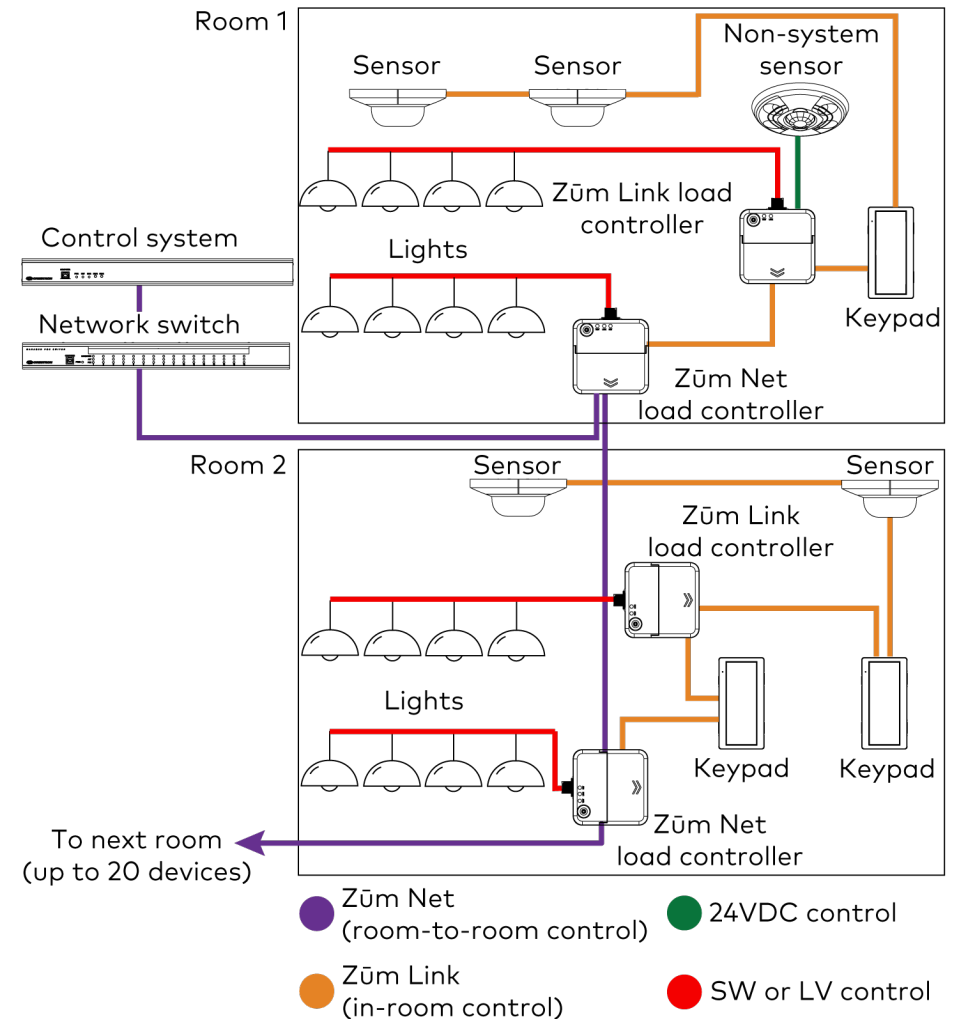


## Zūm® Wired J-Box Load Controller with Net and Link Communication

### ZUMNET-JBOX-16A-LV Wiring to Meet Chicago Electric Code



### Zūm Wired System Diagram



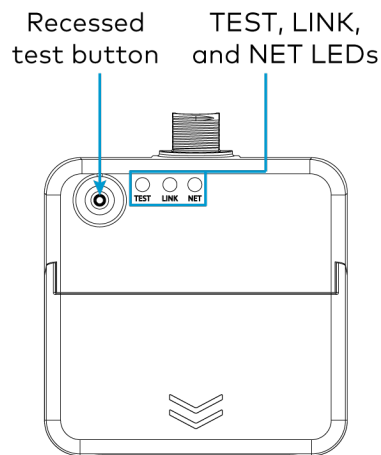
## Zūm® Wired J-Box Load Controller with Net and Link Communication

### NOTES:

- Daisy-chain up to 20 Zūm Net devices (up to a maximum of 328 ft (100 m) per leg) with purple CBL-CAT5E-ZUMNET-P cables (sold separately).
- System sensors communicate digitally via Zūm Link. Non-system sensors communicate via an analog connection on a Zūm Wired J-BOX.

