P/N 041571m

System Programming User Guide

For Hub Firmware Version: 1.23

LUTRON

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What is a Vive system?

The Lutron Vive system is a simple and scalable wireless lighting control solution for new and existing commercial buildings. Some of the many benefits of a Vive system are:

- Flexibility needed to design a building
- Wireless technology simplifies installation and reduces callbacks
- Maximize productivity and building performance
- Dependability and confidence that the system will work from the start and will keep working
- Visible and traceable energy savings control and monitoring

Components

Lutron Vive app

Vive wireless hub

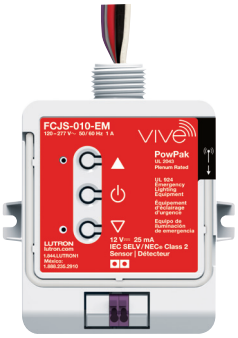
Ceiling mount

PowPak controller with J-box

Fixture mount

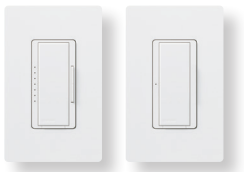
PowPak wireless fixture controller with fixture sensor

Emergency PowPak controller

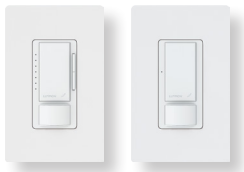


Radio Powr Savr occupancy/vacancy sensor

Wallbox mount



Maestro Wireless dimmer/switch



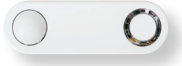
Maestro Wireless dimmer/switch with sensor

PowPak fixture sensor

Radio Powr Savr daylight sensor

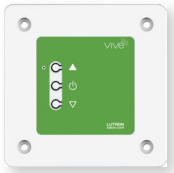
Pico remote control

Integral fixture control



Wireless receptacle

Dimming module



Installation/Wiring

For directions on how to install Vive devices, refer to the installation instructions included with the product. This guide is based on the premise that all devices are already properly installed and wired.

P/N 041571m

Lutron Vive App

The Lutron Vive app is available for download on iOS® and Android™ devices. The app is compatible with Vive hub software version 1.5 and newer. Older versions of hub software must be upgraded before using the Vive app.

1. Download the app from the App Store or the Google Play™ store.

2. Launch the app and follow the instructions to create a myLutron account. If you already have a myLutron account, enter the account credentials into the app.
3. Verify your email address and login to your account.
4. Create a project in the app and add Vive hubs to the project. The app provides a consolidated view of all projects and every hub within a project. The app allows an installer to activate the extended warranty and “hand off” a project to the customer.

   When a project is handed off to the customer, an e-mail that contains the project details will be sent to the customer. The customer will be able to access the project, view the hubs, and see other details related to the project.

Initial Configuration

The Vive software is used to program the Vive wireless hub (known as “hub” hereafter). A hub can be accessed via Lutron Vive app or a web browser (Google Chrome™ browser or Safari application program recommended).

If the Vive app is used, follow the instructions in the app to create a project and add hubs to it. Multiple users can be invited to a project and can access and collaborate on a project from different devices.

Note: The hub can be programmed by connecting a smart device (e.g., phone, tablet, or laptop) to the built-in Wi-Fi® chip of the hub. There is no requirement to connect to external or building Wi-Fi networks.

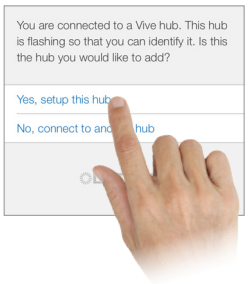
Connect to the Hub (via browser)

1. Enable the Wi-Fi connection on the smart device.

2. Navigate to the list of available networks. When in range of the hub, you should see a network name similar to “Vive-017d20b9”. The text that follows “Vive” in the network name is the serial number of the hub. Connect to this network.

Set Up Wi-Fi Connection (via browser)

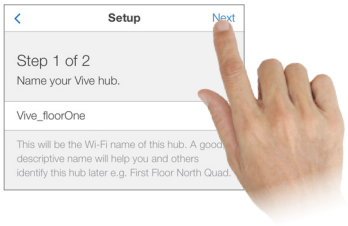
1. Open a web browser and type “vive.lutron.com” into the address bar. An image of the hub will appear and the antenna on the hub that you are connected to will flash white. If this is not the correct hub, return to the list of Wi-Fi networks and choose a different network. Once you have found the correct hub, tap “Yes, setup this hub”.



Note: If you want to set up the hub via the app, follow instructions in the app to set up a project and add hubs.

2. Tap the current name of the hub and rename it (e.g., Vive_floorOne). This will be the Wi-Fi network name of this hub. A good descriptive name will help you and others identify this hub later.

3. Tap “Next”.



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Initial Configuration (continued)

4. Type in a secure password for the Wi-Fi network and tap “Done”.

   A strong password is required to keep the account secure.

   A password must:

   a. be at “Medium” strength or higher.

   b. contain at least 8 characters.

   c. NOT contain these characters: ‘ ’ “ ”

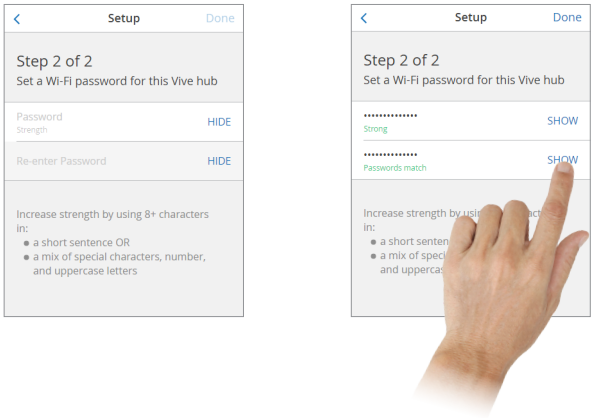
   Follow the guidelines below to create a secure password.

   • Increase the length of the password.

   • Include both uppercase and lowercase letters.

   • Add numbers or special characters.

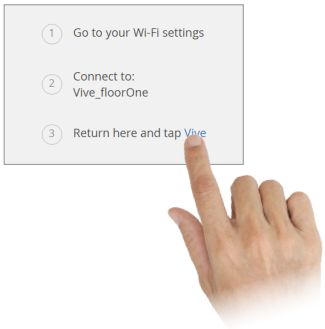
   Note: Tap “Show” or “Hide” to view or hide the password you are typing.

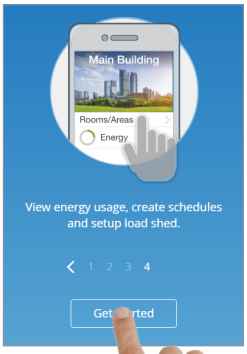


5. Record the password in a secure location.

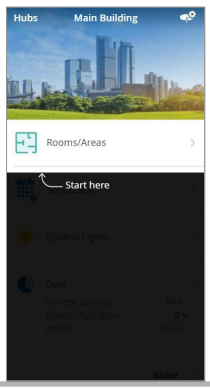
6. The hub will apply these settings and will disconnect from the smart device. Go back to the Wi-Fi settings screen on the smart device and connect to the hub network using the Wi-Fi name and password you just created.

7. Return to the web browser and tap “Vive”. You will be presented with a short tutorial on the Vive software. After reviewing the screens, tap “Get Started”.





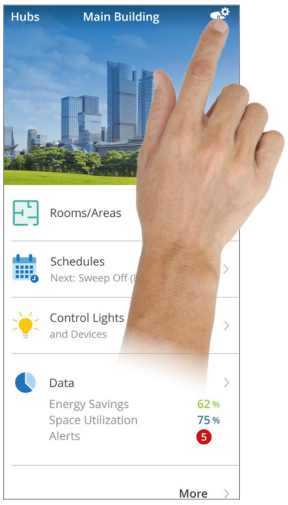
8. You will be directed to the main dashboard of the Vive software. You can start creating the system by following the steps in the **Commissioning** section of this guide.

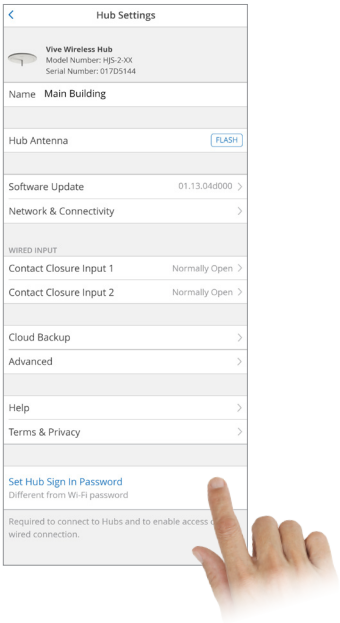


Create a Password for the Hub

Optional: Lutron recommends creating an additional password for the hub. This increases security and is required to access the application over a wired network.

1. From the main dashboard in the Vive software, tap "⚙" and then tap "Set Hub Sign In Password".





2. Enter a secure password for the hub and tap "Save".

   A strong password is required to keep the account secure.

   A password must:

   a. be at "Medium" strength or higher.

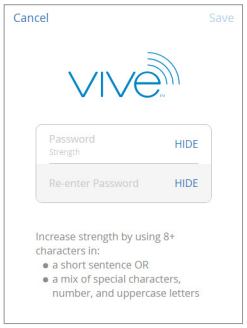
   b. contain at least 8 characters.

   c. NOT contain these characters: ‘ ’ “ ”

   Follow the guidelines below to create a secure password.

   - Increase the length of the password.
   - Include both uppercase and lowercase letters.
   - Add numbers or special characters.

   Note: Tap "Show" or "Hide" to view or hide the password you are typing.



3. Record the password in a secure location.

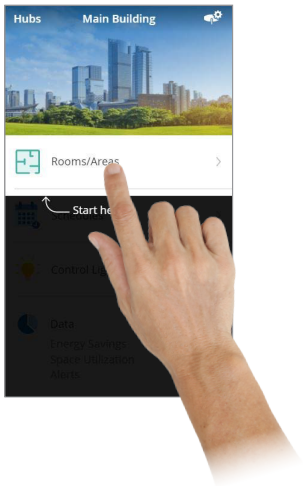
Commissioning

The Vive system uses wireless signal strength measurements to make adding fixtures to an area as quick and efficient as possible. To take advantage of this technology, ensure that you are physically in the room to be programed when performing these steps.

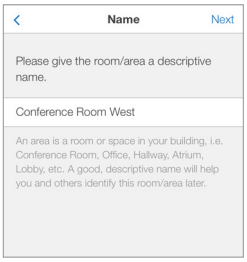
Create an Area

An area is a room or space in the building (e.g., conference room, office, or hallway).

1. From the main dashboard in the Vive software, tap “Rooms/Areas”.



2. Select “Add a room or area” and name the area.



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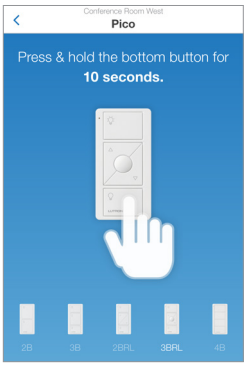
Commissioning (continued)

Add Devices

Add a Pico Remote Control and Assign Devices

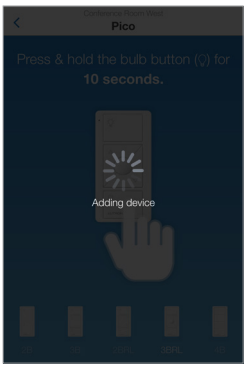
1. Select “Pico” as the type of device you want to add.

   Note: You may choose to start with any device. You can even start with a device that is not shown by selecting “I don’t have any of these devices in my area”. The following steps are based on using a Pico remote control.



2. Press and hold the bottom button on a Pico remote control for 10 seconds until the screen says “Adding device”.

   Note: You do not need to select the correct Pico remote control model number before pressing the button. When you press the button, the software will automatically recognize what model you are using. The images in the software are a guide and may not illustrate the exact model you are using.



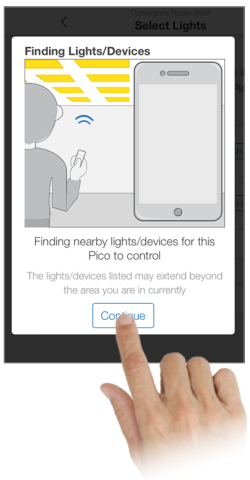
3. Tap “Continue” on the “Finding Lights/Devices” illustration. This illustration will appear when adding the first device.

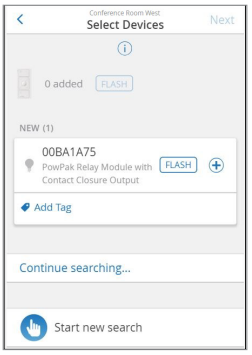
   The software will find lights/devices nearby. You will be presented with a list of devices that is ordered based on the strength of the wireless signal. The devices closest to the Pico remote control will appear at the top of the list. The serial number is the default name for that device. The name can be changed later.

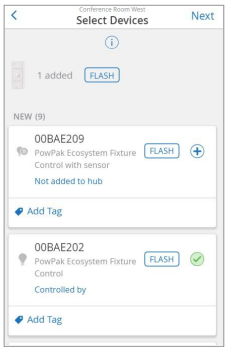
   Note: Any lights/devices manually assigned (button press method) to this Pico remote control will appear in the list as “Not added to hub” and will need to be added. If the lights/devices are controlled by any other controlling device (e.g., sensors), then they will need to be reassigned to those devices via the hub.

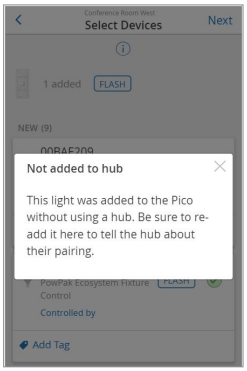
   Note: The “Continue searching...” button can be used to reveal more loads that may be farther away from the Pico remote control. Tap this button if the devices do not appear in the list.

   Note: In very large rooms (e.g., open office) you may need to move around the space and tap “Start new search” several times to capture all of the devices.









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Commissioning (continued)

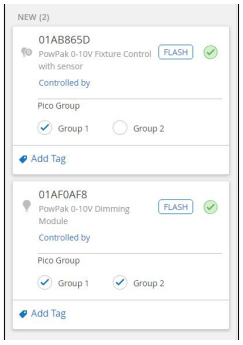
Add Devices (continued)

Add a Pico Remote Control and Assign Devices (continued)

4. Tap “FLASH” and the load will flash to identify the device. If this is the desired device, tap “+”. Repeat this step for each device that you want to add to the area.

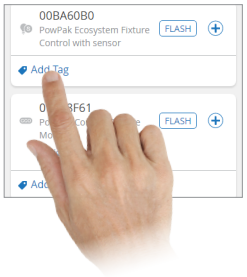
   Note: PowPak receptacle controllers and CCO controllers will not cycle on and off when you tap “FLASH”. Instead, these devices will rapidly flash the LEDs on the front of the PowPak controller.

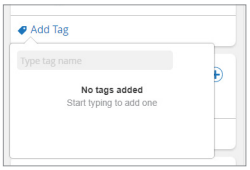
   Note: If you are adding a 4-button 2-group Pico, you can add lights/devices to one or both groups. These lights/devices will be then be controlled by the Pico group button presses.



5. Press “Add Tag” to tag a device, light, or control for future reference. When adding controlling devices, these tags will be displayed and the devices will not need to be flashed again for identification.

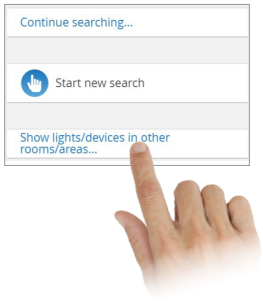
   Tags are flexible and can be used in any way desired. They can be used to name new areas. Examples of tags are “Sales Area”, “Front Row”, and “Conference Room”.

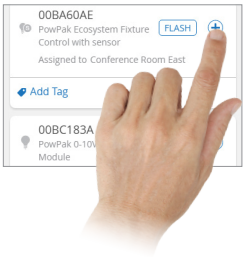




6. A Pico remote control can control devices in multiple areas. To add a device from another area, tap “Show lights/devices in other rooms/areas...”. Select the desired area and tap “+”.

   Note: The Pico wireless control must be located within 30 ft (9 m) through walls or 60 ft (18 m) line-of-sight of all devices that it is controlling.





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Commissioning (continued)

Add Devices (continued)

Add a Pico Remote Control and Assign Devices (continued)

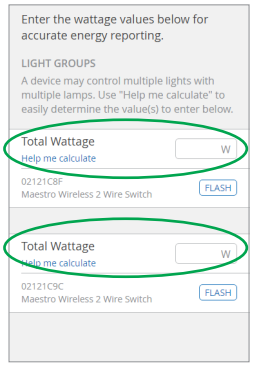
7. For each device added, enter the total wattage of the load(s) in the appropriate “Wattage (W)” field. This is required to obtain the most accurate energy reporting via the Vive software or BACnet.

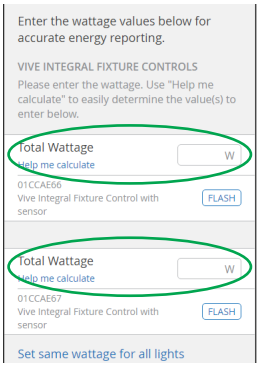
   Note: The Vive software will automatically report energy usage for fixtures with a PowPak fixture controller. Vive Integral Fixture Controls may also report energy usage automatically. Check the Vive Integral Fixture Control product specification for more details.

   Note: The wattage for PowPak receptacle controllers cannot be entered since the wattage can change over time based on what is plugged into the receptacle.

   Note: The energy savings reported is instantaneous only. If historical energy reporting is needed, a premium hub with BACnet should be configured to work with a BMS. The BMS will store and report historical energy savings data.

   Note: In the case that Vive Integral Fixture Controls were added, it is possible to a enter common wattage for each device. It is also possible to enter the wattage of each device individually by tapping “Set different wattage for each light.”



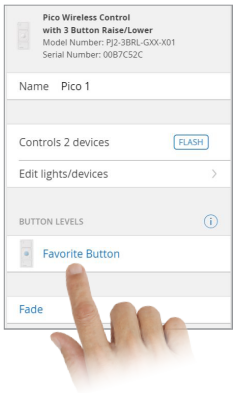


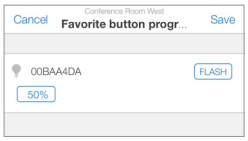
8. Tap “Next” and rename the Pico remote control.

