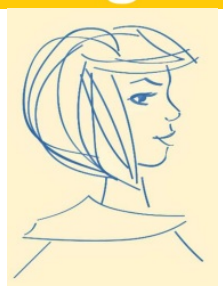
LIGHTING SOLUTION LiNA Connect App Instruction Manual

LIGHTING SOLUTIONS

Blu2Light



Operating Manual LiNA Connect / LiNA

LiNA Connect	Programming the Blu2Light System Using LiNA Connect
LiNA Touch	Operating the Blu2Light System Using LiNA Touch

Contents

GENERAL NOTES

Thank you for choosing the Vossloh-Schwabe Blu2Light system. Prior to using the product, please read this operating manual to familiarize yourself with the system's functions.
Any person tasked with system setup, commissioning, operation, maintenance, and repairmust be:

- suitably qualified and
- closely observe the provisions of this operating manual.

1.1 Legal notice

Trademarks

- The Vossloh-Schwabe and the Blu2Light logos are trademarks of Vossloh-Schwabe Deutschland GmbH.
- Other products and company names mentioned in this manual may be trademarks of other companies.

1.2 DOWNLOADING THE APP
Both apps are available as iOS and Android versions in the respective app stores.

LINA Touch	LINA Connect
https://apps.apple.com/de/app/lina-touch/id1442202019?mt=8	https://apps.apple.com/de/app/lina-connect/id1442201248
https://play.google.com/store/apps/details?id=com.mwaysolutions.linapp&hl=de&gl=US	https://play.google.com/store/apps/details?id=com.vossloh_schwabe.blu2light&gl=DE

PREPARATION

Make sure that all your Blu2Light nodes are powered and that the QR codes of the nodes are ready, for example stuck on your floor plan!

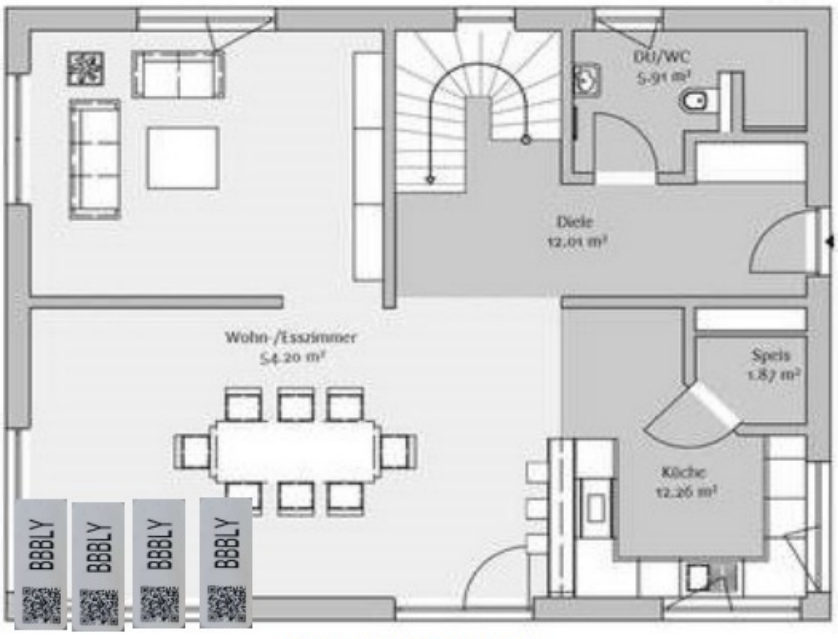


Figure 1: Floor plan

HOW TO CREATE A SIMPLE SYSTEM

Open the LiNA Connect app and click on the button + in the lower right corner to create a project, then name your project and create a system with the same procedure.

Now scan the desired QR code by pressing the button + again!

The following picture shows a successful scanning of a Blu2Light device in LiNA Connect the QR-Code is shown in green color:

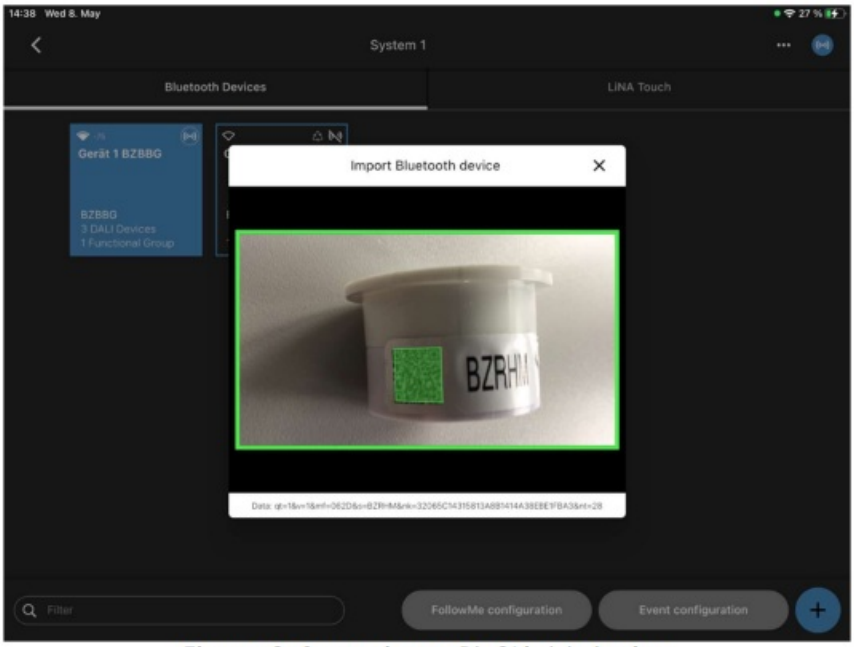


Figure 2: Scanning a Blu2Light device

Scanning of 2 Blu2Light device which has already been commissioned to another system on the tablet – the QR-Code is shown in orange color:

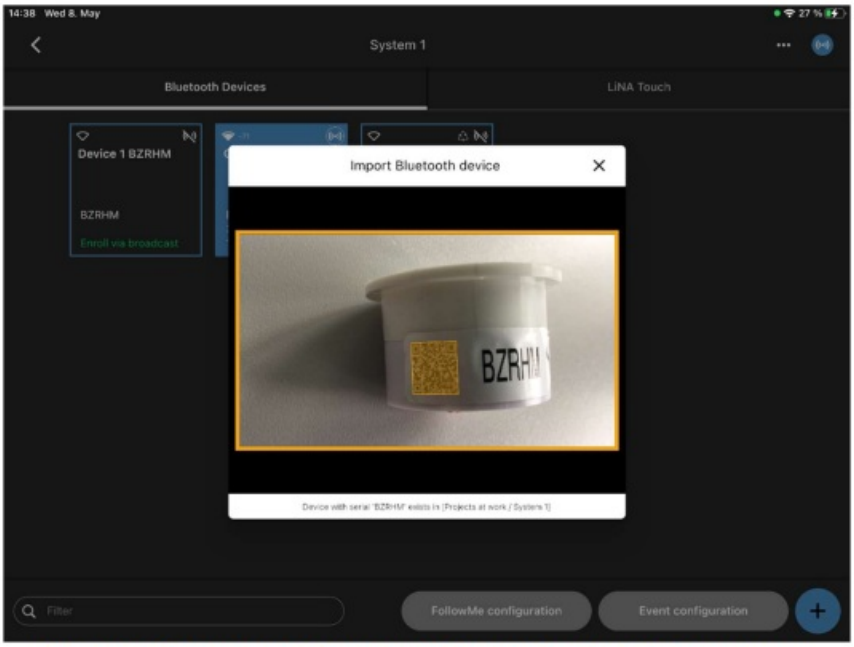


Figure 3: Scanning a Blu2Light device that is already in use

The text field below the scanned node shows you where it is already in use.

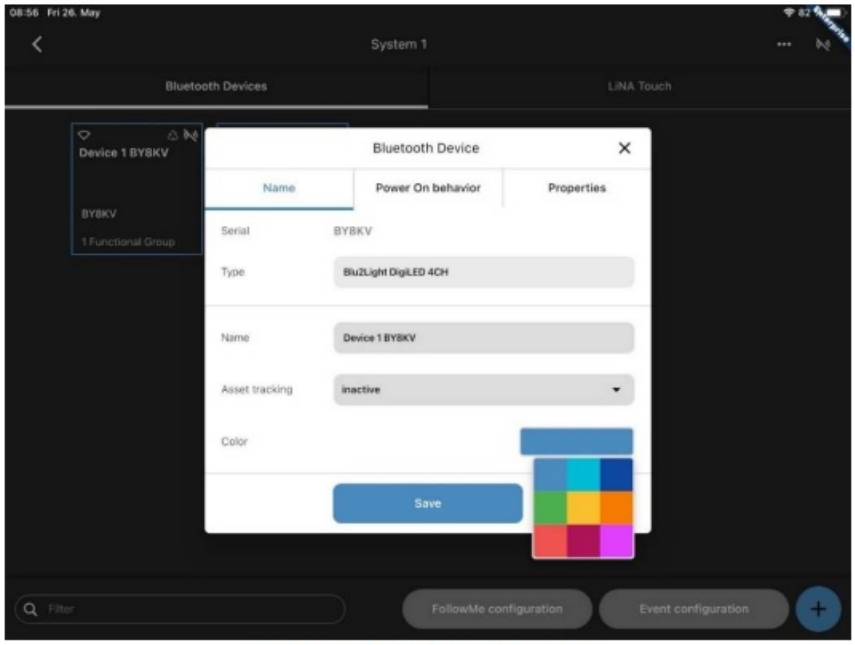


Figure 4: Color selection

A long press on the device symbol offers the device-overview. You have the options “Name”, “Power On Behavior” and “Properties” furthermore you can choose the color for every node in which it should be displayed in the option “Power on behavior” will not be
displayed for all Blu2Light devices and it will only be visible d for devices which support the “Power on behavior” (e.g. not for the Blu2Light LAN Gateway or the Blu2Light Connect PB4). This helps with the overview in big Projects and offers a better visualization.

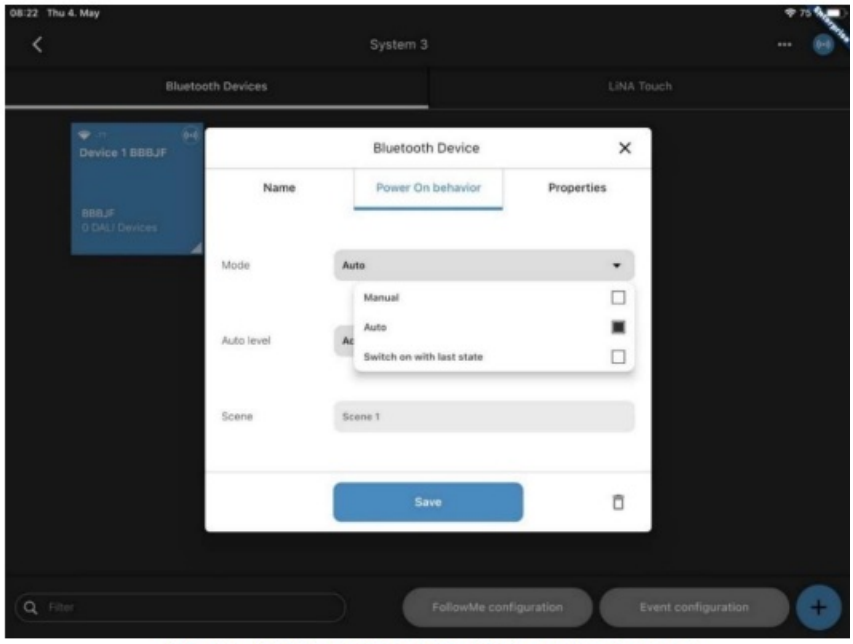


Figure 5: Selection of switch-on behavior

Select “Switch on with last state” in the “Power On Behavior” tab.

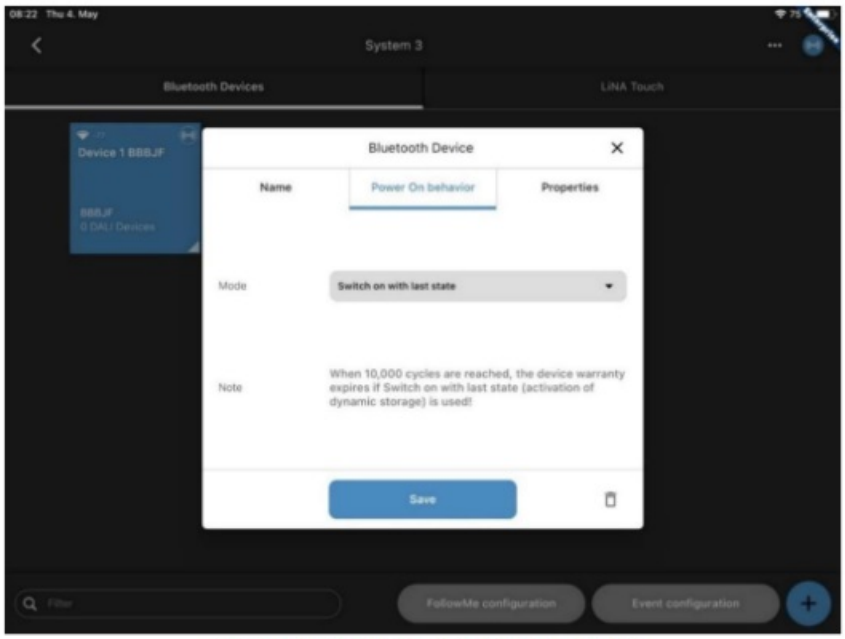


Figure 6: Switch on with last state

Now the node uses the “last state” as “Power On behavior”. Please be aware not to cut off the power for at least 30 seconds before a new “power on last state” is being saved after this mode has been configured. A counter in the “properties” shows the actual state
of how many configuration changes have been done in a lifetime of the node. Only configuration changes that last longer than 30 seconds are being saved. If a counter state of 10 000 has been reached the VS guarantee is lost. The function remains available.

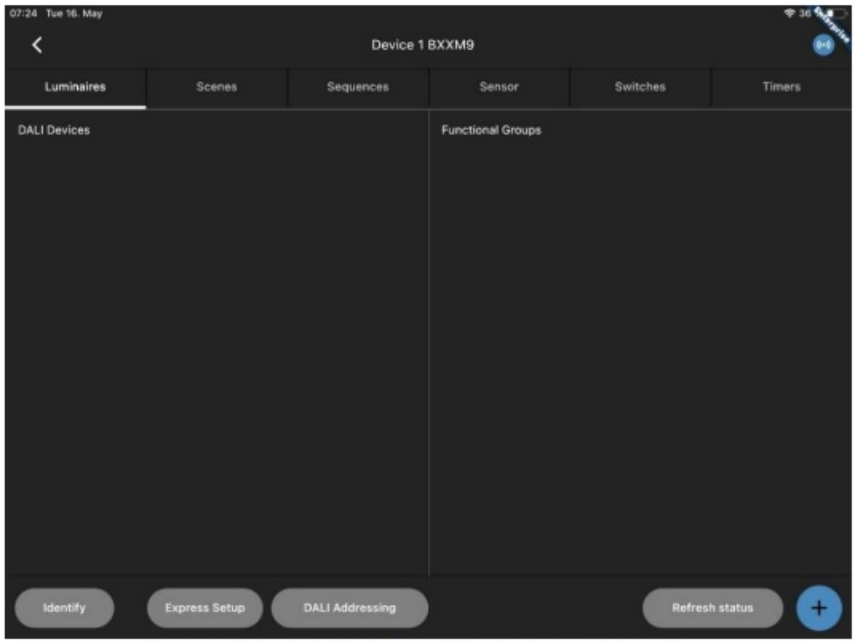


Figure 7: Overview before automatic setup

Select a node and select “Express Setup” to start automatic setup.

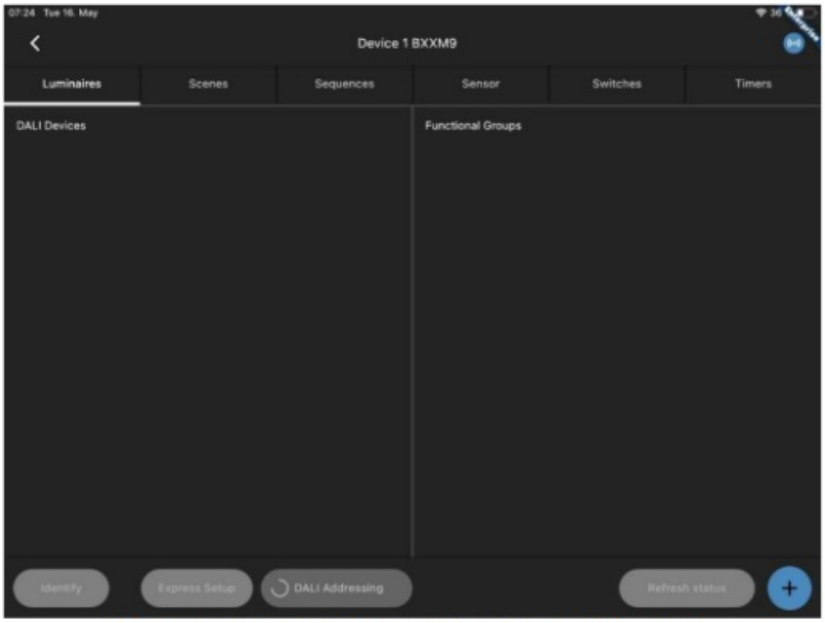


Figure 8: Express setup with active DALI search

A rotating circle at “DALI addressing” indicates an active DALI search.

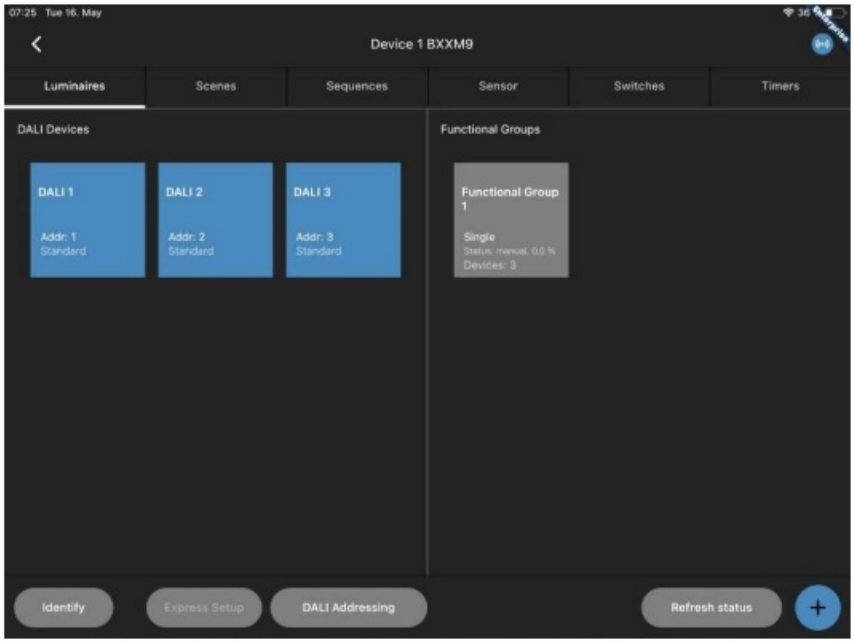


Figure 9: Overview after successful DALI search

If the DALI search is completed, all DALI devices should be displayed, and a functional group should have been created.

