Casambi App User Guide

Version 3.1 Part 1
13.02.2020

CASAMBI

www.casambi.com · support@casambi.com

Table of contents

System overview

Casambi is an advanced lighting control solution based on Bluetooth Low Energy (BLE). Bluetooth Low Energy is the only low power wireless technology in all modern smartphones, tablets and even smart watches, making it the only mainstream and future proof low power radio technology in the world.

Casambi technology can be integrated into luminaires, LED-drivers and even within LED-modules or bulbs, creating an optimal solution in terms of ease of installation and functionality with minimal additional hardware and deployment costs.

Casambi technology provides a mesh network where all the intelligence of the system is replicated in every node. This means that there are no single points of failure.

Casambi app works as one of the user interfaces in a Casambi lighting control solution, the commissioning tool and also as a remote gateway. Casambi app works with iOS and Android devices, like smartphones, tablets and smartwatches. The app is free to download from Google Play and Apple App Store.

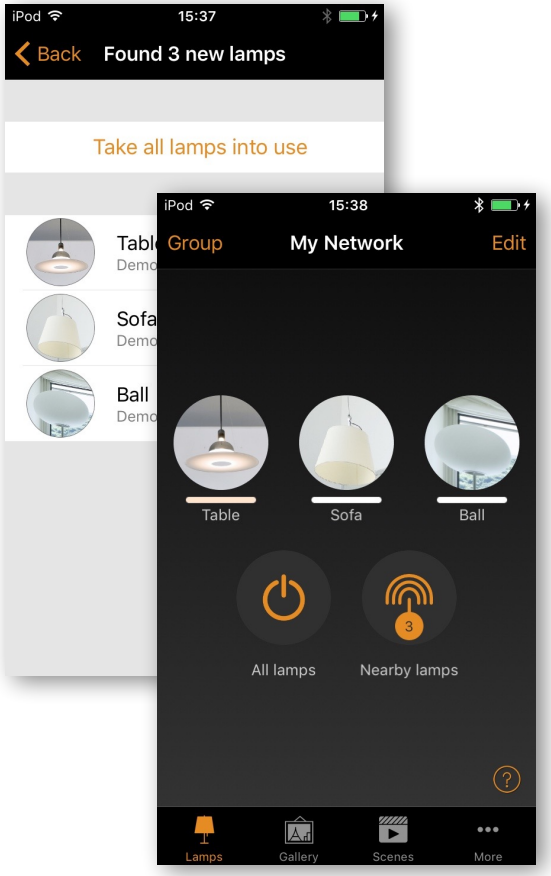
Using the Casambi App

First time use

Casambi app is easy to use. Follow these simple steps:

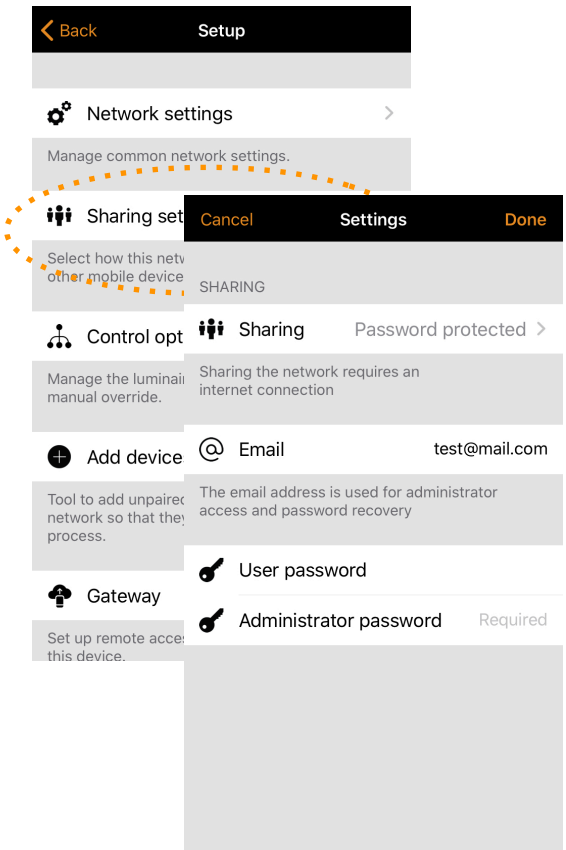
1. Download the app from Apple App Store or Google Play Store.
2. Switch on your Casambi enabled luminaires.
3. Open the app.
4. Casambi app will automatically find all Casambi enabled luminaires that are switched on.
5. Select *Take all luminaires into use*
6. Casambi app will automatically add all of the located luminaires to one network and open the 'Luminaires' tab

Casambi app has four tabs: Luminaires, Gallery, Scenes and More.All of these will be covered in this document.



Taking luminaires into use

When first taking all luminaires into use the Casambi app will automatically create a network. All the luminaires are added to the same network so that they can be easily controlled from the *Luminaires* tab. One luminaire can only be in one network at a time. When a luminaire is part of a network it is in a 'paired' state and cannot be added to any other network before 'unpairing'. i.e. removing it from the network.



The network that is automatically created is always a *Not shared* network. This means that the network is only stored on the device that has created it and is not shared with other devices. If you would like to share the network you need to change the network sharing. Go to the *More* tab and select *Network setup* > *Sharing settings*. Select *Sharing settings* to change the sharing mode. There are four different sharing modes: *Not Shared*, *Administrator only, Password protected* and *Open*.

When you select Administrator only, Password protected or Open mode the network will be uploaded to cloud server and then it can be accessed also from other mobile devices. Remember to add also an email address and a password for the network so it can be recovered later if needed.

Luminaires

Basic Gestures

After you have taken your luminaires into use they are displayed in the *Luminaires* tab with a picture, name and the current brightness level.

Here are the basic gestures to control your lights:

To turn off or on your luminaire just tap the luminaire control.

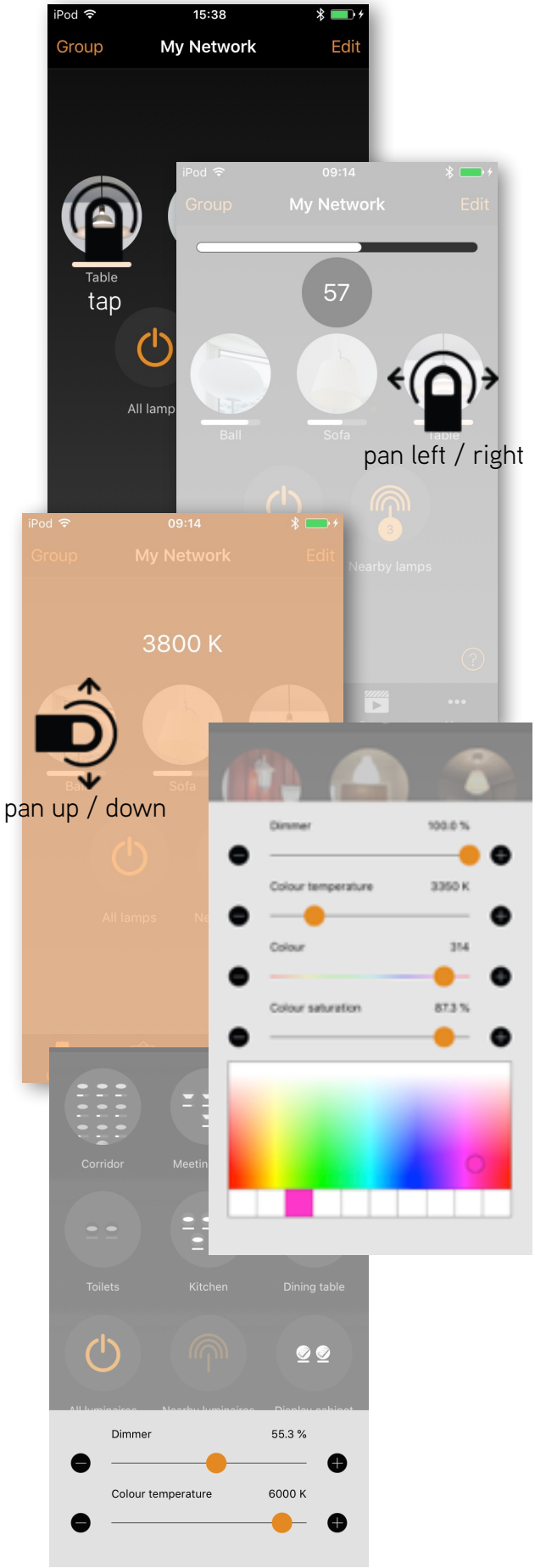
Pan the luminaire control left or right to adjust the light level of the luminaire. The app will remember the last light level, so when you turn on the light on again it will return to the previous level.

Pan the lamp control up or down to adjust the colour temperature of the luminaire.