9. If using a 3BRL Pico remote control, tap “Favorite button programming” to reprogram the favorite button to the desired level. You can set all of the loads to the same level or individual levels. The “Preview” button allows you to see the programming live without making any changes.

   Note: On 2B, 2BRL, 3B, and 3BRL Pico remote controls, the top and bottom buttons will turn all assigned loads to 100% and 0% respectively. On a 4B Pico remote control, the bottom button turns all assigned loads to 0%. The middle button on a 3B and 3BRL and the top three buttons on a 4B can all be programed to desired preset levels.

   Note: The PowPak CCO controller (RMJS-CCO1-24-B) can be programmed like other relay devices (open/close). For PowPak controllers that have both line voltage relays and contact closure outputs (CCOs), the CCO will always mimic the relay and can not be programmed separately.





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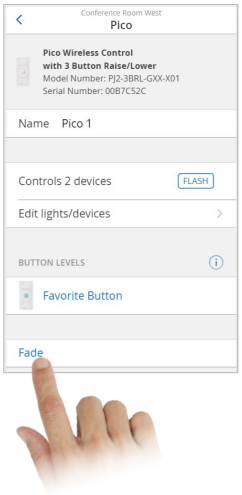
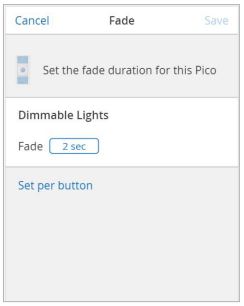
Commissioning (continued)

Add Devices (continued)

Add a Pico Remote Control and Assign Devices (continued)

10. To set the fade duration for the Pico remote control, tap “Fade”. This time specifies the length of the transition between the original and target light levels of the dimmable lights assigned to the Pico remote control.



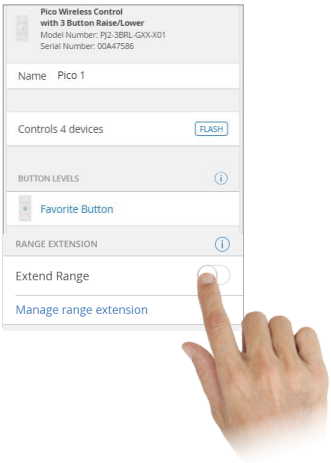


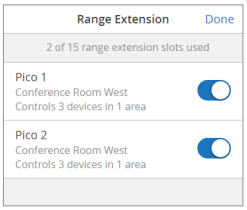
11. Extend the wireless range of a Pico wireless control if it is controlling devices in multiple rooms or lights/devices beyond the normal range. This ensures that far away lights/devices responds to the Pico wireless control.

    Note: This feature extends the wireless range of a Pico wireless control to the full range of the hub that it is assigned to. It cannot be used to control devices beyond the range of the hub.

    Note: A hub will automatically extend the range of Pico wireless controls if they fall under a recommended category; however, you may choose to disable the range extension feature.

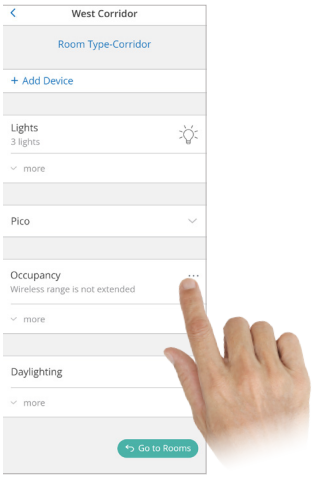
    Note: A maximum of 15 Pico wireless controls can have their range extended.





12. In a new room, if you have added multiple fixtures with sensors to the Pico control, or a wireless daylight sensor, then you will be given the option to enable all occupancy sensors to work together. When working together, if any of the sensors detect occupancy, then all lights associated with all of the sensors will turn on.

    The option can be changed by tapping on the room, where occupancy settings may be changed.



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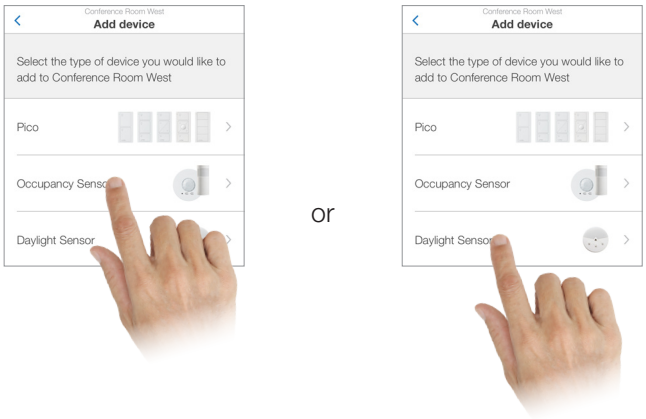
Commissioning (continued)

Add Devices (continued)

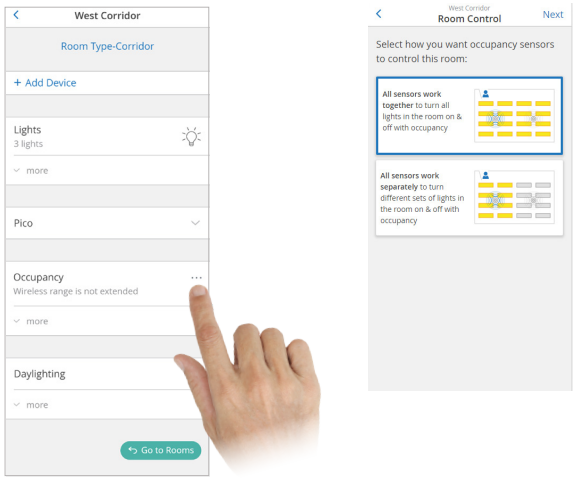
Add a Sensor and Assign Devices

1. From the “Add device” screen, select the desired sensor type.

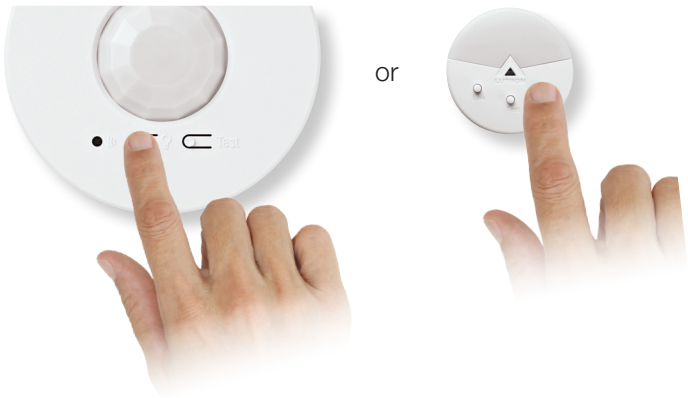


2. In a room with an existing wireless occupancy sensor, if you add an additional wireless sensor, then you will be given the option to enable all occupancy sensors to work together. When working together, if any of the sensors detect occupancy, then all lights associated with all the sensors will turn on.

   The option can be changed by tapping on the room, where occupancy settings may be changed.



3. Press and hold the indicated button on the sensor for 10 seconds. The system will perform another wireless signal measurement like it did with the Pico remote control in the previous section.



Continued on next page...

Commissioning (continued)

Add Devices (continued)

Add a Sensor and Assign Devices (continued)

4. Once the list appears, tap “FLASH” to identify the load and tap “+” to add it.

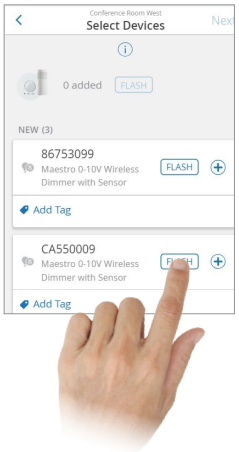
   Any loads already programmed to a Pico remote control are labeled as such. This allows you to quickly identify which devices are already part of the area.

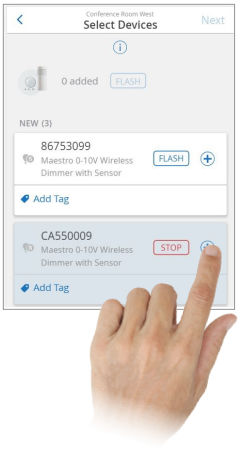
   Note: For wireless daylight sensors, the lights can be added to different rows. There can be a different target brightness for different rows of lights.

   Note: For safety reasons, PowPak receptacle controllers and PowPak CCO controllers will not flash their relay output when you tap “FLASH”. Instead, these devices will rapidly flash the LEDs on the front of the PowPak controller.

   Note: PowPak receptacle controllers cannot be assigned to a daylight sensor.

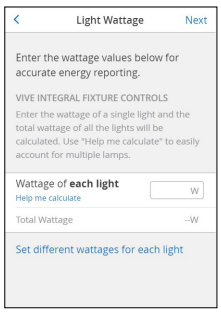
   Note: If there are many devices in the area, it may be easier to rename them first before adding additional sensors. This allows the fixtures to be identified easier when assigning them to sensors.



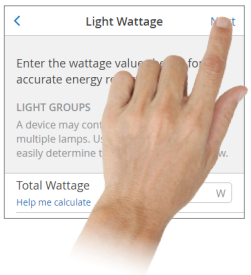


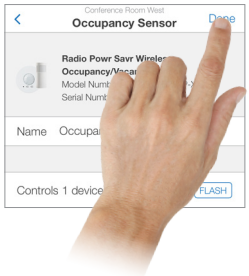
5. Enter the total wattage of each load in the appropriate “Wattage (W)” field for each device. This is required to get accurate energy data.

   Note: In the case that Vive Integral Fixture Controls were added that do not automatically report energy usage, it is possible to enter a common wattage for them. It is also possible to enter the wattage of each device individually by tapping “Set different wattages for each light.”



6. Tap “Next” and rename the sensor. Tap “Done.”





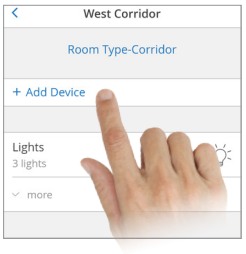
Continued on next page...

Commissioning (continued)

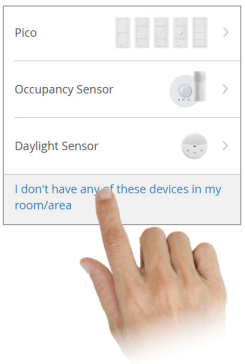
Add Devices (continued)

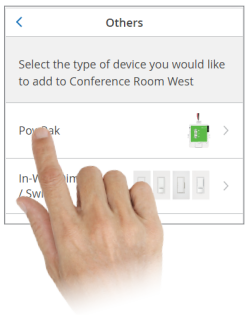
Add Devices Directly to the Hub

1. Tap “Add Device” at the room’s device screen.

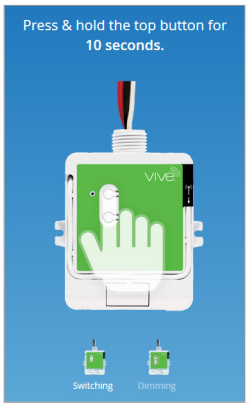


2. Tap “I don’t have any of these devices in my room/area” and then select the desired device.





3. Press and hold the indicated button for 10 seconds. The screen will show which button to press.



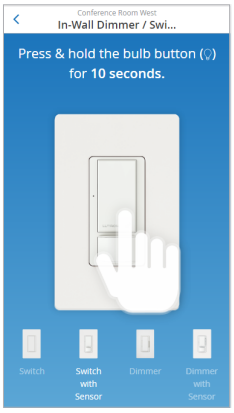
Continued on next page...

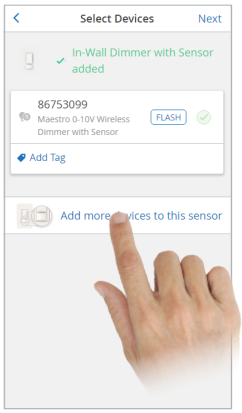
Commissioning (continued)

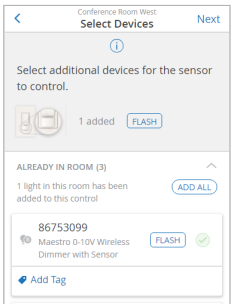
Add Devices (continued)

Add Devices Directly to the Hub (continued)

Note: While adding an In-Wall Dimmer/Switch with sensor in the room, additional lights/devices can be assigned to the sensor. The occupancy of lights/devices added to the sensor will be controlled by the sensor; however, the dimmer/switch will not control these additional lights. It will only control its wired lights.

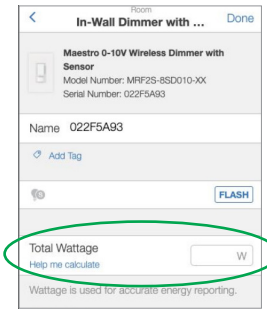




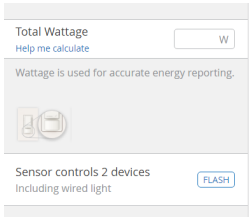


4. Rename the device and enter the total wattage of each load in the appropriate “Total Wattage (W)” field for each device. This is required to get accurate energy data.

   Note: The Vive software will automatically report energy usage for fixtures with a PowPak fixture controller. Nothing needs to be entered for these fixtures. If power for the fixture is not wired through the PowPak fixture controller, the software will report 0 W for that fixture.



   Note: If additional devices are added to the sensor of an In-Wall Dimmer/Switch with sensor, then an additional section with that information will display on the device detail screen.

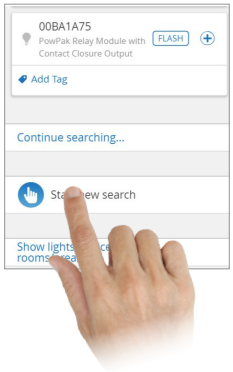


5. Tap “Done”.

Find Devices not Showing up in Discovery

Device Too Far Away

Sometimes a device cannot be found during the “Finding Lights/Devices” step. Follow the steps below if you are having difficulty finding a device that you would like to add to an area via a Pico remote control or sensor.



1. On the “Select Lights” screen, tap “Start new search”.
2. Move a Pico remote control or sensor close to the device that you are trying to add.

   Note: Devices can be wired to multiple loads in an area. Move the Pico remote control or sensor near the device, not the load.

   Note: The Pico wireless control must be located within 30 ft (9 m) through walls or 60 ft (18 m) line-of-sight of all devices that it is controlling.

3. Press and hold the indicated button on the Pico remote control or sensor for 10 seconds. The system will perform a wireless signal measurement and the device should be listed.

   If you still cannot find the device, check the following:

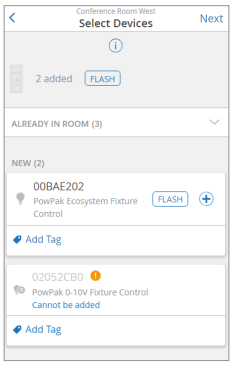
   - Verify that the device has power.
   - Ensure that the device is properly wired.
   - Sometimes large metal objects can decrease the signal strength of a device making it appear further away. Move to the other side of the room as that may make the device appear closer.

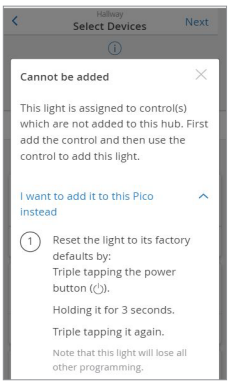
Unsupported Device

If the hub software does not support a specific device, you will get an “Unsupported device” error message when trying to add that device. Follow the steps in the **Firmware Update** section to update the hub software. Once the hub software has been updated, add the device to the hub.

Devices Set Up Without the Hub

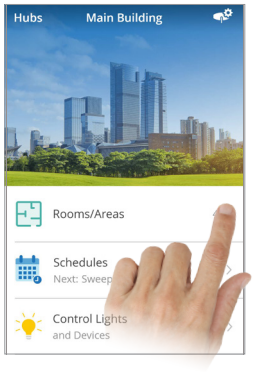
If a light/device was manually assigned (button press method) to a different device (e.g., Pico remote control, sensor), the light/device will be shown in the discovered list but cannot be added until it is restored to factory defaults. To do this, follow the steps on the screen or in the installation instructions (provided with the device).



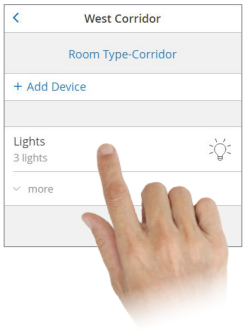


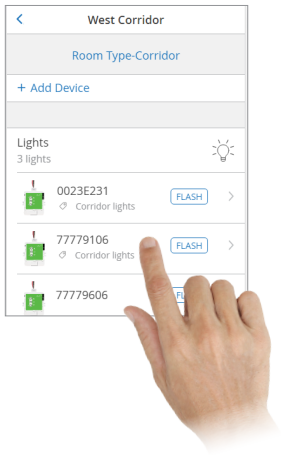
Rename Devices

1. Tap “Rooms & Areas”, and select the area that contains the device.

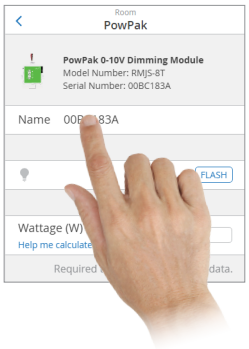


2. For lighting controls, expand “Lights” and select the desired device. For PowPak receptacle controllers and CCO controllers, expand “Receptacles and CCO Modules” and select the desired device.





3. Rename the device and tap outside of the “Name” field to save the changes. A “Saved” confirmation note will be displayed.



Troubleshoot Devices

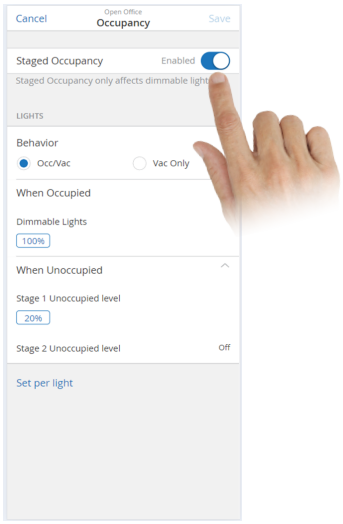
If a light/device is not behaving as expected, then try the troubleshooting steps mentioned at the device detail screen.