### Test the Loads

To verify system wiring, the loads can be tested. Press the **TEST** button to turn the connected loads on and off. Press and hold the **TEST** button to cycle dim the connected dimmers.



### Firmware Upgrade

Before using the ZUMNET-JBOX, ensure it is updated with the latest firmware. Check for the latest firmware at [www.crestron.com/firmware](http://www.crestron.com/firmware). Load the firmware onto the device using Crestron Toolbox™ software.



### Operation

A Zūm Wired space consists of at least one ZUMNET-JBOX or ZUMLINK-JBOX connected to lights, sensors or another Zūm device. Once the Zūm Wired devices are installed and connected together in a space, they communicate with each other. Without any programming, the devices behave as described below.

**NOTE:** To add an Zūm Wired device to an existing space, simply connect the device and it will become part of the space logic.

## Zūm® Wired J-Box Load Controller with Net and Link Communication

### Presence Detector Sensors

Non-system (such as the [GLA-IR-QUATTRO-HD-COM1-24](#) or [GLS-ODT-C-NS](#)) and system sensors (such as the [ZUMLINK-IR-QUATTRO-DLS](#)) will trigger and control the connected load controller. Non-system sensors connect to the load controller via the I/O ports, while system sensors connect to the load controller via a [CBL-CAT5E-ZUMNET-P](#) cable.

**NOTE:** The Zūm app is required to enable Daylighting.

#### Presence Detector Functionality When Connected to Load Controllers

Load Controller	Occupancy Detected	Vacancy Detected
ZUMNET-JBOX-16A-LV and ZUMLINK-JBOX-16A-LV	Recalls Scene 1 (all on)	Recalls Scene 16 (all off)
ZUMLINK-JBOX-20A-SW	On	Recalls Scene 16 (all off)
ZUMLINK-JBOX-20A-PLUG	On	Off after grace period delay
ZUMNET-JBOX-DALI	Recalls Scene 1	Recalls Scene 16 (all off)

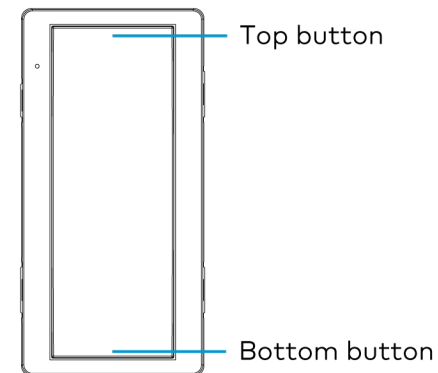
### Keypads

The ZUMLINK-KP-R controls most of the connected load controllers in a space.

**NOTE:** The ZUMLINK-KP-R will not control a ZUMLINK-JBOX-20A-PLUG.

#### ZUMLINK-KP Functionality When Connected to Load Controllers

Load Controller	Top Button Tap	Top Button Hold	Bottom Button Tap	Bottom Button Hold
ZUMNET-JBOX-16A-LV and ZUMLINK-JBOX-16A-LV	Recalls Scene 1	Raise all loads	Recalls Off	Lower all loads
ZUMLINK-JBOX-20A-SW	Recalls On	N/A	Recalls Off	N/A
ZUMLINK-JBOX-20A-PLUG	N/A	N/A	N/A	N/A
ZUMNET-JBOX-DALI	Recalls Scene 1	Raise all loads	Recalls Off	Lower all loads



## Zūm® Wired J-Box Load Controller with Net and Link Communication

The ZUMLINK-KP-R can be used with any [ZUMLINK-BTN button tree](#) for up to 8 programmable buttons. Use the Zūm app to change a button's default functionality. Each of the buttons can be programmed with the following functions:

- None
- Off: Assigned loads controllers turn off.
- On: Assigned loads turn on
- Raise: Assigned load controllers raise.
- Lower: Assigned load controllers lower.
- Recall Scene 1 - Scene 16: Assigned load controllers recall the behavior set for the specified scene.

### Load Controllers

For load controller functionality with Presence Detector sensors or Keypads, refer to [Presence Detector Sensors](#) and [Zūm Wired System Diagram](#).