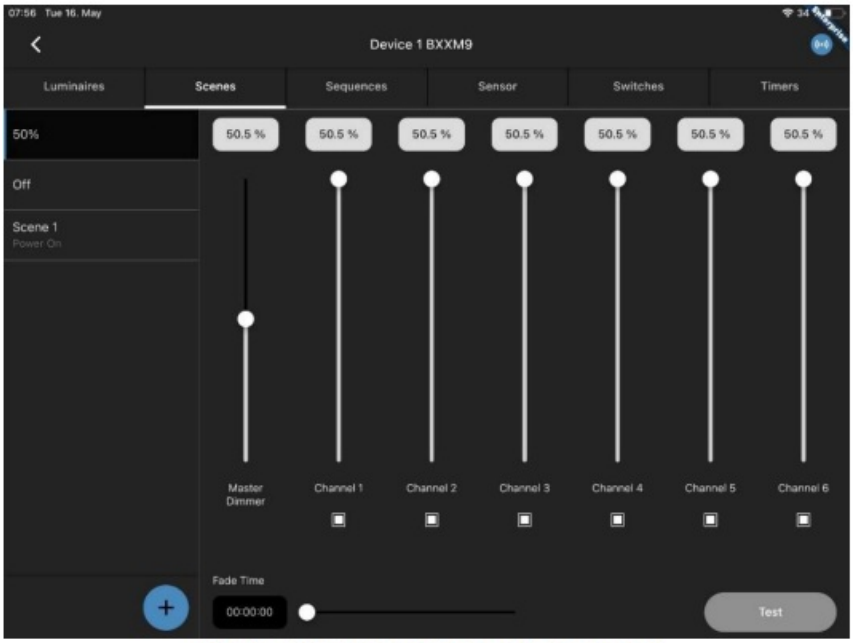


Figure 10: Menu for creating scenes

Now you can create scenes according to your wishes, “50 %”, “Off” and “On” are the most common ones. Now add a new scene by pressing the button  !

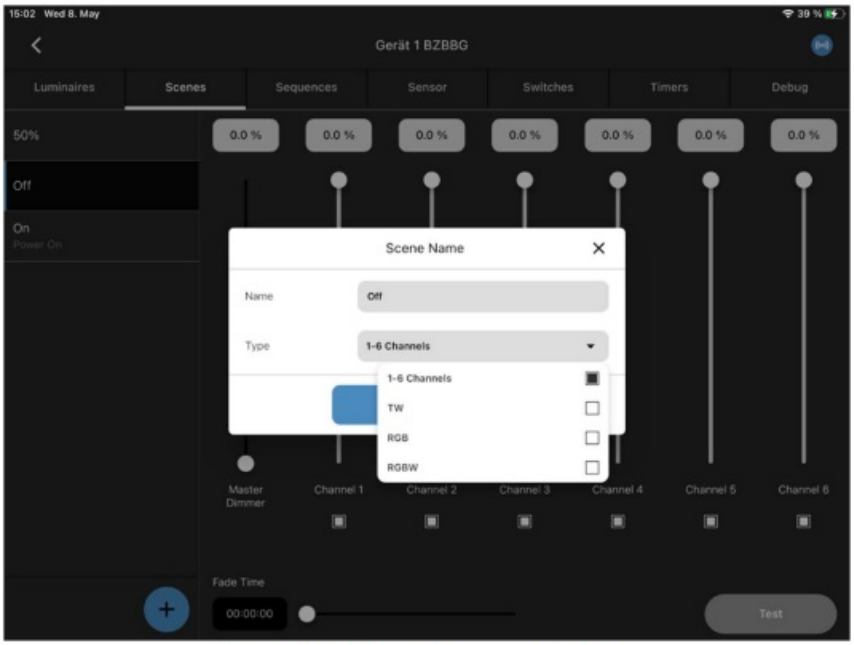


Figure 11: Creating a new scene

Here you can name the scene as you wish and select the type of luminaire module used.

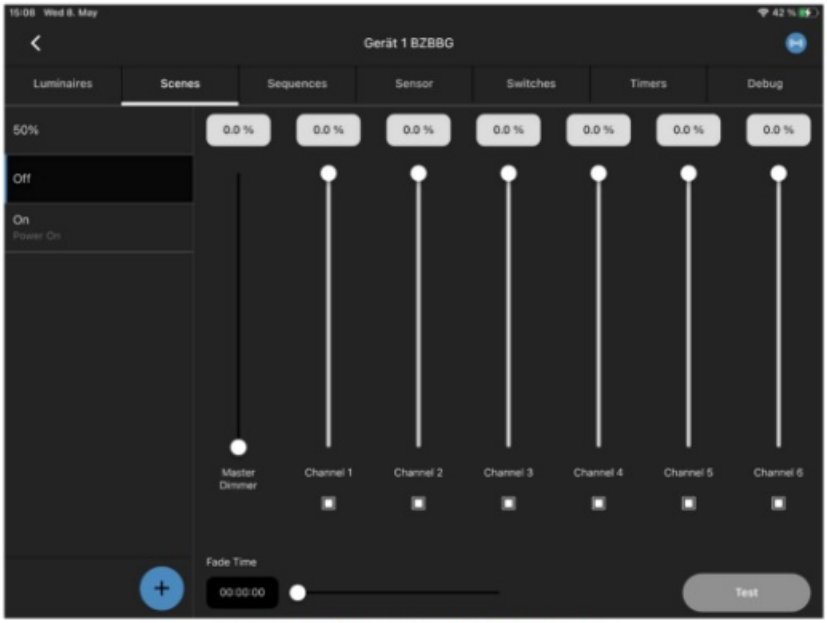


Figure 12: Created "Off" scene

In most configurations, it is recommended to leave at least one channel switched on. The slider for the master dimmer should be set to zero for the “Off” scene.

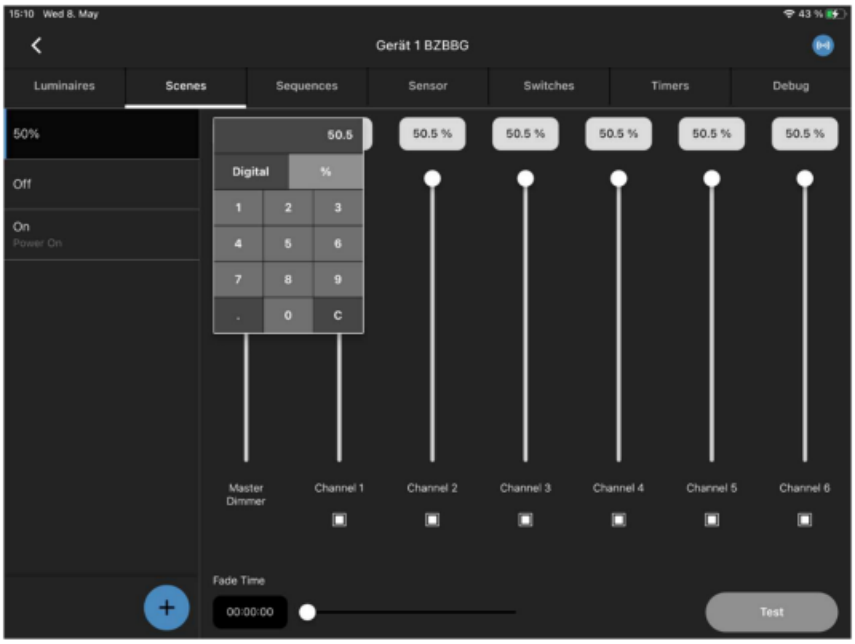


Figure 13: Setting the brightness level

The brightness can be set using the slider or by pressing the brightness value displayed above (allows digital or percentage values to be entered).

If all scenes are configured as desired, only thing left is to generate a user interface in the LiNA Touch App, for that, switch to the tab “LiNA Touch”.

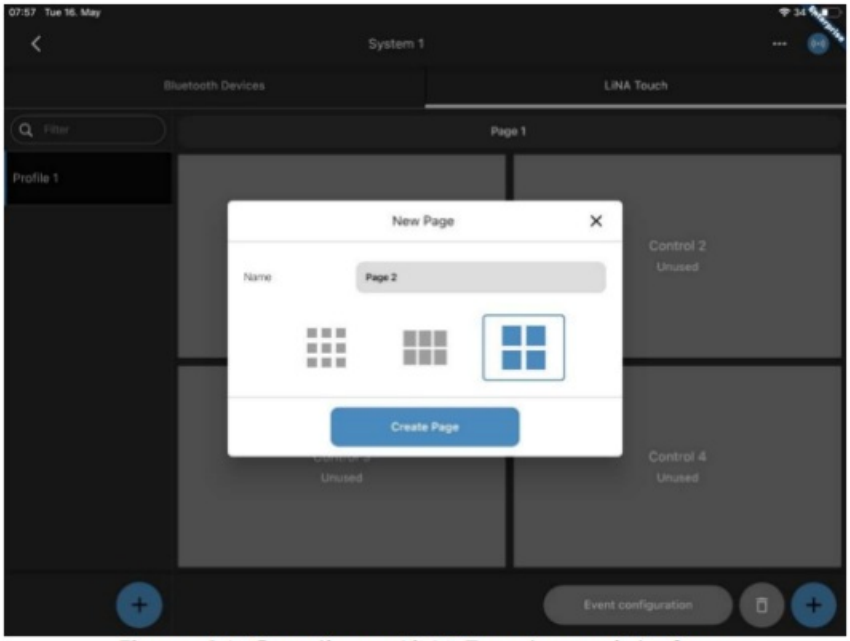


Figure 14: Creating a LiNA Touch user interface

Here you can use the + button on the left-hand side to create a new touch profile and name it accordingly. Use the + button on the right-hand side to select a touch surface, depending on the scope of the desired functions. Unused touch panels will not be displayed in the LiNA Touch app. If more touch panels are needed more fields can always be added.

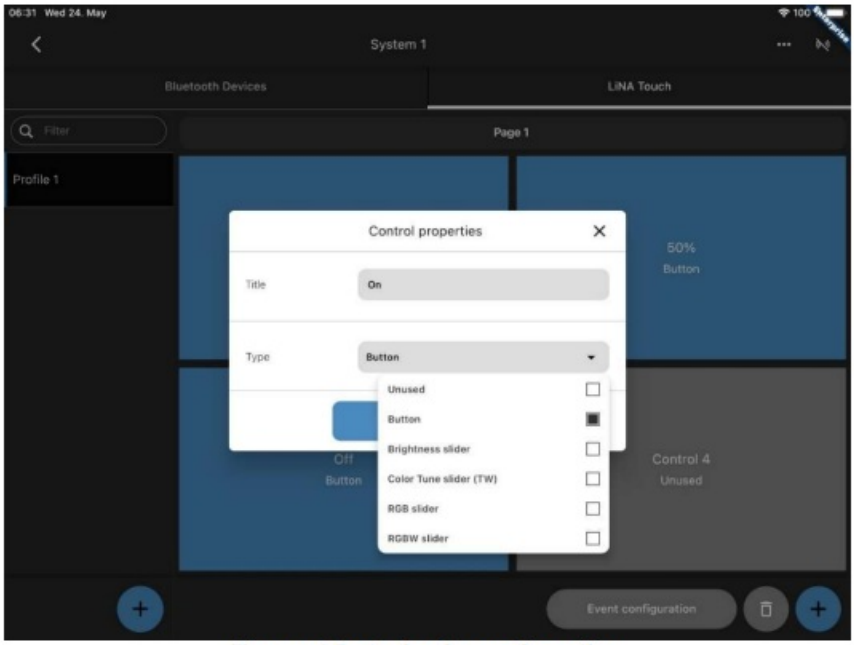


Figure 15: Assigning a function

Each control panel must now be assigned a function that can later be used in the Touch App. It is advisable to name the control surface according to the scene to be controlled.

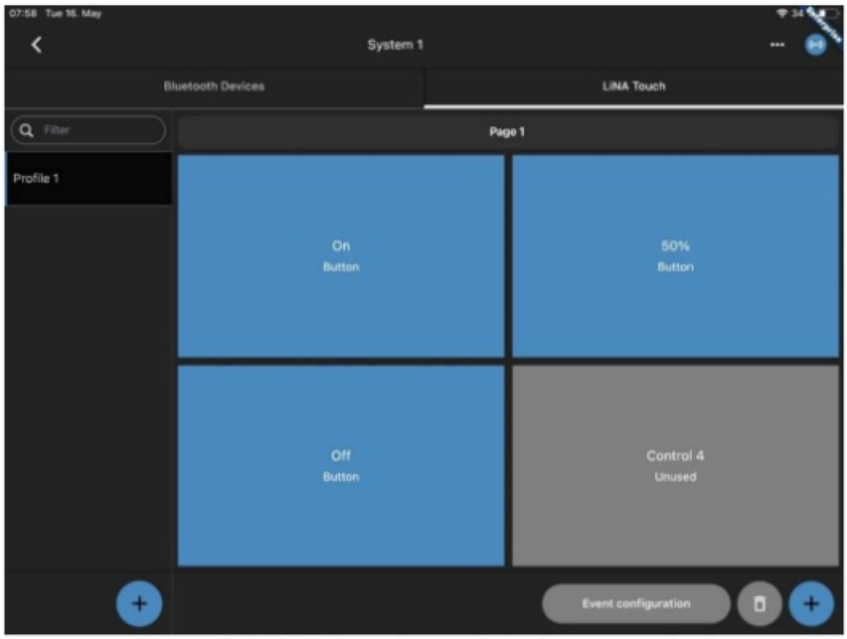


Figure 16: LiNA Touch user interface created

Once this has been achieved, your user interface should look like this.

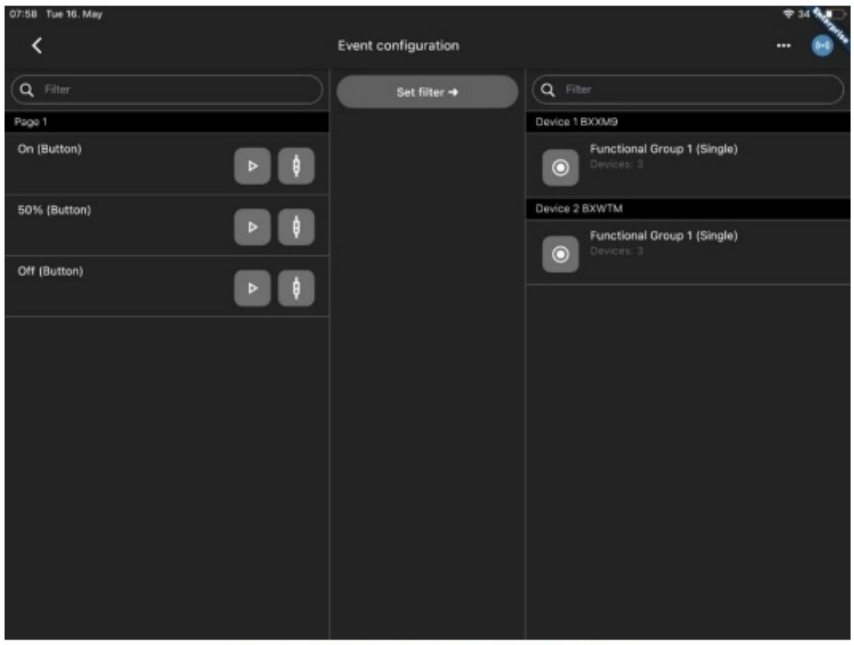


Figure 17: Event configuration

Now the control panels are assigned to the respective functional groups and (Figure 18) to the respective scenes via the event configuration using drag & drop.

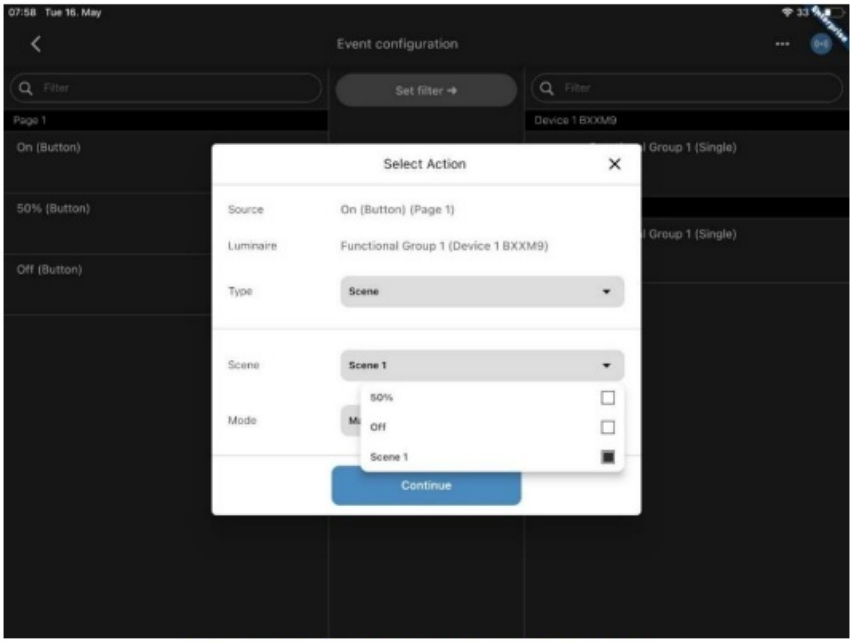


Figure 18: Assignment of the scenes

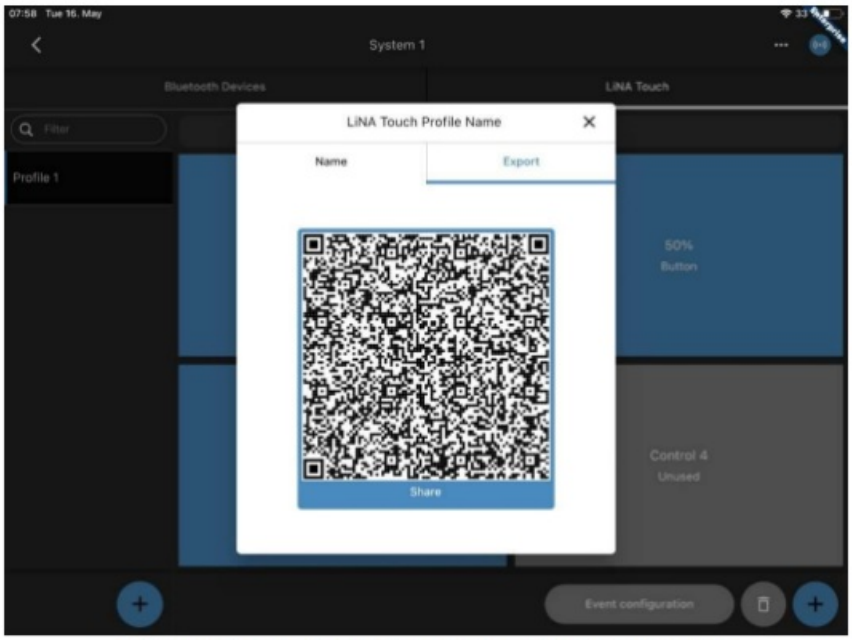


Figure 19: Export the desired LiNA Touch profile

In the last step, press and hold the respective touch profile you want to export in the main window of the Connect app and select “Export”. Now you are free to scan the generated QR code with another device using the LiNA Touch app or to export it in another way by pressing “Share”.
To scan the QR code, press the QR code symbol in the upper right corner of the LiNA Touch App and scan the respective QR code.