Follow the steps below to navigate to the device detail screen:

1. Tap “Rooms/Areas”, select the area that contains the device.
2. Expand “Lights” and select the desired device.
3. Tap “Troubleshoot” to open screen with troubleshoot instructions.
4. Follow the instructions.

Programming

Occupancy/Vacancy Sensor Settings



Staged Occupancy

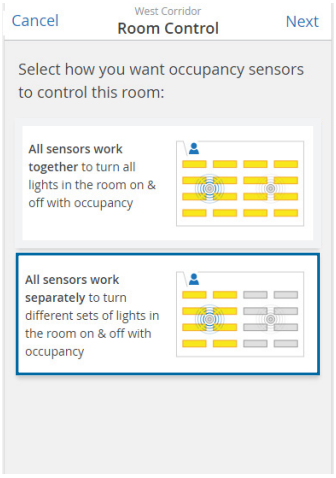
Use the slider to enable or disable the staged occupancy functionality in the area.

Staged occupancy requires:

- More than one independently controlled dimmable light in the room.
- "All sensors work separately" on the All Occupancy Sensors Work Together setting.
- Occupancy/Vacancy behavior enabled.
- Each sensor is controlling some, but not all, lights in the room.

When Staged occupancy is enabled:

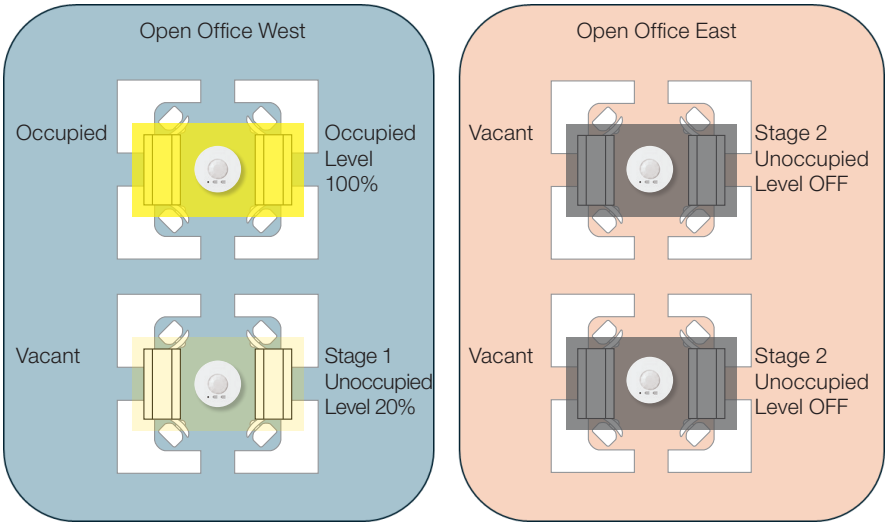
- Stage 1 Unoccupied (default: 20%) – This is the light level when the sensors controlling this zone show unoccupied, but there are still some sensors within the area, which do not control this zone, that show occupied.
- Stage 2 Unoccupied (OFF: unprogrammable) – This is the light level when all sensors in the area are unoccupied.



Note: Staged occupancy will override any timeclock programming that modifies the unoccupied level.

Note: Staged occupancy transitions after the timeout of the sensors; no additional time is added. Refer to the sensor setting page of this guide on how to adjust sensor timeouts.

Note: To set a minimum level for egress lighting applications, refer to the "Minimum Light Level" section for programming details.

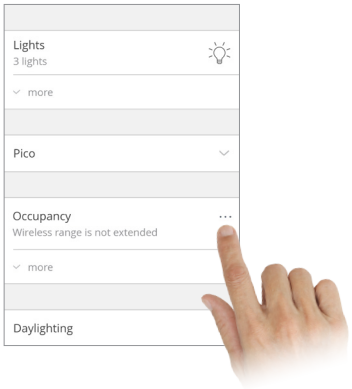


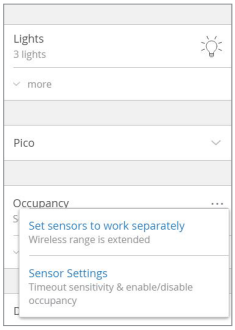
Programming (continued)

Occupancy/Vacancy Sensor Settings

1. Navigate to the area that contains the sensor to be adjusted. Go to "Occupancy" section of the screen and tap "..." and select "Sensor Settings".

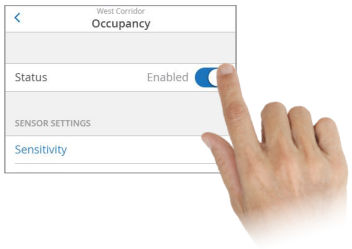
   In this menu, there are multiple settings that can be changed. See below for details about these settings.





Status

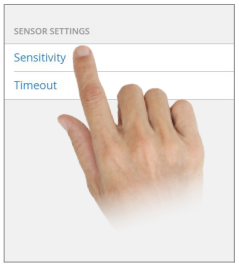
Use the slider to enable or disable the occupancy/vacancy sensors in that area.

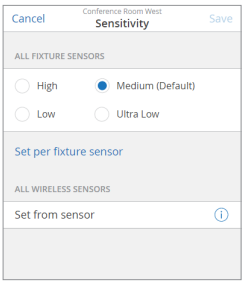


Sensitivity

Tap "Sensitivity" to adjust the sensitivity of the occupancy/vacancy sensors. These settings will only appear if there is a PowPak fixture controller with a fixture sensor in the area. Sensitivity for a Radio Powr Savr sensor must be set locally on the sensor. Instructions on how to do this will be shown on the software screen.

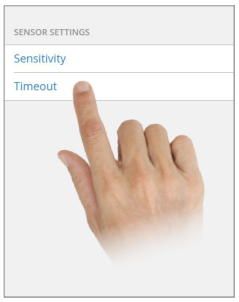
Note: Sensitivity should be increased if the sensors are not detecting motion (e.g., lights turn off when people are in the room). Sensitivity should be decreased if the sensors are detecting too much motion (e.g., lights do not turn off after the timeout period).

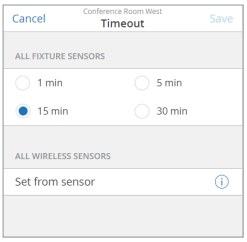




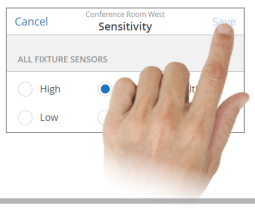
Timeout

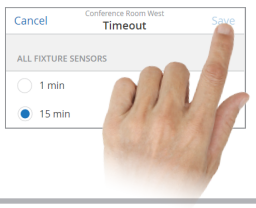
Tap "Timeout" to change the occupancy timeout for fixture sensors. These settings will only appear if there is a PowPak fixture controller with a fixture sensor in the area. Radio Powr Savr sensor timeouts must be changed locally on the sensor. Instructions on how to do this will be shown on the software screen.





2. Once the desired settings are changed, tap "Save" on the respective screen.





Continued on next page...

Programming (continued)

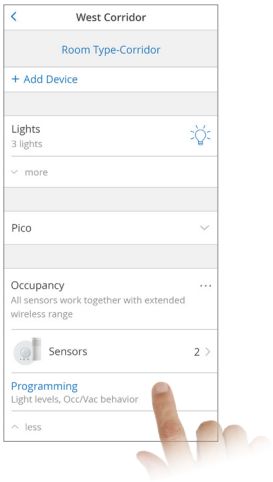
Occupancy/Vacancy Sensor Settings

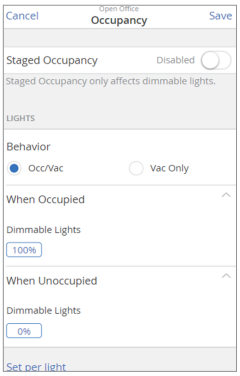
(continued)

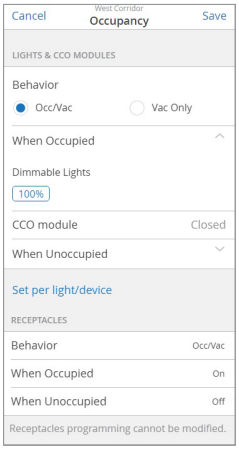
Occupancy Settings/Programming

- Navigate to the area that contains the sensor to be adjusted. Go to "Occupancy" and select "Programming".
- Refer to "Lights & CCO Modules" to adjust occupancy/vacancy behavior, occupied/unoccupied levels, and other settings for lights and CCO modules.
- Refer to "Receptacles" to view occupancy/vacancy behavior and occupied/unoccupied settings for receptacles.

Note: The occupancy settings for a device type will only display if there are corresponding devices being controlled by an occupancy/vacancy sensor in that area. For example, "Receptacles" will only be displayed if receptacles are being controlled by an occupancy/vacancy sensor in that area.







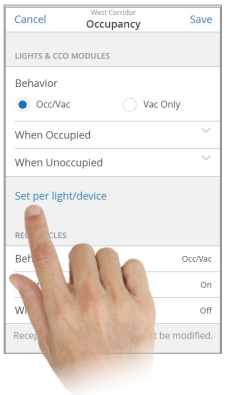
Occupancy/Vacancy Behavior

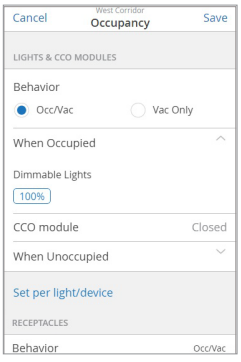
Set the "Occ/Vac" or "Vac Only" behavior in the area as desired. This can be set the same for all the lights/devices in the area or it can be set individually for each light/device.

- Occ/Vac = auto on; auto off
- Vac Only = manual on; auto off

Note: The RMJS-20R PowPak receptacle controller cannot be set to "Vac Only". It will always operate as "Occ/Vac" and the occupied and unoccupied settings will always be "On" and "Off" respectively.

Note: The only two methods to enable/disable occupancy in a Vive system are through this screen and via BACnet protocol.





Occupied/Unoccupied Levels

Adjust the occupied and unoccupied levels as desired for the dimmable lights in the area. This can be same level for all dimmable lights in the area or different levels for each dimmable light.

Note: Switched lights will always be set as "On" when occupied and "Off" when unoccupied. CCOs will always be set as "Closed" when occupied and "Open" when unoccupied.

Continued on next page...

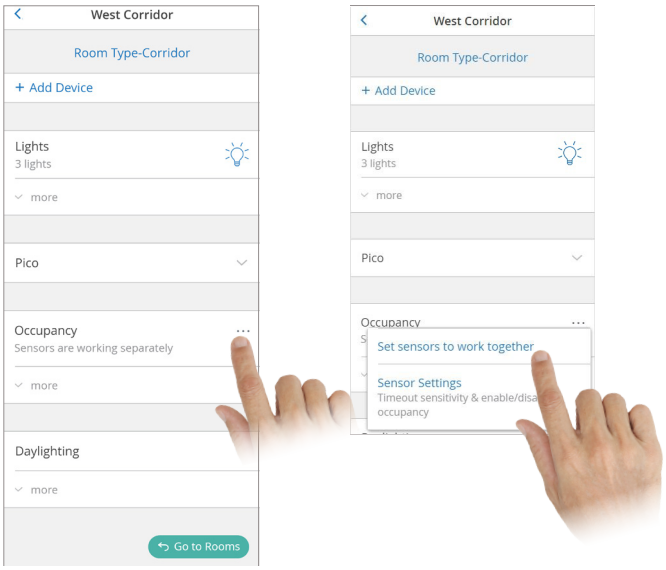
Programming (continued)

Occupancy/Vacancy Sensor Settings (continued)

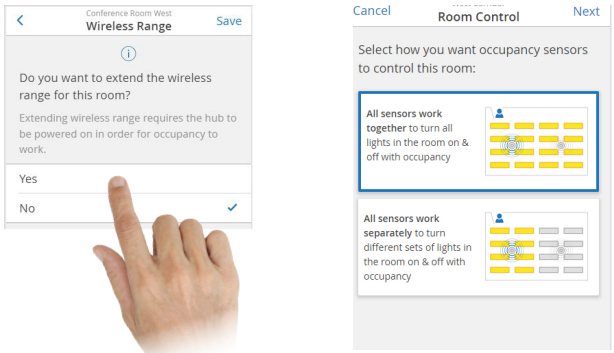
All Occupancy Sensors Work Together

Enable this setting for the room if you want all occupancy-controlled lights/devices to turn on and off together when any occupancy sensor in the room detects a change. Occupancy sensors added later will also automatically control these lights/devices.

Tap “Set sensors to work together” and then “All sensors work together” to enable this setting.



In large or oddly shaped rooms, such as long hallways and open offices, lights/devices may be outside the range of the occupancy sensors. You can extend the wireless range so that all occupancy sensors in the room can control any light/device in that room, regardless of distance between these sensors and the device. You can extend the wireless range of occupancy sensors for up to 14 rooms per Vive hub. Tap “Yes” on the Wireless Range screen to enable this setting and select the room type.



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Programming (continued)

Occupancy/Vacancy Sensor Settings (continued)

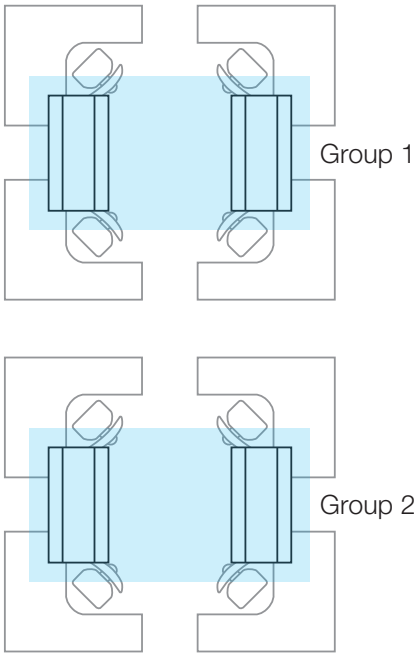
Occupancy Grouping

Below are two main applications of occupancy grouping with fixture sensors.

Note: Occupancy grouping is not used with Radio Powr Savr occupancy/vacancy sensors because devices are assigned to the sensors directly. Also, devices can be assigned to more than one sensor at a time for rooms with multiple sensors.

- Group fixture sensors together to form larger occupancy groups (e.g., open office). When fixture sensors are grouped, all the lights will turn on and off together. If one sensor sees movement, all the lights will turn on. Conversely, all the sensors in the group must be in the unoccupied state before the lights turn off.
- Allow control of devices other than fixture controls via fixture sensor (e.g., private office where a fixture sensor controls both the fixture and the PowPak receptacle controller).

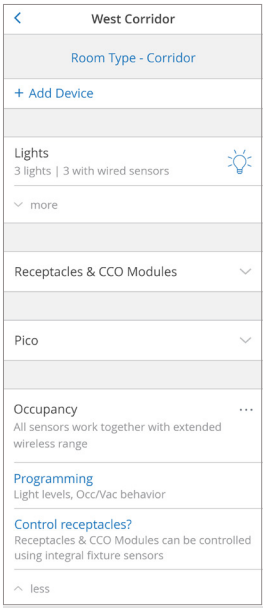
To the right is an example of occupancy grouping. The four fixtures are grouped into two separate occupancy groups based on the furniture layout. Each group operates independently with the corresponding fixture sensors and all four fixtures are part of the same area.

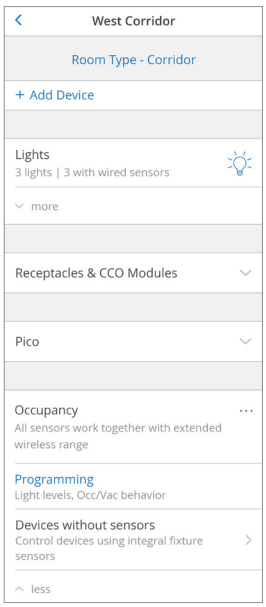


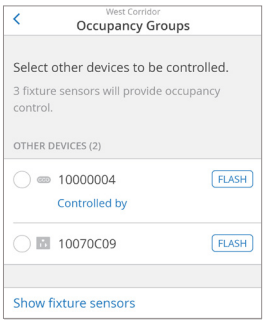
Control Receptacles/CCO Modules Using Occupancy Grouping

Note: If the fixture occupancy sensors are set to work together, then they will all work as one occupancy group in the room. In this case, expand the Occupancy section to find the “Control Receptacles/CCO Modules” to open a screen to add devices (like receptacles) to the occupancy group. Tap “Show fixture sensors” to list fixture sensors which are working together in the room.

Note: “Control Receptacles/CCO Modules” link on the screen will not display if a few devices without sensors (receptacles, CCO Modules) are already being controlled by fixture sensors. Instead, the “Devices without sensors” row will display in place of it.







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Programming (continued)

Occupancy/Vacancy Sensor Settings (continued)

Control Receptacles/CCO Modules Using Occupancy Grouping (continued)

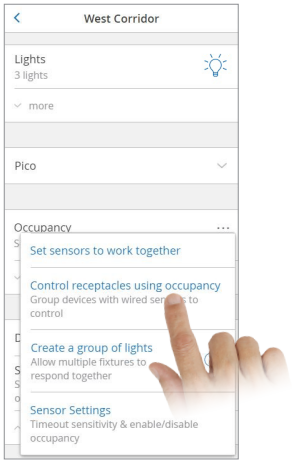
Follow the steps below to create multiple different occupancy groups using fixture sensors.

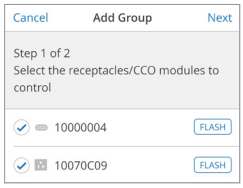
1. To create multiple occupancy groups using one or more fixture sensors, first set sensors to work separately and then select “Control receptacles using occupancy” if receptacles or CCO modules are required to be grouped or “Create a group of lights” if only lights need to be grouped with the fixture sensors.