**NOTE:** Performing a Factory Restore on the master Zūm Wired load controller restores the space to default functionality. Performing a Factory Restore on any other Zūm Wired load controller or device in the space only restores the default settings for that device.

The LINK LED on the master load controller consistently flashes for 0.5 seconds on and 0.5 seconds off.

#### LED Status for Slave Load Controllers (ZUMLINK-JBOX only)

LED	LED Color	Description
LINK	Off	The load controller is not being polled by the room master load controller.
LINK	Green (solid)	The load controller is actively being polled by the room master load controller.
TEST	Off	The local load is off.
TEST	Green	The local load is on.
NET (ZUMNET-JBOX only)	Off	The ZUMNET-JBOX is not connected to a control system or ZUM-HUB4.
NET (ZUMNET-JBOX only)	Green	The ZUMNET-JBOX is connected to a control system or ZUM-HUB4.
NET (ZUMNET-JBOX only)	Red	The ZUMNET-JBOX lost connection to a control system or ZUM-HUB4.



## Zūm® Wired J-Box Load Controller with Net and Link Communication

### LED Status for Room Master Load Controllers

LED	LED Color	Description
LINK	Off	The load controller is not polling any slave load controllers.
LINK	Green (flashes 0.5 seconds on and 0.5 seconds off)	The load controller is the room master load controller.
TEST	Off	The local load is off.
TEST	Green	The local load is on.
NET (ZUMNET-JBOX only)	Off	The ZUMNET-JBOX is not connected to a control system or ZUM-HUB4.
NET (ZUMNET-JBOX only)	Green	The ZUMNET-JBOX is connected to a control system or ZUM-HUB4.
NET (ZUMNET-JBOX only)	Red	The ZUMNET-JBOX lost connection to a control system or ZUM-HUB4.



### Zūm Wired Setup

Once all of the devices are installed in the space, use the Zūm app to modify default behavior. Expedite commissioning by copying a room configuration and sending it to an identical room. Save a room configuration template and share it via the ZUM-HUB4 or the Zūm app.

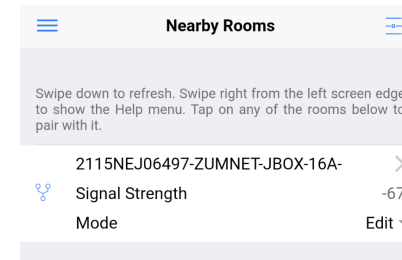
**NOTE:** The ZUMLINK-KP Bluetooth® connection is required to configure a Zūm wired space with the Zūm app.

### Connect to the Zūm App

Download the Zūm app from the [Google Play™](https://play.google.com/store/apps/details?id=com.crestron.zum) online store.

To use the Zūm app:

1. Enable Bluetooth wireless connection on your device to communicate with the Zūm space.
2. Launch the Zūm app and grant the permissions the app requests. The Zūm app displays a list of available spaces.



## Zūm® Wired J-Box Load Controller with Net and Link Communication


### Zūm App Main Screen

From the Nearby Rooms screen, tap the room to open the Main screen.  
The following section describes the actions available for each area of the Main screen.

The screenshot shows the 'Main' screen of the Zūm app. It is divided into two main sections: a left-hand menu and a right-hand configuration area. The left-hand menu includes a 'Back' button, a 'Select to configure a room.' header, and a list of room settings and configurations. The right-hand area contains a 'Current Template' section with instructions and buttons for 'Open room template', 'Save room template', and 'Share room template'. Below this is a 'Tap to save the current room configuration.' section with a 'Save room configuration' button. The next section is 'Tap the button to send current configuration to the room.' with a 'Send configuration to room' button. The final section is 'Tap the advanced data management button to perform advanced data file actions. Recommended for advanced users.' with an 'Advanced data management' button. At the bottom is a 'Tap the revert changes button to restore all data to previous. The app will exit the room.' section with a 'Revert changes' button. Numbered callouts 1 through 6 point to specific elements: 1 points to 'Room Settings', 2 to 'Configuration', 3 to the room list, 4 to the 'Open room template' button, 5 to the 'Send configuration to room' button, and 6 to the 'Revert changes' button.