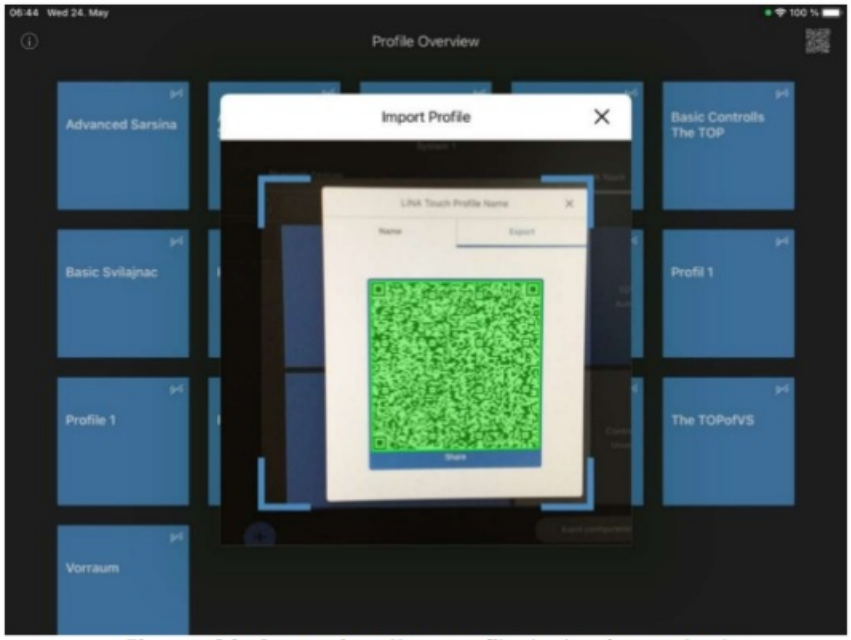


Figure 20: Scanning the profile to be imported

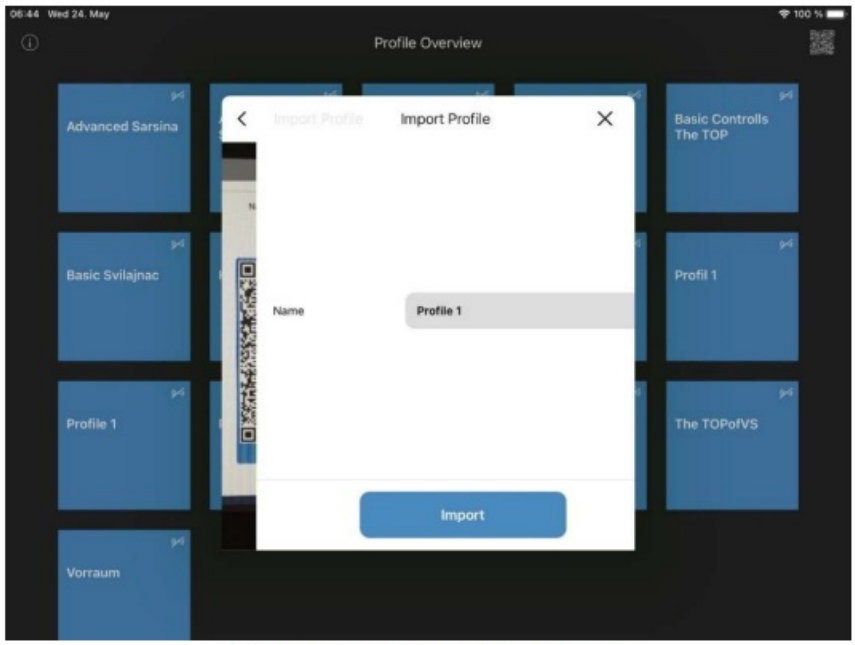
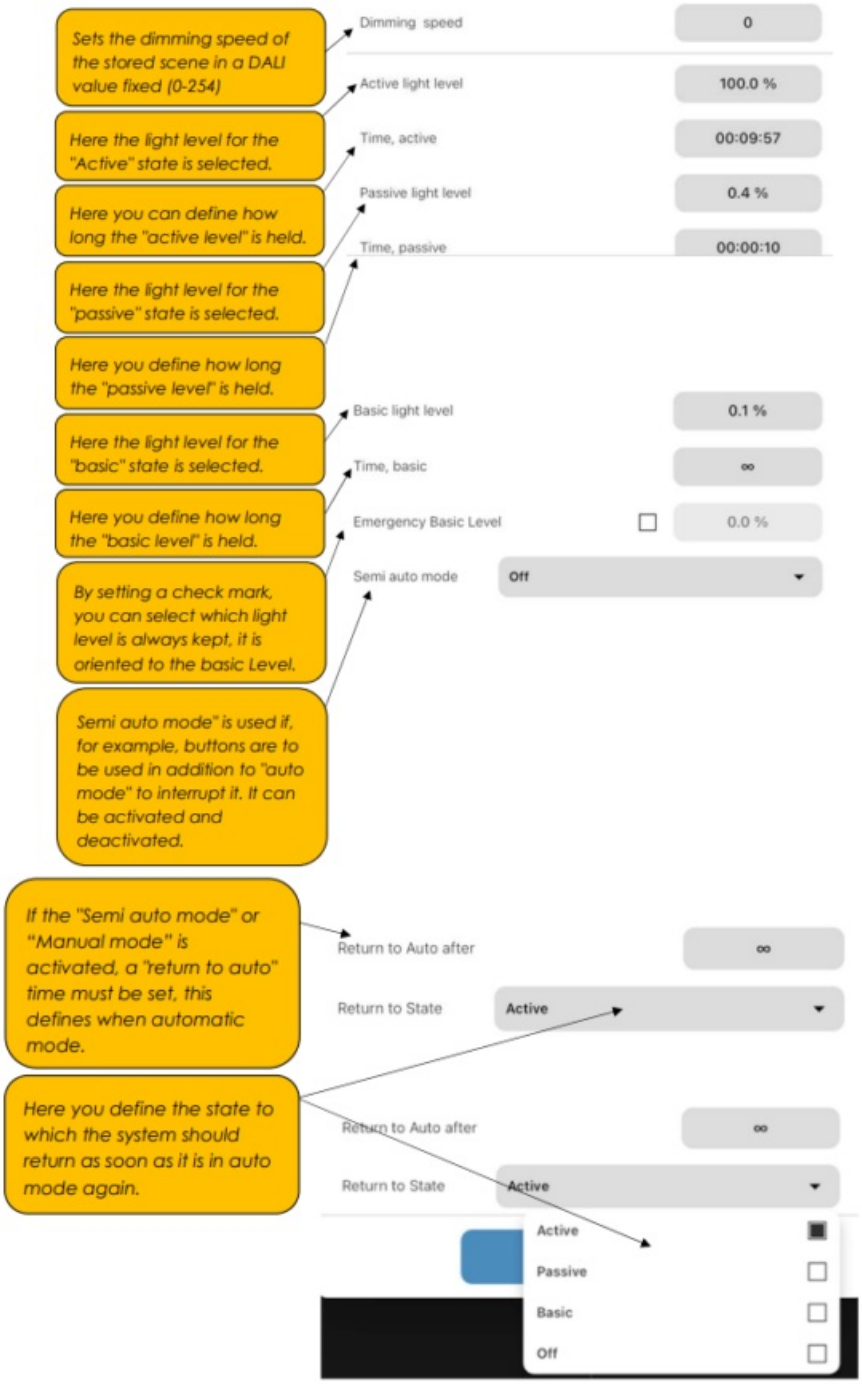


Figure 21: Importing the profile

Congratulations!
Your basic system is now fully operational and can be operated via the LiNA Touch App!

USING AN AUTOMATION

To set up an automatic setup, return to the overview shown in Figure 9.
Now press and hold the control panel, Functional Group.
A window called “Setting/Parameters” appears, offering the following choices:



Once you have made all the settings, press “Save”, now the configuration should have been applied to the active system.

SETTING UP THE TUNABLE WHITE FUNCTION

The following steps describe the “Tunable White” function:

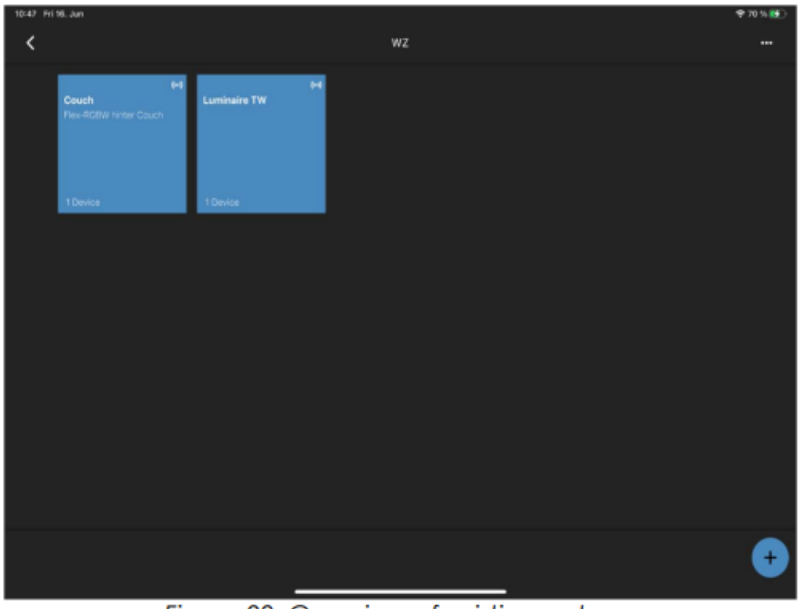


Figure 22: Overview of existing systems

Add your node to the system and enter the configuration.

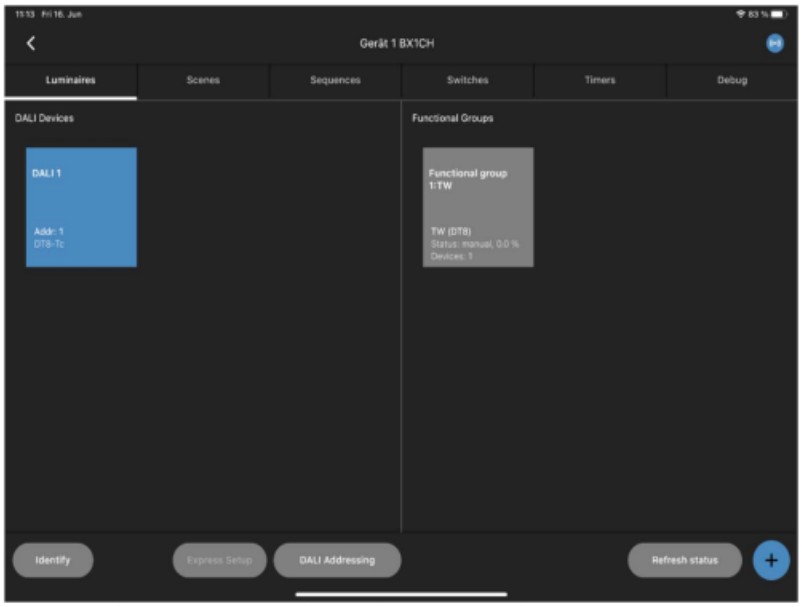


Figure 23: Overview after successful DALI search

Now set it up as you did in the basic configuration.

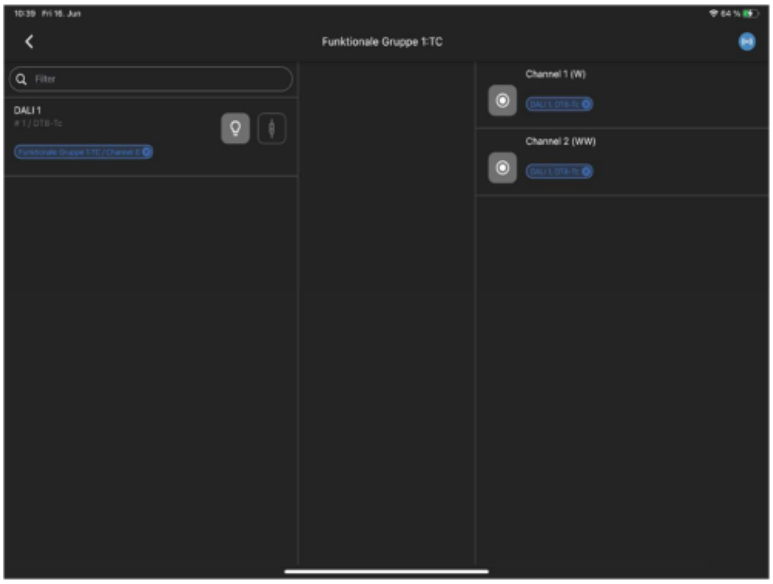


Figure 24: Channel assignment within the functional group

Connect the DALI device to the channels (W=white, WW=warm white) per drag and drop.

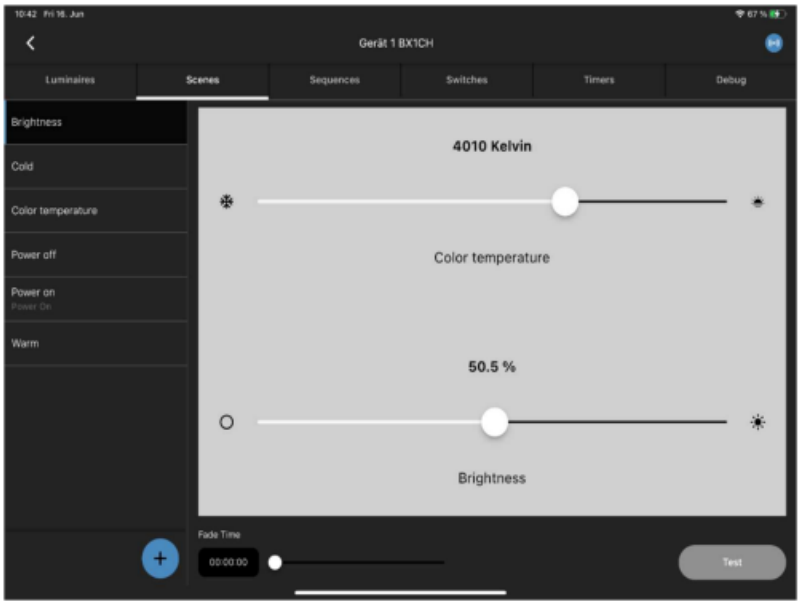


Figure 25: Create the desired scenes

In the next step you can configure the scenes you need. And prepare your touch overlay as you did in the Figures 14 – 21.

IMPLEMENTING A DIGILED (186839) + MANUAL CONFIGURATION

For scanning in the Digi LED 4CH please refer to the 3. Step of the manual until you reach figure 7 of the manual.

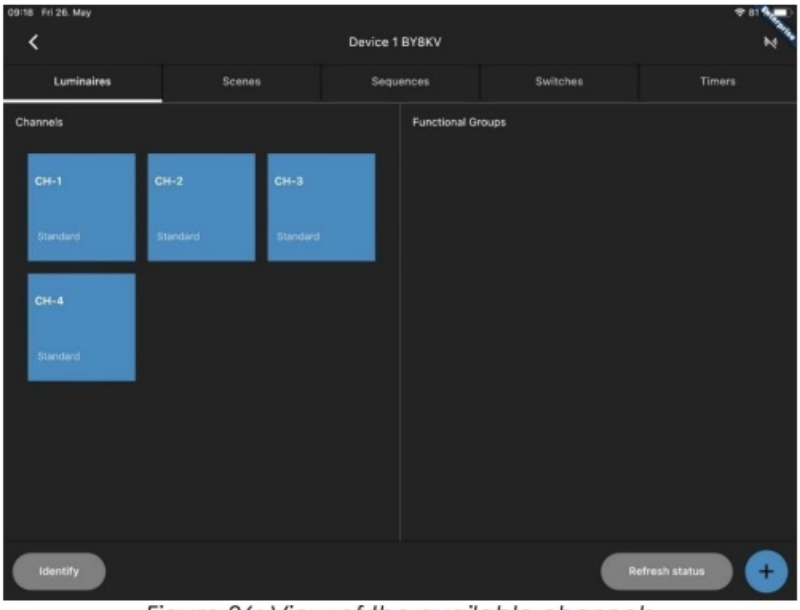


Figure 26: View of the available channels

After that you will see that channel 1-4 have already been recognized by the LiNA Connect App.

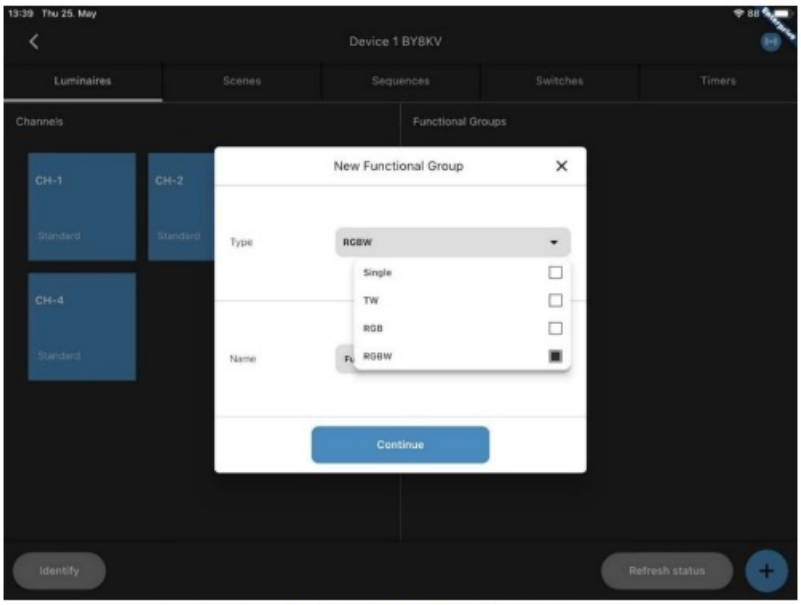


Figure 27: Create new functional group

As you probably already have mentioned, you can't do an express setup here.

Therefore you must create a Functional Group by yourself! To do this, press the + button.
Here you must select, how many channels your modules have. In this case it is RGBW.

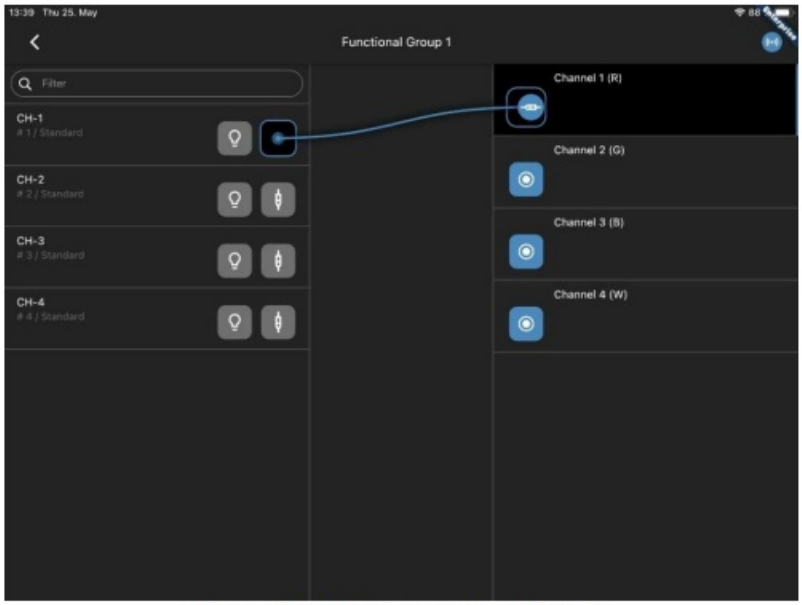


Figure 28: Assigning the channels

In the next step you must connect every channel of the DigiLED (R, G, B, W) to every channel of the Functional Group (also applicable for other systems).

