ZUMLINK-JBOX Series

ZŪM®

Zūm® Wired J-Box Load Controller with Link Communication

The Crestron® ZUMLINK-JBOX-16A-LV, ZUMLINK-JBOX-20A-SW, and ZUMLINK-JBOX-20A-PLUG load controllers:

- Provide a sophisticated, wired lighting control solution for Zūm® commercial lighting systems.
- Facilitate in-room communication via the CBL-CAT5E-ZUMLINK-P cables (sold separately) for daisy-chained connection to Zūm Link load controllers and compatible keypads and sensors.
- Connect to Zūm Net devices for communication between rooms.
- Mount directly to a 4 in. square junction box.

The ZUMLINK-JBOX-16A-LV, ZUMLINK-JBOX-20A-SW, and ZUMLINK-JBOX-20A-PLUG load controllers are functionally similar. For simplicity within this guide, the term "ZUMLINK-JBOX" is used except where otherwise noted.

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

- 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
- ZUMNET-JBOX-16A-LV: 0-10V Dimmer, 16A, 100-277V
- ZUMNET-JBOX-DALI: DALI® Load Controller, 100-277V

> **NOTE:** ZUMNET-JBOX devices facilitate communications between rooms via CBL-CAT5E-ZUMNET-P cables (sold separately) and can be daisy-chained for network expansion. Zūm Link devices connect to ZUMNET-JBOX devices to provide in-room lighting control.

ZUMLINK-JBOX Open
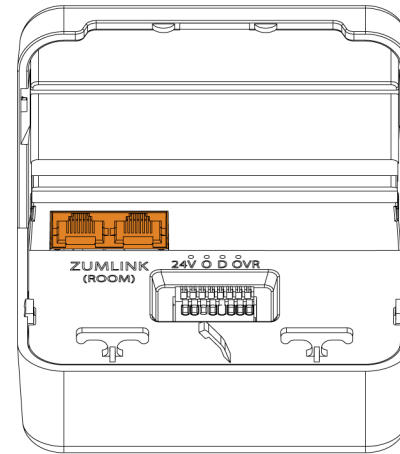
ZUMLINK-JBOX Closed
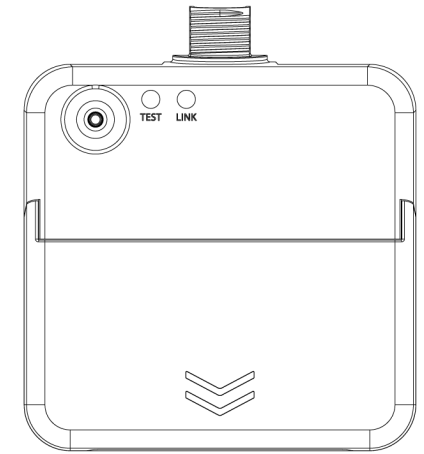
In the Box

| 1 | ZUMLINK-JBOX-16A-LV, ZUMLINK-JBOX-20A-PLUG, or ZUMLINK-JBOX-20A-SW, Zūm® LINK Wired J-Box Load Controller |

Additional Items

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

ZUMLINK-JBOX Series

Quick Start

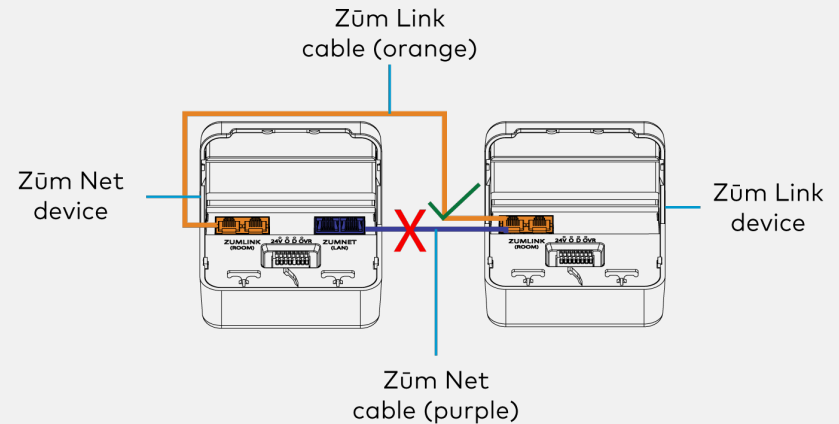## Zūm® Wired J-Box Load Controller with Link Communication