Callout	Element
1	Room Settings
2	Configuration
3	Room List (ZUMNET-JBOX-16A-LV-6497, ZUMNET-JBOX-16A-LV 0002115NEJ06497, ZUMLINK-JBOX-20A-PLUG-4955, ZUMLINK-JBOX-20A-PLUG 0002112NEJ04955, ZUMLINK-JBOX-20A-SW-5076, ZUMLINK-JBOX-20A-SW 0002112NEJ05076, ZUMLINK-KP-3252, ZUMLINK-KP 002109NEJ03252)
4	Open room template
5	Send configuration to room
6	Revert changes

## Zūm® Wired J-Box Load Controller with Net and Link Communication

1. Room Settings: Edit the Room Name, PIN, Floor ID, Zone ID, and Network information.
2. Configuration: Edit the room logic view the current state of the room.
  - Sensors: View details for the connected sensor(s). Edit sensor name.
  - Load Controllers: Identify and view the details for the connected load controller(s).
    - ZUMLINK-JBOX-16A-LV and ZUMNET-JBOX-16A-LV load controllers:
      - View Current Scene, Daylighting status, Output Level.
      - Override: The state of the load when Override is recalled. Click the toggle to turn the load on or off during Override.
      - Assign the occupancy mode (Occupancy menu), vacancy mode (Vacancy menu), vicinity mode (Vicinity menu), and daylight harvesting (Photo menu) to specific load controllers.
      - View Dimming Values
      - Edit the Dimming Curve Configuration or Dimmer Scenes Configuration.
    - ZUMLINK-JBOX-20A-PLUG load controller:
      - Override: The state of the load when Override is recalled. Click the toggle to turn the load on or off during Override.
      - Assign the occupancy mode (Occupancy menu), vacancy mode (Vacancy menu), vicinity mode (Vicinity menu), and daylight harvesting (Photo menu) to specific load controllers.
    - ZUMLINK-JBOX-20A-SW load controller:
      - Closed: Click the toggle to turn the load on or off.
      - Override: The state of the load when Override is recalled. Click the toggle to turn the load on or off during Override.
      - Assign the occupancy mode (Occupancy menu), vacancy mode (Vacancy menu), vicinity mode (Vicinity menu), and daylight harvesting (Photo menu) to specific load controllers.
      - Scenes: Allow keypad access to the scene by selecting or deselecting the checkbox. Determine the state of the load when the scene is recalled by clicking the toggle on or off.
  - Scenes: View and edit room scenes: Scene 1 - Scene 16. When editing the scene, tap the Identify icon  to identify load controller: It emits a sound and flashes the Link LED. The connected loads also flash.

## Zūm® Wired J-Box Load Controller with Net and Link Communication





- Keypads: Identify and view the details for the connected keypad(s). Edit the keypad name and assign the button layout.
  - Adjust the Double Tap Speed: Set the amount of time between two button presses to qualify as a double tap.
  - Specify the Button Layout and click on a button to configure button actions.


### Button action options:

- None
  - Off: Assigned load controllers turn off.
  - On: Assigned loads turn on.
  - Raise: Assigned load controllers raise.
  - Lower: Assigned load controllers lower.
  - Recall Scene 1 - Scene 16: Assigned load controllers recall the behavior set for the specified scene.
  - Export to Hub: Name and send information to ZUM-HUB4 for macro actions.
- Load Shedding: Set the maximum levels for load shedding.
  - Load/Sensor Groups: Create groups within the room.
  - Current Scene: Displays the current room scene.
  - Occupancy Status: Displays occupied or vacant. If any area of the room is occupied, then the status is Occupied. When all areas of the room are vacant, the status is Vacant.

3. Discovered Room Devices: Identify a device and edit the commissioning settings

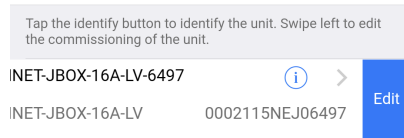
Tap the identify button to identify the unit. Swipe left to edit the commissioning of the unit.