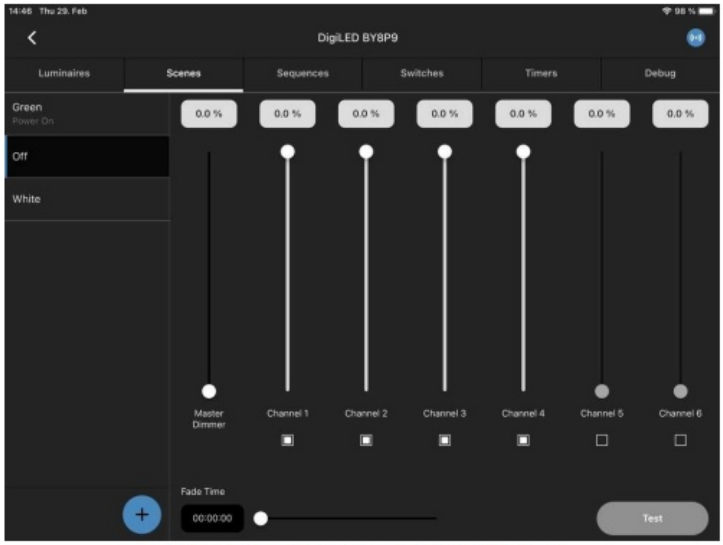


Figure 29: Create the desired scenes

Now we configure our scenes as we did for a simple configuration (Figure 10-12). For the DigiLED you have the option to either use the channel overview or change the type of the scene and use RGBW directly, this could make the selection of colors easier. Which should look something like this:

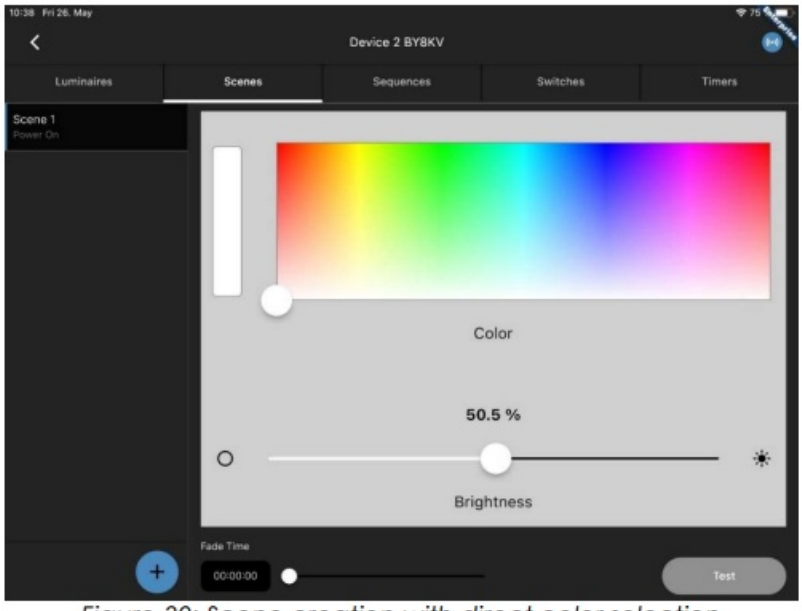
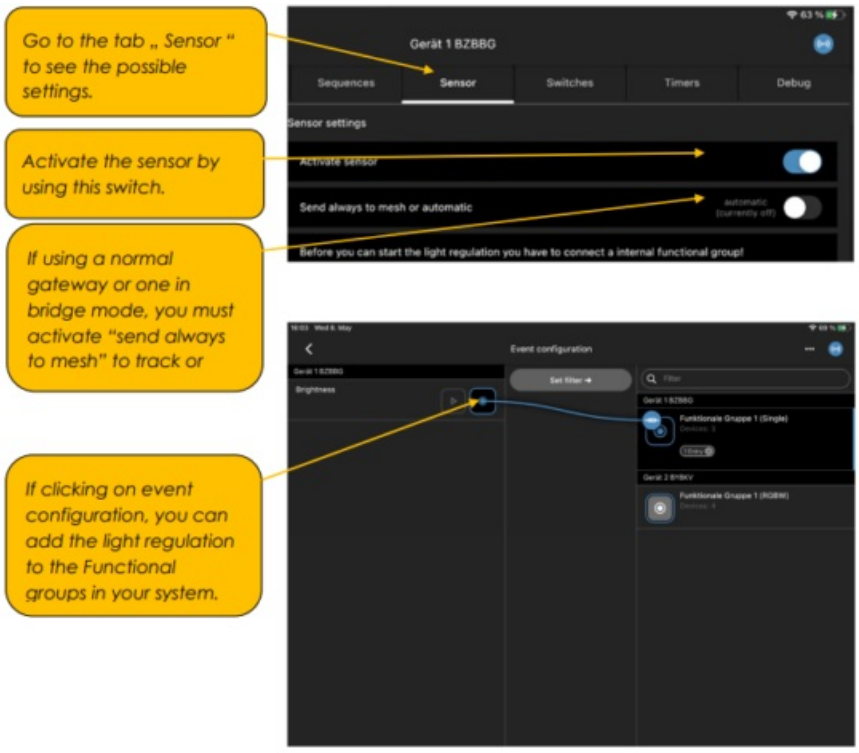


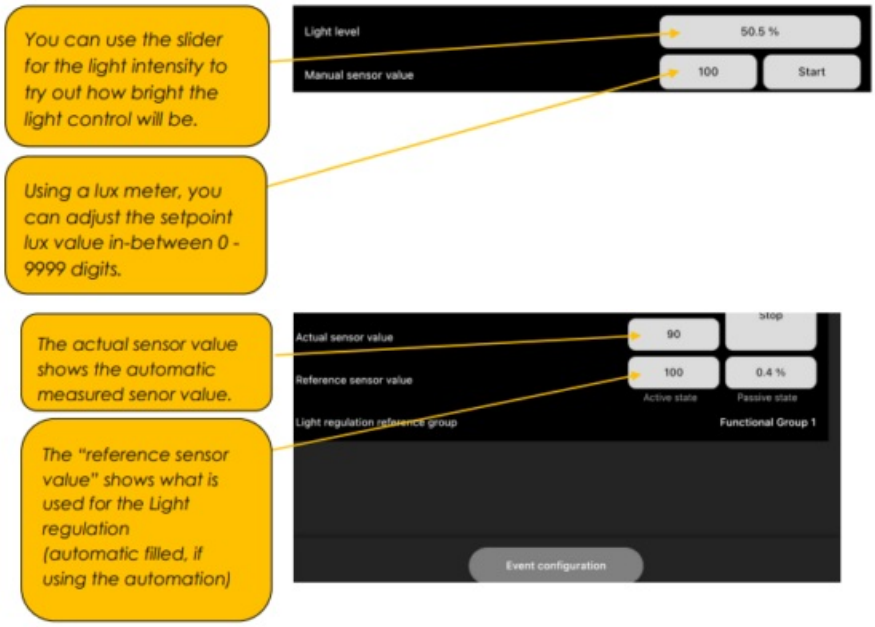
Figure 30: Scene creation with direct color selection

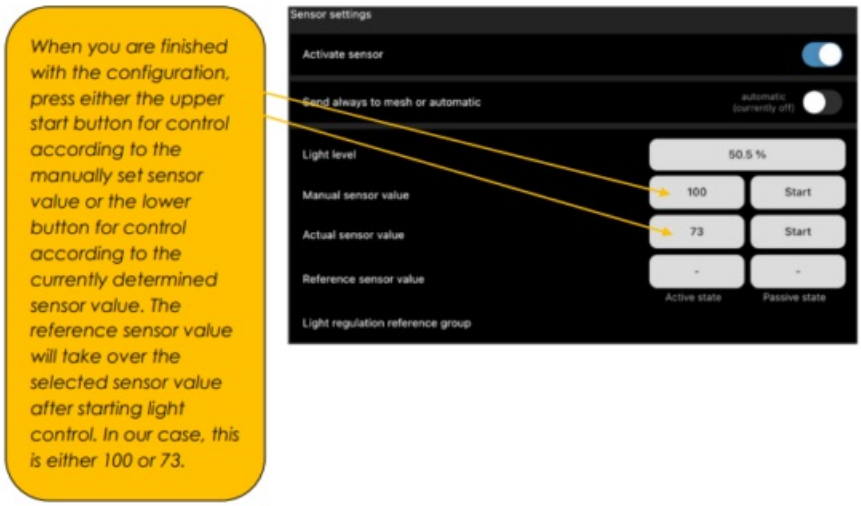
If you configured every scene you like, go back to Figure 14 and onward to move on.

DAYLIGHT CONTROL EXPLAINED



Before you can adjust the light regulation, you must connect an internal functional group.





Daylight control can only be started if an event configuration has been conducted beforehand.

HOW TO USE MOTION DETECTION

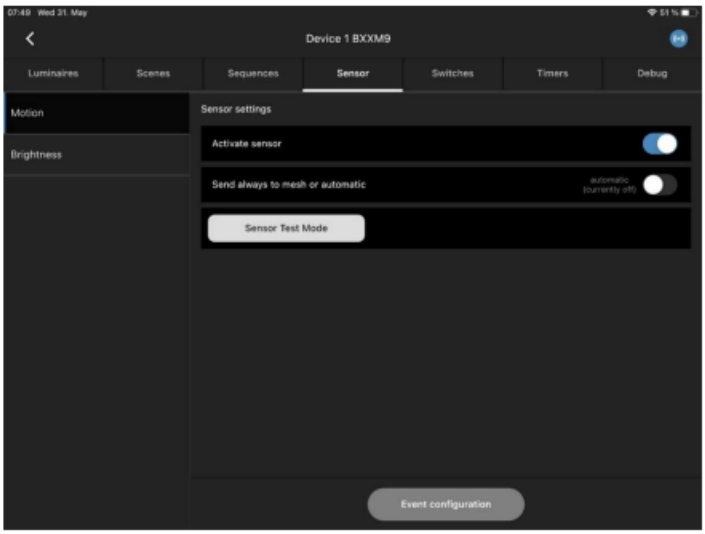


Figure 1: Motion detection menu

Go to the tab “Sensor” and switch on motion detection, if using a normal gateway or one in Bridge mode, you must activate “send always to mesh” to track or forward Sensor Information.

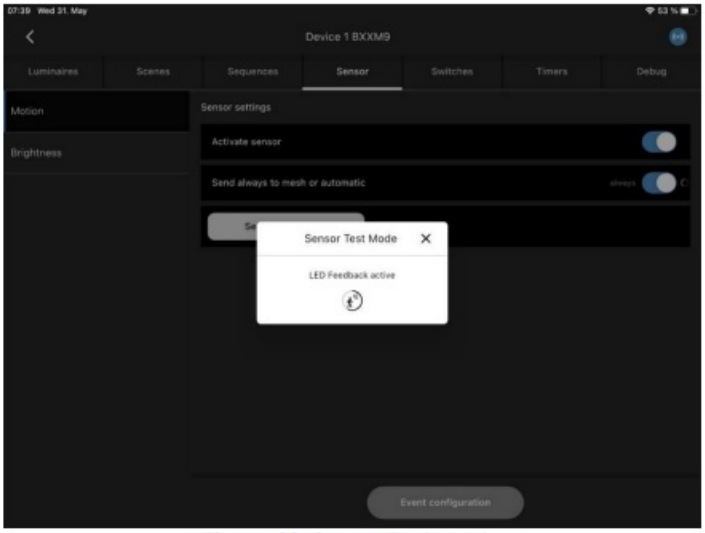


Figure 32: Sensor Test Mode

With the “Sensor Test Mode” you can check your sensor before installing. While active, the sensor indication LED blinks when detecting movement and the circle in “Figure 32” gets filled, it resets every time movement is being detected.

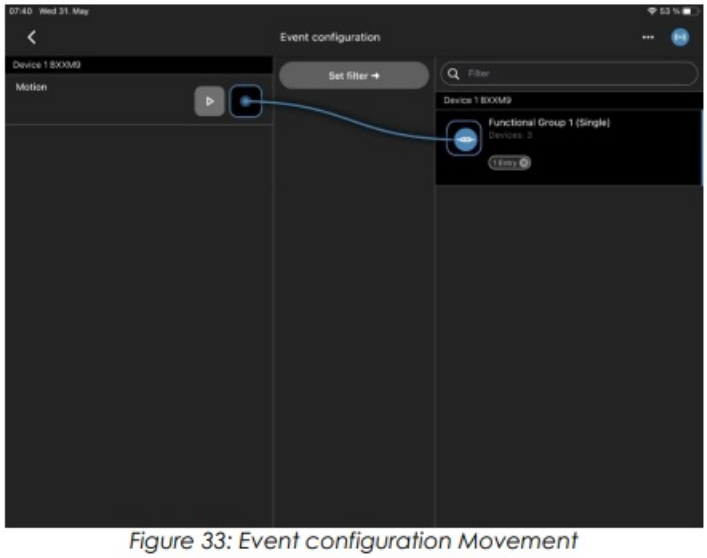


Figure 33: Event configuration Movement

The only thing left to do is to couple the “Motion” function to the “Functional Group” you want it, in the event configuration of the sensor.

USING SEQUENCES

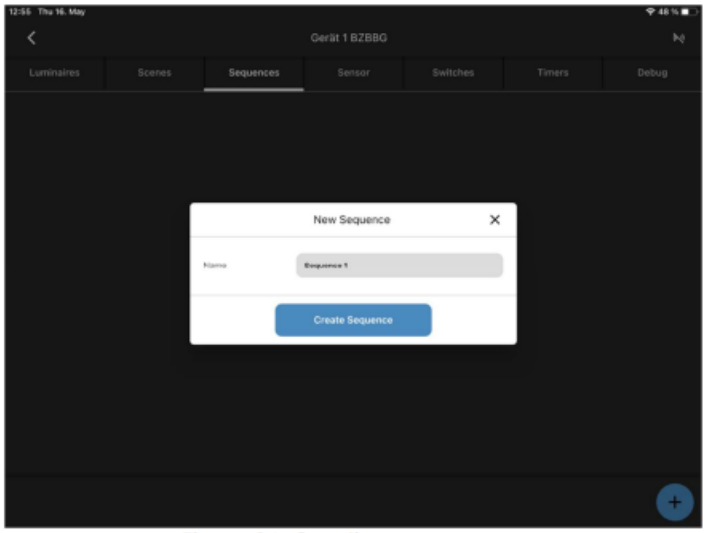


Figure 34: Creating a sequence

Go to the Tab „Sequences” press the (+) on the lower right corner and name your sequence as you wish.

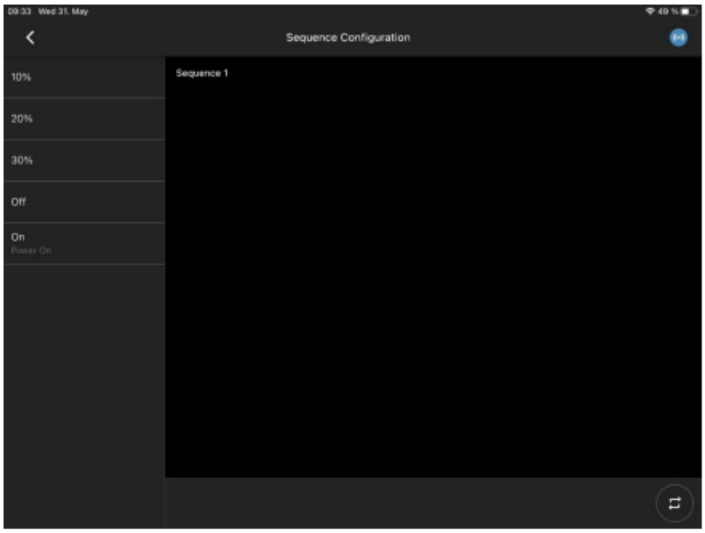


Figure 35: Overview of previously created scenes

On the left side you can see all scenes you have created before.

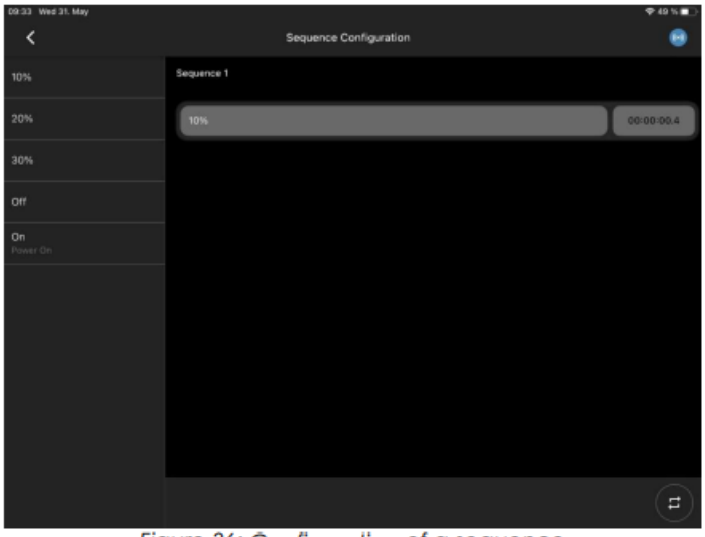


Figure 36: Configuration of a sequence

You can simply add each scene by drag and drop in the desired order. Multiple scenes can as well be added. You have the possibility to move scenes within the created sequence.

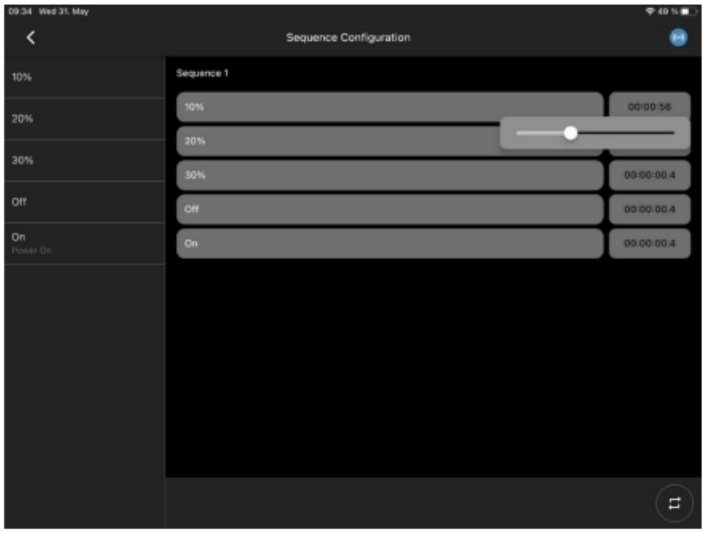


Figure 37: Setting the duration for a scene within a sequence

If you added every Scene you need/want, you can configure how long every scene will be used until the next scene will be started.

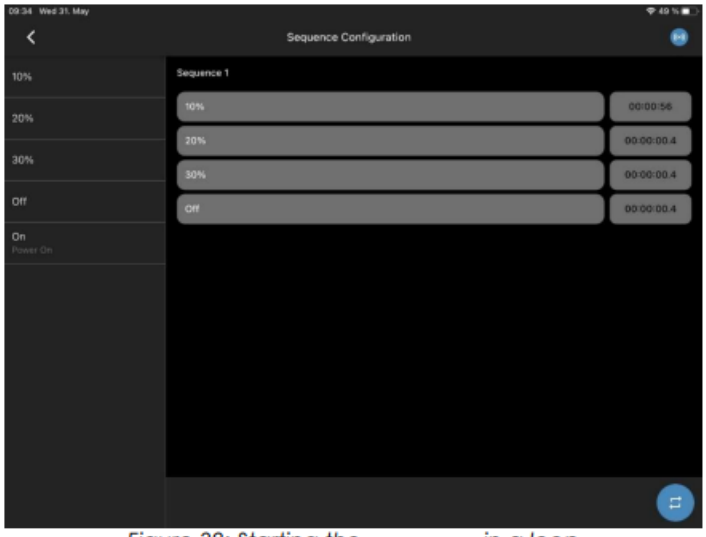


Figure 38: Starting the sequence in a loop

By clicking on the button , the sequence will run in a loop forever. This is indicated by the button , highlighted in blue.