⚙ 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 Link cable (orange)

Zūm Net device

Zūm Link device

Zūm Net cable (purple)

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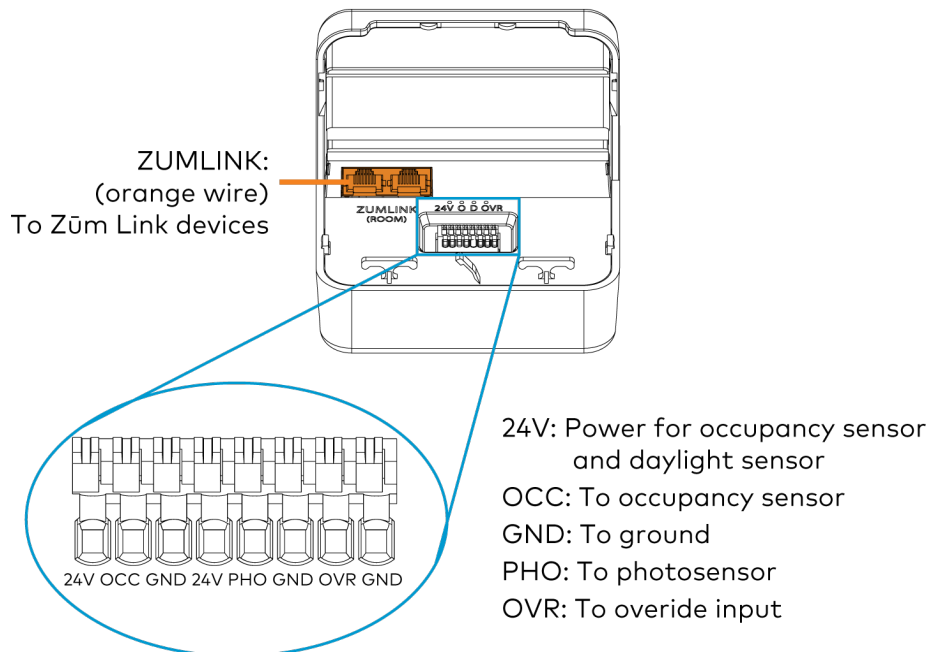## Zūm® Wired J-Box Load Controller with Link Communication

To install a ZUMLINK-JBOX:

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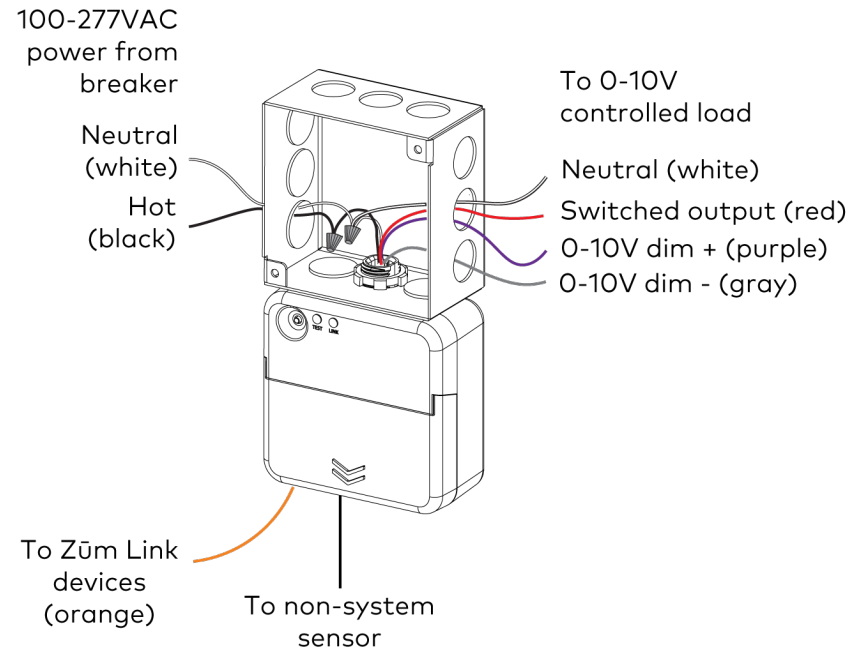2. Mount the ZUMLINK-JBOX to the junction box using the included locknut.