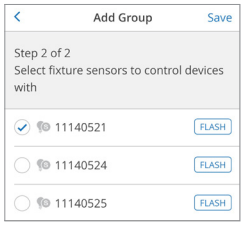
2. To create an individual fixture sensor’s occupancy group when there are wireless occupancy sensors working together in the room, first set the sensors to work separately. If you want other devices to be controlled by occupancy, then add them to any occupancy sensor.

3. Follow the steps to select devices and fixture sensors to group. Now all the fixture sensors in the group will work together to control the grouped devices.

   Note: In order to create an occupancy group, at least two lights/devices and at least one fixture sensor must be added.







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Programming (continued)

Occupancy/Vacancy Sensor Settings (continued)

Occupancy Dependency

When adding an occupancy sensor to a room/area, you select which devices that sensor will control. You can also select devices in other room/areas to be controlled by that same sensor. These devices will now become dependent on the occupancy status of this sensor. For example, users working in private offices may want the lights to stay ON in an adjacent hallway.

When an occupancy sensor in one room controls lights in another room, each room still has its own occupancy programming (occupied/unoccupied levels, occ-vac/vac-only) and sensor settings (enable/disable, sensitivity, timeout). For instance, if a sensor in one room is programmed to affect lights in a second room, the sensor will have no effect on the second room if Occupancy is disabled in the second room.

Follow these steps while adding an Occupancy sensor to a room, to make that sensor control lights in another room:

1. On the Select Devices screen, tap “Control other rooms/areas”.

   Note: The “Control other rooms/area” option will be presented only if other rooms already exist. If you add another room later, you can come back to this screen and add it to this sensor.

2. Expand the room you wish to control and tap “+”.

   Note: Depending on room configuration, your experience may vary.

3. If sensors are not already set to work together, you will be asked whether to proceed, in which case you should tap “Set sensors to work together”.

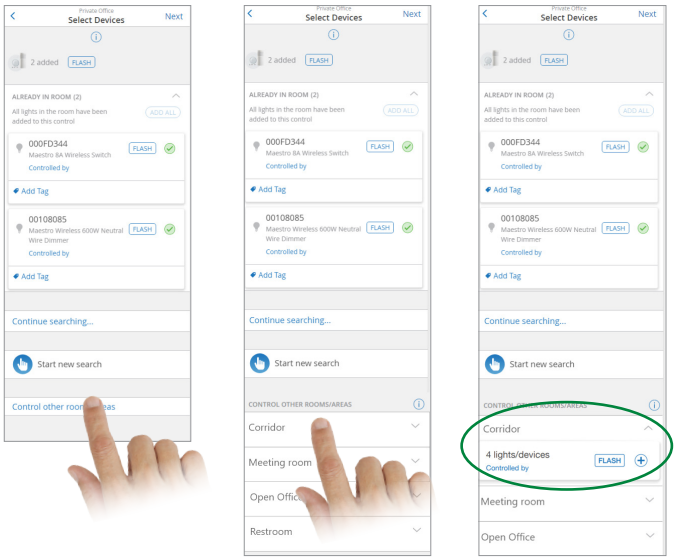
   Note: Once occupancy sensors are set to work together, if any sensor in that room detects motion, then all lights associated with those sensors will turn on.

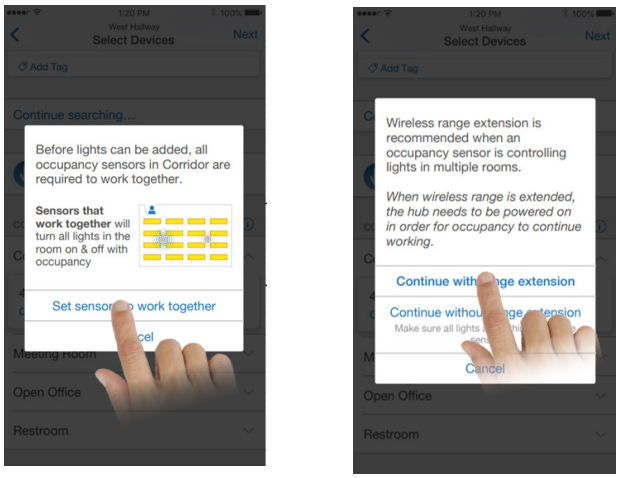
4. If occupancy range is not already extended in the room, you will be asked how to proceed. Tap “Continue with range extension”, or make sure that all lights in the room are within 98.5 ft (30 m) range before tapping “Continue without range extension”.

   Note: You may not use a sensor in one room to control lights in a second room if that second room includes fixtures with wired sensors or integral fixture controls (and they are enabled).

   Note: You can make this sensor control more rooms later by editing which devices are affected by this occupancy sensor.

   Note: You can go to a room Occupancy section to see all sensors (including from other rooms) which control that room.



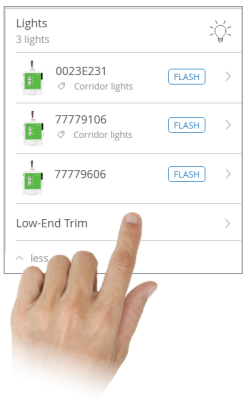


Tuning

High-end/Low-end Trim

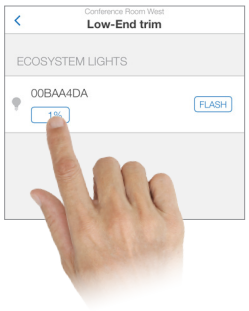
1. Tap “Rooms & Areas” and select the desired area.

2. Expand “Lights”.



3. Tap “Low-End trim” to adjust the low-end trim of the device. The device will not go below this level. This can be set the same for all devices or each device individually.

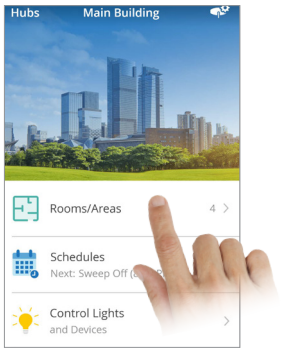
   Note: Low-end trim is different than the minimum light level. Low-end trim is the lowest level the load will dim down to before turning off. The minimum light level is the level the load goes to when commanded to turn off.



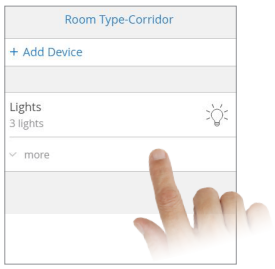
Minimum Light Level

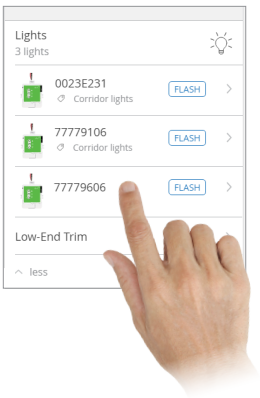
This setting should be used if you want the load to go to a specific level when “turned off” but never actually turn off. This is primarily used in paths of egress (e.g., corridors and hallways).

1. Tap “Rooms & Areas”, and select the desired area.



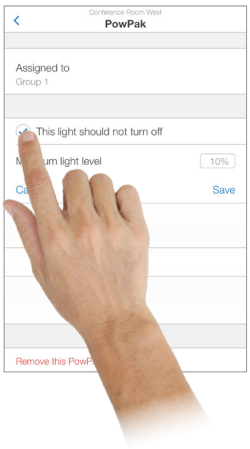
2. Expand “Lights” and select the desired device.

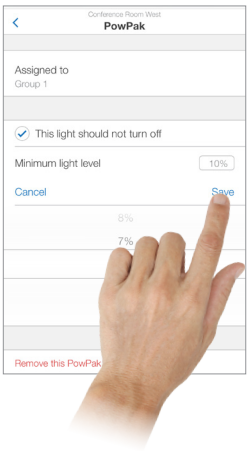




3. Tap “This light should not turn off” and select the minimum light level that the load should not dim below. Tap “Save”.

   Note: The minimum light level is different than low-end trim. The minimum light level is the level the load goes to when commanded to turn off. Low-end trim is the lowest level the load will go before turning off.



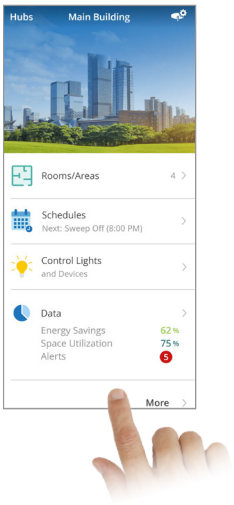


Maximum Light Level

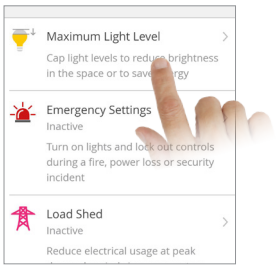
From the Vive software, you can set the maximum light levels for lights, which will cap light levels to reduce brightness in the space and save energy. The devices will not go above this maximum level.

Follow the below steps to set maximum light levels.

1. Tap the “More” menu on the main dashboard of the Vive software.

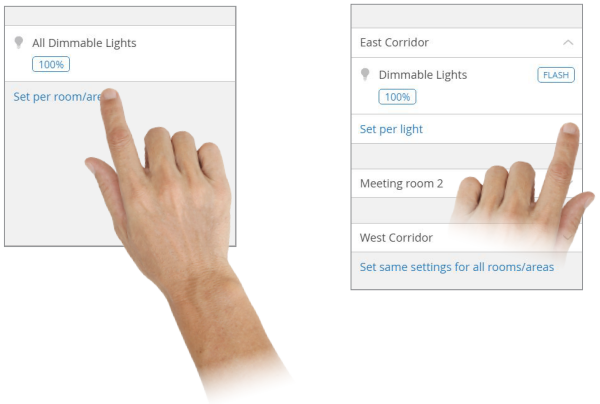


2. Tap “Maximum Light level” to set the levels.



3. Set the maximum light levels for all dimmable lights. To set devices to different levels by area, tap “Set per room/area”.

4. To set devices to different maximum levels by device in an area, tap “Set per light” in that area.



Daylighting

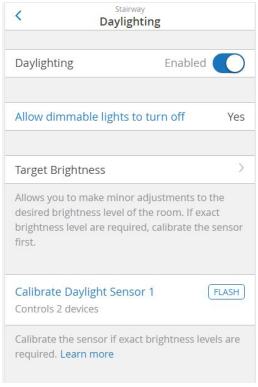
Daylight harvesting reduces the use of artificial lighting when daylight is available in order to reduce energy consumption. This applies to all operations, including all Pico button presses. Daylight calibration is either done automatically (fixture sensor) or manually through button presses (Radio Powr Savr daylight sensor). Details on daylight sensor calibration are covered below.

or

Best Practices

1. Calibrate space first for best results.

- Perform calibration when the space is receiving adequate, indirect sunlight. Do not calibrate when there is direct sunlight entering the space or when there is low sunlight.
- Perform calibration after all of the furniture or equipment has been moved into the space and after all painting has been completed.
- If a customer has specific requirements for illumination, measurements using a light meter may be required to adjust the light levels to match these requirements. After noting the required level, take lux measurements with a light meter at work surface height [typically 91.4 cm (3 ft) above finished floor] and directly under the row of fixtures being tuned.



2. If the brightness still does not meet expectations after calibration, set the target brightness level to fine tune the light level in the space.

Individual Fixture Sensors

- Fixture sensors will automatically perform daylight calibration the first time the sensor goes to the unoccupied state. The fixture sensor is both an occupancy and daylight sensor.
- A fixture sensor will only control the PowPak fixture controller that it is attached to. Daylight information cannot be shared from one individual fixture sensor to other devices.
- If a Radio Powr Savr daylight sensor is assigned to a PowPak fixture controller, the daylight sensor function of the fixture sensor will be disabled.

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Daylighting (continued)

Radio Powr Savr Daylight Sensors

Radio Powr Savr daylight sensors must be calibrated manually. Refer to these sections of the Radio Powr Savr daylight sensor installation instructions: Calibration, Testing the Daylight Sensor, and Tuning the System.

Note: You do not need to press a button on PowPak devices because they will automatically enter calibration mode.

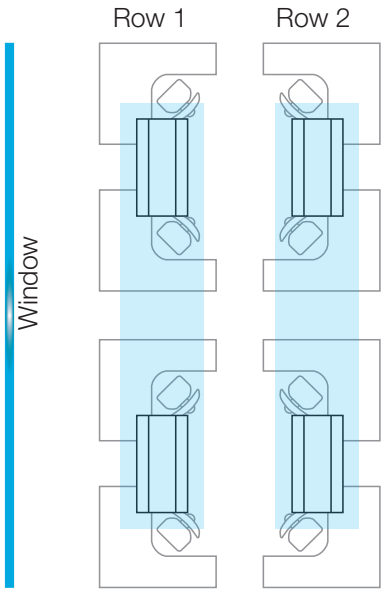
Instead of pressing and holding the "Cal" button on the sensor, you can shine a green laser (available at hardware or office supply stores) on the sensor two times to put it in calibration mode. This is the same procedure used for association.

WARNING! Eye Injury and/or Blindness Hazard. May Result in Serious Injury or Death. Avoid direct eye exposure to laser beam.

- Use of laser pointer is NOT recommended for use with Lutron products located near reflective surfaces.
- Do NOT aim or shine laser pointers at any person, pet, vehicle, or aircraft directly, or through reflection by mirrors or other shiny surfaces. Do NOT view the laser beam through binoculars, magnifying glass, or other optical devices.
- Do NOT allow children to use laser pointers.
- **Read and follow the laser pointer manufacturer's instructions on safe use.** In the event of injury, get medical attention immediately.

Multi-row Daylighting

To the right is an example of multi-row daylighting using a Radio Powr Savr sensor. To complete a similar setup, follow the steps below.



1. In the Vive software, assign all fixtures to the daylight sensor.
2. Manually adjust the devices for all rows to achieve the desired foot-candle (fc) level.

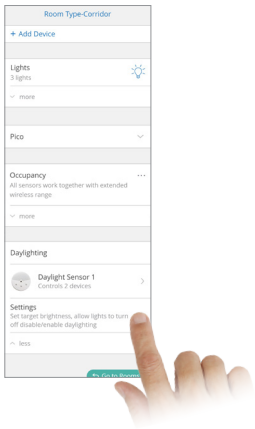
   Note: It may be a challenge to physically find where the PowPak devices are located and manually adjust them to reach the desired foot-candle level. To alleviate this challenge, you can assign a 2BRL Pico remote control to each PowPak device participating in daylighting so that you can adjust the level remotely. After daylighting has been calibrated, you can remove the 2BRL Pico remote controls from the Vive system database.

Continued on next page...

Daylighting (continued)

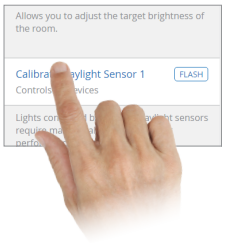
Multi-row Daylighting (continued)

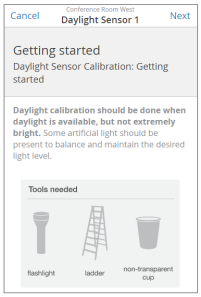
3. To adjust the daylighting settings, navigate to the area dashboard that contains the daylight sensor. Expand “Daylighting” section and select “Settings”.



4. Tap the daylight sensor to be calibrated and read “Getting started”. Tap “Next” and follow the instructions to perform calibration.

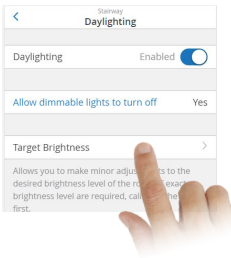
   Note: Check out “Best Practices” in the beginning of this section for tips on calibrating the sensors.

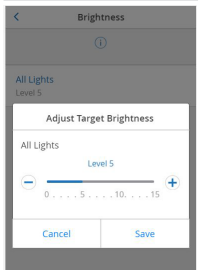




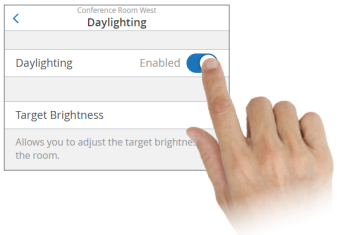
5. If brightness still not does meet expectations after calibration, tap “Target Brightness” to adjust the target brightness of the room. These changes are live so that you can view the changes and fine tune until your space is at your desired level. If the daylight in the space is at a high level during adjustment, changes may not be perceivable. You can adjust and save target brightness of all lights or lights connected to a specific sensor.

   Note: This option only displays if a wireless daylight sensor has been added to the room.





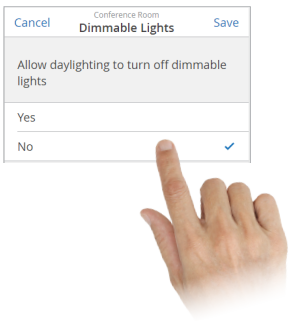
6. Use the slider to Enable or Disable daylighting in that area.



7. Tap “Allow daylighting to turn off dimmable lights” to allow or prevent dimmable lights to turn off due to daylighting. If “Yes” is selected, the lights may turn off if enough daylighting is present in the room. If “No” is selected, daylighting will not turn off the dimmable lights, but it will still dim lights to the low-end trim level. This setting will not affect switches and CCOs added in the room.

   Note: The low-end trim level can be adjusted in Tuning.

   Note: The dimmable lights which were turned OFF when the daylight setting was changed, will only take effect when daylight in the space is insufficient. These changes are not made in real time.



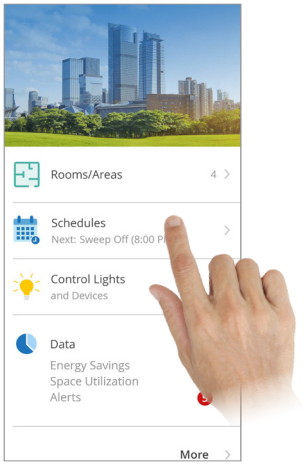
Schedules

The hub contains a built-in timeclock that can schedule an event by time of day or astronomic time.

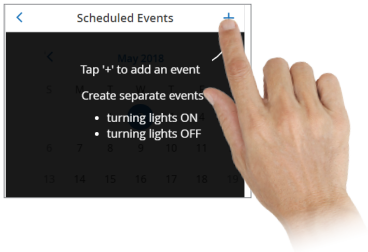
Note: Create and program all of the individual areas before creating timeclock schedules.