ADD AND USE TIMERS

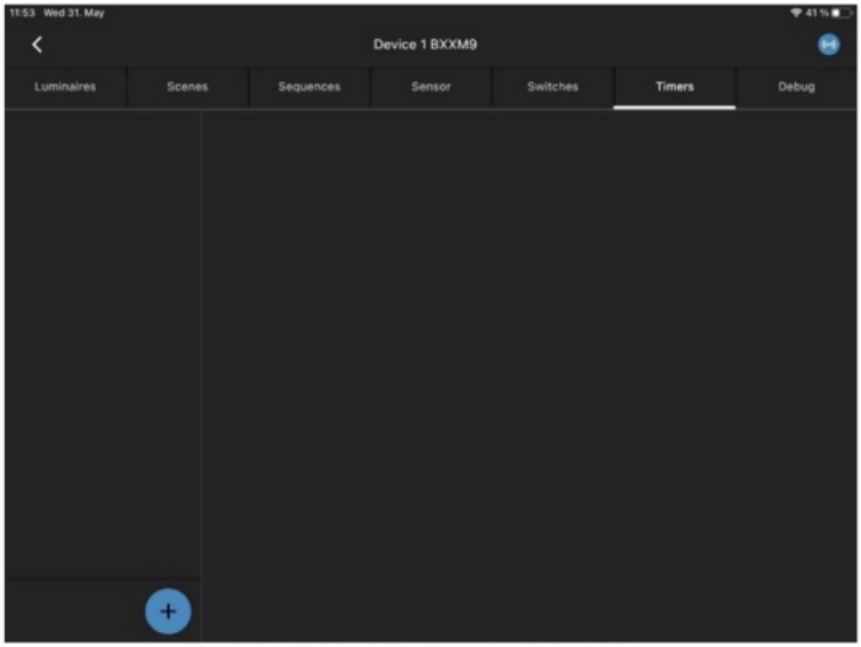


Figure 39: Menu for creating timers

Go to the tab „Timers” and add a new timer by clicking on the button  in the left lower corner.

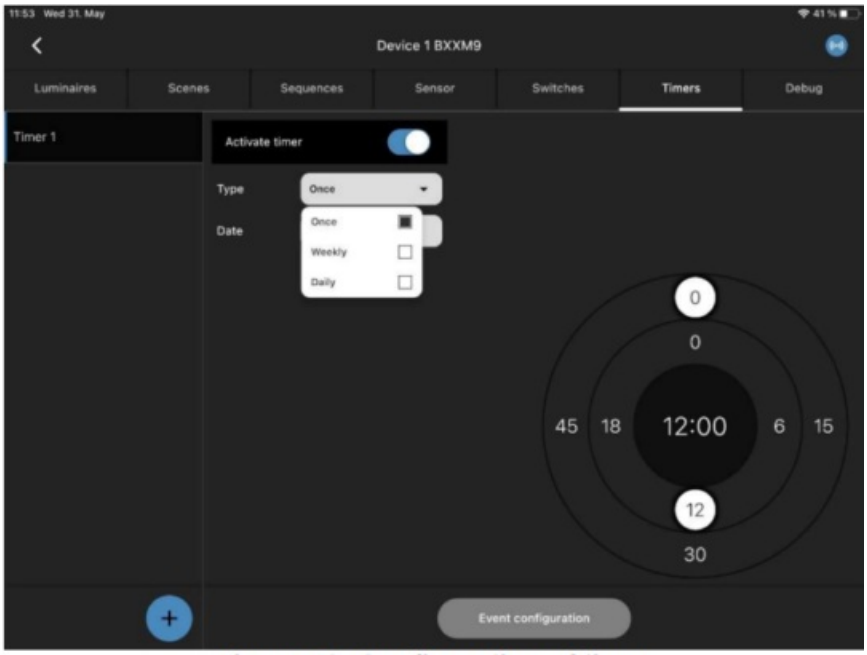


Figure 40: Configuration of timer

Now you have a couple of settings to choose from, “once, weekly, daily”, with different sub menus.

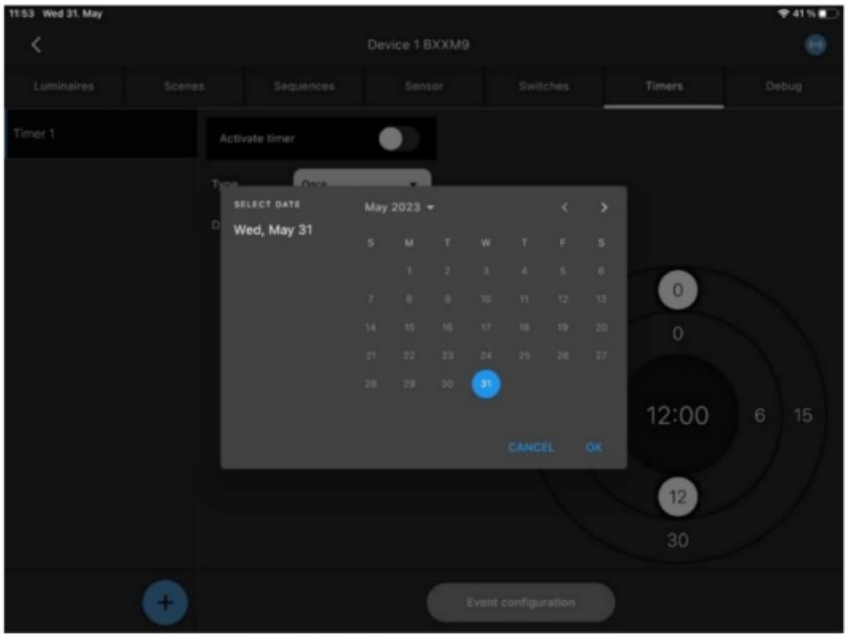


Figure 41: One-time timer

For once, you can select a date and time when it shall work.

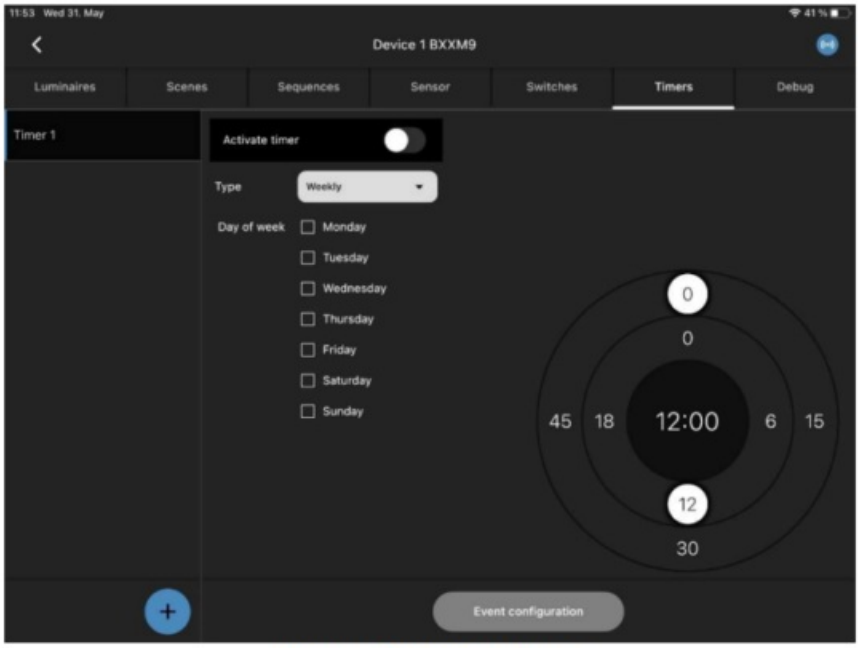


Figure 42: Weekly timer

For weekly, you can select between days and time.

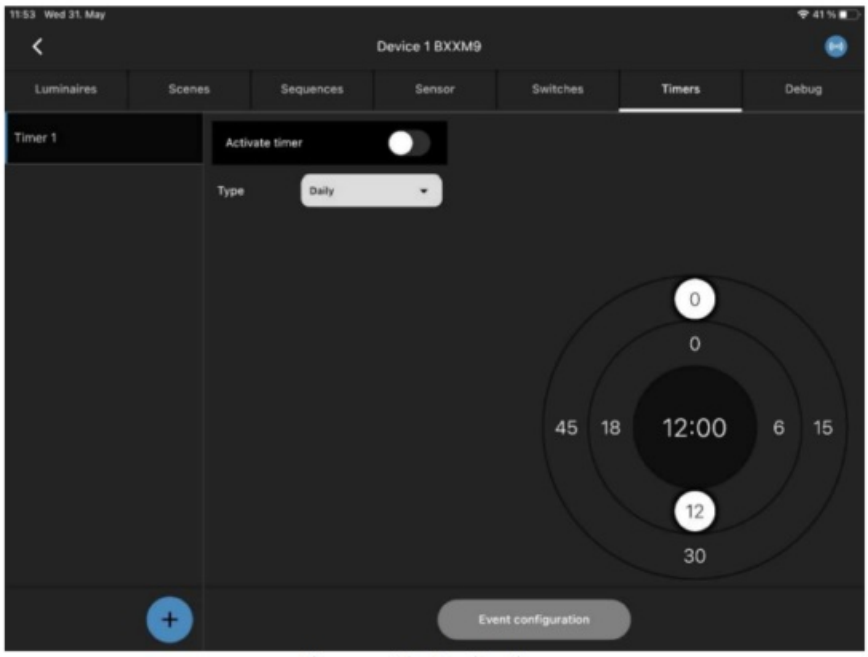


Figure 43: Daily timer

For daily, you can select only time for a daily use.

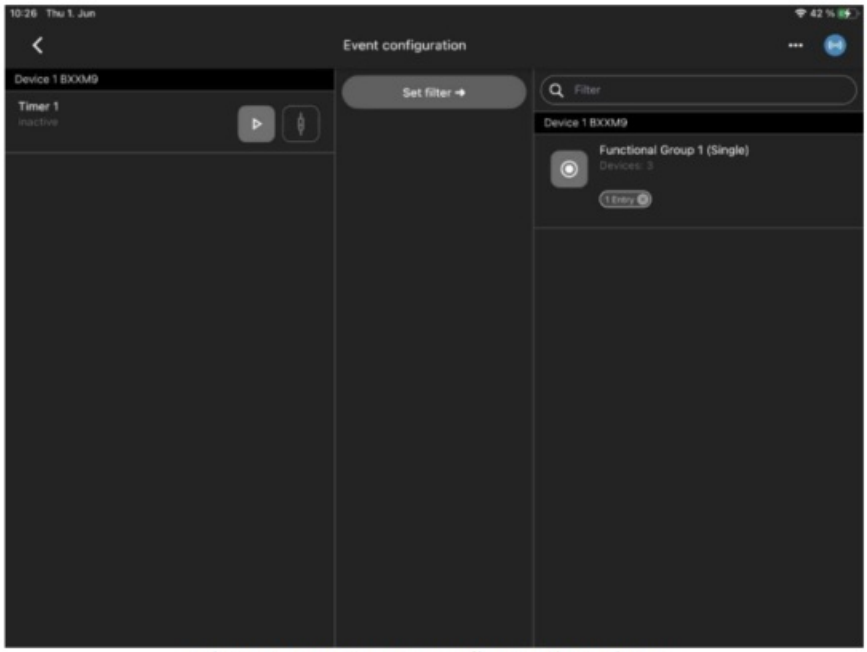


Figure 44: Event configuration Timer

After setting and selecting the Timer the only thing left is to connect the timer to the Functional Group in the event configuration.

USING THE AIR SENSOR

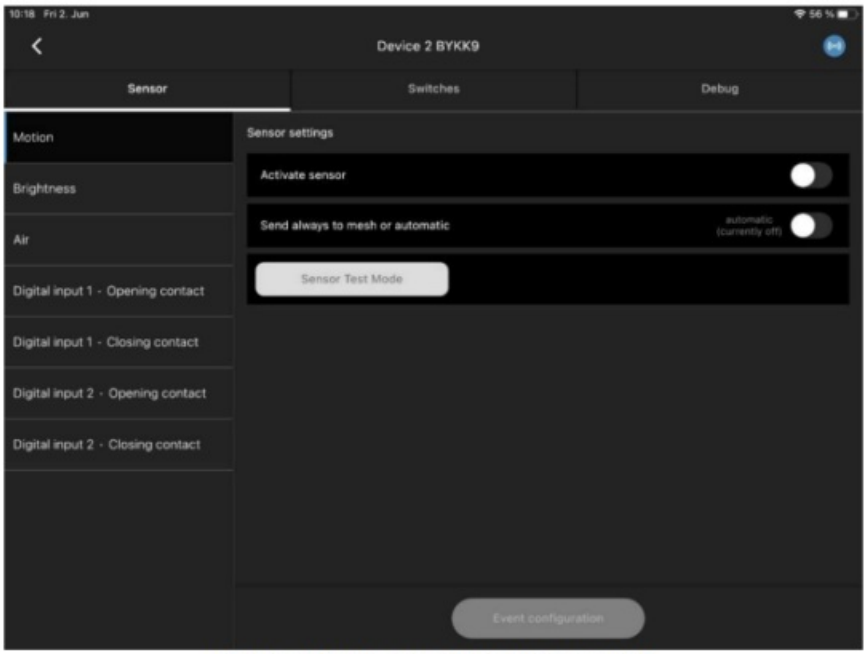


Figure 45: Menu of Multisensor Air

Our air sensor has the options to be used as a motion or brightness sensor which can be configured same, as described in chapter 6 and 7.

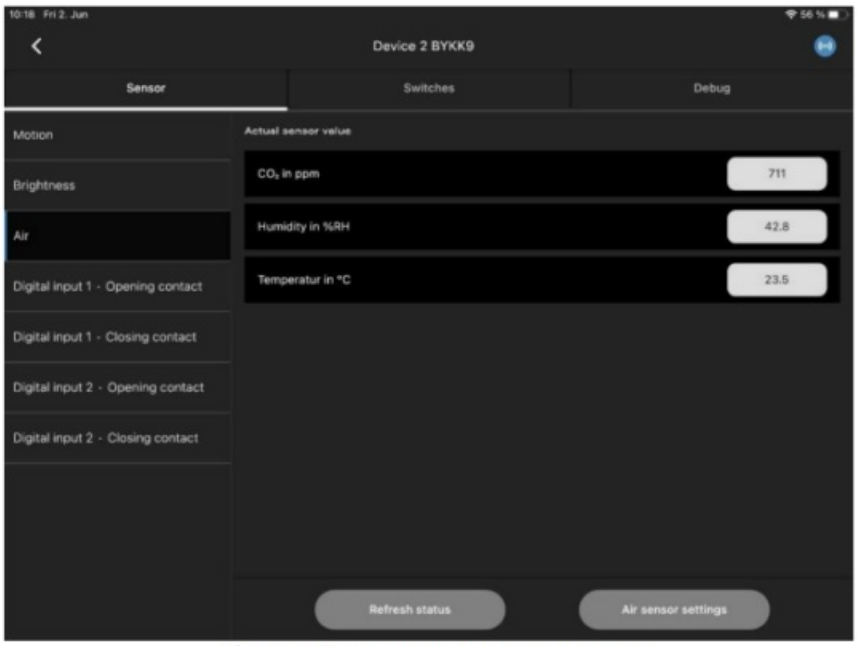


Figure 46: Current sensor values

You can see the values of CO2, humidity in %RH and temperature in °C in the Tab „Air“.

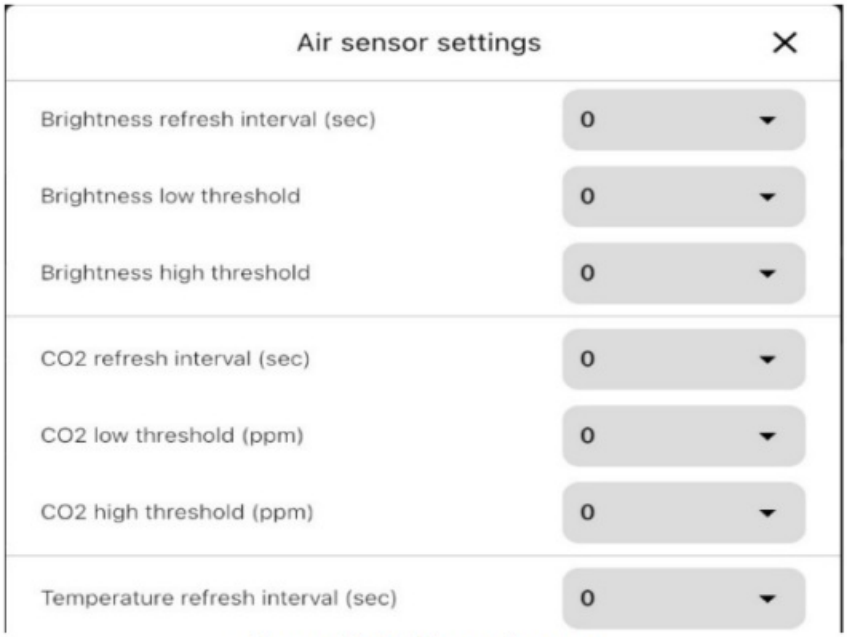


Figure 47: Settings of sensor

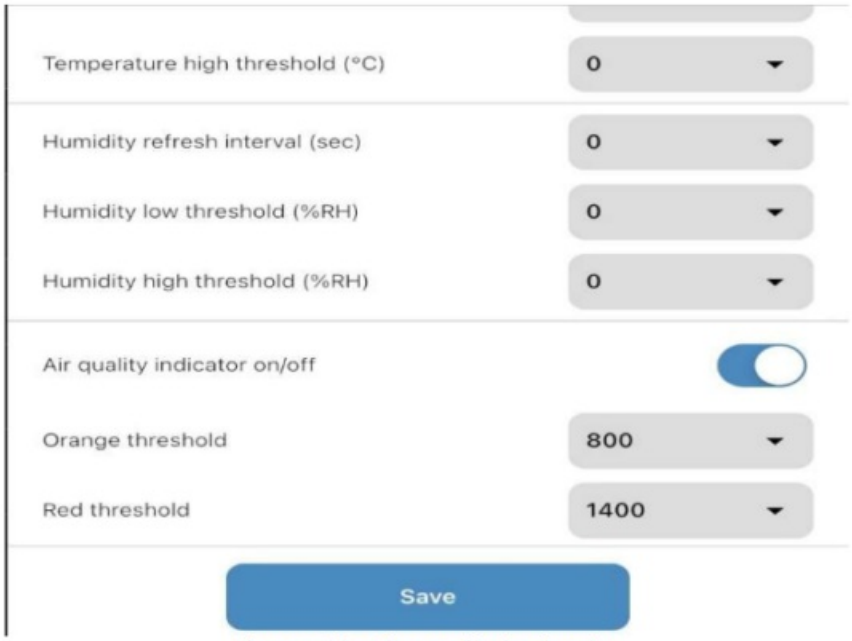


Figure 48: Air quality indicator

For the CO2 Level, temperature and Humidity, there is an option to change the threshold as well as the refreshing interval of all of those. Underneath you have the option to switch on and off the air quality indicator and define the orange and red threshold, the LED is turned on in default.