Select and hold the lamp control to change the colour. It is also possible to save your favourite colours to the palette. Just set the colour and then select and hold an empty palette space to save it. The saved colours are device specific and will not be shared with other devices in the network. Once you have saved different colours to the palette it is not possible to reset it, but previously saved colours can be over-written with new colours.

If you have a lamp that supports more than one channel you can adjust the different channels by holding on top of the lamp control.

Tip: use the basic gestures on the All luminaires icon to control all of your lamps simultaneously or Nearby luminaires icon to control luminaires that are close to you.



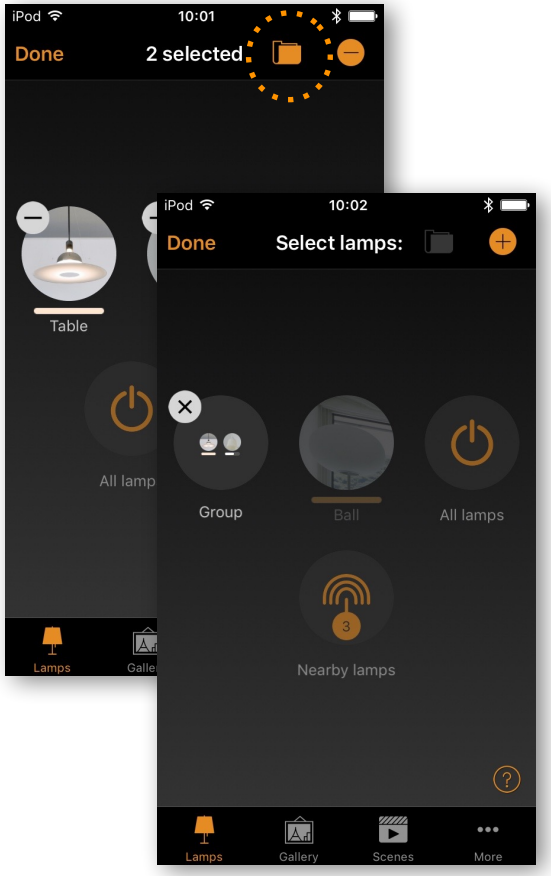
www.casambi.com
support@casambi.com

Using a group

After creating a group you can control all of the luminaires within it simultaneously. Use the normal gestures - select, pan and hold - to control the whole group.

If you would like to control luminaires separately, even if they are part of a group, just double tap the group to expand it and a separate screen will open which then allows you to control the luminaires separately.

Note that groups are predominantly designed for manual control, whereas scenes are designed primarily for automation. See the *Scenes* section later for more information.



Creating a group

There are two ways to create a group:

1. Select *Group* at the top of the screen and select the lamps for the group by tapping them. Create the group by tapping the 'folder' icon on top. At the top you can also see + or - icons. They can be used to select or deselect all luminaires. Tap *Done* to save the changes.

2. Select *Edit* at the top of the screen. Drag the lamp controls on top of each other to create a group.

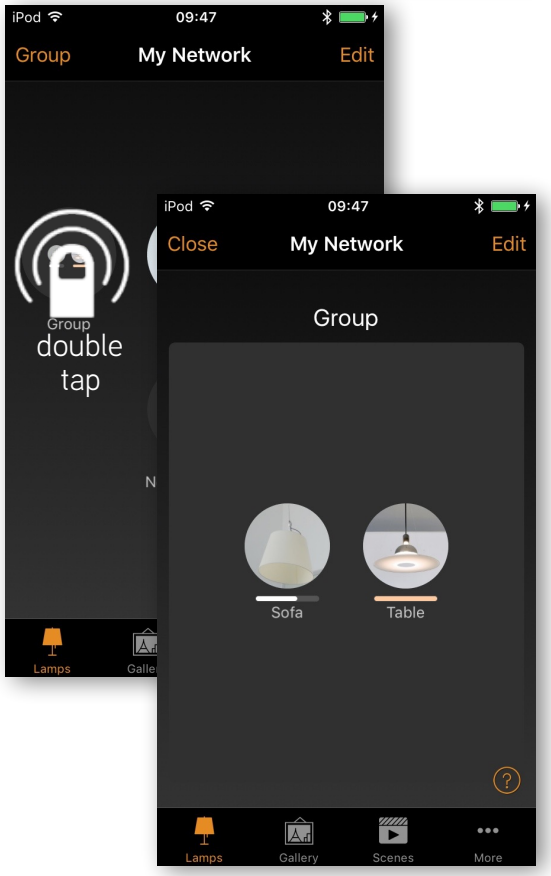
If you want to add more lamps into the group, select *Edit* and drag and drop them on top of the group.

If you want to edit the group just select the group while in edit mode and it will open for editing.

In the edit window you can rename the group and remove lamps from it by dragging and dropping them outside the group area.

When you have finished editing the group, select *Done* and *Close* to go back to luminaires tab.

If you want to remove a group just select *Edit* or *Group* and then select the X sign in the corner of the group icon.



Luminaires

Editing a luminaire control

To edit a lamp control either double tap the lamp control you want to edit or tap on the *Edit* on top of the screen and select the lamp control you want to edit.

In the edit screen there are multiple options. You can adjust the luminaire's state, mode, smart-switching features and control hierarchy options etc.

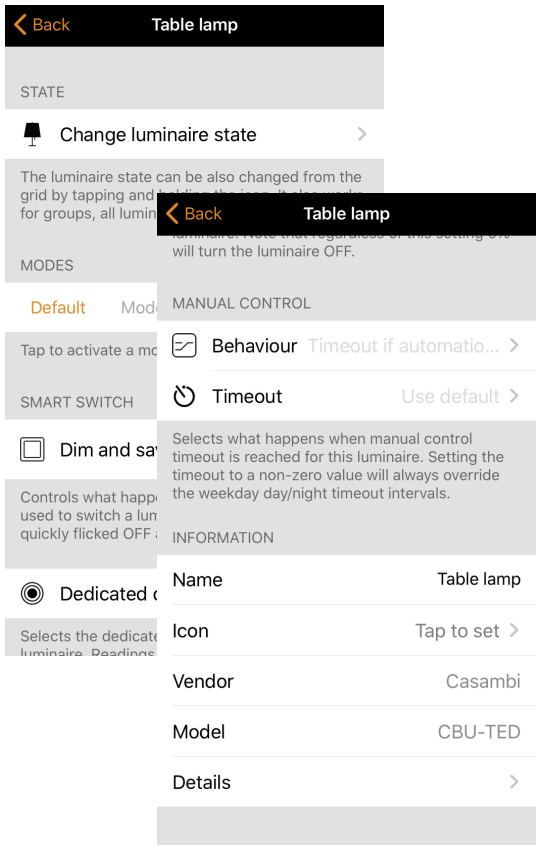
MODES Modes can be use to store different dimming levels, colours or colour temperatures. To edit a mode, select and hold the *Default* or *Mode X* text and an *Edit* option will appear. Select *Edit* and then adjust the luminaire's settings as needed. The mode will be automatically saved after adjusting and exiting the luminaire setting. NOTE: the *Default* option is used to set the luminaire state after a power cut.

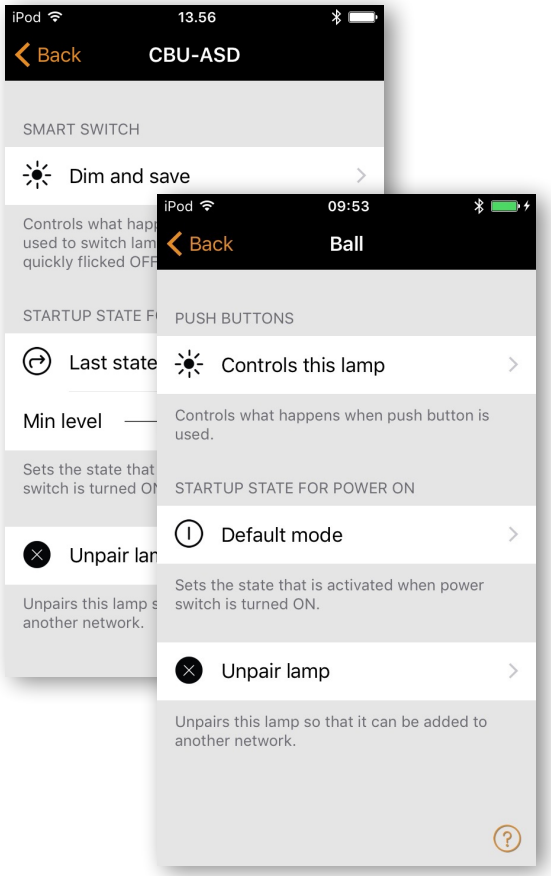
SMART SWITCH and PUSH BUTTON Smart-switching and Push Button allow you to select the mode for a luminaire's switch, depending on the type of Casambi device which you are using. For detailed information about smart-switching and push-buttons, please see the *Smart Switching* and Push Button sections of this document.