Create Schedule

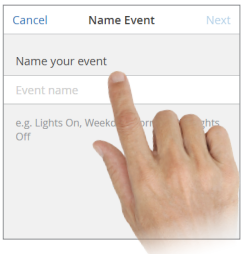
1. Open the “Schedules” menu on the main dashboard of the Vive software.

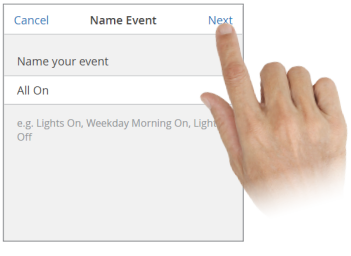


2. Tap “+” to add a schedule. You can create many separate timeclock schedules and each one is uniquely programmed.



3. Name the schedule so that it describes the intended programming (e.g., AllOn - Morning).





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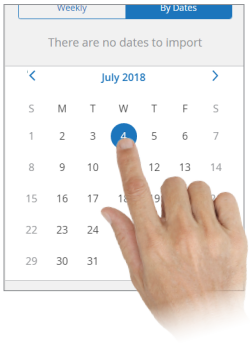
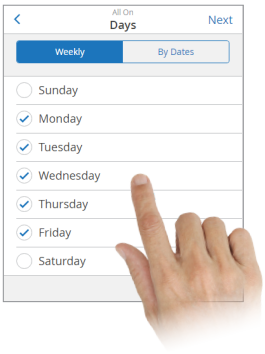
Schedules (continued)

Create Schedule (continued)

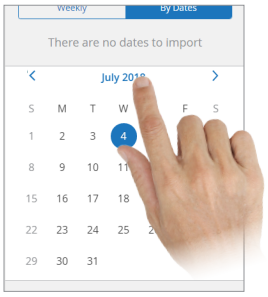
Note: You can create “Weekly” events which will run on selected weekdays or “By Dates” events which will run only on the selected dates.

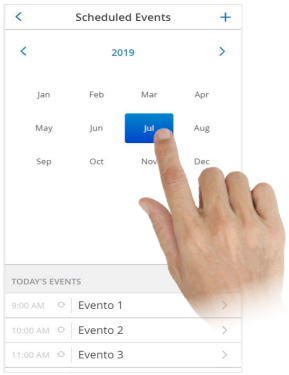
4. If you are creating a Weekly event then adjust weekdays, select start date, end date & Holidays/Exception dates and tap “Next”. Any day of the week can be selected.





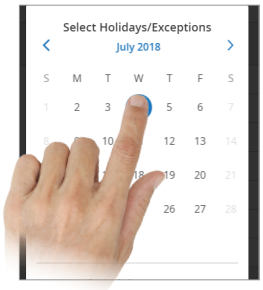
5. Click on the Month or Year to quickly jump forward to a date in the future.





6. Events will not run on the selected Holidays/Exceptions.

Note: On the Select “Holiday/Exception” screen, you can import Exception dates from other events. Grayed out dates on calendar represents that the event will not run on these dates.

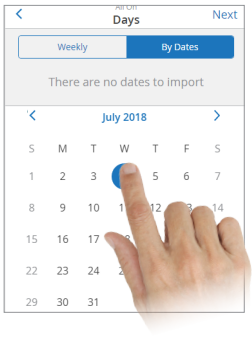


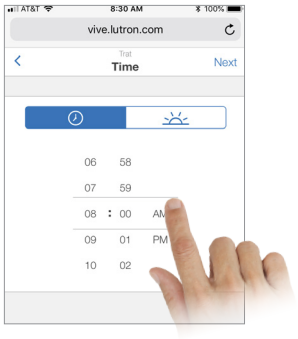
Continued on next page...

Schedules (continued)

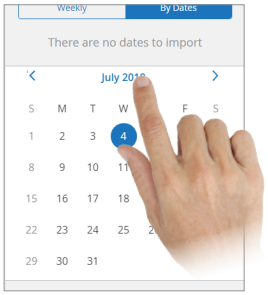
Create Schedule (continued)

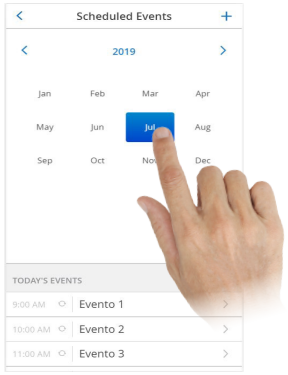
7. If you are creating a “By Dates” event, then select dates on which you want to run the event and tap “Next”. Select the time you wish the event to start.





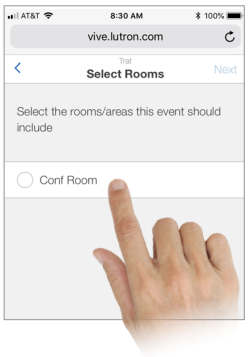
8. Click on the Month or Year to quickly jump forward to a date in the future.

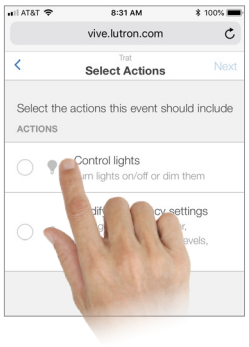




9. Select the rooms/areas that the event should include.

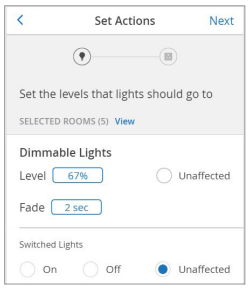
10. Select the actions this event should include.

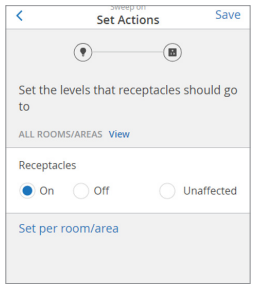




11. Indicate the levels that the lights, receptacles, and CCO modules should go to when this event occurs.

    Note: You may also choose to change the fade duration for this event. This time specifies the length of the transition between the original and target light levels of the dimmable lights in the event.





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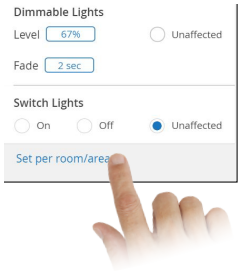
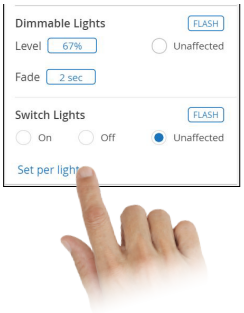
Schedules (continued)

Create Schedule (continued)

12. To set devices to different levels by area, tap “Set per room/area”.

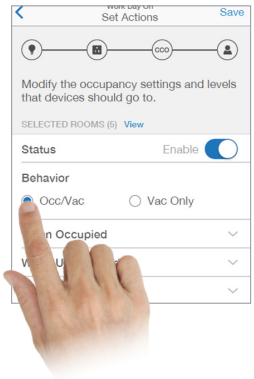


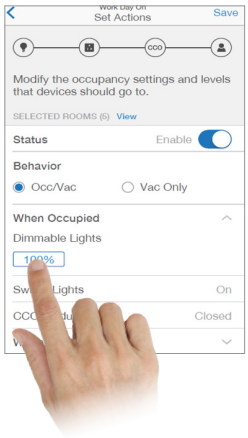
13. To set devices to different levels by device in an area, tap “Set per light” in that area.



14. Set the occupancy settings and levels for this event and tap “Save”.

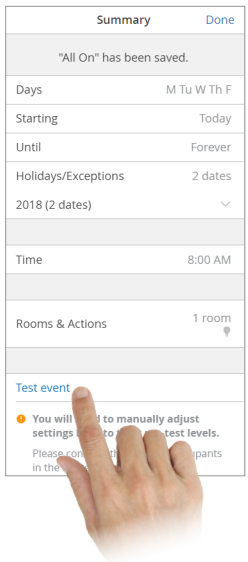
    Note: Once an event is triggered, it will modify the occupancy settings of individual areas.

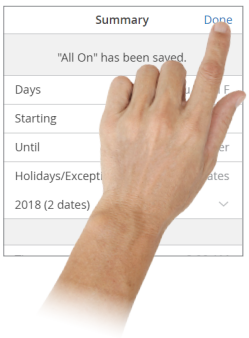




15. If desired, tap “Test event” to test the schedule. Tap “Done” to save the schedule.

    Note: The “Test event” will test the light level transitions. Changes made to Occupancy Settings will not be shown in the test event.





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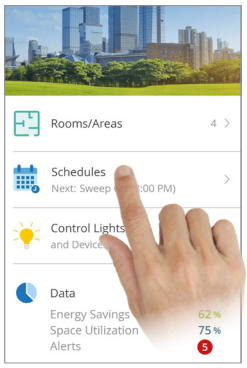
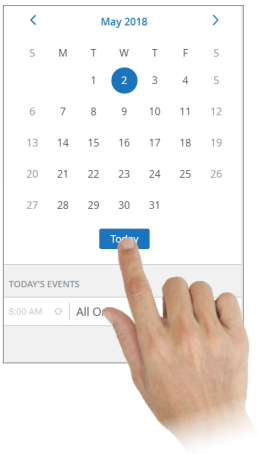
Schedules (continued)

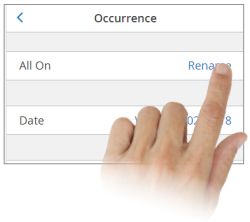
Modify and Test Schedules

1. After creating a schedule, navigate to the “Schedules” screen. You will see the list of scheduled event(s) in the calendar view. You can select a different date to see scheduled events for a date. Tap the desired schedule to modify or view its details.

   Note: A recurring icon will display against events which are scheduled for multiple days/dates. Tapping on recurring events will ask you to open “This occurrence” or “Entire series.” “This Occurrence” will open event details of a particular date and “Entire series” will open the details of complete series including start date, end date and exceptions. Modifying an Occurrence will modify event for an Occurrence only.



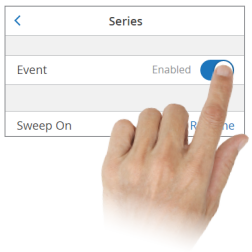




2. You can do any of the following:

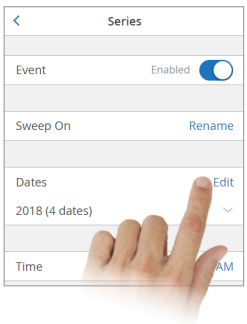
   a. Enable or disable the entire event series by moving the “Status” slider. This enables or disables the schedule on all programmed days, not just one specific day.

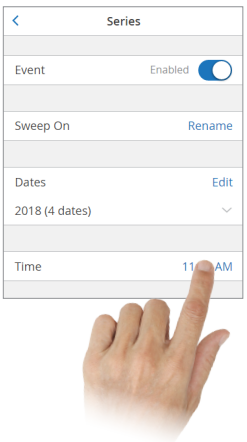
      Note: Delete Occurrence if you do not want to run an event on a date.



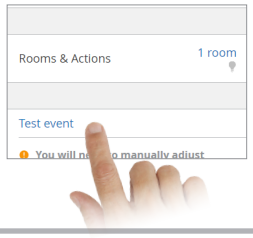
   b. Modify the name, day, dates, time, Holidays/Exceptions and Rooms & Actions affected by the schedule on this screen.

      Note: If it is a “Weekly” event then click on “Edit” dates to modify weekdays, start & end date, and exceptions. If it is a “By Date” events, then tap on “Edit” dates.





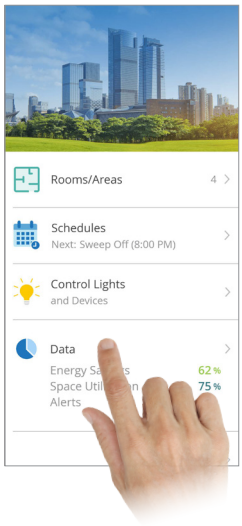
   c. Tap “Test event” to test the programmed schedule. This will activate the schedule so you can see what the space will look like when the event occurs.

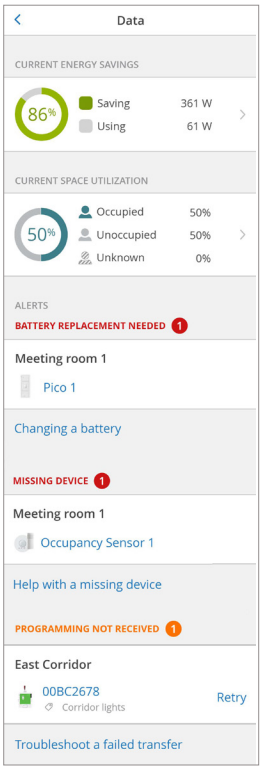


P/N 041571m

Alerts

Alerts displays run-time issues which may prevent devices from operating as expected.





View Alerts

Tap “Data” on the main dashboard of the Vive software to open the screen with details on current energy savings, space utilization and alerts.

Fixing Alerts

If you need help resolving an alert, tap on the provided links in each section to get step-by-step guidance.

Alert Types

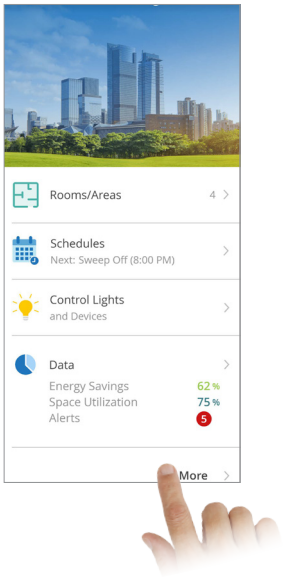
- Battery Replacement Needed: The device either has low a battery or the battery has died.
- Missing Device: The hub cannot communicate with the device.
- Programming Not Received: The hub had attempted to send programming to the device but was unsuccessful. Retry or perform troubleshooting steps and then retry.

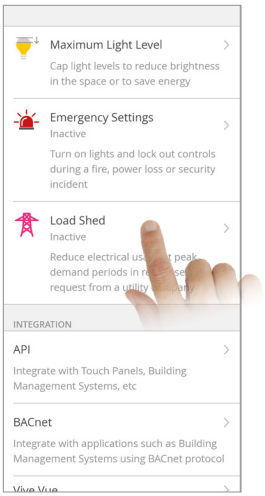
Load Shed

Load shed is a feature that reduces the overall lighting load in a system in response to an external signal (typically from a utility company).

Note: Add all devices to the system before configuring the load shed settings. If a device is added to an area after the load shed is configured, the device will need to be set up with the load shed.

1. Tap the “More” menu on the main dashboard of the Vive software.
2. Tap the “Load Shed” menu on the main dashboard of the Vive software.

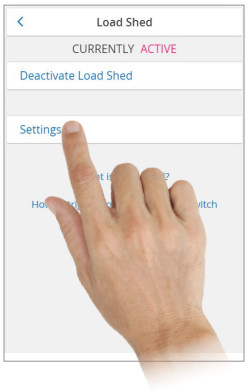




2. Tap “Settings” to modify the settings for load shed events.

   Note: Load shed can be manually activated from the “Settings” screen, automatically activated through the contact closure input on the back of the hub, or automatically activated via BACnet.

   Note: There is only one profile available for load shed. The settings that are modified will apply each time load shed is activated.



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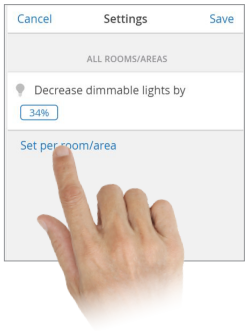
Load Shed (continued)

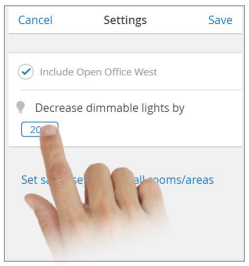
3. There are two options that can be modified for the load shed profile:

   a. By default, all areas will participate in a load shed event. Tap “Set per room/area” to select which specific areas participate in the event.



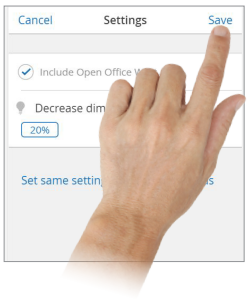
   b. For each area that participates in the load shed event, you can set the percentage that dimmed loads decrease. Also, you can set whether switched loads turn off or remain unaffected by a load shed.

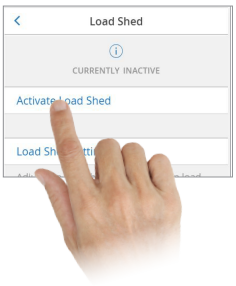
   Note: After a switched load is turned off by load shed, the user can override the load shed by manually turning the switched loads on. The switched loads will not react to load shed until load shed is deactivated and activated again.



4. Tap “Save” and tap “Activate load shed”.

   Note: When load shed is activated, it creates a scaled cap on the maximum light level of all dimmed loads. Regardless of what light level the dimmed load is currently at, it will be reduced when load shed is activated. For example, if a dimmed load is at 50% when a load shed profile of 20% is activated, the dimmed load will dim to 40%. The user can brighten the dimmed load to a maximum of 80% while load shed is active.





OpenADR

OpenADR is an energy code compliance feature that enables you to opt-in to automatic triggers of load shedding events from your utility company during peak hours.