ZUMNET-JBOX-16A-LV-6497		>
ZUMNET-JBOX-16A-LV	0002115NEJ06497	
ZUMLINK-JBOX-20A-PLUG-4955		>
ZUMLINK-JBOX-20A-PLUG	0002112NEJ04955	
ZUMLINK-JBOX-20A-SW-5076		>
ZUMLINK-JBOX-20A-SW	0002112NEJ05076	
ZUMLINK-KP-3252		>
ZUMLINK-KP	002109NEJ03252	

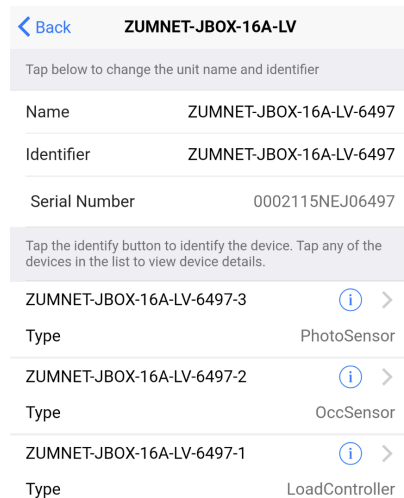
- Tap the Identify icon  to identify a device. A load controller emits a sound and the Link LED flashes. The connected loads also flash. A keypad flashes its LED.
- Tap the device to edit or review the device details: Edit Name. Review the Model, Serial Number, Status, and edit the device settings.

## Zūm® Wired J-Box Load Controller with Net and Link Communication

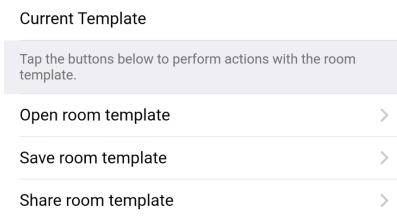
- Tap and slide a device from right to left until the blue Edit button appears.



Use the edit screen to change the name of the device and the name of the device functions. Also, identify or edit the connected devices.

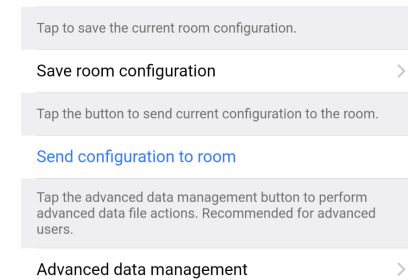


4. Current Template Settings: Choose Open room template, Save room template, or Share room template.



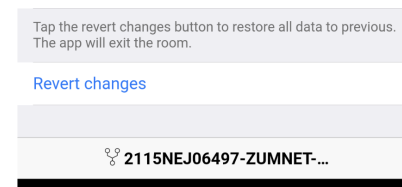
5. Configuration Data:

- Save room configuration: Save the room configuration data in the space.
- Send configuration to room: Send room logic changes made in the app to the room.
- Advanced data management: Review the Map, Logic, and Settings of the data currently loaded. Load, save or share new Map, Logic, or Settings data.



**NOTE:** Changes made in the app are not sent to the room until they are deployed using the Send configuration to room button.

6. Revert changes: Restore all non-deployed changes made since launching the app.



## Zūm® Wired J-Box Load Controller with Net and Link Communication

### Calibrate Daylighting Settings

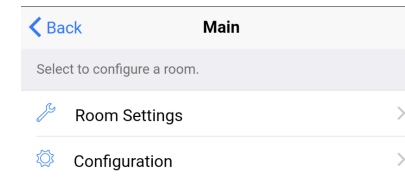
The photocell component of a load controller detects the amount of ambient light in the room. When a space is calibrated for Daylighting and Scene 1 is called, the photocell will detect the ambient light levels and dim the lights accordingly.

Calibrating Daylighting requires four main steps:

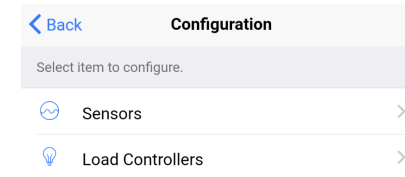
1. Assign the photocell component of a load controller to the load controller.
2. Send the new configuration to the space.
3. Adjust the light level in the space.
4. Calibrate Daylighting.

To calibrate the daylight settings:

1. Assign the photocell component to the load controller that will participate in Daylighting.
  - a. From the Main screen, click **Configuration**.



- b. Click **Load Controllers**.



- c. Click the desired load controller.