DEDICATED DAYLIGHT SENSOR This option allows you to select a daylight sensor which can affect the luminaire. You can also adjust the *Daylight gain* for this luminaire using the slider.

STARTUP STATE FOR POWER ON Allows you to set the luminaire to use either the *Default mode* (default light level) or *Last state* when switching on the luminaire. The *Last state* option will cause a luminaire to go to the same dimming level and colour which were previously in use before the luminaire was switched off.

You can also configure minimum and maximum dimming levels for the luminaire. The luminaire will always operate within these restriction, although dimming to 0% will always turn off the luminaire.





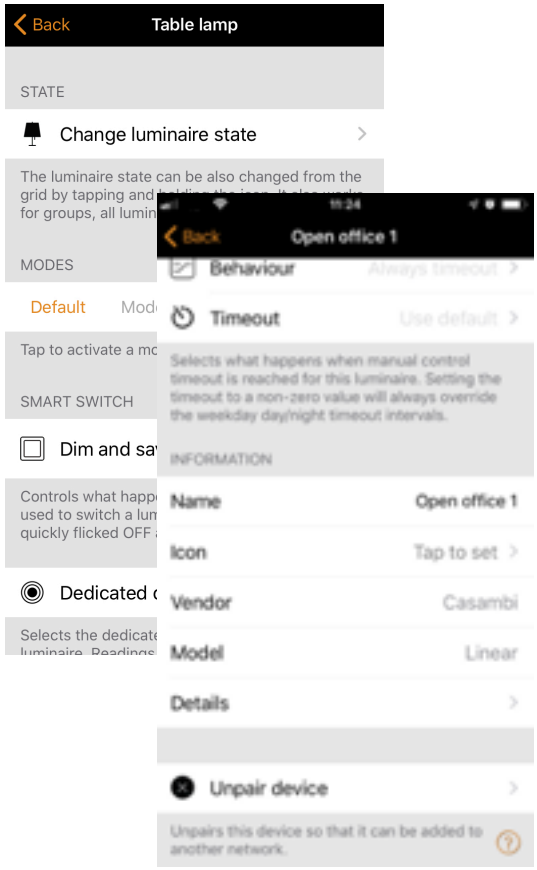
Luminaires

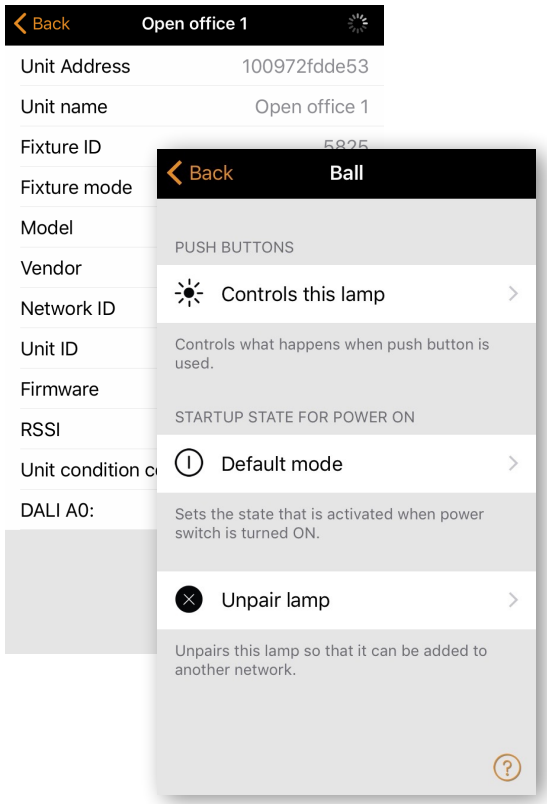
MANUAL CONTROL The *Behaviour* and *Timeout* options allow you to over-ride the network's default manual control settings and create individual options for an individual luminaire. Select *Behaviour* to change how manual control should work for the luminaire and select Timeout to over-ride the default timeout value.

NOTE: the *Manual Control* option will only appear if *Use control hierarchy* is enabled in the *Control options* section of the network settings.

INFORMATION Within this section you can change the luminaire's name and create a new icon which replaces the luminaire's default image. The icon can be an existing picture from your device's photo gallery or you can take a new photo. The *Details* section also displays further technical information about the luminaire.

UNPAIR DEVICE / REPLACE DEVICE Use the *Unpair device* option to remove a luminaire from a network. If a luminaire has become damaged and is powered off, the *Replace device* option can then be used to replace a luminaire. When using the *Replace device* option, an identical luminaire device must be used. This allows all of the previous settings for the luminaire to be used by the new luminaire device.





Changing a device's profile

A Casambi device's profile may need to be changed depending on the type of luminaire which it controls. For example, different profiles are required for 1ch dim, 2ch dim, RGB, TW etc. To change a devices profile:

1. Unpair the device from your network
2. Select the device from the *Nearby Devices* list
3. Choose the *Change profile* option
4. Select the correct profile from the list
5. Once the profile has been configured, add the device to your network.

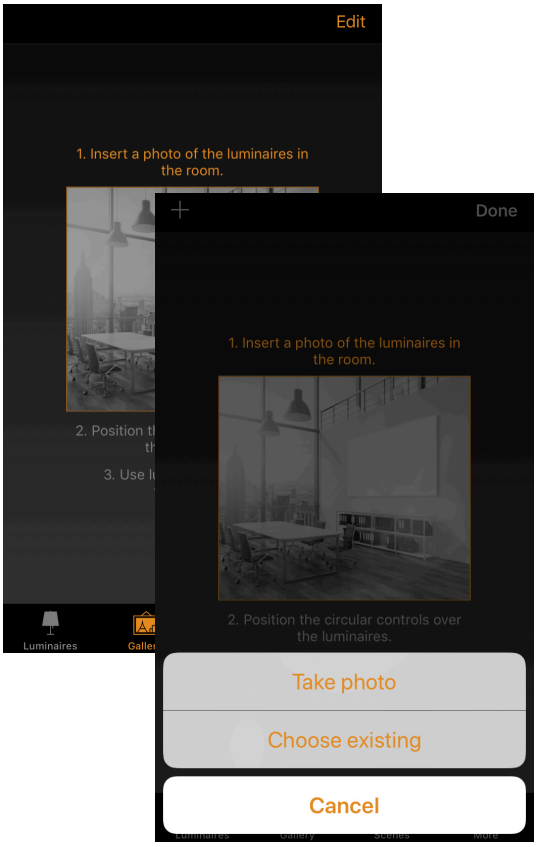
Gallery

First time use

The Gallery in Casambi app is the most intuitive way of controlling your luminaires. Take a picture of the room where your luminaires are and place lamp controls over them in the photograph.

To add the first photograph, select the black and white image and choose whether you want to take a photo or use an existing picture from your device's gallery.

After you have taken a photo or selected a photograph it is added to the Casambi Gallery.



The next step is to add lamp controls to the picture.

Tap on the + sign to open the selection screen containing your luminaires

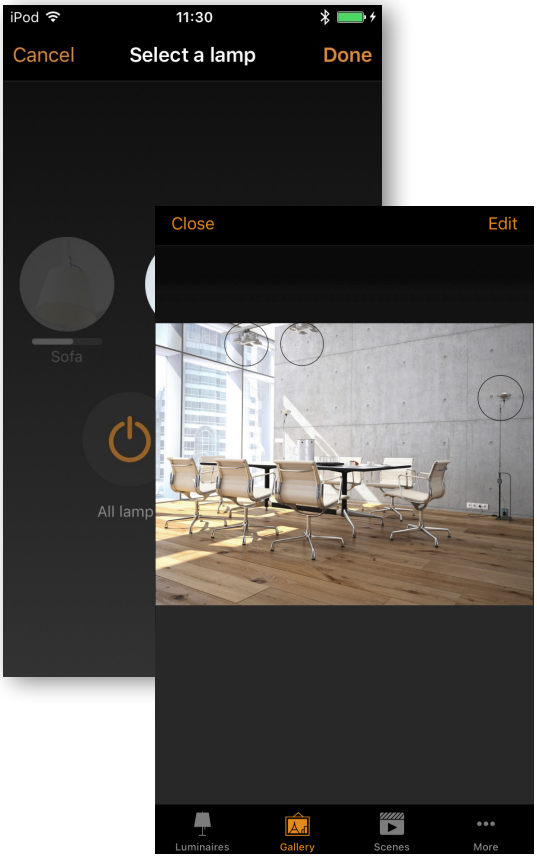
Select a luminaire that is in the photograph and confirm your selection using *Done*. If the required luminaire is in a group, first double tap the group and you can then select the required luminaire.

A lamp control circle will appear in the centre of the photograph. Drag the control circle on top of the luminaire. You can resize the circle by pinching.