ZUMLINK-JBOX   Locknut   Junction box
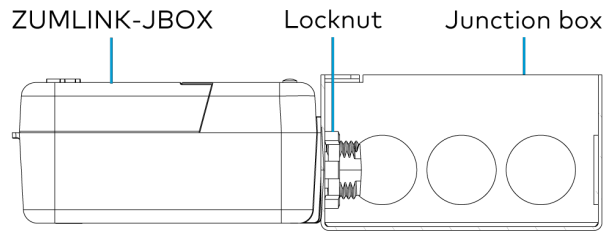
3. Wire the ZUMLINK-JBOX as shown in the following diagrams.

ZUMLINK-JBOX Wiring to Other Zūm Link Devices

ZUMLINK:
(orange wire)
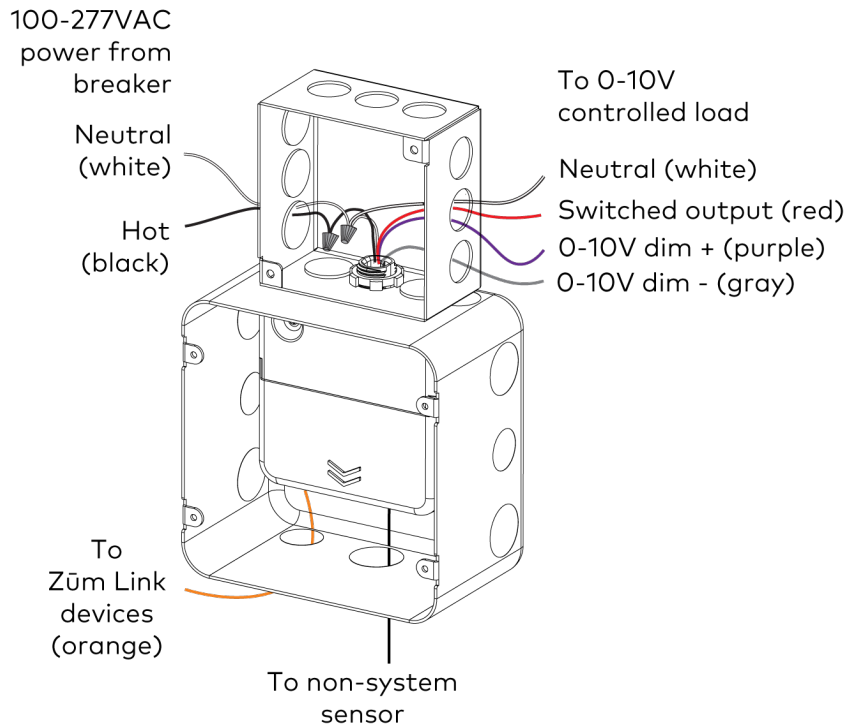To Zūm Link devices

ZUMLINK
(ROOM)   24V O D OVR

24V OCC GND 24V PHO GND OVR GND

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

ZUMLINK-JBOX Wiring

100-277VAC
power from
breaker

Neutral
(white)

Hot
(black)

To 0-10V
controlled load

Neutral (white)
Switched output (red)
0-10V dim + (purple)
0-10V dim - (gray)

To Zūm Link
devices
(orange)

To non-system
sensor

ZUMLINK-JBOX Series

Zūm® Wired J-Box Load Controller with Link Communication

ZUMLINK-JBOX Wiring to Meet Chicago Electric Code

100-277VAC power from breaker

Neutral (white)

Hot (black)

To 0-10V controlled load

Neutral (white)
Switched output (red)
0-10V dim + (purple)
0-10V dim - (gray)

To Zūm Link devices (orange)

To non-system sensor

Zūm Wired System Diagram

Room 1

Sensor   Sensor

Non-system sensor

Zūm Link load controller

Lights

Control system

Network switch

Keypad

Zūm Net load controller

Room 2

Sensor   Sensor

Zūm Link load controller

Lights

Keypad   Keypad

Zūm Net load controller

To next room (up to 20 devices)

● Zūm Net (room-to-room control)

● 24VDC control

● Zūm Link (in-room control)

● SW or LV control

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Zūm® Wired J-Box Load Controller with 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 the connected dimmers.