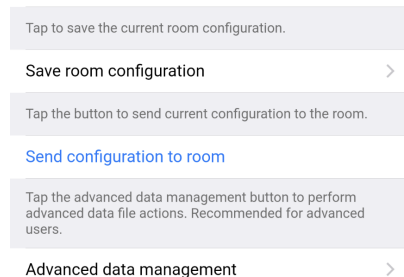
## Zūm® Wired J-Box Load Controller with Net and Link Communication

d. For Photo, select a photocell from the drop-down menu.



2. Send the configuration to the room.

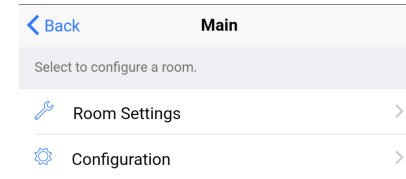
- Navigate back to the Main screen.
- Click **Send configuration to room**.



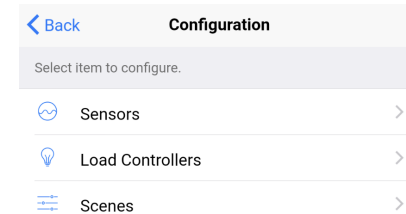
A confirmation window opens stating that the app will disconnect from the room. Click **OK** to continue or **Cancel** to close without sending the configuration. The Retrieving Data Map screen displays.

3. Recall Scene 1 and adjust load levels.

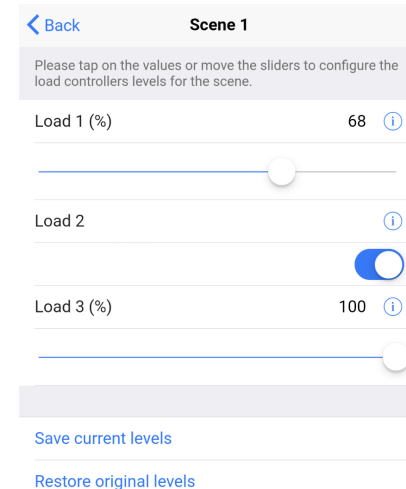
- From the Main screen, click **Configuration**.



- Click **Scenes**.



- Select **Scene 1**. Daylighting is only available for Scene 1.



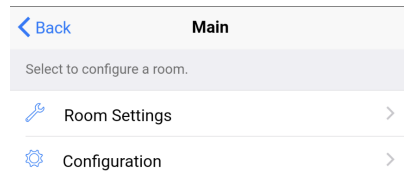
## Zūm® Wired J-Box Load Controller with Net and Link Communication

- d. Adjust the loads in the space to the appropriate level based on the amount of natural light.

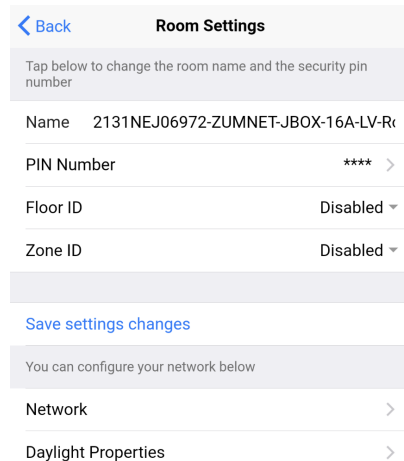
**NOTE:** DO NOT click Save current levels.

### 4. Calibrate Daylighting.

- a. Navigate back to the Main screen.
- b. Click **Room Settings**.



- c. Click **Daylight Properties**.



- d. Click **Calibrate Daylighting**.



To indicate that Daylighting has been calibrated, the lights in the space will turn full on, turn off, and then back on with the Daylighting settings. Whenever Scene 1 is recalled, the Daylighting settings are initiated.



## Zūm® Wired J-Box Load Controller with Net and Link Communication



### Visit the Product Page

Scan the QR code to visit the product page.

#### ZUMNET-JBOX-16A-LV



[www.crestron.com/model/6511166](http://www.crestron.com/model/6511166)

#### ZUMNET-JBOX-DALI



[www.crestron.com/model/6511170](http://www.crestron.com/model/6511170)

### Additional Information

#### Original Instructions

The U.S. English version of this document is the original instructions. All other languages are a translation of the original instructions.

Regulatory Model: M201933001, M201933003

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The product warranty can be found at [www.crestron.com/warranty](http://www.crestron.com/warranty).

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