If you have more than one luminaire in the picture tap on + sign to add other controls. When you have added controls over all of the luminaires in the photograph, select *Done*.

To return to the Gallery and add more photographs, select *Close*.

If you would like to add more photographs, select the + on top of the Gallery screen. If the + sign is not visible, select *Edit* and the + sign will appear.

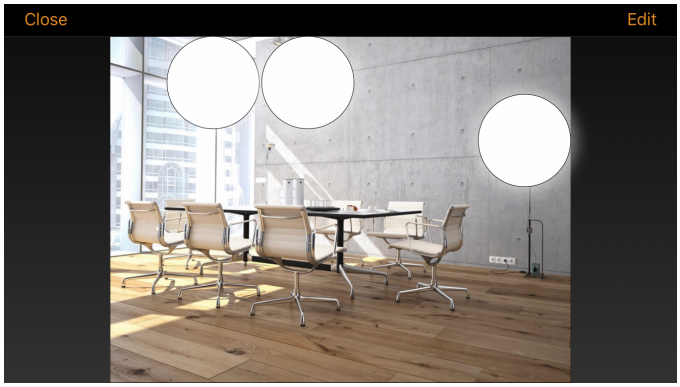


Tip: take a panorama picture of your room to capture more luminaires in one photo. Alternatively, use a graphical floor plan of your building to control luminaires based on their location.

www.casambi.com
support@casambi.com

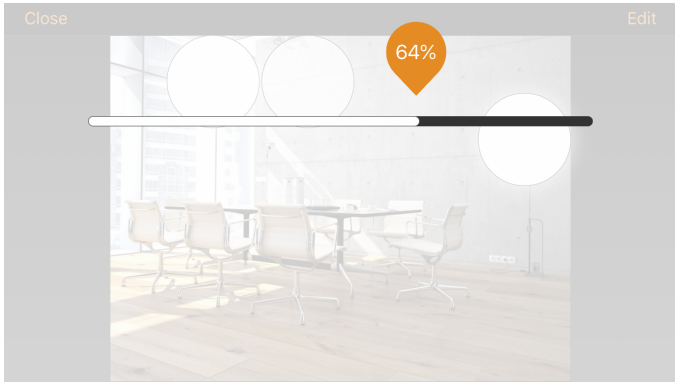
Gallery

Controlling luminaires



After adding at least one photo you can open it from Gallery and control the luminaires in it from the photograph. Tap on a photograph to open it in full screen.

Use the normal gestures, select, pan and hold on the lamp control circles to control the luminaires in the picture.



If you open the photograph in portrait orientation then related scenes are shown next to it. The scene icon is shown if even one lamp in the photograph is part of the scene.

Tip: pan or hold anywhere outside the control circles in the photograph to dim or change colour for all luminaires simultaneously.

Arranging the pictures

You can arrange the order and change the size of photographs in Gallery.

First select *Edit* at the top of the screen.

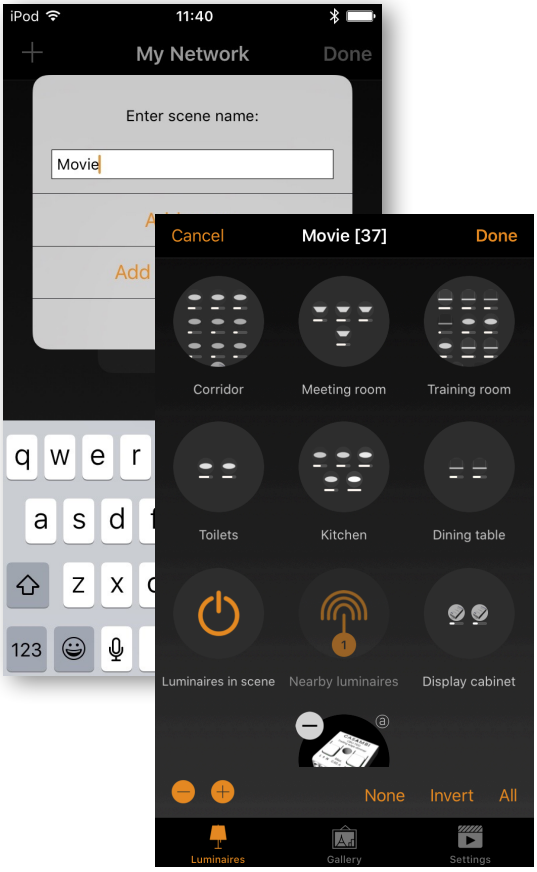
In edit mode you can drag and drop photographs to arrange them.

If you want to resize the photographs, move the orange bar up or down between the photographs. Note that this feature is only available for Apple iOS.

Confirm the changes by selecting *Done*.

Scenes

Scenes allow you to create different lighting situations for different occasions. Multiple luminaires can be controlled with a single scene to create perfect ambience for different needs. The same luminaire can also be used in multiple scenes. Note that a basic scene must first be created before time-based scenes and animations can be created. And a scene is active when it's highlighted.

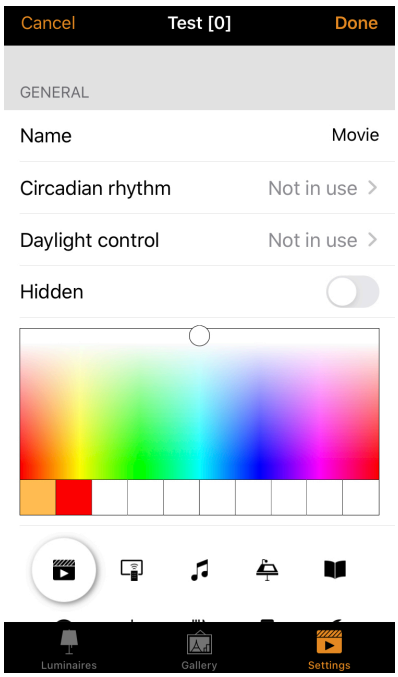


Select *Edit* and + then enter a name for the scene and select *Add a scene*. Select and adjust the luminaires for this scene. With + you can add all luminaires and with - you can remove all luminaires from the scene. You can adjust the luminaires separately or if you want to have same dim level or colour for all you can use *Luminaires in scene* control to adjust all luminaires in the scene.

If you want to add luminaires that are in a group, double tap the group to open the selection screen. If you want to add all luminaires in the group to the scene tap on the + sign on left bottom corner. Or if you want to remove all the luminaires in the group from the scene tap on the - sign

To adjust all the luminaires in the group use basic gestures anywhere on the group area (in iOS app). In Android app close the group with *Close* and then you can adjust all luminaires in the group from the group control icon.

Luminaires can also be added from a gallery image. Simply open the appropriate gallery image and select the required luminaire(s).



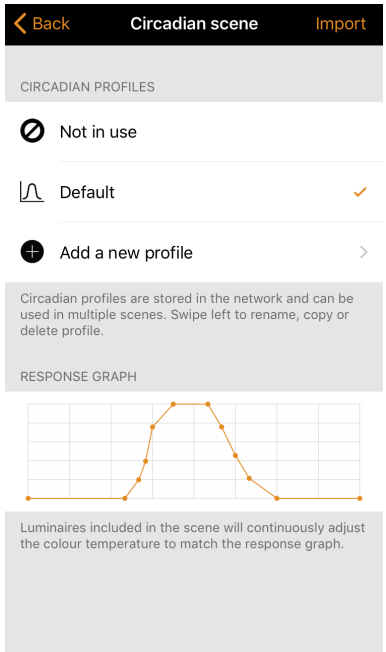
To change the name, icon and colour for the scene control, select the settings icon in the bottom right corner. Use the colour palette to define a colour for the scene icon, if required. A scene can also be hidden from the user view by selecting the *Hidden* option. To return to the scenes tab, select *Done.*

To create more scenes just select the + sign at the top of the scenes tab. You can also copy scenes by selecting and holding an existing scene. A copy will then be created in edit mode and the number 2 will appended to the scene name.

Tip: also select any luminaires which should be off during the scene and adjust their brightness level to 0%.

Scenes

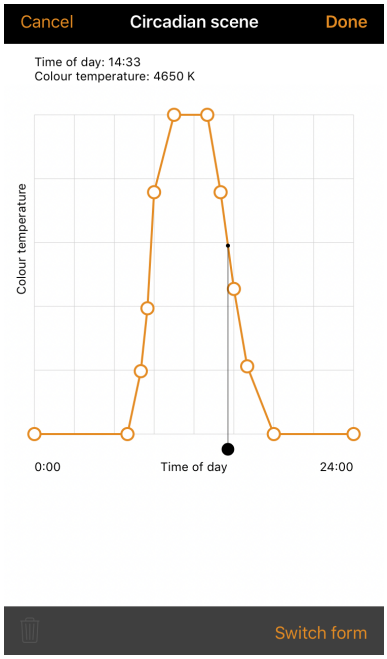
Circadian scenes



Circadian rhythms can be enabled by selecting the graph icon.