Recessed test button   TEST and LINK LEDs
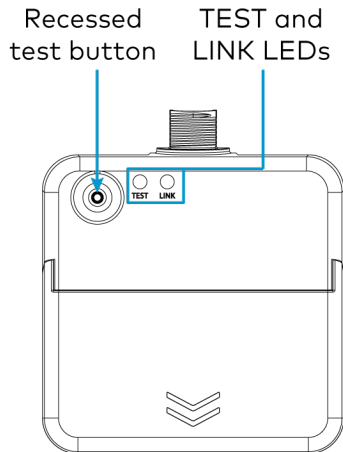
Firmware Upgrade

Before using the ZUMLINK-JBOX, ensure it is updated with the latest firmware. Check for the latest firmware at 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 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-ZUMLINK-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

Top button

Bottom button
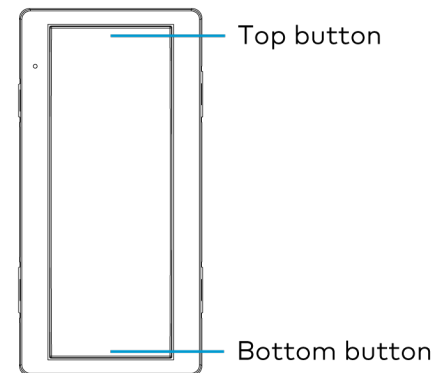
Zūm® Wired J-Box Load Controller with Link Communication

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 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™ 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.

	Nearby Rooms	
	Swipe down to refresh. Swipe right from the left screen edge to show the Help menu. Tap on any of the rooms below to pair with it.	
	2115NEJ06497-ZUMNET-JBOX-16A-	>
	Signal Strength	-67
	Mode	Edit ▾
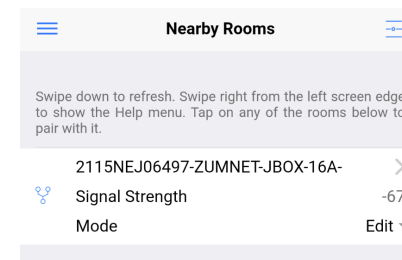
Zūm® Wired J-Box Load Controller with Link Communication

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.

Zūm® Wired J-Box Load Controller with 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 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 Link Communication

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

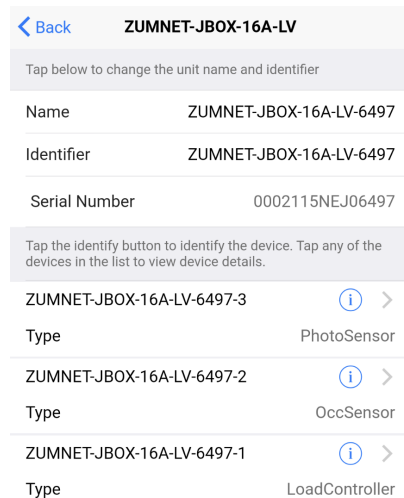| Tap the identify button to identify the unit. Swipe left to edit the commissioning of the unit.		
NET-JBOX-16A-LV-6497	ⓘ >	
NET-JBOX-16A-LV	0002115NEJ06497	Edit
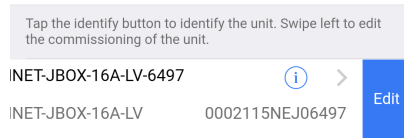
Use the edit screen to change the name of the device and the name of the device functions. Also, identify or edit the connected devices.
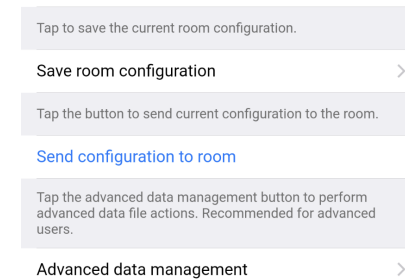
‹ Back	**ZUMNET-JBOX-16A-LV**
Tap below to change the unit name and identifier	
Name	ZUMNET-JBOX-16A-LV-6497
Identifier	ZUMNET-JBOX-16A-LV-6497
Serial Number	0002115NEJ06497
Tap the identify button to identify the device. Tap any of the devices in the list to view device details.	
ZUMNET-JBOX-16A-LV-6497-3	ⓘ >
Type	PhotoSensor
ZUMNET-JBOX-16A-LV-6497-2	ⓘ >
Type	OccSensor
ZUMNET-JBOX-16A-LV-6497-1	ⓘ >
Type	LoadController