To configure OpenADR, please note the prerequisites required for each hub:

1. Ensure each hub has an internet connection and an Ethernet cable is plugged into the hub.
2. Ensure your utility company is OpenADR 2.0b certified.
3. Contact your utility company to gather the following information:

   a. OpenADR 2.0b Endpoint URL

   b. Process to acquire OpenADR security certificates for your hub(s)

   Your utility company might optionally provide a:

   c. Virtual Top Node (VTN) ID

   d. Virtual End Node (VEN) ID

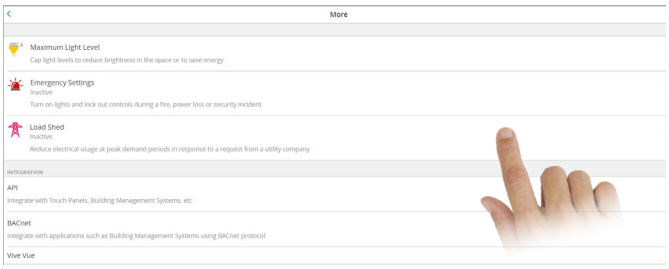
   e. Market Context

   f. VEN Name

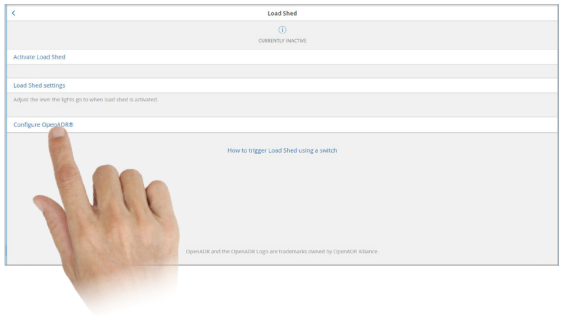
   g. Registration ID

Once prerequisites are met, follow the steps below to configure OpenADR for each hub:

1. On the main dashboard in the Vive software, tap “More” and then “Load Shed”.



2. Select “Configure OpenADR” to initiate setup.



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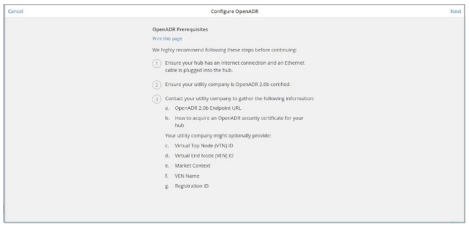
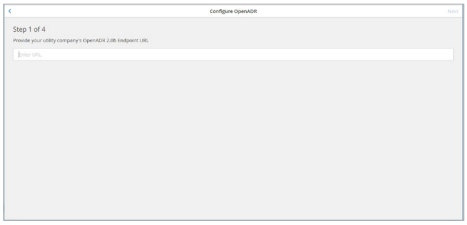
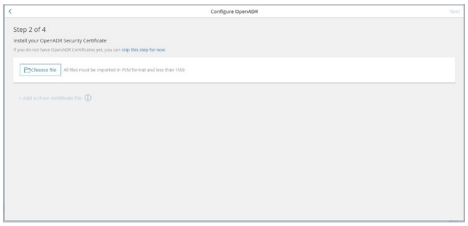
OpenADR (continued)

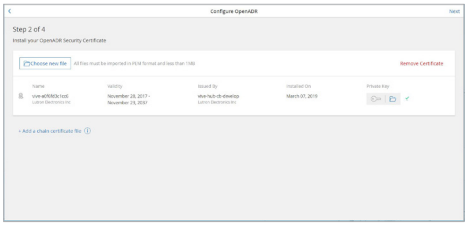
3. After confirming that the prerequisites are met, input the URL given by your utility company.



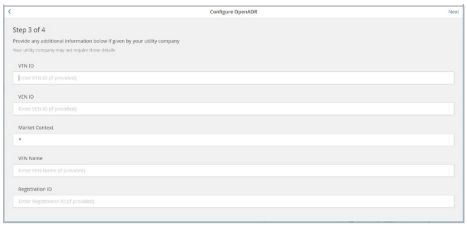


4. Upload the OpenADR Security Certificate and private key you acquired by following the process given to you by your utility company.





5. Enter any additional information that your utility company has provided to you. Some or all of these fields may not be used depending on your utility company.



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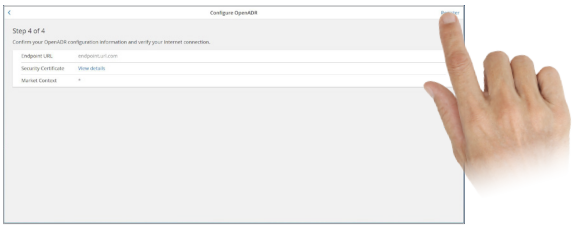
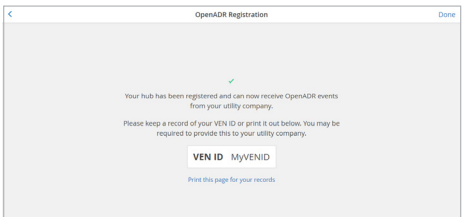
OpenADR (continued)

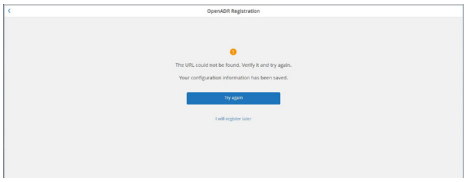
6. Confirm that all the information provided by your utility company has been captured accurately and then click “Register”.



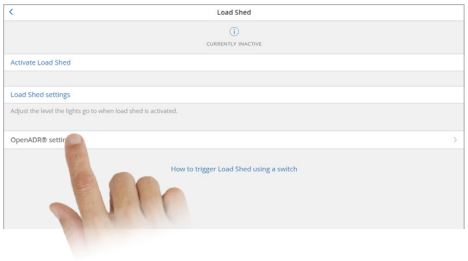
a. If your Registration has been successful, you will receive a confirmation that includes the hub’s VEN ID. Your utility company may require that you provide this to them.

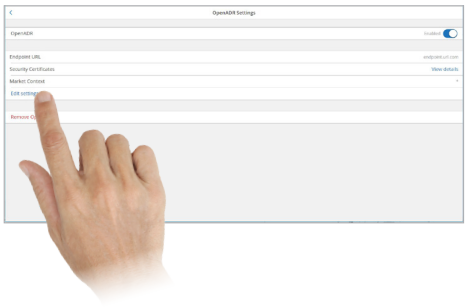


b. If your Registration has failed, an error message will appear with additional information on why registration had failed.



To make changes to the OpenADR settings, return to the “Load Shed” menu of the Vive software, select “OpenADR settings” and then select “Edit settings”.





P/N 041571m

Emergency

Emergency settings allow you to configure the level that lights will go to in the event of an emergency. These lights, while in emergency mode, will not respond to sensors or button presses from Pico remote controls and will remain at their emergency levels. While in normal operation, the lights will respond normally to commands from Pico remote controls and sensors.

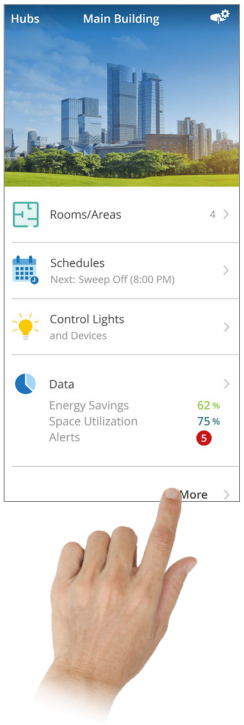
Follow the steps below to program emergency settings:

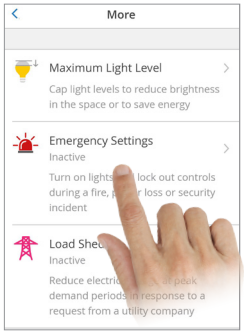
1. From the main dashboard in the Vive software, tap “More” and then “Emergency Settings”.

   Note: “Emergency Settings” will only display if there are Emergency lights added to your hub.

2. Tap “Emergency Settings” to set emergency settings.

3. All Emergency lights (red PowPak modules) will automatically follow default settings, which can be modified from the Emergency setting screen.





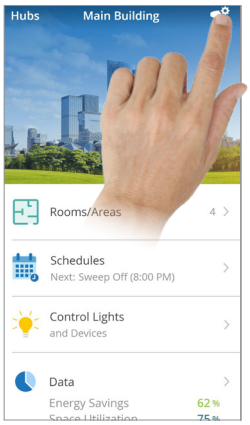
Cloud Backup

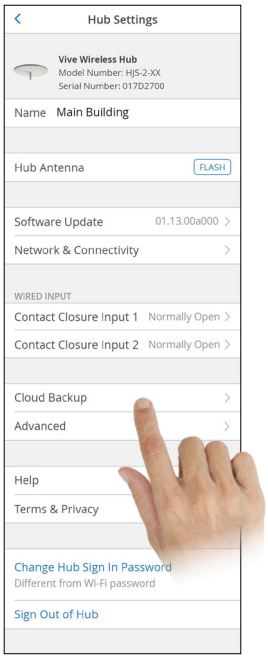
Cloud backup is available only on the Lutron Vive app. If user has allowed cloud storage while creating a Vive project, then the hub’s programming is automatically backed up and stored on the cloud. It helps to restore your system in an event that the hub needs to be replaced.

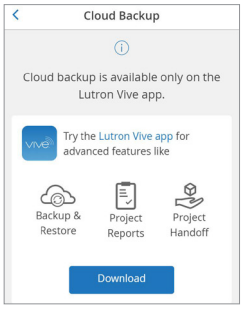
Follow the steps below to view Cloud Backup:

1. From the main dashboard in the Vive software, tap ⚙ and then tap “Cloud Backup”.

   Note: To restore the backup on the Vive Hub, please contact Lutron Customer Assistance.







BACnet

BACnet is used for integration into a Building Management System (BMS). For a list of control points available through BACnet and details related to implementation of this standard in Vive systems, refer to the Protocol Implementation Conformance Statement (PICS). The PICS can be found at www.lutron.com/vive and is available in the hub via BACnet ID Report. BACnet is only available with premium hubs (HJS-2 models). Integration is only allowed via wired Ethernet.

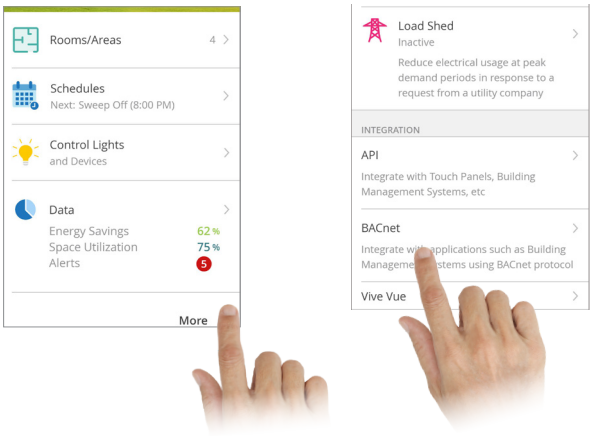
Note: The hub uses BACnet/IP protocol to communicate. There are other forms of BACnet communication (e.g., BACnet MSTP) but the hub will not directly communicate to these other protocols. There are third party devices that can convert one protocol to another.

Note: Before modifying any of the BACnet settings, coordinate with the BMS integrator to ensure settings are applied that allow integration into the BMS BACnet network.

Refer to the API integration section in this document to use API for your building management system.

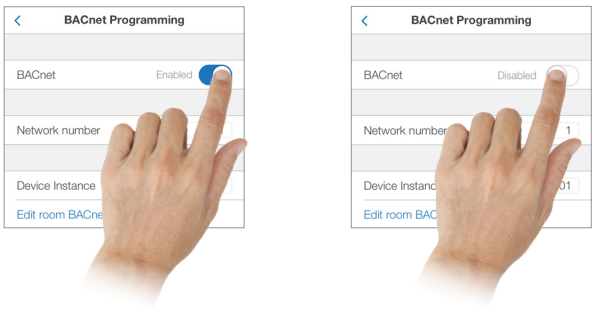
Settings

1. From the main dashboard in the Vive software, tap “More” and then “BACnet”.



2. Enable or disable BACnet as desired. BACnet is disabled by default.

   Note: The hub is a BACnet virtual router because it relays commands between the physical network that the hub is connected to and the virtual network of all the areas in the Vive system. Each area in the Vive system is a virtual BACnet device.



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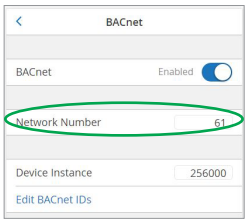
BACnet (continued)

Settings (continued)

3. "Network number" field

   This is the virtual network number and can be modified as desired. The hub will automatically take the network number of the physical network it is connected to. The physical and virtual network numbers must be different.

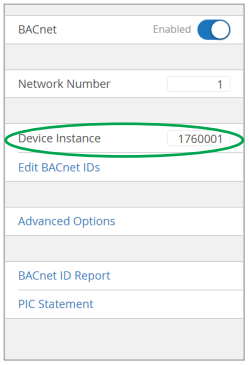
   Note: There can be multiple BACnet hubs on the same network. By default, the hubs will all have their virtual network numbers set to "1" which will cause conflicts on the network. Set the virtual network number of each hub to a unique number. The allowable range is 1–65534.



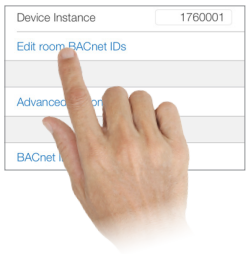
4. "Device Instance" field

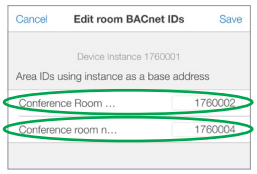
   This is the BACnet ID that the BMS will use to communicate with the hub. All of the areas created via the hub will have IDs that are generated sequentially after the "Device Instance". The allowable range is 0–4194302.

   Note: Each device must have a unique instance ID on a BACnet network. A single hub can have hundreds of unique IDs (e.g., areas). It is critical to coordinate the IDs between the hubs and any third party BACnet devices that may be on the same network. Coordination with the BMS integrator is critical. Unless specific IDs are supplied by the integrator, it is recommended to offset the base "Device Instance" by 1000 for each hub on the network. This will ensure there are no repeat IDs.



5. Tap "Edit room BACnet IDs" to change the area IDs. Use the "Device Instance" ID as a base address. The allowable range is 0–4194302.





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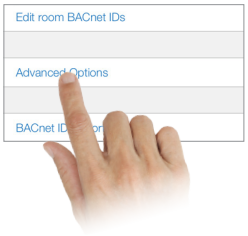
BACnet (continued)

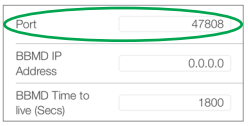
Settings (continued)

6. Tap “Advanced Options” to modify additional BACnet settings.



a. “Port” field

This is used for inbound and outbound UDP communication on the network. By default it is 47808 but can be changed if desired.



b. “BBMD IP Address” field

This is the IP address of the BACnet Broadcast Management Device (BBMD). There are several BACnet commands that are sent as broadcast messages and those are typically blocked by equipment on IT networks. BBMDs are used to route broadcast traffic from one BACnet network to another. The hub supports the ability to register as a foreign device with a BBMD by entering the IP address of the BBMD into this field.

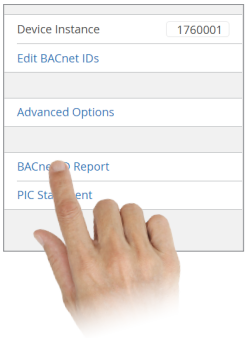
c. “BBMD Time to live (secs)” field

This is the amount of time (in seconds) that a command routed by a BBMD will live on a network before it is deleted.

7. Tap “BACnet ID Report” to generate a report that contains the BACnet IDs for all of the BACnet devices in the Vive system. This will generate two PDF documents:
   a. A list of the specific BACnet IDs with the Areas/Rooms they are assigned to.
   b. The PICS statement which covers the types of information that can be shared and the commands that can be sent to those areas.

   These documents should be sent to the BMS integrator.

   Note: Each area in the Vive system is a virtual BACnet device.



API Integration

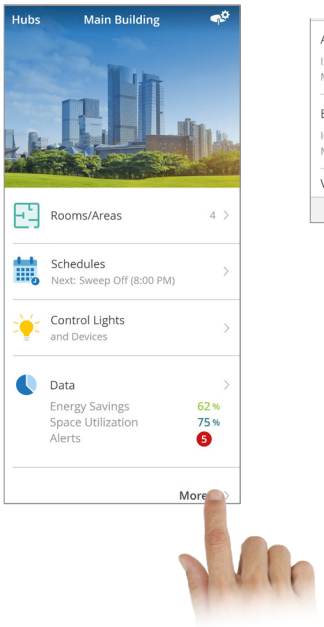
The API enables you to integrate the hub with other applications, such as a Touch Panel or a Building Management System. API is only available with premium hubs (HJS-2 models). Integration is only available via a wired Ethernet connection.

In the RESTful protocol supported by this API, each object in the hub is referred to as a “Resource”, which may be controlled or monitored. Examples of Resources include rooms, devices and zones.

Instructions to Integrate

Follow the steps below to program emergency settings:

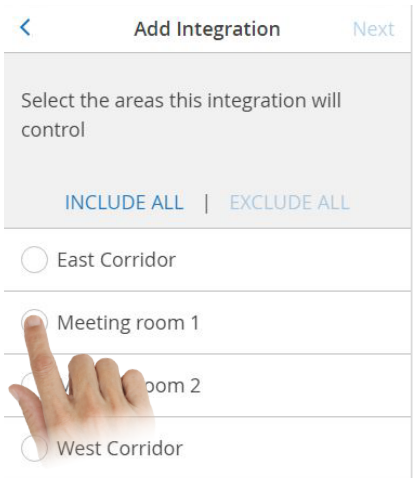
1. From the main dashboard in the Vive software, tap “More”.



2. Tap “API” to add an integration on this hub.

3. Tap “Add” for each unique Touch Panel and Software API integration on this hub.

4. If a Touch Panel is selected, select the rooms which it would control.



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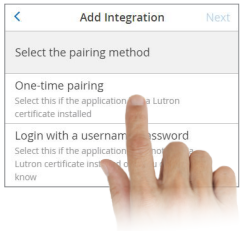
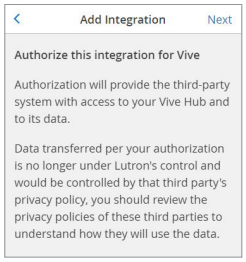
API Integration *(continued)*

5. Choose the pairing method for the integration.
   Note: “One-time pairing” should be selected if the integrating device is partnered with Lutron and has a Lutron certificate installed on it. “Login with a username/password” should be selected if the integrating device or application does not have a Lutron certificate installed. If you are not sure which to select, reach out to the company of the integrating device.