A circadian rhythm allows automatic colour temperature management for basic scenes by using a response graph that displays the hours of the day and colour temperature. When a circadian profile is enabled for a scene it will look up the colour temperature from the response graph when the scene is activated and every minute after that, until the scene is deactivated. Note that it can be used simultaneously with daylight control.

To add a circadian rhythm to a scene, select the Settings icon in the bottom right corner and then choose the *Circadian rhythm* setting. Select *Add a new profile* or the *Default* profile and then tap on the response graph below. You can then adjust the response graph to your requirements. The time of day can also be moved to help you select when your circadian rhythm should start and finish.



Select any area on the graph to create a new marker point. Use the rubbish bin icon to delete a highlighted graph marker point.

Use the *Switch Form* option to change the response graph form from a smooth graph to a stepped graph.

Multiple rhythms can also be created and rhythms from other networks listed on the same device can also be imported. To import a rhythm from another network, simply select the *Import* option and you will then be presented with a list of circadian rhythms from the other networks on your device.

Select *Done* when your rhythm is complete.

Scenes

Daylight control

To change the daylight control mode, select the Settings icon in the bottom right corner and then choose the *Daylight control* option. Below is a description of each available setting:

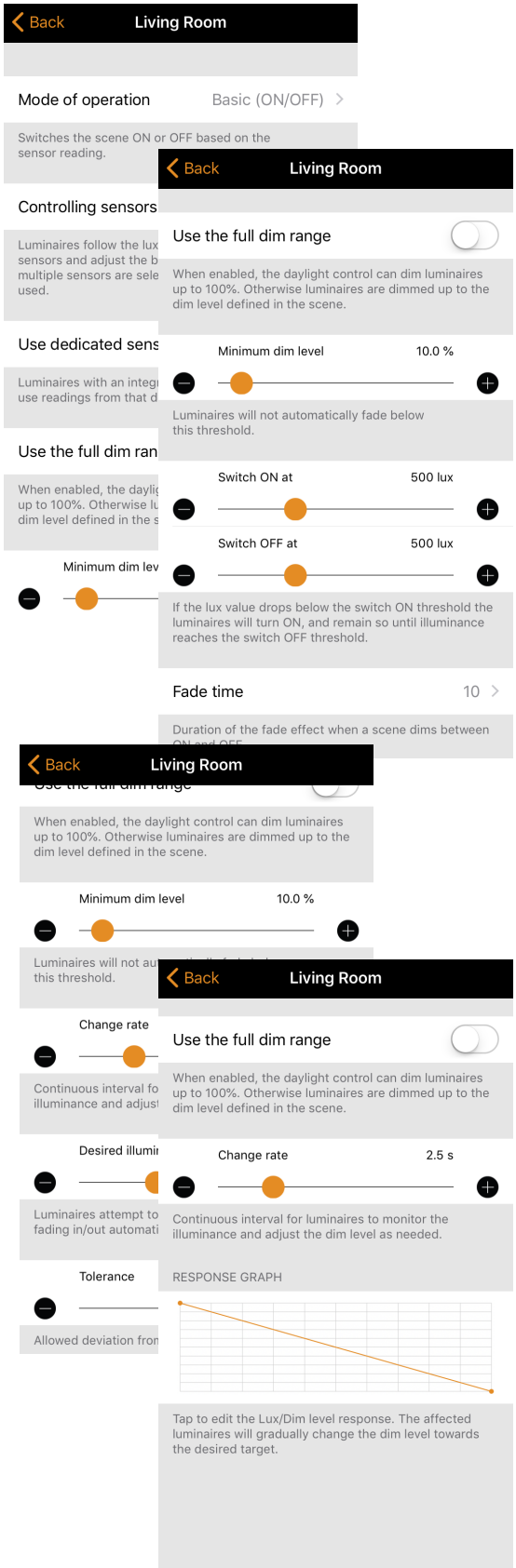
Basic (ON/OFF) Luminaires will switch ON or OFF based on two configurable Lux threshold levels. Sensors may or may not be affected by the nearby luminaires and the mode only operates when it is the highest priority item on control hierarchy. The scene's output is always defined by the dimming level(s) of the luminaires selected within the scene.

Open loop Luminaire output level (0-100%) is obtained by comparing the sensor's lux reading against a response graph. Sensors should not be affected by the luminaires in the network and this mode can operate on the control hierarchy even if it is not the highest priority item. Some examples of this are: a group of luminaires controlled by a daylight sensor installed in a separate location to the luminaires, or controlled by a sensor facing towards a window away from the luminaires.

Closed loop A target lux level is manually specified and the sensor will actively try to reach and maintain the lux level via a feedback loop (by observing the results of its own changes). Sensors are affected by luminaires and this mode can only operate when it is the highest priority item on the control hierarchy. An example of this is a group of luminaire controlled by a daylight sensor located in the same area as the luminaires.

External Similar to the *open loop* option, but is based on a 0-100% dimming signal rather than a Lux level. This option is designed to be used to combine a Casambi unit with a sensor which is not Casambi-activated. Examples include a CBU-ASD connected to a non-Casambi activated sensor, or when dimming is performed by an external DALI controller or DALI 2 sensor.

Casambi-ready sensors created by our partners already contain the Casambi firmware so there would be no need to use the *External* option with those devices.



Scenes

Creating Animations

In the *Scenes* tab it is also possible to create animations. Animations are a special type of scene that fade from scene to scene. Animations can be activated in the same way as standard scenes and it is also possible to set animations to repeat.

Select *Edit* and then the + in the top right corner. Then select *Add an animation*. Note: at least one scene must already exist in order to create an animation.

Next you need to add animation steps. Steps are scenes and waiting times. You can add as many steps as you like.

Example animations:

Add Scene Red, fade time 10 sec
Add wait 3 min
Add Scene Blue, fade time 10 sec
Add wait 5 min
Add Scene All Off, fade time 10 sec

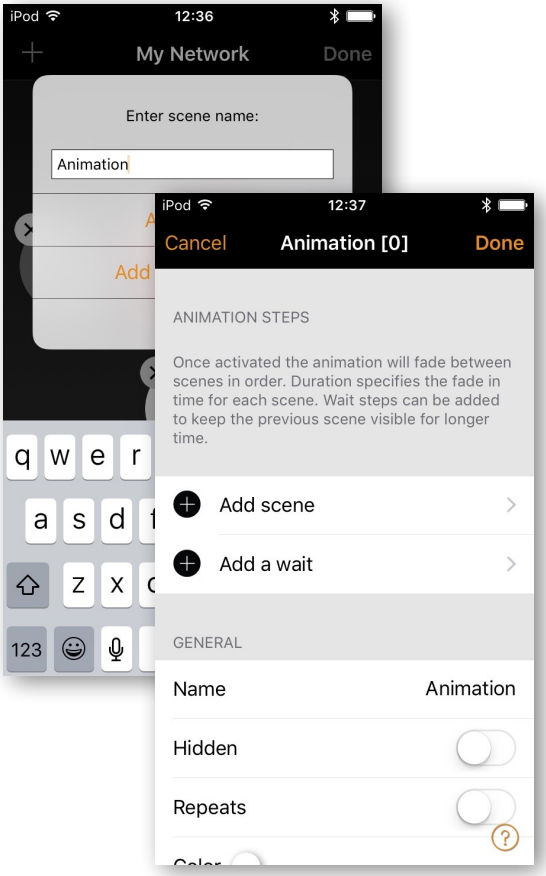
This animation above will fade in to scene Red within 10 seconds and Red will be active for 3 minutes. Then the scene Red will fade into scene Blue in 10 seconds and Blue will be active for 5 minutes and fade out in 10 seconds.

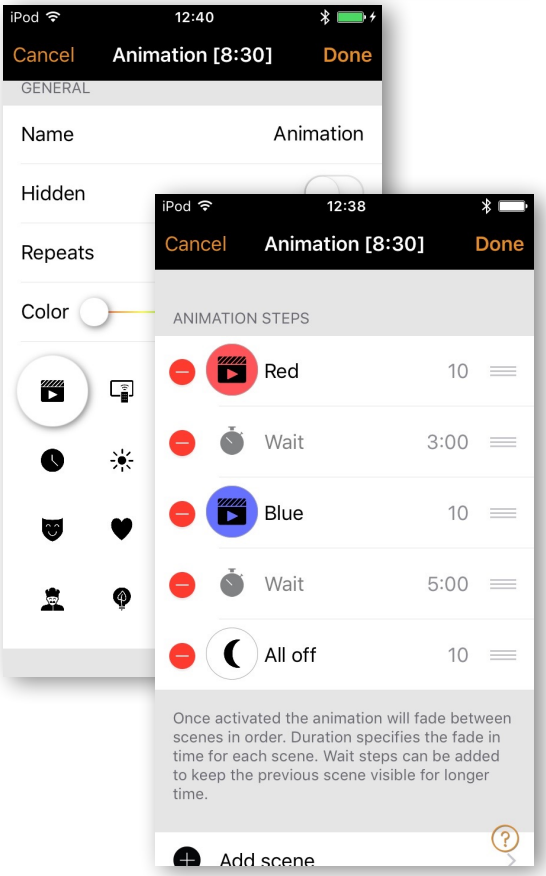
Under the *GENERAL* section you can set the animation to repeat. You can also change the name, colour and icon. The animation can also be hidden from the Scenes tab view if needed. It will, however, reappear once *Edit* has been selected.