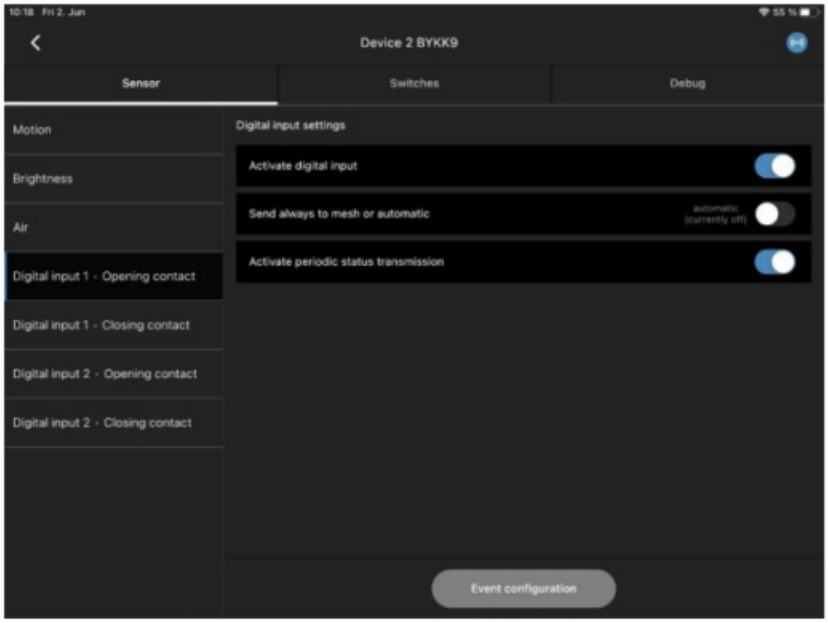


Figure 49: Setting the digital inputs

For switching on and of air conditioning, we have 2 digital inputs where we can detect openings and closings of a window. This function can only be used in a cloud solution, as well as the usage of the air sensor values (CO2, humidity etc.).

USING THE BLU2LIGHT RELAIS

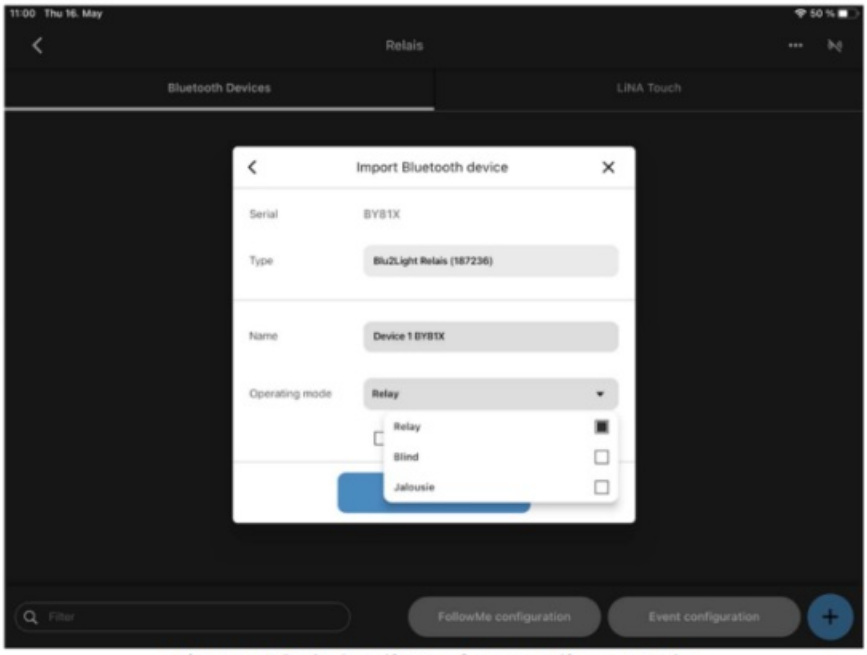


Figure 50: Selection of operating mode

Start scanning in your node and go into the settings as in “Figure 2”. Now you can either use the relay mode, roller shutter mode or the blinds mode by changing the wiring on therelay itself and set the mode to the function you need. Have in mind that this is only a relay, meaning that all scenes you configure over 0 % are on state “on”!

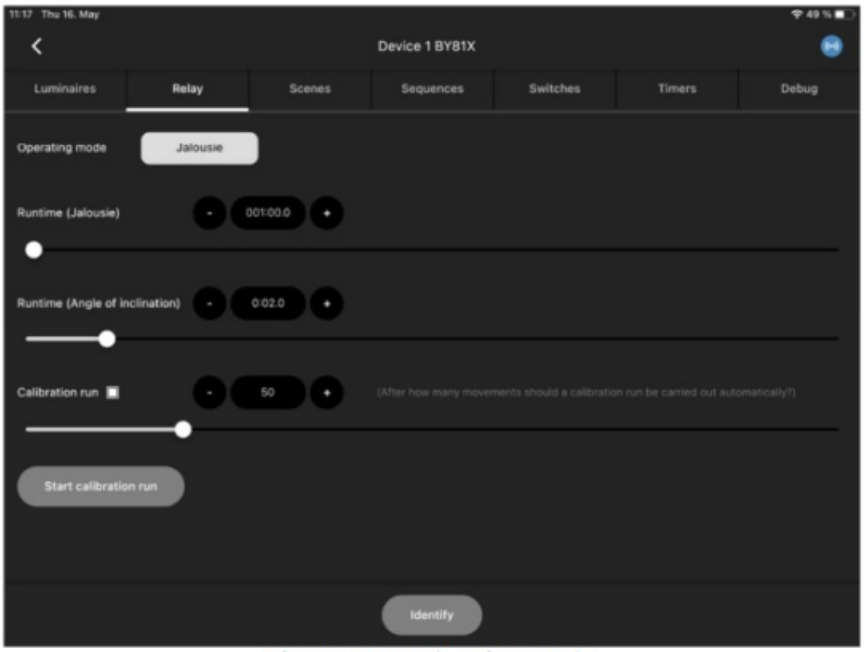


Figure 51: Jalousie mode

The set running time must correspond to the time that the blind needs to move from one end point to the other. You can also change the time manually using a slider (see Figure 51). The time that has been set must be equal to the time the blind including the slats do need to achieve position from one endpoint to another.

You can use the scene settings for channel 1 (blind) and the channel 2 (slats) to specify the percentage of the distance the blind shall move as well as for the working angle of the slats. You can use common or different scenes for the 2 channels. The equivalent of light is used here, assuming that it is not night. This means 100% is open, 0% is closed.

Errors of a few cm can occur if intermediate positions are approached several times (e.g. from 30% to 60%). However, this can be rectified by moving to an end point. A reference movement is always carried out in the direction in which the desired end position is reached more quickly. This can therefore be up or down.

The number of incomplete journeys after which automatic calibration should take place if the end point is not reached can also be set. There is also the option to start the calibration manually by pressing the “Start calibration run” button. This moves the blind to
the nearest end point and back to the current position.

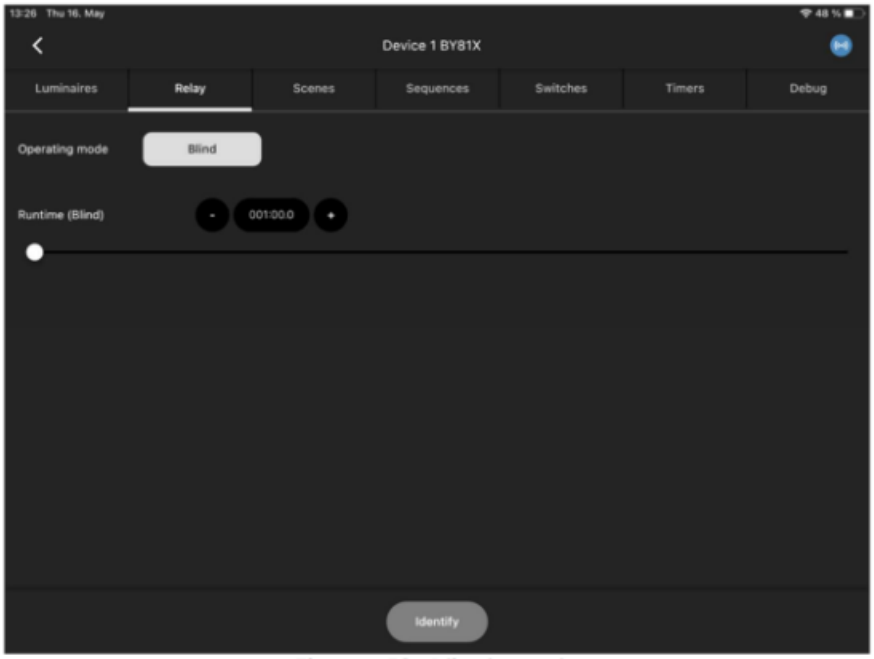


Figure 52: Blind mode

The set running time must match the time that the roller shutter needs to move from one end point to the other. You can also change the time manually using a slider (see Figure 52).

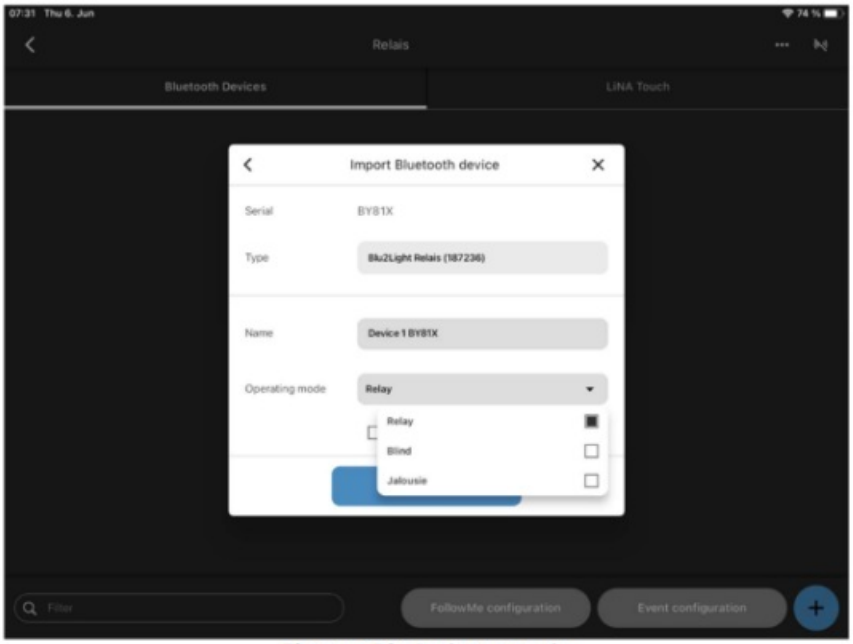


Figure 53: Relay mode

Non-dimmable lights or similar loads can be controlled in relay mode.
Please keep in mind that by changing the mode, you reset all the functional groups connected to your relay! You must choose the mode after scanning of the Node!
After importing the device in relay operating mode, you will see the following view with 2 preset channels and functional groups.

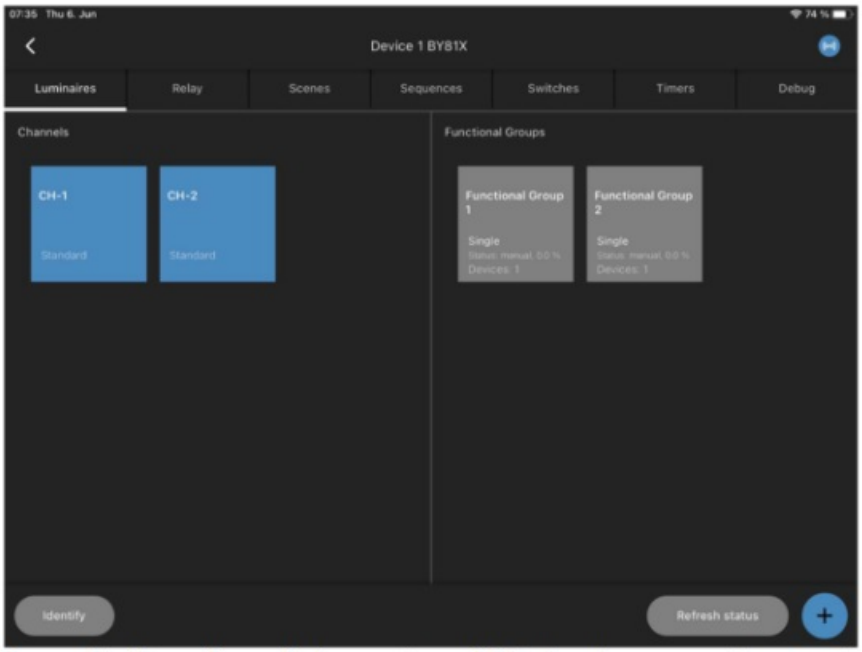


Figure 54: Overview of channels and FGs in relay operating mode

When creating scenes, the on and off scenes are set with channel 1.

Figure 55: Menu for creating scenes

Please note that this is only a relay, i.e. all scenes that you configure above 0 % are in the “on” state!

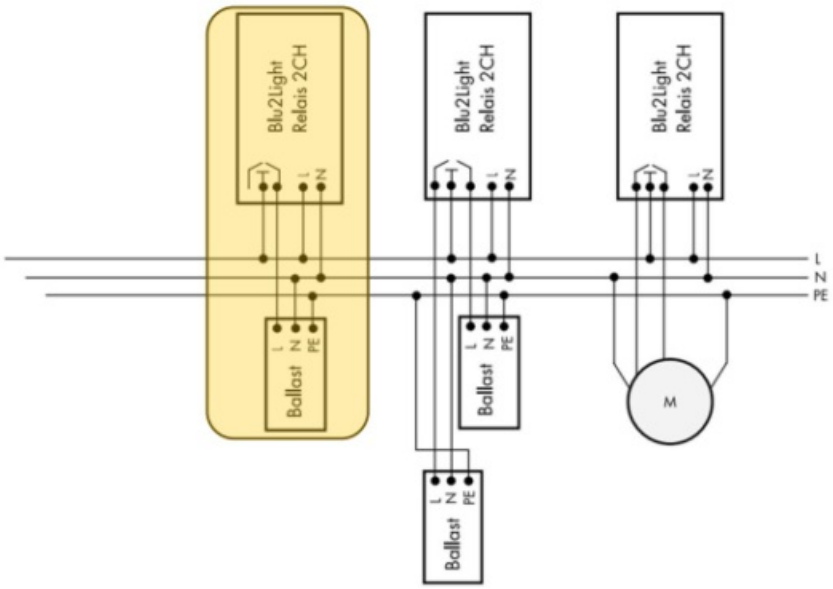


Figure 56: Wiring diagram

We are looking at the colored wiring of the relay. Even if you wire the left relay contact instead of the right one, you must set channel 1 when creating the scene.

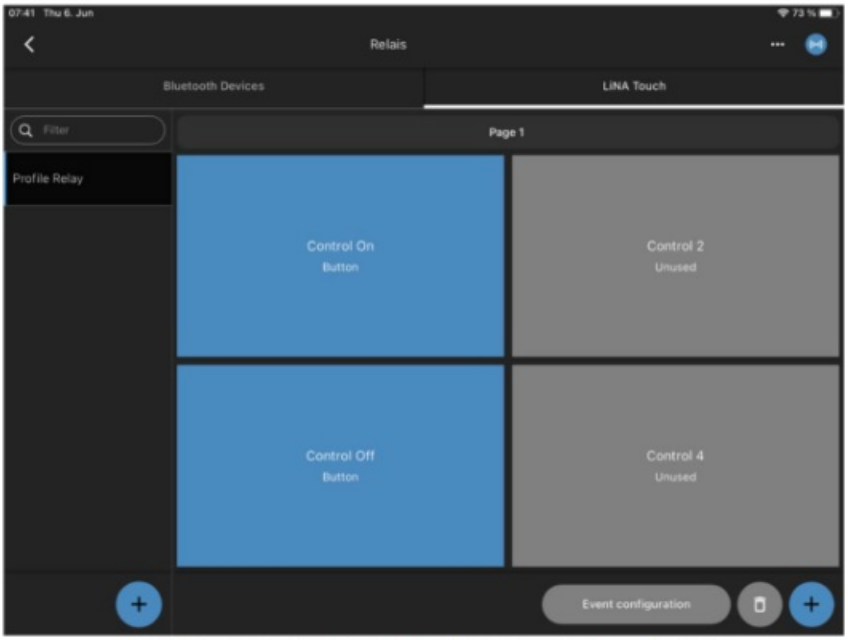


Figure 57: Creating the touch user interface

In the event configuration, you must note which relay contact you have wired. If you use the right-hand contact, the events must be linked to functional group 1 in the event configuration; if you use the left-hand contact, link the events to functional group 2.

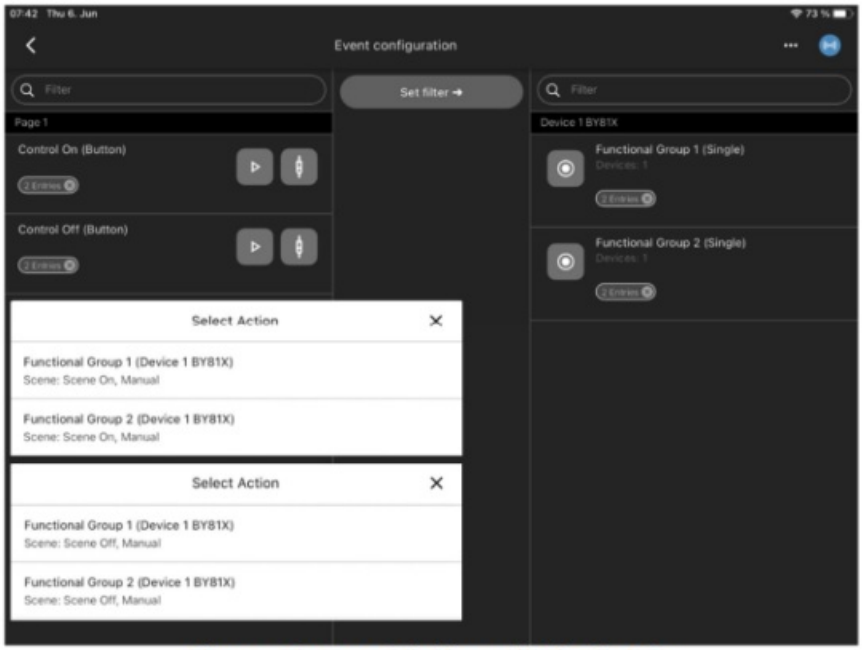


Figure 58: Event linking with both FGs

However, you also have the option of linking the events to both functional groups. This means that both contacts are switched.