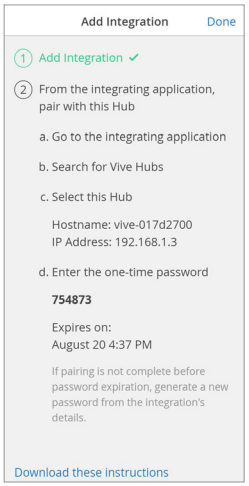
6. Authorize integration for the Vive hub by selecting “Next”.

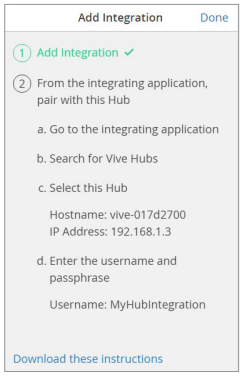


7. Set username and password if the selected pairing method was “Login with a username/password” and tap “Next”.

8. Follow the instructions on the screen to pair the integrating application with the hub. The pairing instructions differ depending upon if “One-time pairing” or “Login with a username/password” method was selected.

   Note the one-time password for “One-time pairing” method integration. You can also download these instructions to use while integrating the application.





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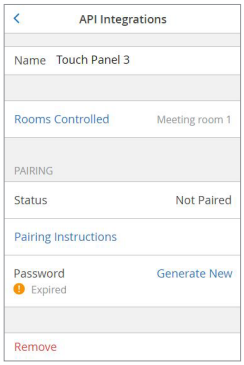
API Integration *(continued)*

9. From the integrating application, pair the hub. When prompted, enter the password details.
   Note that for “One-time pairing” intgeration, one-time passwords may only be used once and within 48 hours of generation. If it has expired, return to the integration on the hub and generate a new password.



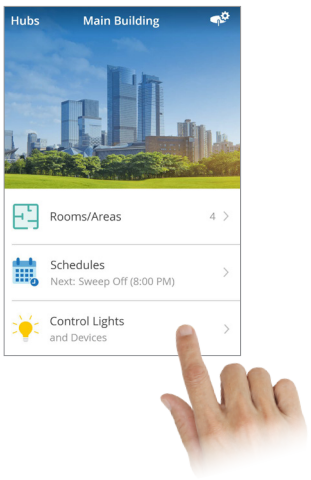
10. Configure the integrating application. To configure the integrating application offline (when not connected to the hub), tap “Download API Resource Report” on the API integration screen.

Scenes

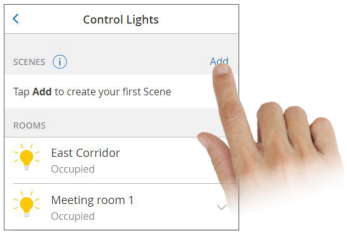
From the Vive software, you can control lights and devices in a single room or multiple rooms using scenes.

Create a Scene

1. Tap the “Control Lights” menu on the main dashboard of the Vive software.



2. Tap “Add” to add a Scene.



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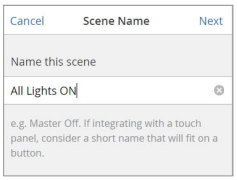
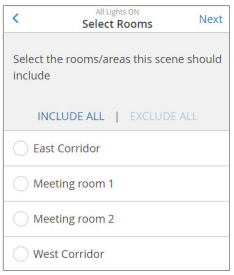
Scenes *(continued)*

Create a Scene *(continued)*

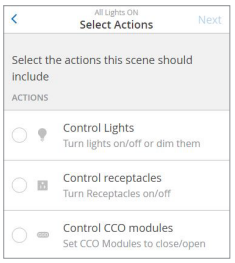
3. Name the scene so that it describes the intended programming (e.g., All Lights ON).



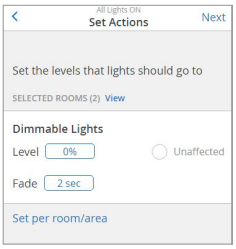
4. Select the rooms/areas that the scene should include.



5. Select the actions this scene should include.

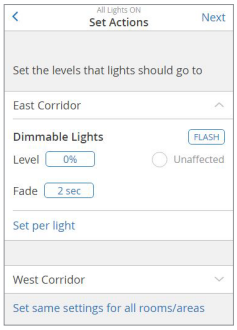


6. Indicate the levels that the lights, receptacles, and CCO modules should go to when this scene activates.
   Note: You may also choose to change the fade duration for this scene. This specifies the length of time for the transition between the original and target light levels of the dimmable lights for this scene.



7. To set devices to different levels by area, tap “Set per room/area”.

8. To set devices to different levels by device in an area, tap “Set per light” in that area.



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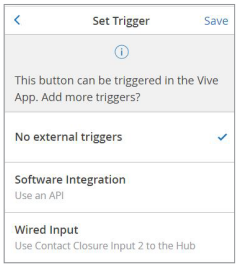
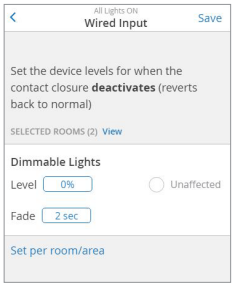
Scenes *(continued)*

Create a Scene *(continued)*

9. Once created, the scene can be triggered using a button in the Vive software. If required, select an external trigger to activate this scene.
   a. Select “Software Integration” if API intgeration will be used to activate the scene.
   b. Select “Wired Input” if the hub’s second contact closure input (CCI 2) will be used to activate the scene.

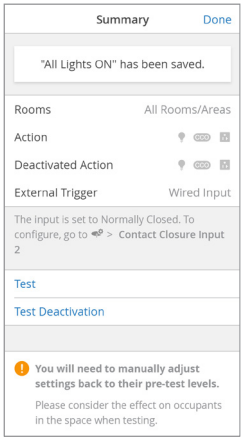


10. If “Wired input” (CCI 2) is selected, then set the device levels for when the contact closure input deactivates.

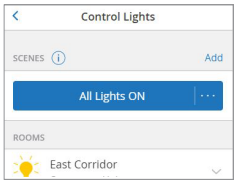


11. Tap “Save” to save the scene.

12. If desired, tap “Test” to test the scene. For the “Wired Input”, deactivation settings can also be tested using “Test Deactivation”. Tap “Done” to continue.



13. Once created, press the button for that scene to activate the sequence.

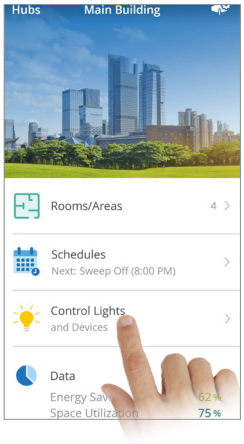


Control and Monitor

From the Vive software, you can control and monitor many aspects of the system. Lights and devices for individual rooms can be controlled using the virtual control buttons for lights and devices. “Scenes” can be used to control lights and devices across multiple rooms.

The Vive software can also be used to monitor current energy savings, space utilization and alerts for any missing or low battery devices in the system.

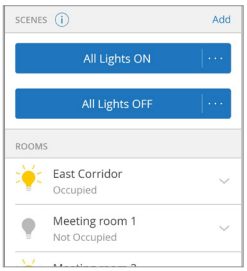
Please see the following section for more details.



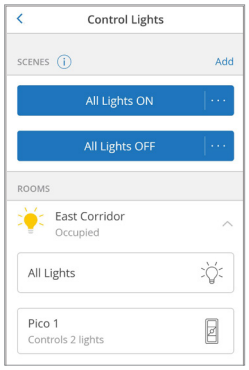
Control Lights & Devices

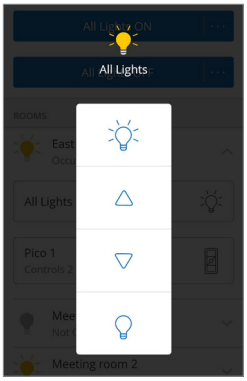
Tap the “Control Lights” menu on the main dashboard of the Vive software. On the next screen you can do several things.

a. Control Scenes - Press the desired scene to manually activate or deactivate.

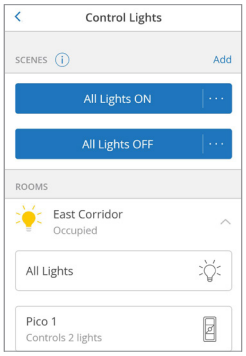


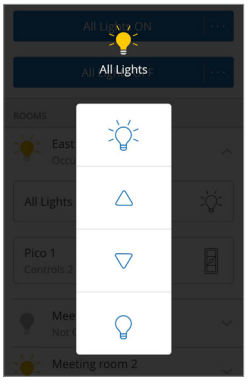
b. Control Lights - Control all lights in a desired room via the virtual light control for an area.





c. Manually control specific lights by simulating button presses on the programmed virtual Pico remote controls.





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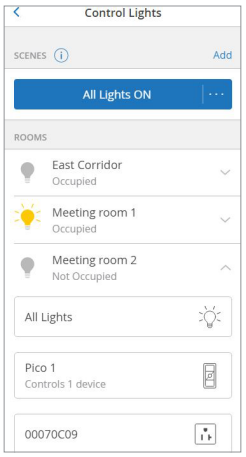
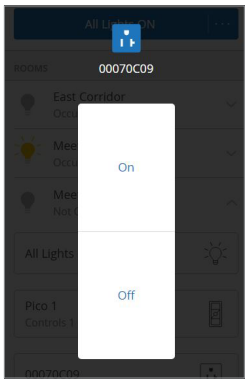
Control and Monitor *(continued)*

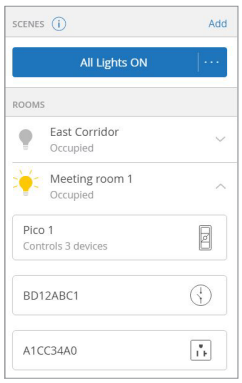
Control Lights & Devices *(continued)*

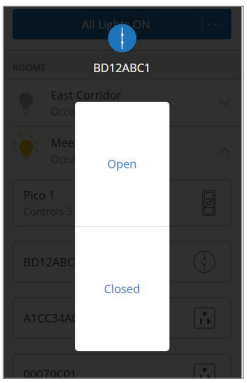
d. Control Receptacles - Control individual receptacles via the virtual control in a room.





e. Control CCO Modules - Control individual CCO modules via the virtual control in a room.

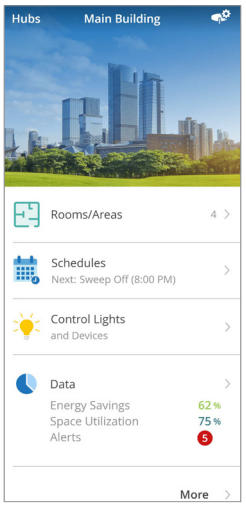




Current Energy Savings

Follow the steps below to monitor the current energy savings.

1. Tap the “Data” menu on the main dashboard of the Vive software to monitor the current energy savings & space utilization for the hub.



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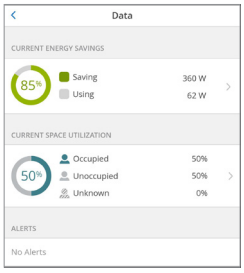
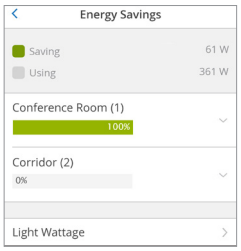
Control and Monitor *(continued)*

Current Energy Savings *(continued)*

2. Tap “Current Energy Savings” to view current energy savings per room type.



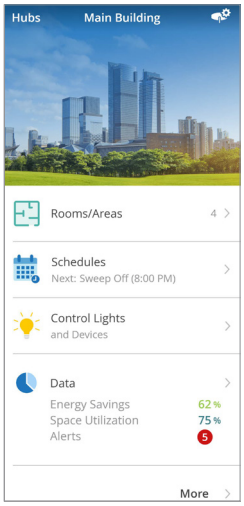
3. Expand a room type row to view current energy savings for individual rooms.
   This is more accurate if fixture wattage is entered into the system for each device. A warning will display if wattage information has not been entered for some of the fixtures. Enter the wattage of fixtures by tapping “Light Wattage” on the energy savings screen.



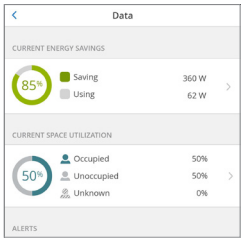
Current Space Utilization

Current Space Utilization displays run-time occupancy status of different rooms. Follow the steps below to monitor the current space utilization.

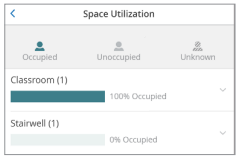
1. Tap the “Data” menu on the main dashboard of the Vive software to monitor the current space utilization for the hub.



2. Tap “Current Space Utilization” to view current space utilization per room type.



3. Expand a room type row to view current occupancy information for the individual rooms.
   Unknown status covers rooms for whom status is not available (e.g., sensors are not responsive because of low battery etc.).



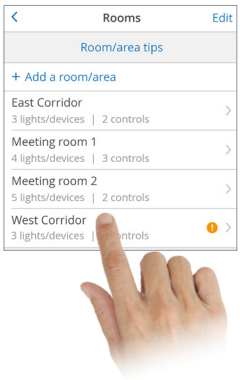
Runtime Status

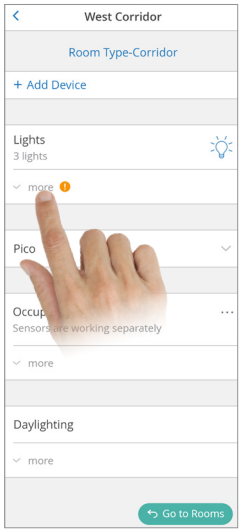
Fixture Sensor Gets Connected

If a fixture sensor is connected to a device that is already added to a hub, you will see a notification in the software.

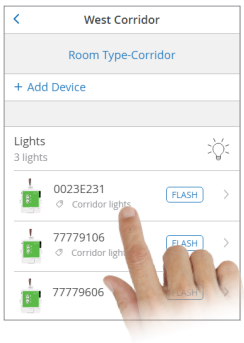
To add this newly connected fixture sensor to the hub:

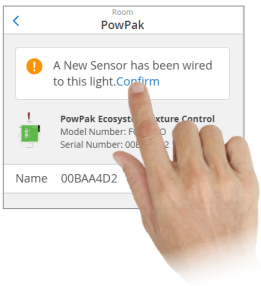
1. From the “Rooms” list screen, tap the area row and then expand “Lights”.



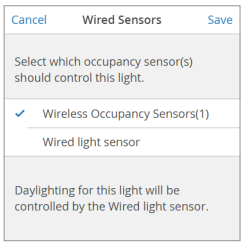


2. Select the device that is attached to the new fixture sensor. Tap “Confirm” to add this sensor.





3. If the device is assigned to a Radio Powr Savr sensor, you will be asked to pick which sensor (wireless or wired) should control this device. Select the appropriate option.



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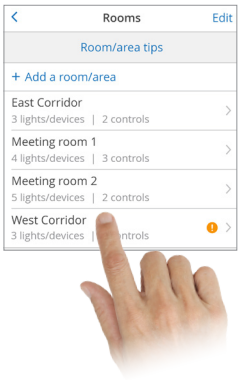
Runtime Status (continued)

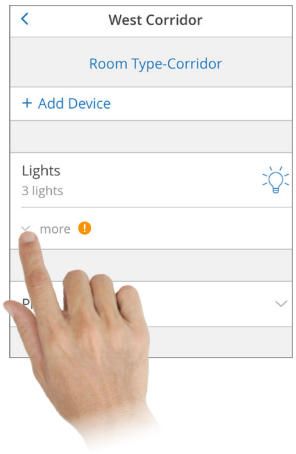
Fixture Sensor Gets Connected (continued)

If a fixture sensor gets disconnected from a device that is added to a hub, you will see a notification in the software.

To remove this fixture sensor from the hub:

1. From the “Rooms” list screen, tap the area row and then expand “Lights”.

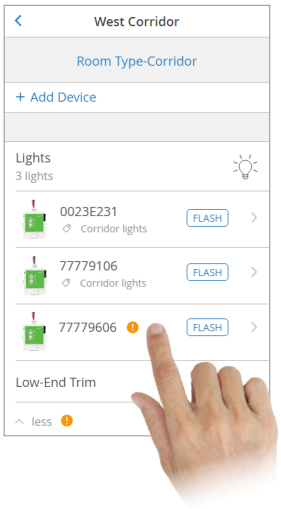


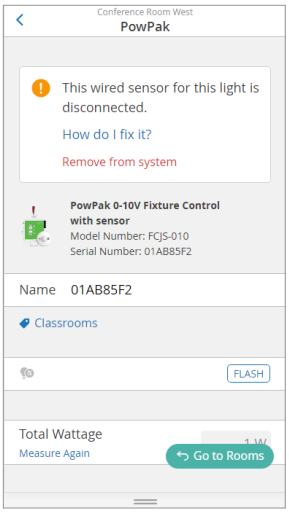


2. Select the device that had the fixture sensor disconnected. Tap “Remove from system” to remove the fixture sensor.

   Note: If this fixture sensor is the only sensor in an occupancy group, you will be notified that the occupancy group will be deleted.

   Note: If you did not intentionally disconnect the fixture sensor or if you see the fixture sensor connection/disconnection notification frequently, verify that the fixture sensor is properly wired to the device.





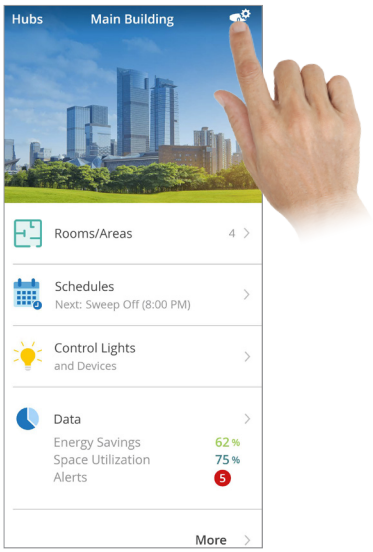
Configure the Hub

Firmware Update

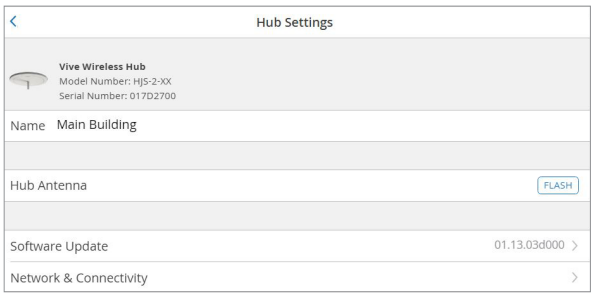
Follow these steps to complete a firmware update.