When you have finished editing the animation, select *Done*. The time displayed next to the animation's name is the total time length of the animation.

Please note that non-repeating animations can not be used with time-based scenes.

Tip: you can also use timers to control animations. This way an animation can be turned on and off based on time.





Scenes

Example animations

Add Scene Red, 100%, fade time 10 sec
Add wait 3 min
Add Scene Blue, 100%, fade time 10 sec
Add wait 5 min
Add Scene All Off, 100%, fade time 10 sec

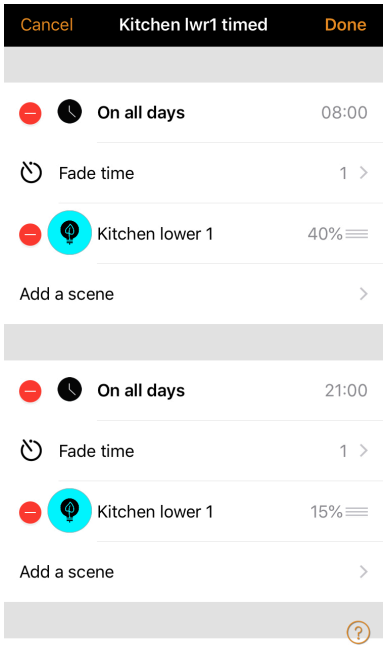
This animation above will fade in to scene Red within 10 seconds and Red will be active for 3 minutes. Then the scene Red will fade into scene Blue in 10 seconds and Blue will be active for 5 minutes and fade out in 10 seconds.

Add Scene SHOWROOM1, 100% fade time 1 sec
Add wait 15 sec
Add Scene SHOWROOM1, 0% fade time 1 sec
Add Scene SHOWROOM2, 100% fade time 1 sec
Add wait 15 sec
Add Scene SHOWROOM2, 0% fade time 1 sec
Add Scene SHOWROOM3, 100% fade time 1 sec
Add wait 15 sec
Add Scene SHOWROOM3, 0% fade time 1 sec
Repeat ON

This animation above will fade in to scene SHOWROOM1 within 1 second and be active for 15 seconds before fading off (to 0%) within 1 second. Then the scene SHOWROOM2 will fade on in 1 second and remain active for 15 seconds before fading off (to 0%) within 1 second. Then the scene SHOWROOM3 will fade on in 1 second and remain active for 15 seconds before fading off (to 0%) within 1 second. The whole animation will then repeat itself.

Scenes

Time-based scenes



Time-based scenes can be used to alter dimming levels of scenes at specific times. While this can also be achieved by using a timer, a time-based scene has its advantage in that it can be triggered so that a luminaire is not permanently on. For this reason they are primarily designed to be used with presence sensors.

For example:

A time-based scene (*Kitchen lwr1 timed*) is created to set scene *Kitchen lower 1*'s dimming level at 40% between 08.00 and 21.00. Between 21.00.and 08.00, the dimming level will be 15% (to not disturb people if the scene is activated during the night.

The scene is not running 24 hours / day. Instead, a presence sensor triggers scene *Kitchen lwr1 timed* whenever presence is detected. Depending on when the time-based scene is triggered, it then sets the dimming level of scene *Kitchen lower 1* appropriately.

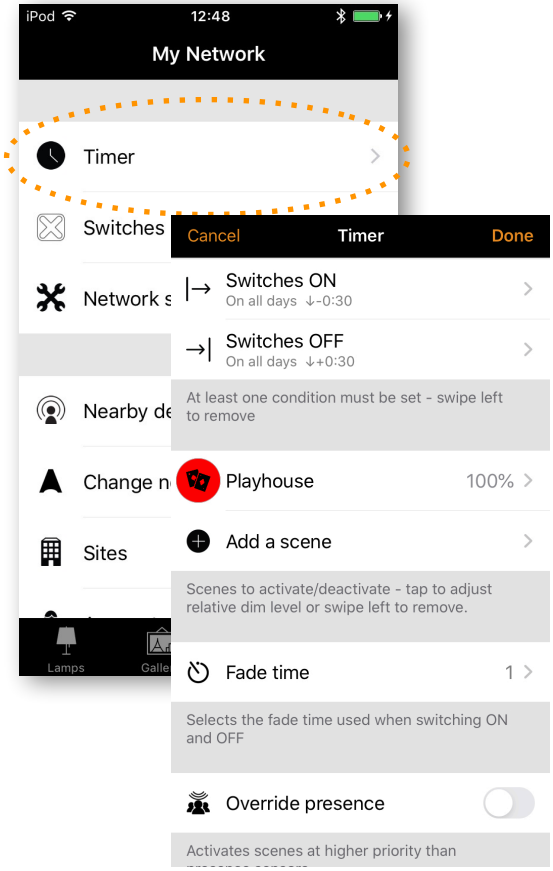
To create a time-based scene, follow the same produce for a basic scene, but then choose:

- the time and days when it should alter the basic scene
- the fade time
- the basic scene
- the basic scene's dimming level

Multiple conditions can be added using the *Add a condition* option.

Please note that non-repeating animations can not be used with time-based scenes.

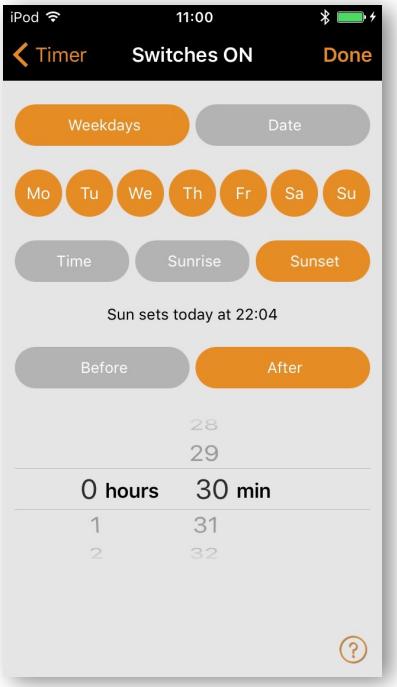
Timers



With the timer function you can create a list of timers that will turn scenes or animations on and off based on time and/or date. For example, you can set a presentation luminaire to activate during office hours or set corridor lights dim to a lower level during the night.

Go to *More* tab and select *Timers*. Create a new timer by selecting *Edit* on the left top corner and then + on the top right corner. Select the scene or animation you want to control with this timer.

Activate the *Switches ON* button and set the time when the scene should start. You can use weekdays or a specific date. For time you can set a time of day or use local sunrise and sunset to turn on the scene. To use sunrise/sunset the network location needs to be set. See the *Network setup* settings section for detailed instructions. Select *Done* to confirm the changes.



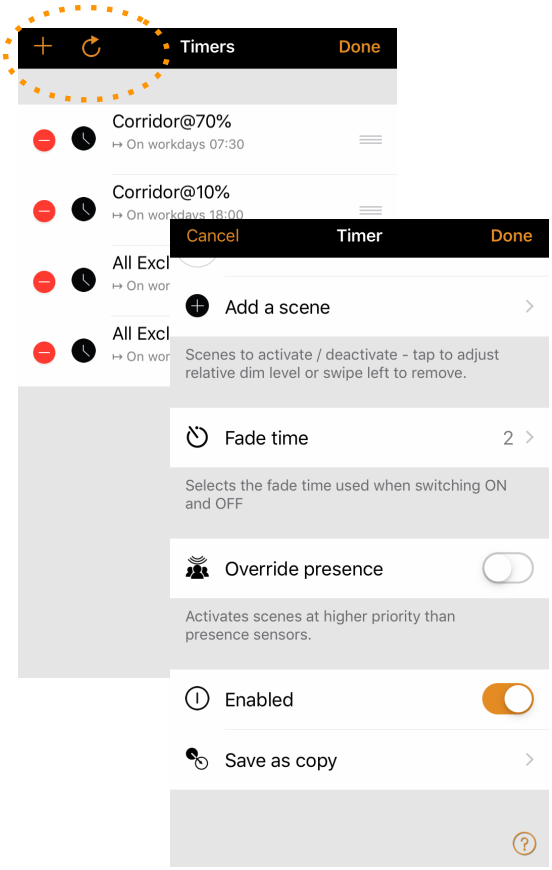
Select the Switches OFF option and select the time when the scene should turn off. The options available are the same as those available for the start time. You can also select *After* and set the length of time the scene will stay on. Select *Done* to confirm the changes.