USING THE B2L CONNECT PB4

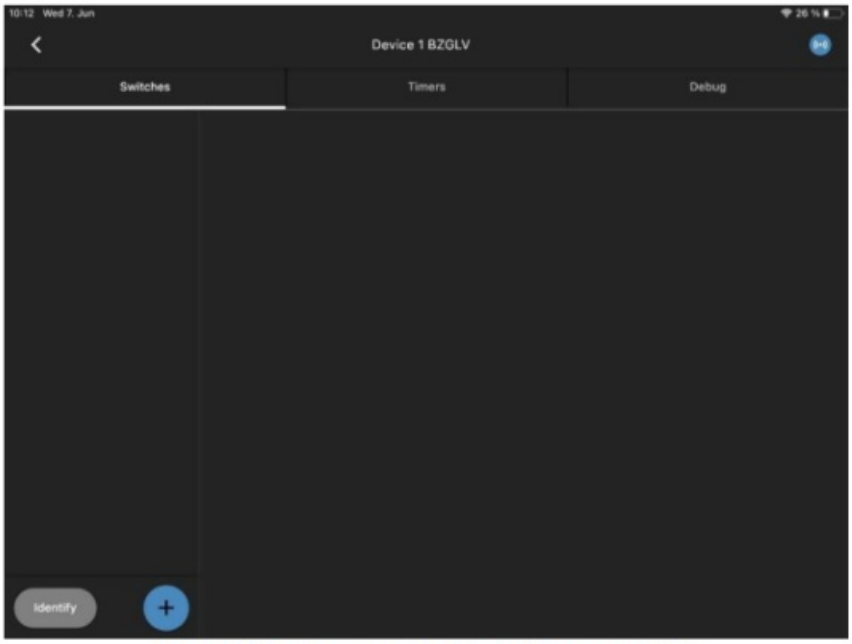


Figure 59: Menu of Blu2Light Connect PB4

By scanning in the PB4 and clicking on the Node you will notice that you have the Option to add another En Ocean Switch. You can also add Timers.

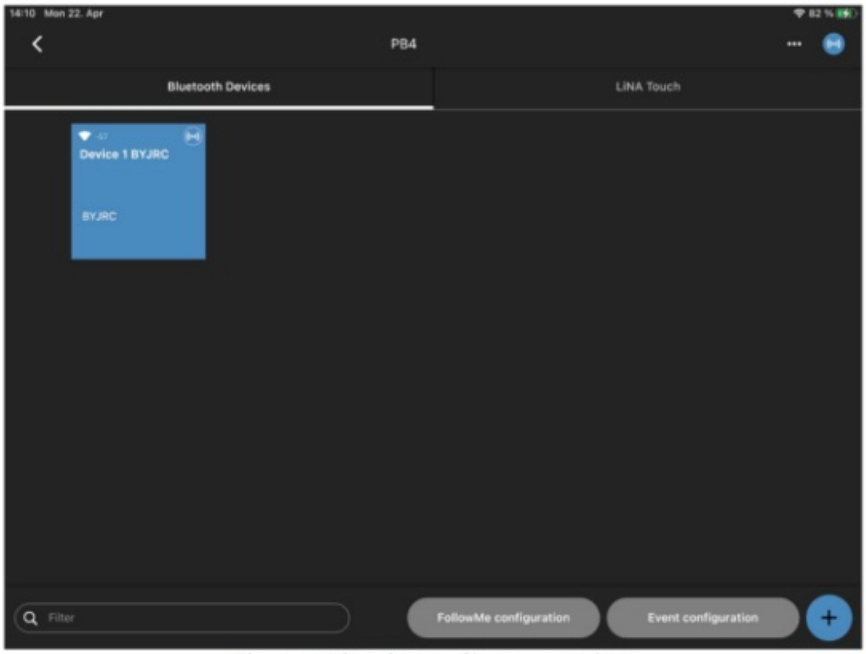


Figure 60: View after scanning

If you don’t need the options in “Figure 59” you can simply open your Event configuration. There you will now see the inputs of your Connect PB4.

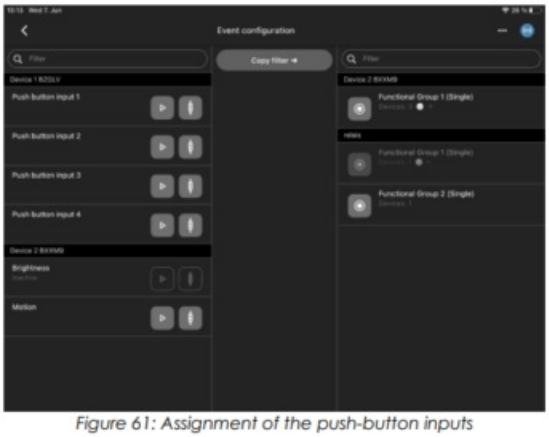


Figure 61: Assignment of the push-button inputs

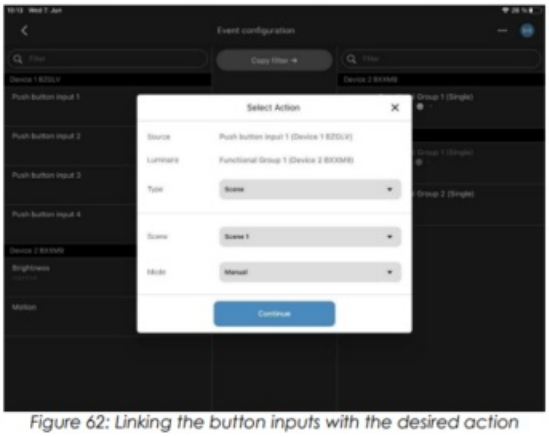


Figure 62: Linking the button inputs with the desired action

By connecting the nodes to the desired functional group, you can decide which action shall be triggered by pressing the switches, connected to the output according to the scenes you configured in “Figure 10” to “Figure 12”.

INCLUDING AN BLU2LIGHT REPEATER

For better connection between the nodes, you can use a repeater. The repeater can only be used to strengthen the mesh and is simply scanned in. The device can’t be configured.

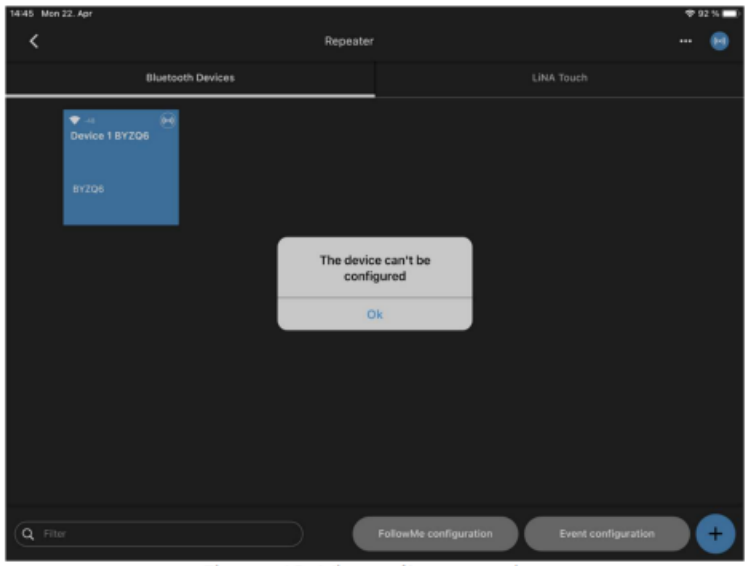


Figure 63: View after scanning

INCLUDING THE BLU2LIGHT CONNECT DMX CONTROLLER

Start scanning the node in your system and go into the settings as in “Figure 2”. You can now select either receiver, master or master follower mode by setting the mode to the desired function. If you want to change the mode for a device, the corresponding device must be deleted from the system configuration and scanned in again.

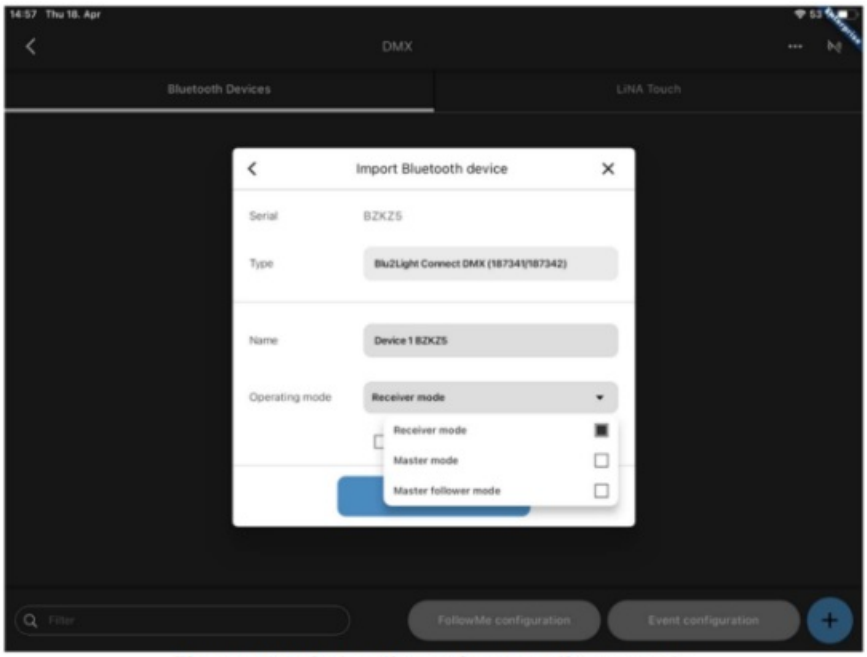


Figure 64: Selection of operating mode

15.1 RECEIVER MODE

This mode is used when the device is connected to a DMX controller. After scanning the Node, please select the “Receiver Mode” and press the button “Continue”.

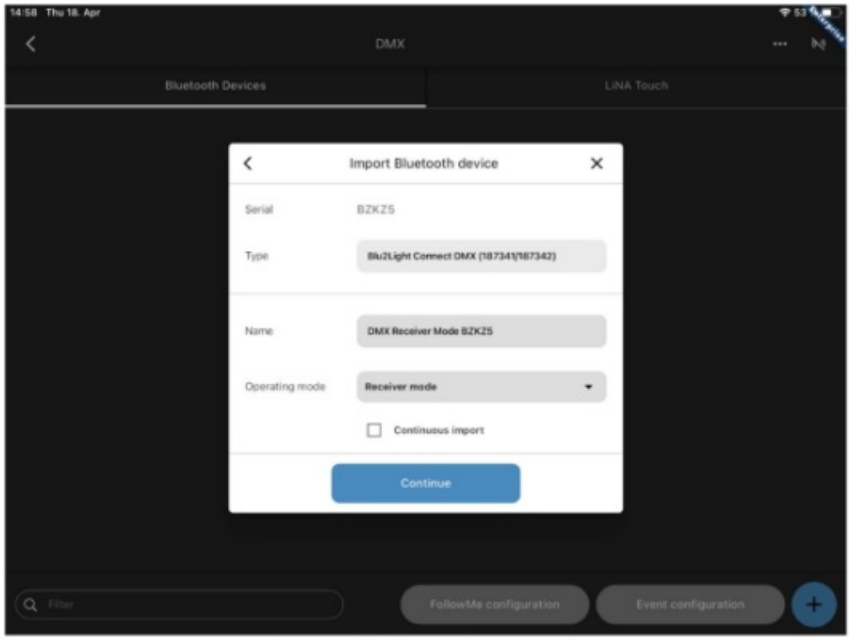


Figure 65: Receiver mode

By pushing the button for the commissioned device, you will come to the following overview. There are 32 configurable channels.

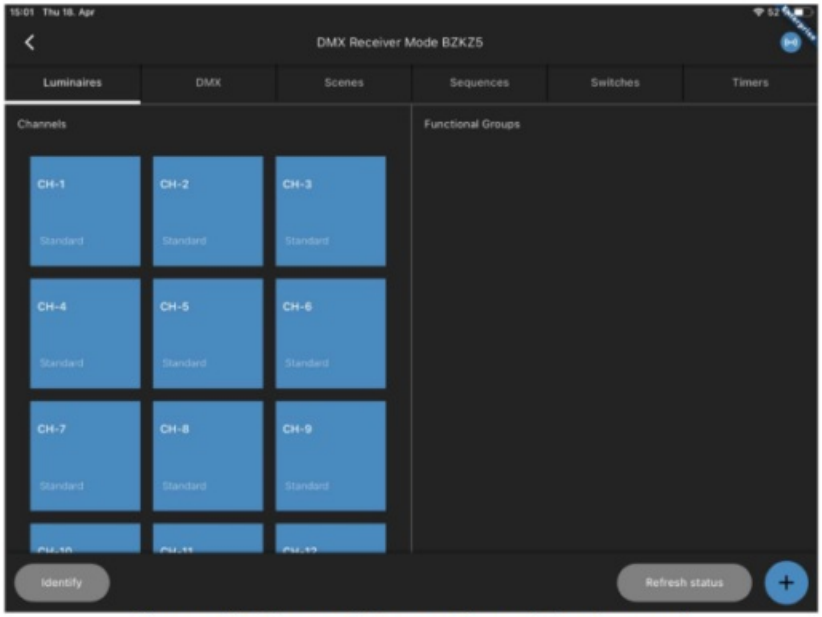


Figure 66: View of the configurable channels

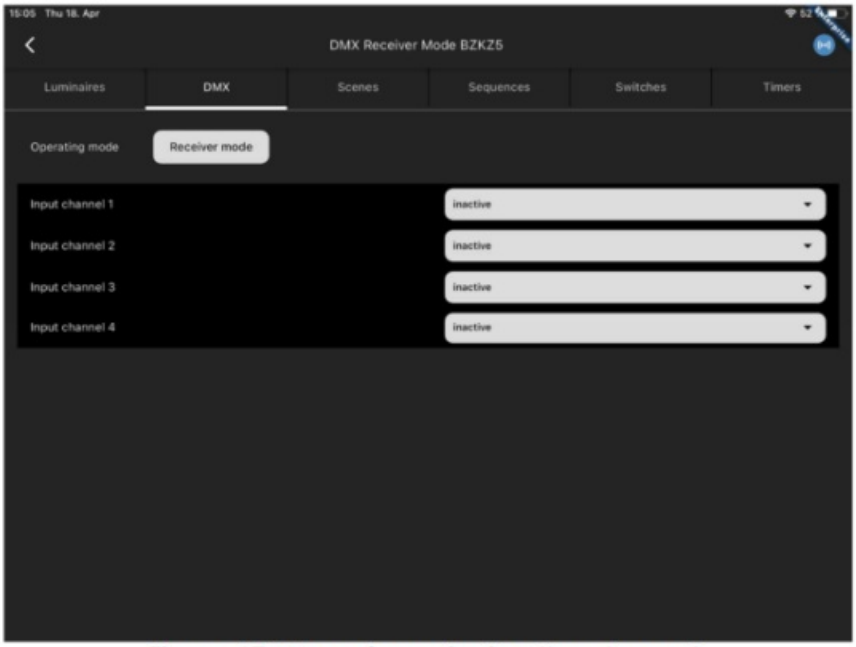


Figure 67: Menu for assigning the channels

Please select the tab “DMX” to access the input channels. In this view, the channels must be assigned according to the channels used by the DMX controller.

Figure 68: Assignment of channels

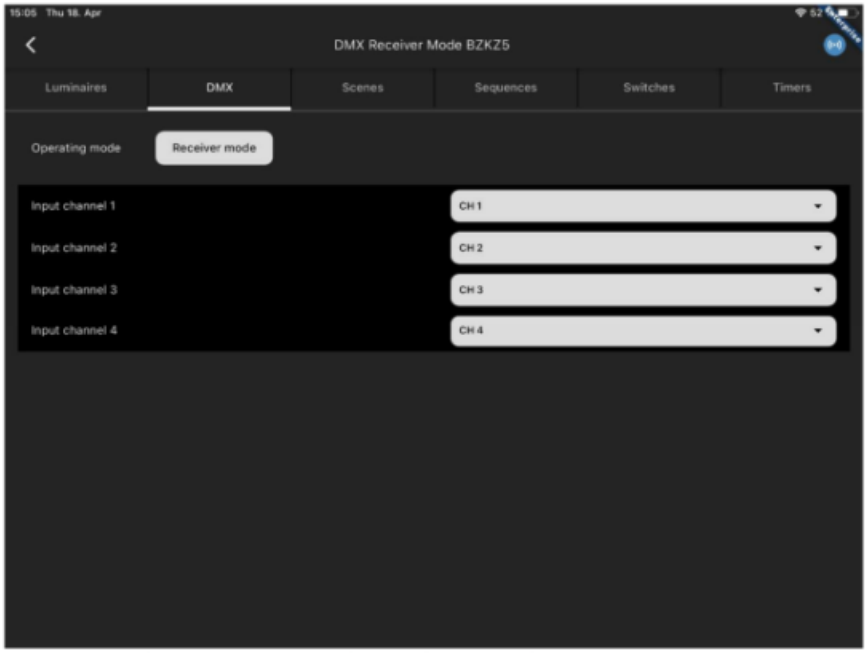


Figure 69: Overview of the assigned channels

15.2 MASTER MODE

This mode is used when the device is connected to a DMX spotlight. After scanning the Node, please select the “Master Mode” and press the button “Continue”.

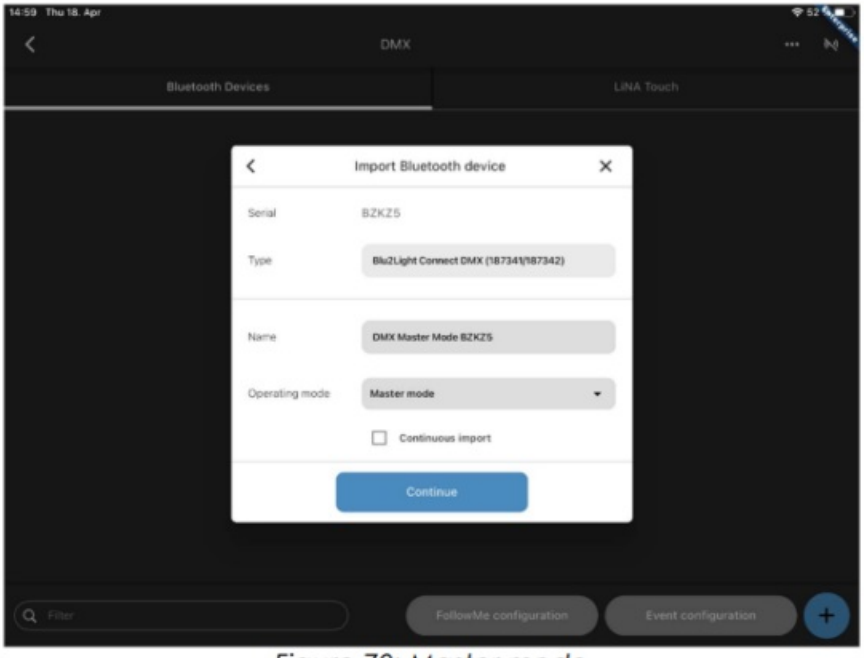


Figure 70: Master mode

By printing the button for the commissioned device, you will come to the following overview. There are 32 assignable channels available.