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

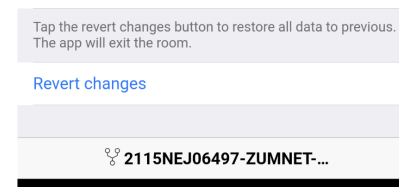| Current Template	
Tap the buttons below to perform actions with the room template.	
Open room template	>
Save room template	>
Share room template	>
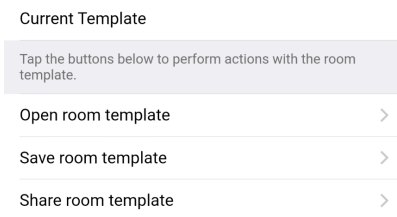
5. Configuration Data:
   - Save room configuration: Save the room configuration data in the space.
   - Send configuration to room: Send room logic changes made in the app to the room.
   - Advanced data management: Review the Map, Logic, and Settings of the data currently loaded. Load, save or share new Map, Logic, or Settings data.

Tap to save the current room configuration.
Save room configuration >
Tap the button to send current configuration to the room.
Send configuration to room
Tap the advanced data management button to perform advanced data file actions. Recommended for advanced users.
Advanced data management >

> **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.

Tap the revert changes button to restore all data to previous. The app will exit the room.
Revert changes
⛉ **2115NEJ06497-ZUMNET-...**

Zūm® Wired J-Box Load Controller with 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.

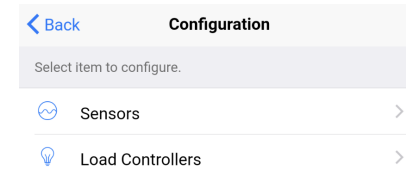Calibrating Daylighting requires four main steps:

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**.

‹ Back	Main	
Select to configure a room.		
🔧 Room Settings		›
⚙ Configuration		›

    b. Click **Load Controllers**.
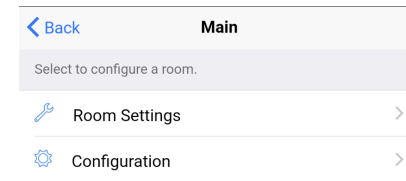
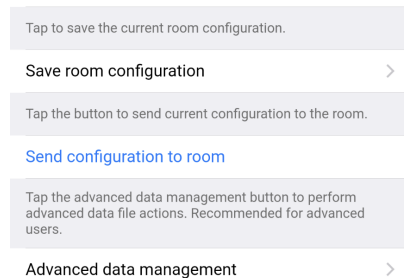 | ‹ Back | Configuration | |
    | --- | --- | --- |
    | Select item to configure. | | |
    | ⊙ Sensors | | › |
    | 💡 Load Controllers | | › |

    c. Click the desired load controller.

Zūm® Wired J-Box Load Controller with Link Communication

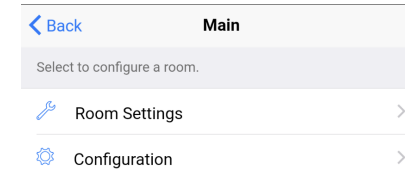d. For Photo, select a photocell from the drop-down menu.