Note that standard timer settings do not always require a start and stop time. For example, multiple timers could be configured to trigger the same scene to different dimming levels throughout a 24-hour period. Therefore only start times would be necessary because the timers would transfer from one to the next. This is not the case for timers using *Override presence*. *See the explanation below.*

It is also possible to set the Fade time for the scene. This means that when the scene is turned on the lights will slowly reach the light level in the scene. With faders you can change from one scene to other very smoothly.

The fader will start when the timer is turned on. This means that if you set the scene to come on at 14:05 and you set a fader for 30 seconds then the scene is at full brightness at 14:05:30. The scene also fades to off with the same time, so if the scene goes off at 15:00 the light will be fully off at 15:00:30.

Timers



If an installation requires that some timers operate at a higher priority in the Control Hierarchy, then you can enable the *Override presence* option. Note that a timer using Override Presence must alway shave its own start and stop times, as it will operate on a higher level within the Control Hierarchy. See the Appendix for an explanation of the *Control Hierarchy*.

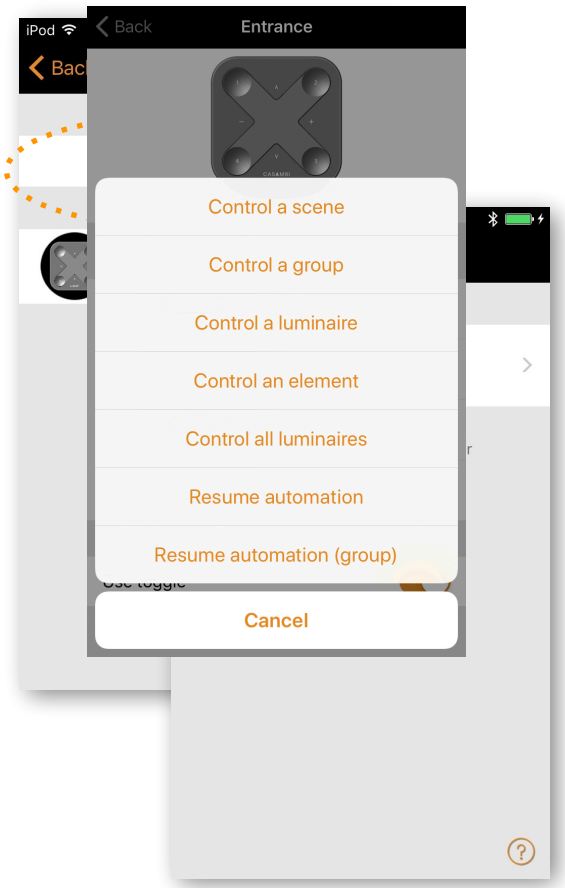
It is also possible to Enable/Disable a timer by using the *Enabled* button. Confirm your settings by selecting *Done*. After saving a timer it is possible to copy that timer. Open the timer again and select *Save as copy* from the bottom of the timer screen.

Casambi units will keep track of time when even one unit in the network is powered on all the time. In a situation where all units have been powered off, the network time needs to be set to the units again. In this situation please open the network in the Casambi app with modification rights to set the time again.

A timer's state can also be reactivated by selecting *Edit* and then selecting the refresh button in the top left corner of the *Timers* screen.

Switches

Within the *Switches* section, Casambi-enabled switches can be configured to control luminaires easily and wirelessly. Casambi-enabled switches and push-buttons appear under the *Switches* page after pairing them with the network. To use standard wall switches with Casambi, see the *Smart Switching* section in the Appendix.



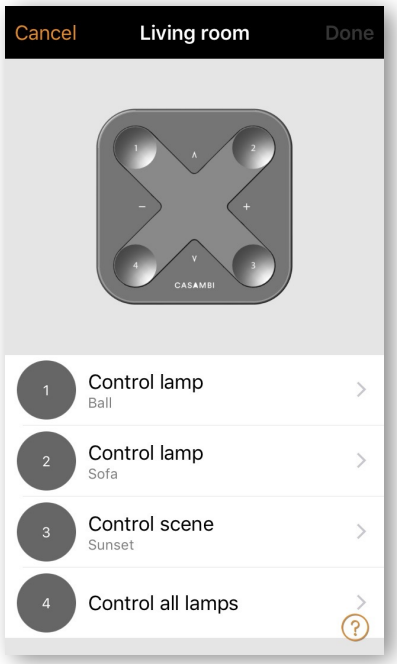
Xpress switch

The Casambi Xpress is a wireless user interface that brings flexibility to interior design. The switch can be kept wherever the user needs it and it gives direct access to all the important Casambi lighting control functionalities.

1. Press any two preset buttons on the Xpress and the Casambi app will automatically detect it (for example, buttons 1 and 3). If you have an existing network, Casambi will automatically suggest to add Xpress to that network. Select *Add to 'My Network* button. If a network has not yet been created, select *Take into use*.

2. After you have added the Xpress switch to the network navigate to the *More* tab and select *Switches* to configure the numbered preset buttons.

3. Select the Xpress switch from the list of available switches and the configuration page will open. You can then assign a luminaire, scene, group, element or all luminaires to each button. It is also possible to assign *resume automation* options either for a group or the whole network.



4. Select the appropriate *Use toggle* function. When activated, will allow luminaires to be turned on and off. When deactivated, will prevent the switch from turning luminaires off.

5. Select the appropriate *Long press all OFF* function. This option allows any Xpress configurable button to be held down and turn off all luminaires in the network.

You can also rename the Xpress and change its icon to make identification easier. Select *Done* to save the settings.

Switches

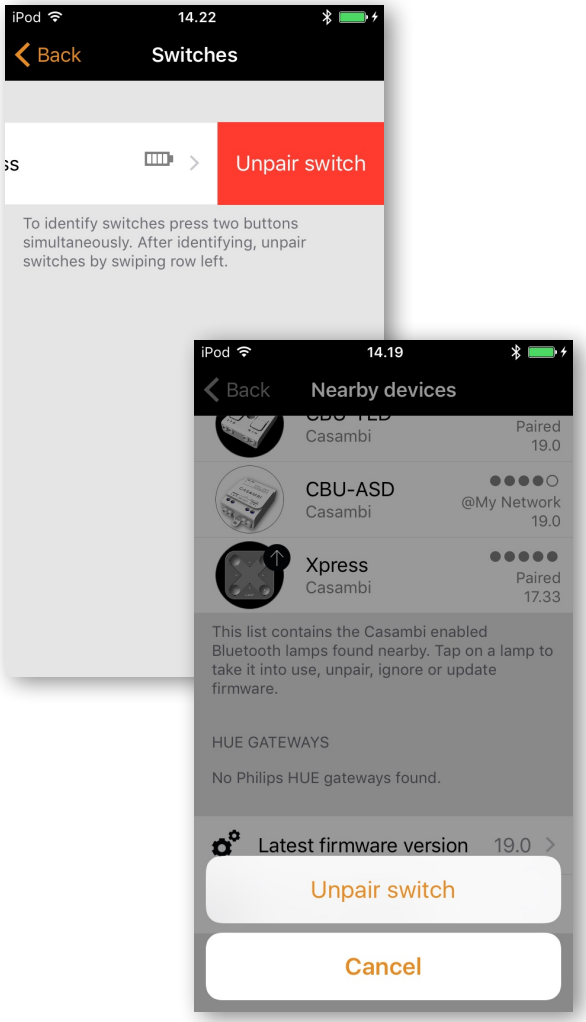
After configuring the buttons they will now control the assigned scene, luminaire, group, element or resume automation (see *Control Hierarchy*).

The first press will turn on the scene, lamp or group and second press will turn it off. The + and - buttons allow you to dim your selected device(s) up or down. The up and down buttons can be used to change colour temperature (of a tuneable white luminaire) and direct/indirect lighting ratio, provided that your luminaire supports these features.

Unpairing a Xpress

To begin the unpairing process, first press any two preset buttons on the switch. There are two ways to unpair a Xpress switch: by selecting the *Unpair device* option within the switch settings page, or by swiping the device's row to the left (in iOS) or tap and hold (in Android) in the switches main page.