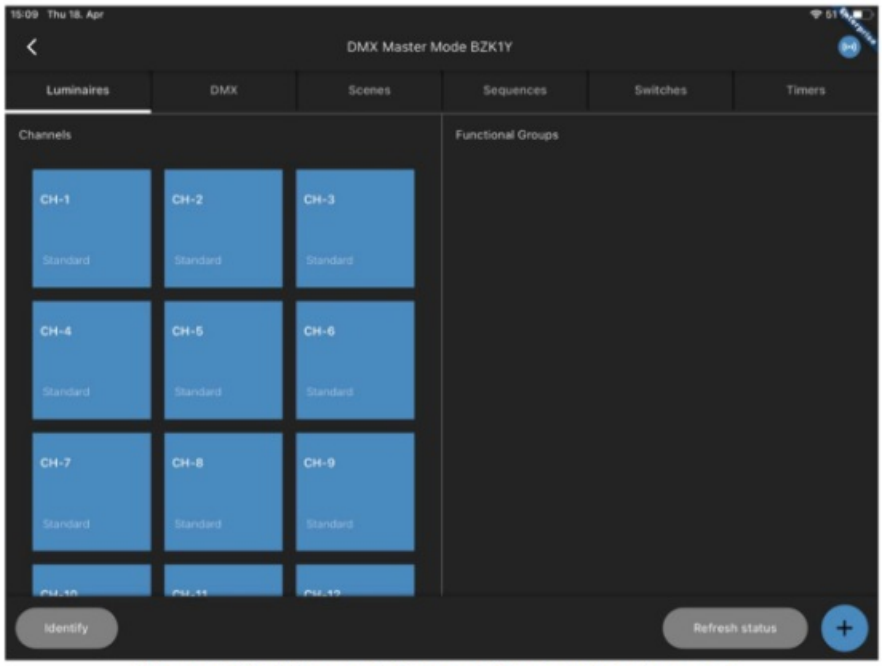


Figure 71: View of the configurable channels

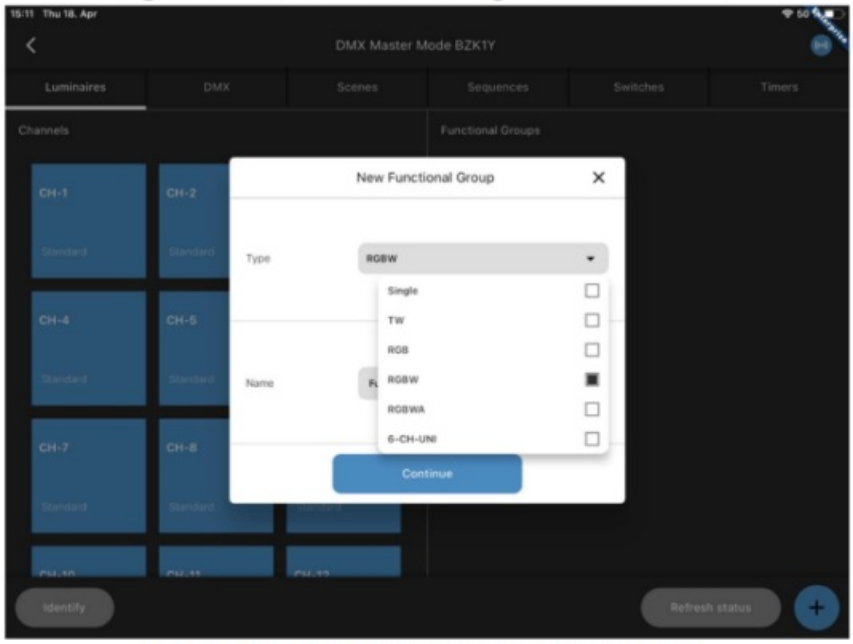


Figure 72: Creating of a functional group

You cannot perform an express setup. You must therefore create a function group by yourself! Here you must select how many channels your spotlight has. In this case, it is RGBW.

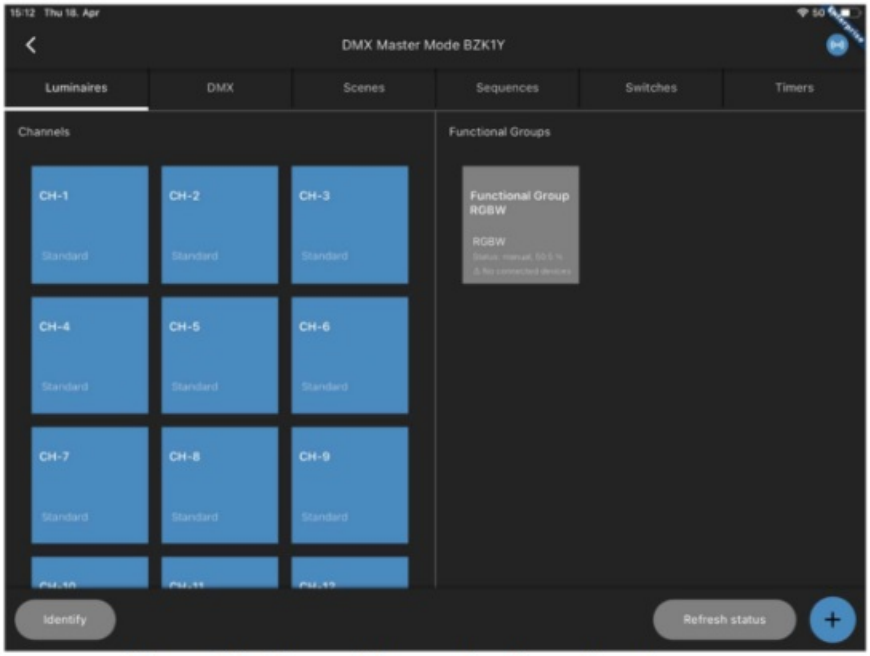


Figure 73: View with created functional group

Pressing the tile of the just created Functional Group takes you to the next step where you must connect every channel of the device (R, G, B, W) to every channel of the Functional Group (also applicable for other systems).

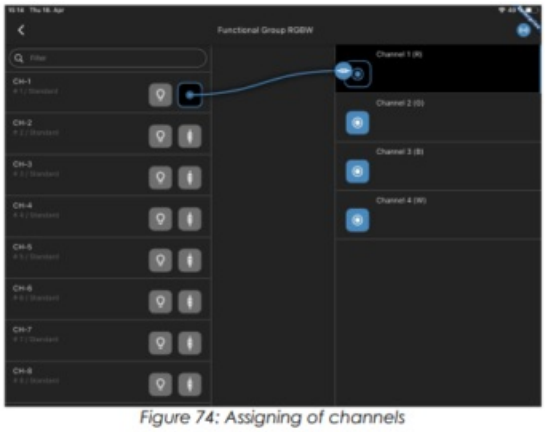


Figure 74: Assigning of channels

Figure 75: View of the linked channels

Now we configure our scenes as we did for a simple configuration (Figure 10-12). In this case you have the option to either use the channel overview or change the type of the scene and use RGBW directly, this could make the selection of colors easier (see Figure30).

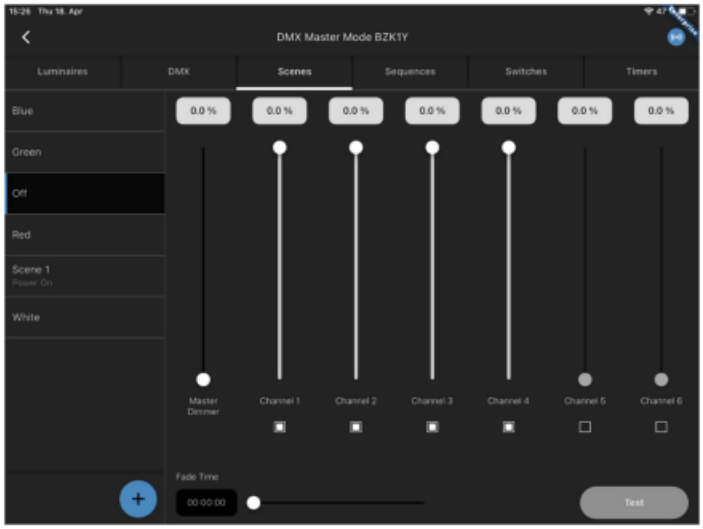


Figure 76: View of created scenes

Once you have configured all the desired scenes, go back to Figure 13 to create a user interface for the LiNA Touch app.

15.3 USING RECEIVER AND MASTER MODE IN COMBINATION

This combination is used when you want to control a spotlight via DMX controller. Please repeat the steps of configuration for Receiver and Master Mode (Figures 65 – 76).

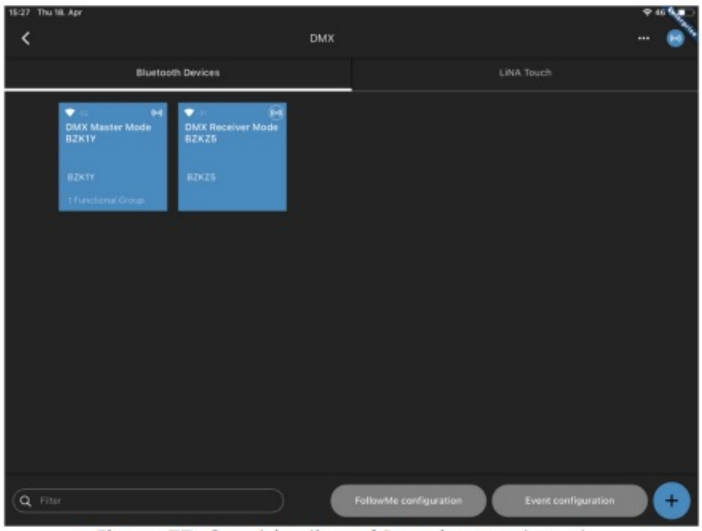


Figure 77: Combination of Receiver and Master

Please open the Event configuration and assign the Push button inputs 1 to 4 of the DMX device in Receiver Mode to functional group of DMX device in Master Mode.

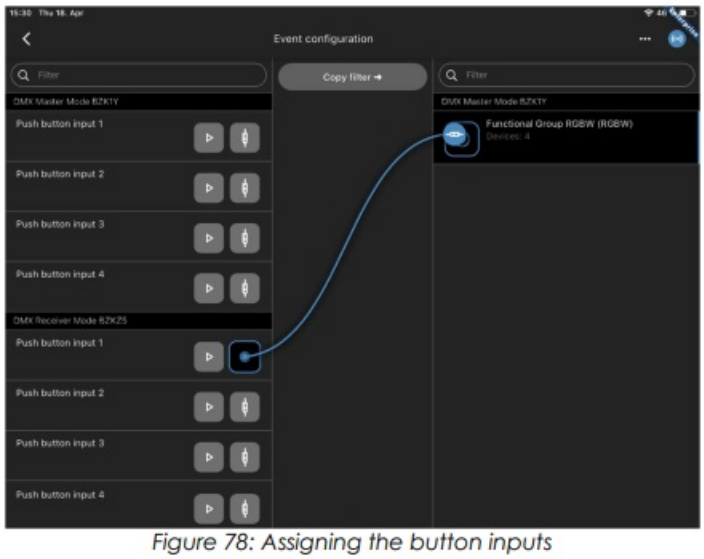


Figure 78: Assigning the button inputs

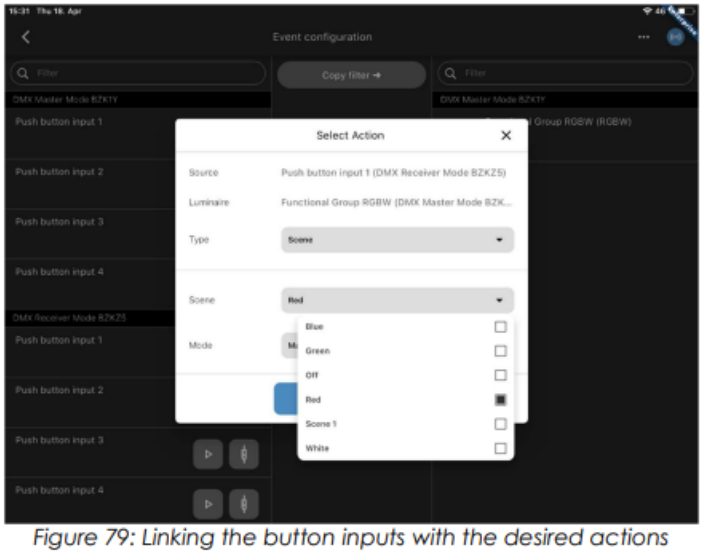


Figure 79: Linking the button inputs with the desired actions

Select the type of action and the desired scene. See the overview mentioned in figure 80.

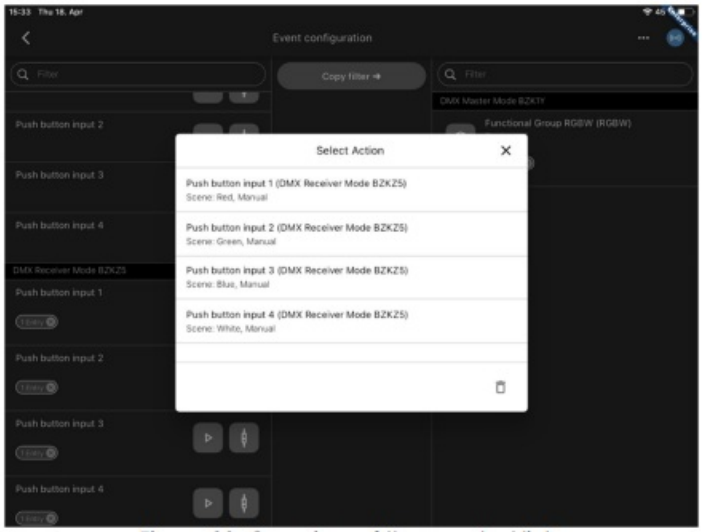


Figure 80: Overview of the created links

After completing the event configuration, you can control the connected DMX spotlight via the DMX control device. The control signals are transmitted from the DMX controller via the DMX device in receiver mode to the DMX device in master mode using a Bluetooth connection.

15.4 MASTER FOLLOWER MODE

The Master Follower Mode allows the DMX light control commands to be passed on as dimming levels. After scanning the Node, please select the “Master Follower Mode” and press the button “Continue”.

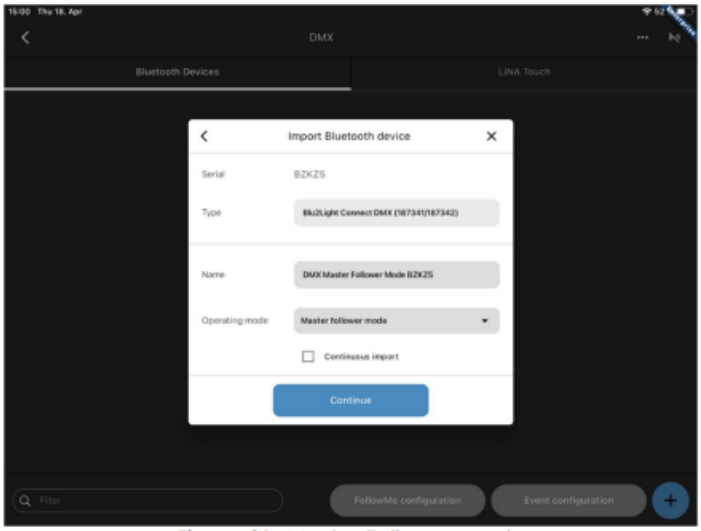


Figure 81: Master Follower mode

You cannot perform an express setup. You must therefore create a functional group by yourself! Here you must

select how many channels your spotlight has. In this case, it is RGBW (Figure 72-75).
After that you can configure the scenes as we did for a simple configuration (Figure 1012). In this case you have the option to either use the channel overview or change the type of the scene and use RGBW directly, this could make the selection of colors easier (see Figure 30).
The second DMX Node must be configured as Master (figure 70). Please create the functional group. In this case, it is RGBW (Figure 72-75).

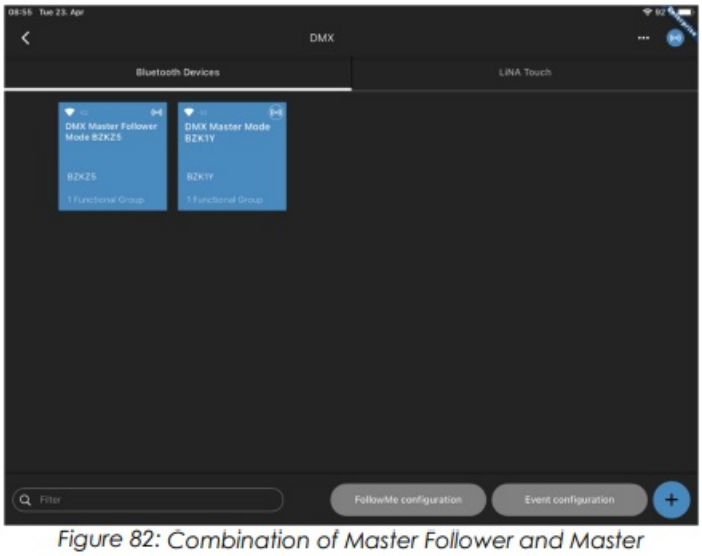


Figure 82: Combination of Master Follower and Master

Please open the FollowMe configuration.

Figure 83: Linking the functional groups

Assign the Functional Group of DMX Master Follower to the Functional Group of DMX Master.
After completing the event configuration, you can control the connected DMX spotlight via the DMX control device. The control signals are transmitted from the DMX controller via the DMX device in Master Follower Mode to the DMX device in Master Mode using a Bluetooth connection.
Switching on the channels on the DMX controller follows the position as dimming level. The mixing of colours is possible.

Figure 84: Combination of DMX device with a DigiLED

Figure 85: Linking the functional groups

Instead of a second DMX device in master mode, a DigiLED 4CH can also be integrated into the system. The linking is identical (figure 85). The DigiLED 4CH can also be added to a system consisting of 2 DMX devices (figure 84).

DO'S AND DON'TS

16.1 DO'S

- Always use the latest provided app and firmware
- Read the documentation carefully.
- Always create a backup after configuration
- In buildings in construction, make sure you have a proper and uninterrupted mains supply.
- Steps to configure a system:
  1. Plan.
  2. Document the needed functions.
  3. Scan all QR codes.
  4. Make firmware update.
  5. Create all FGs.
  6. Assign channels to FGs.
  7. Configure power on values.
  8. Connect functions.
  9. Make backup.
  10. Import backup to Server.
- Set up light regulation reference with no (ideal) or minimal external light.
- If you have a technical request, include:
  1. Backup file.

2. Exported network overview.
3. Description of the system.
4. Description of the issue as detailed as possible.

- Use “Follow Me” function wherever possible.
- Always delete a system if it was transferred via backup to another tablet.
- Make a DALI bus power calculation for every DALI bus.
- Place nodes with GPS receivers with open view to the sky.
- Blu2Light is designed to be always ON. To turn OFF the light, create a scene with luminance 0 %.

16.2 DON’TS

- Do not configure all color values to zero for a scene.
- Do not add functional groups to a light regulation on a node that has no own FG and no physical driver connected.
- Do not use long RTA (return to auto) times. We recommend max. up to 2 minutes.
- Do not locate two or more light sensors feeding each a light regulation to close together. If they see the light from a different area this will cause unstable regulation when the other group changes their level.
- Do not change the room setup below the sensor when light regulation is active without reconfiguring the reference value (or expect changes in the reached target level).
- Never turn off the power during a firmware update.
- Never turn off the power directly after configuration changes. Wait at least 1 minute.
- Do not use any unknown power supply.
- Don’t use weak radio connection between two nodes.
- Never connect too much load on the DALI line.
- Don’t Save nodes. Having too less nodes in a system decreases radio stability and reduces the possibility to configure the system for changed behaviors.
- Never use two tablets for configuration in parallel or alternating on one system.
- Using the LiNA Connect App on a finished configuration which already has a LiNA Touch interface is not recommended and can cause malfunctioning of the Touch system while programming on the Connect App in parallel.
- Do not Connect two (or more) Blu2Light controllers on one DALI line (therefore we have the Power Splitter, 187280).

16.3 INFORMAL

- Each functional group has its own state.
- Manual
- Auto
- Sequence
- The “Auto” state has a sequence of steps, based on the configuration not all of them might be reached.
- Active
- Passive
- Basic
- Off

- Only the auto states “Active” and “Passive” can be used for light regulation.
- Movement only reacts in state “Auto”.
- A sequence can end with a scene call either in active, manual mode or trigger another sequence.

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Documents / Resources

	LIGHTING SOLUTION LiNA Connect App [pdf] Instruction Manual LiNA Connect, LiNA Touch, LiNA Connect App, App

References

- User Manual