‹ Back	ZUMLINK-JBOX-16A-LV	
SN: 0002133NEJ10536; FW: v1.001.00054		
Current Scene		1
Daylighting		Inactive
Output Level		68%
Tap below to configure the load override.		
Override (0-100%)		100
Select the sensors that are bound to this load controller.		
Occupancy		All ▾
Vacancy		All ▾
Vicinity		None ▾
Photo		None ▾

2. Send the configuration to the room.

   a. Navigate back to the Main screen.

   b. Click **Send configuration to room**.

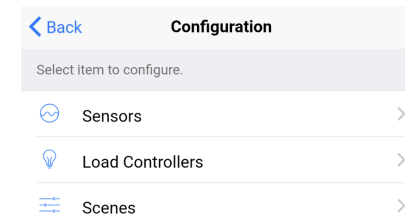| |
|---|
| Tap to save the current room configuration. |
| Save room configuration ❯ |
| Tap the button to send current configuration to the room. |
| Send configuration to room |
| Tap the advanced data management button to perform advanced data file actions. Recommended for advanced users. |
| Advanced data management ❯ |

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.

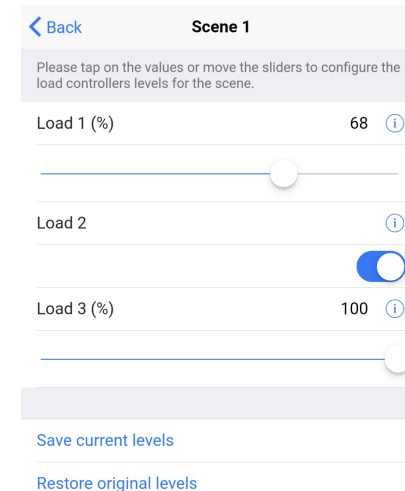3. Recall Scene 1 and adjust load levels.

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

‹ Back	Main
Select to configure a room.	
🔧 Room Settings	❯
⚙ Configuration	❯

   b. Click **Scenes**.

‹ Back	Configuration
Select item to configure.	
Sensors	❯
Load Controllers	❯
Scenes	❯

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

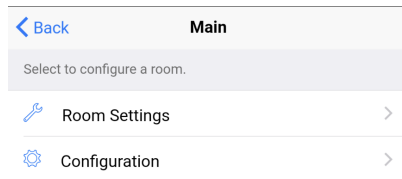| ‹ Back	Scene 1
Please tap on the values or move the sliders to configure the load controllers levels for the scene.	
Load 1 (%)	68 ⓘ
Load 2	ⓘ
Load 3 (%)	100 ⓘ
Save current levels	
Restore original levels	

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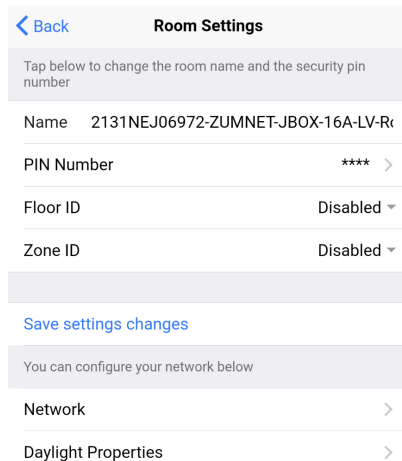## Zūm® Wired J-Box Load Controller with Link Communication

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**.

‹ Back	Main
Select to configure a room.	
🔧 Room Settings	›
⚙ Configuration	›

c. Click **Daylight Properties**.

‹ Back	Room Settings
Tap below to change the room name and the security pin number	
Name	2131NEJ06972-ZUMNET-JBOX-16A-LV-R(
PIN Number	**** ›
Floor ID	Disabled ⌄
Zone ID	Disabled ⌄
Save settings changes	
You can configure your network below	
Network	›
Daylight Properties	›

d. Click **Calibrate Daylighting**.

‹ Back	Daylight Properties
Current Daylight properties of the room	
Scene	1
Room Occupancy	Occupied
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 Link Communication

Visit the Product Page

Scan the QR code to visit the product page.

ZUMLINK-JBOX-16A-LV

www.crestron.com/model/6511167

ZUMLINK-JBOX-20A-SW

www.crestron.com/model/6511168

ZUMLINK-JBOX-20A-PLUG

www.crestron.com/model/6511169

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, M201933002, and M201933004

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