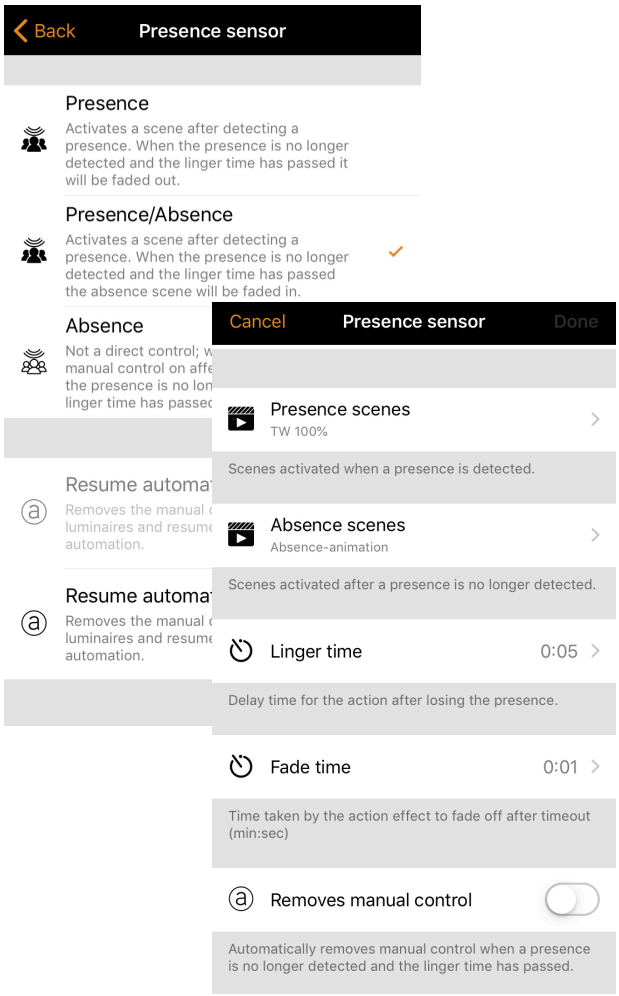
Make sure that the Xpress switch has the amber LEDs on when you do the unpairing. You will also need to perform the steps quickly before the switch turns itself off (no LEDs on).



Sensors

In order to add a presence sensor to your network, the *Use Control Hierarchy* option must first be enabled. Once a presence sensor has been added to your network, it will appear on the *Sensors* page. For each sensor sensor, there are a number of options which can be selected:

- *Presence*
- *Presence/Absence*
- *Absence*
- *Resume automation (group)*
- *Resume automation*



Presence activates up to two scenes when the sensor has been triggered.

Presence/Absence activates up to two scenes when the sensor has been triggered, and then activates up to two scenes when absence has been detected. **Note**: presence and absence scene(s) must control the same luminaire(s). An absence scene can not control different luminaires to those configured in the presence scene(s).

Absence removes manual control from selected scene(s) once presence is no longer detected and the linger time has expired (see below).

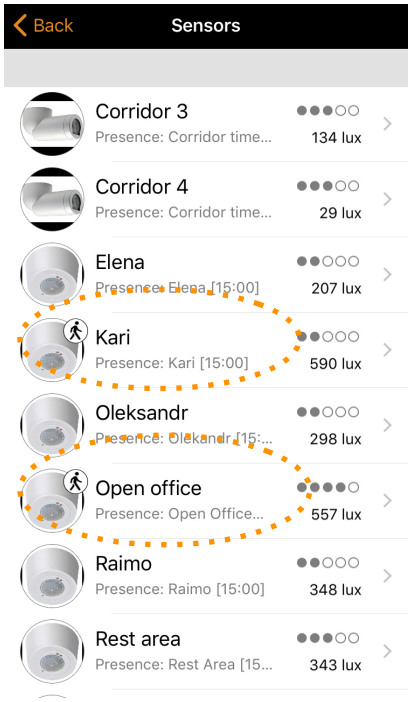
Linger time is the delay between presence no longer being detected and the controlled scene(s) expiring.

Fade time is the time it takes the expired scene(s) to dim to 0%.

Removes manual control allows any previous manual control of a scene to be removed once presence is no longer detected and the linger time has also passed.

The two **Resume automation** options can be used to remove manual control from a specific group of luminaires or all luminaires in your network.

Once a sensor has a presence type assigned to it, it will display a 'walking' icon next to the sensor's name when it is presence is detected.



Note: 230VAC-switching PIR sensors can also be used with the CBU-ASD or CBU-TED to act as a Casambi-enabled sensor.

Network setup

When you first take your luminaires into use the Casambi app will automatically create a network and add the luminaires to that network. For more information about Classic and Evolution networks, please see the Appendix.

By default the network is *Not Shared* which means that its configuration is only stored on the device used to created it. This means that only that device can control the luminaires. Please see the *Sharing Settings* section if you want to use multiple devices to control the same Casambi network.

To change the network settings select the *More* page > *Network Setup* > *Network Settings.* There you can change the network name, set the time zone and the network's location. The location needs to be set if you wish to create timers using local sunrise or sunset as a trigger.

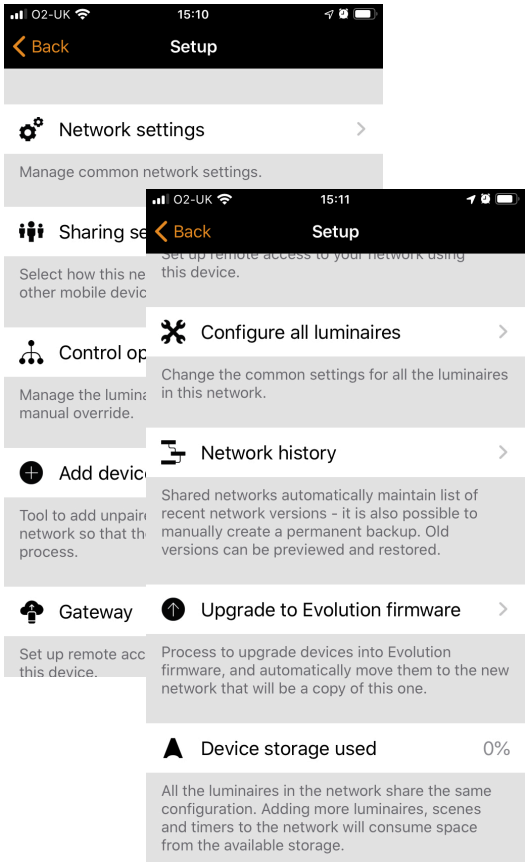
You can also select if you would like the nearby luminaires icon to be visible in the app. This selection will hide the *Nearby Luminaires* icon for all users in this network.

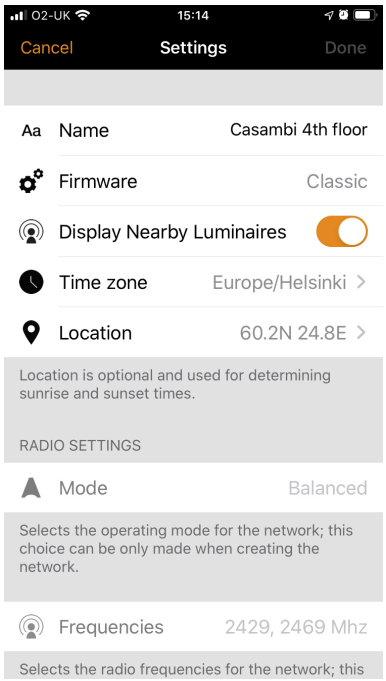
The network mode and network frequencies can only be configured when creating a network for the first time; it can not be changed after a network has been taken into use. The default mode for Classic networks is *Balanced* and that should normal be used for most networks. Evolution networks use *Better performance* as their default mode. If your network contains a very large amount of luminaires (100+) and they are placed physically close to each other, then the *Better Performance* option can be used, regardless of the network type. See *Change networks* section for instructions how to create a new network.

Network frequencies are always chosen in pairs. Communication is always made on both frequencies for redundancy in the event of interference in the mesh network caused by an external source.

Once your network set-up is complete, select *Save* to finish.

Tip: it is possible to have several networks in one mobile device. All created and visited networks will be listed in the Networks screen.





Sharing settings

To control luminaires also with other devices the sharing settings need to be changed. Tap on *Sharing settings* and then *Sharing*. There are four different options for network sharing:

Not shared Access to the network is only possible using the device with which it was originally created and not uploaded to cloud service.

Administrator only The network is not automatically visible to any devices but it is possible to log in with admin email and password from the networks screen. Everyone who is able to log in, is also able to modify network. The Networks screen can be accessed from *More* > *Change network* or from the app's start page by selecting *My Networks*.

Password protected The network is automatically found by other devices but users need a password to access and control luminaires. If users want to modify the network i.e. add more luminaires, or create scenes, they need to have the administrator password. This type of network has two access levels: visitor and administrator. Visitors can not make changes but they can control lights.

Open The network is automatically found by other devices and there is no password for visitor access. If a user wants to modify the network they need the administrator password. This type of network also has two access levels: visitor and administrator.

Note: In order to be able to recover lost passwords, an administrator email address and password must always be used when creating a network.