1. Connect to the hub via a Wi-Fi network or Ethernet.

   Note: It can take up to 1 minute to connect to a laptop or desktop the first time. To speed up the connection, disconnect from any VPN before proceeding.

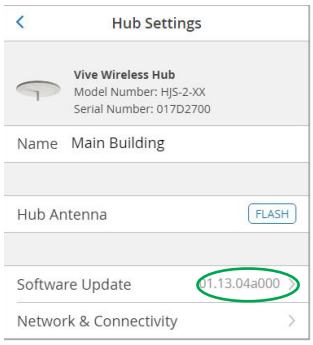


2. From the main dashboard in the Vive software, click ⚙ and then click “Software Update”.



3. During the update process, the antenna on the hub will blink blue and white alternately. The process will take approximately 10 minutes. The hub will reboot after the update is complete.

4. Navigate to “Hub Settings” screen again and verify the new software version of the hub.



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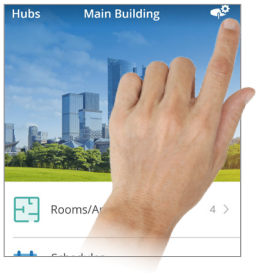
Configure the Hub (continued)

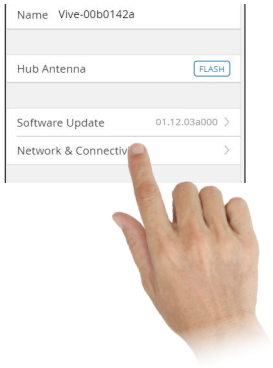
Ethernet Settings

By default, the Ethernet is set up to use DHCP. As a result, the hub will be expecting a DHCP server on the network to assign it an IP address. Usually, an IT department will want to assign IP addresses to the devices on the network. In this case, you will have to set a static IP address on the hub. Follow the steps below.

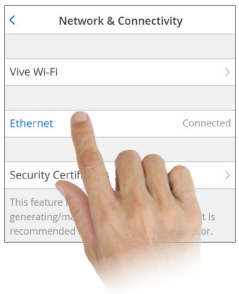
1. Connect an Ethernet cable between the hub and a laptop or desktop computer.
2. Connect the smart device to the Wi-Fi network of the hub.

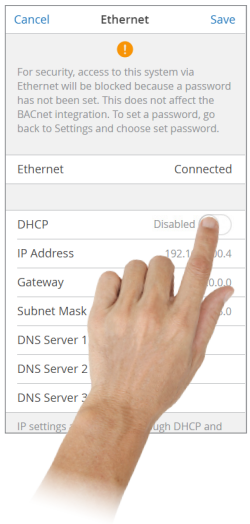
3. From the main dashboard in the Vive software, tap ⚙ and then tap "Network & Connectivity".





4. Tap "Ethernet" and modify the Ethernet settings as needed. To set a static IP address, use the "DHCP" slider to disable DHCP. Enter the settings provided to you by your IT department. If no settings were supplied, use the following:
   a. IP Address: 192.168.4.1
   c. Gateway: 0.0.0.0
   b. Subnet Mask: 255.255.255.0
   d. DNS Server 1: 8.8.8.8





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Configure the Hub (continued)

Ethernet Settings (continued)

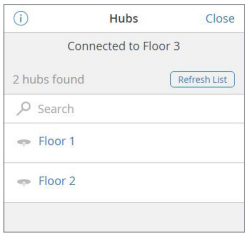
5. Disconnect from the Wi-Fi network and type the IP address of the hub (e.g., http://192.168.4.1) into a web browser on a laptop or desktop computer. The first time you do this, you will get a warning saying that the connection is not safe/private. There is no security concern because the hub uses a self-signed certificate. Tap "Proceed to the website" and enter the hub password.

   Note: If the hub password is entered incorrectly 10 times in a row, the hub will lock. To unlock the hub, either wait 1 hour or cycle power to the hub.

   Note: When connecting to the hub via Ethernet, type the IP address of the hub into the web browser (vive.lutron.com will not work). If the IT department has set up a DNS server, you may be able to type in a more descriptive name instead of the IP address.

   Note: If you want to turn off the Wi-Fi network or hide the SSID broadcast, proceed to the **Wi-Fi Settings** section.

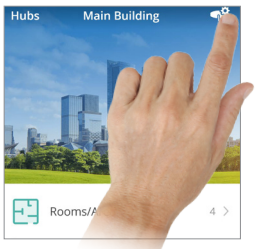
6. From the main dashboard in the Vive software, tap "Hubs" to access the different hubs. If multiple hubs are connected to the same network and Ethernet is enabled and configured on all hubs, you will be able to access the Vive software on all of the hubs when connected to the wired network.

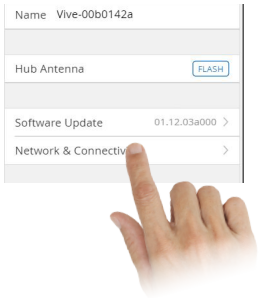


Wi-Fi Settings

After initial setup of the hub, it may be necessary to change the Wi-Fi name or password, hide the SSID broadcast, or disable Wi-Fi. Follow the steps below to change the Wi-Fi settings.

1. From the main dashboard in the Vive software, tap and then tap "Network & Connectivity".

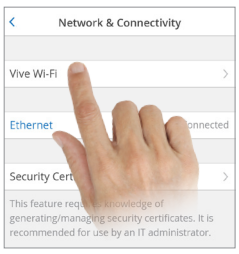


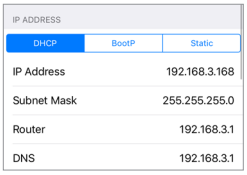


2. Tap "Vive Wi-Fi" and modify the desired items appropriately.

   Note: The default Wi-Fi IP address of the hub is 192.168.3.1

   Note: Before disabling Wi-Fi on a hub, you must set up a hub password so that you can access the hub through the wired Ethernet. Failure to do so will require you to reset the Wi-Fi settings. See **Reset Passwords and Settings** section if you need to reset the Wi-Fi settings.





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Configure the Hub (continued)

Time & Date/Location

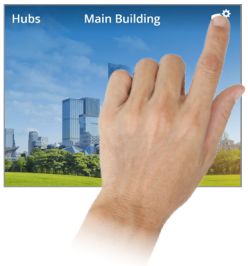
Time, date, and location settings are primarily used to determine the sunrise and sunset times for astronomic timeclock events.

If you have allowed the Vive software to access your location, when a new hub is added, the location and time will be automatically selected and saved to the hub.

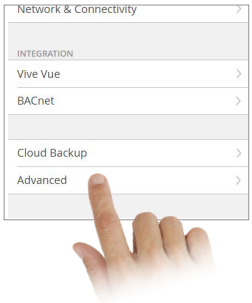
If you haven't allowed location access, the location will not be set and you will have to enter the location manually.

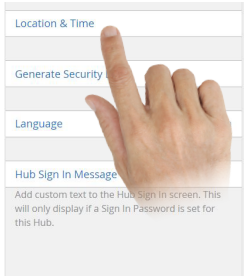
Follow the instructions below to modify or enter the location manually.

1. From the main dashboard in the Vive software, tap .



2. Tap "Advanced" and then select "Location & Time" to view or modify the hub location, date & time.

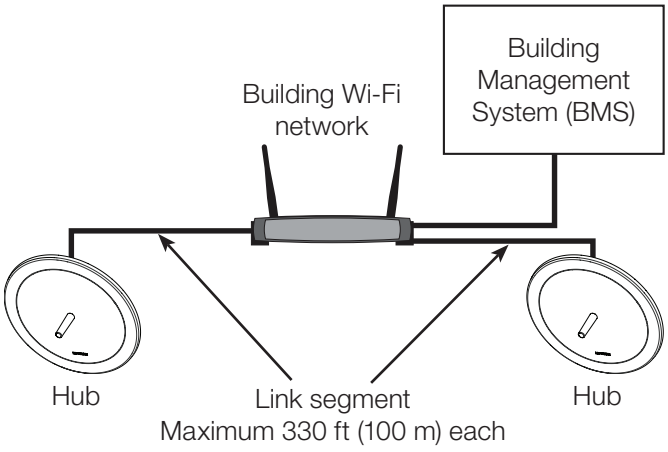




Accessing Other Hubs on the Wired Network

You can access other hubs via the building Wi-Fi/wired network or by connecting directly to the network via Ethernet using a laptop or desktop computer.

1. Connect the hubs by wiring them together via Ethernet. This allows you to easily access them without connecting to each hub Wi-Fi network. Up to 64 hubs can be connected.
2. Configure each hub for wired access by connecting it to the Ethernet network and setting up the Ethernet connection (see **Ethernet Settings** section).
3. Connect to the building Wi-Fi network and navigate to the hub using the IP address or name set by the IT department.



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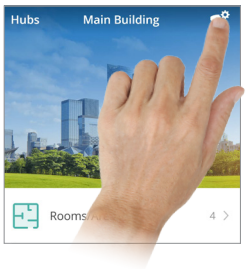
Configure the Hub (continued)

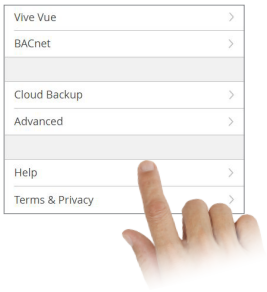
Hub Support File

The hub support file is used for troubleshooting and contains information about the programmed devices and the hub settings.

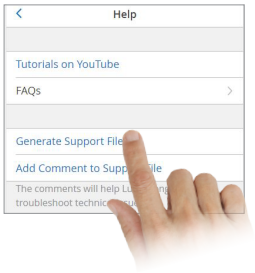
1. From the main dashboard in the Vive software, tap ⚙.



2. Tap “Help”.

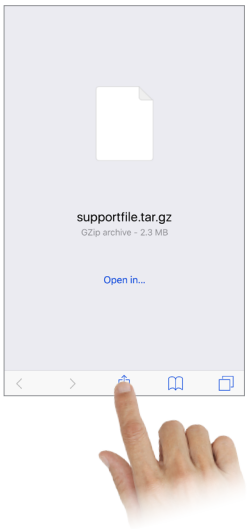


3. Tap “Generate Support File”.



a. If using a laptop, desktop, or Android™ device, save the file to the desired location and e-mail to systemsupport@lutron.com

b. If using an iPhone mobile device, tap “⬆” to share the file via e-mail. Select the desired mail application and e-mail to systemsupport@lutron.com



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Configure the Hub (continued)

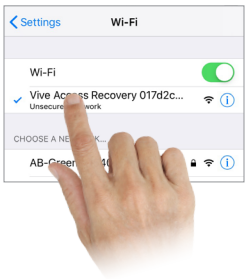
Reset Passwords and Settings

In the event that the Wi-Fi or hub password is lost or forgotten, both passwords can be reset without restoring the hub to factory default. Follow the steps below to clear the hub password and reset the Wi-Fi settings.

1. Press and hold the button on the back of the hub for 30 seconds until the antenna on the hub starts to blink rapidly.

2. The hub will go in access recovery mode for 30 minutes. The Wi-Fi name will change to “Vive Access Recovery xxxxxx” and password protection will be removed.

3. Connect to the Wi-Fi network of the hub and follow the instructions to reset hub access details.

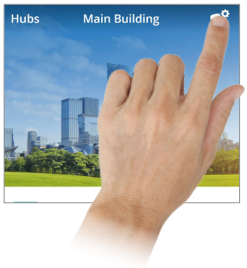


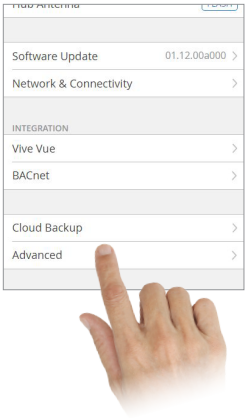
4. Reconnect to the hub using the new password.

Security Log

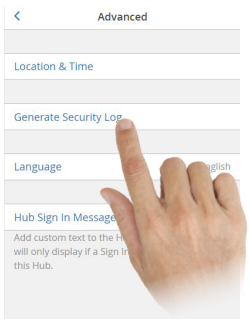
You can generate a log of key security events in the system.

1. From the main dashboard in the Vive software, tap and then tap “Advanced”.





2. Click “Generate Security Log” to generate and download the log to your device.



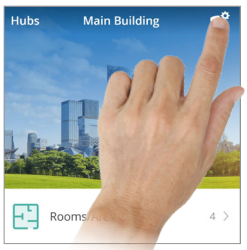
Security Certificates

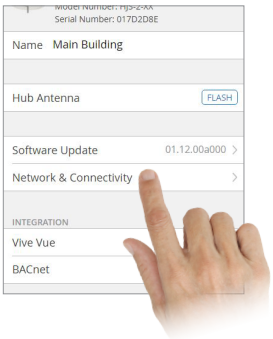
The Vive hub uses its default security certificates; however, you can install your own custom security certificate on a Vive hub to enable browsers to identify the hub during secure access (HTTPS).

Note: Please use a laptop or desktop computer to install a certificate. The certificate and private key must be imported in PEM format. The secure certificate private key should be between RSA 2048 – RSA 4096.

Follow the steps below to update or install a new security certificates:

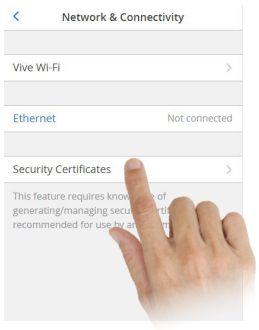
1. From the main dashboard in the Vive software, tap ⚙ and then tap "Network & Connectivity".





2. Click "Security Certificates" and follow the instructions to install the certificate.

   Note: Tap on "What is a security certificate?" to know more details about security certificates.



3. Verify the installation by opening a new browser window and reconnecting to the hub using an HTTPS connection over Ethernet.

   Note: If the certificate is invalid then you will not be able to connect to the hub. You can recover access to the hub by following instructions:

   a. Connect to the hub's Wi-Fi and access Vive to bypass the failed connection.

   b. Navigate to Hub settings ⚙ and then tap "Advanced".

   c. Click "Security Certificate" and then uninstall the invalid certificate and install a new certificate.

   If you do not have access to the hub's Wi-Fi, then follow following steps:

   a. Press and hold the black button on the back of your hub for 30 seconds until the antenna on the hub starts to blink rapidly.

   b. The hub will go into access recovery mode and become open for reconnection. The hub password will clear and the Wi-Fi name will change to "Vive Access Recovery xxxxxxxx".

   c. Connect to the hub's Wi-Fi and follow the instructions to set a new Wi-Fi name and password.

P/N 041571m

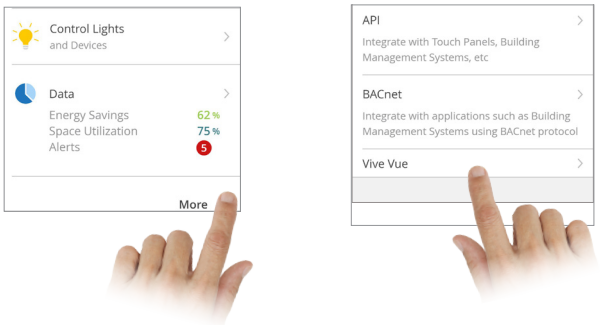
Vive Vue

Vive Vue is a server installed locally at your premises to centrally manage multiple hubs, it works as a single dashboard for all your hubs. It provides:

1. Graphical floorplan view for control and navigation
2. Centralized energy logging & historical reports
3. Space utilization and occupancy reporting
4. Building-wide control of schedules and load shed

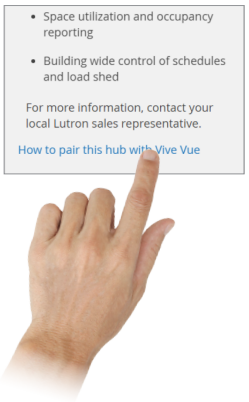
Follow the steps below to view Vive Vue details:

1. From the main dashboard in the Vive software, tap “More” and then tap “Vive Vue”.



2. To pair a hub with a Vive Vue server, please select “How to pair this hub with Vive Vue” link.

3. Check the hub readiness report to make sure that the hub is ready to be paired.



4. To setup the Vive Vue server, contact Lutron to schedule a field service engineer.

   Once a hub is paired with the Vive Vue server you can manage its load shed and events using a Vive Vue server dashboard. You can also see occupancy and energy reports on the dashboard. If required, a Hub can be unpaired later from Vive Vue server.

Visit www.lutron.com/vive for a wide range of tutorials, videos, FAQs, and forums.

Lutron Contact Numbers

WORLD HEADQUARTERS
U.S.A.
Lutron Electronics Co., Inc.
7200 Suter Road
Coopersburg, PA 18036-1299
TEL: +1.610.282.3800
FAX: +1.610.282.1243

support@lutron.com

www.lutron.com/support

North & South America
Customer Assistance
U.S.A., Canada, Caribbean:
1.844.LUTRON1 (1.844.588.7661)
Mexico:
+1.888.235.2910
Central/South America:
+1.610.282.6701

UK AND EUROPE:
Lutron EA Ltd. - London
3rd Floor, 51 Lime Street
London EC3M 7DQ
England
TEL: +44.(0)20.7702.0657
FAX: +44.(0)20.7480.6899
FREEPHONE (UK): 0800.282.107
Technical Support: +44.(0)20.7680.4481

lutronlondon@lutron.com

ASIA:
Lutron GL Ltd.
390 Havelock Road
#07-04 King's Centre
Singapore 169662
TEL: +65.6220.4666
FAX: +65.6220.4333
Technical Support: 800.120.4491

lutronsea@lutron.com

Asia Technical Hotlines
Northern China: 10.800.712.1536
Southern China: 10.800.120.1536
Hong Kong: 800.901.849
Indonesia: 001.803.011.3994
Japan: +81.3.5575.8411
Macau: 0800.401
Taiwan: 00.801.137.737
Thailand: 001.800.120.665853
Other Countries: +65.6220.4666

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