

ayControl Editor Manual

Version 01/2020

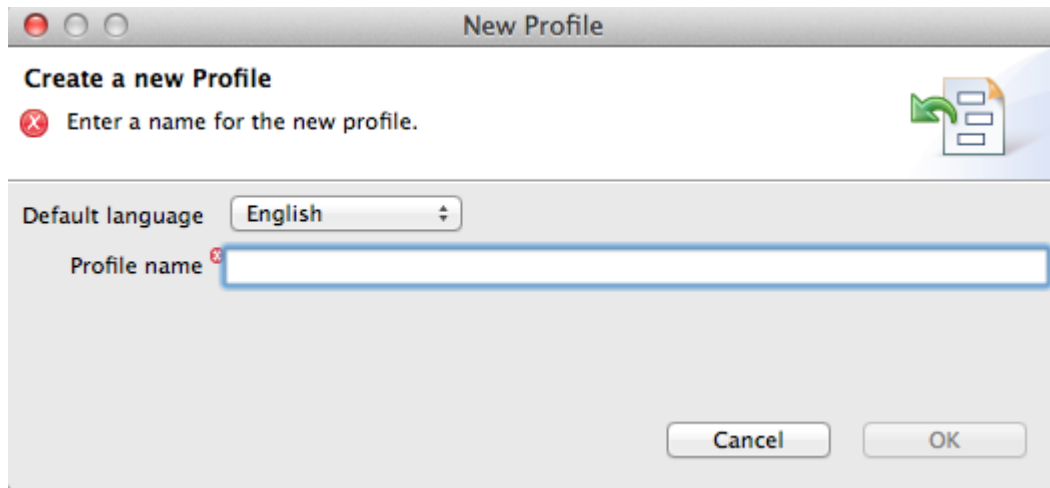
2020-01-18 20:53



Getting Started

Welcome to the ayControl Editor! If this is your first time using the Editor we recommend watching the tutorial videos in the “Info”-tab of the editor. As you work, the Editor will automatically display help relevant to your current task.

In order to get started with the ayControl Editor, the first thing you have to do is create a new profile. After clicking on “File” → “New” in the menu or on the paper icon in the menu bar, a small window will appear where you will have to enter the name of your profile and select the default language.



Selecting the proper default language is important if you want to use the multi-language support that ayControl provides.

After you have created a profile and selected the default language, you will have to complete the following four steps needed to make the profile ready to use for the ayControl app:

1. Step: Create Connections

This is done in the Connections tab. You can create KNX, HTTP, Sonos, infrared and IoT connections. If you create a KNX connection, you will also have to create new KNX group addresses or import them from ETS. If you want to add IoT functionality to your profile you can use the bundled IoT templates and [Profile merging](#).

2. Step: Create Control Elements

Control elements are graphical elements in the ayControl app which the users can use to control devices. For example, the control element “Switch” is used to turn the devices on and off, the control element “Blinds” is used to raise and lower the blinds etc. These control elements are created in the [Controls](#) tab.

3. Step: Place the Control Elements in a Structure

Generally speaking, most houses/buildings are separated into sections and these sections are then separated into rooms. For example a house can be separated into two sections (“1st floor” and “2nd floor”), and the section “1st floor” can be separated into rooms like “living room”, “bedroom”, “kitchen” etc. The structure of an ayControl profile is built in a similar way. In the Structure tab you can create your sections, add rooms to them and then for every room create a layout depending on what type of mobile device you have (different smartphones and tablets both in portrait and landscape orientation). You can then place the control elements in the layouts you created.

4. Step: Transfer the Created Profile to a Mobile Device

When you are done creating your profile, you can transfer it to your mobile device. When it comes to transferring the profile to a device, the easiest option is to use the built-in Wi-Fi transfer. You can also send the profile via email and then open it in the email app on your mobile device, or you can use other services like Dropbox to upload and access the profile.

Multi-Language Support

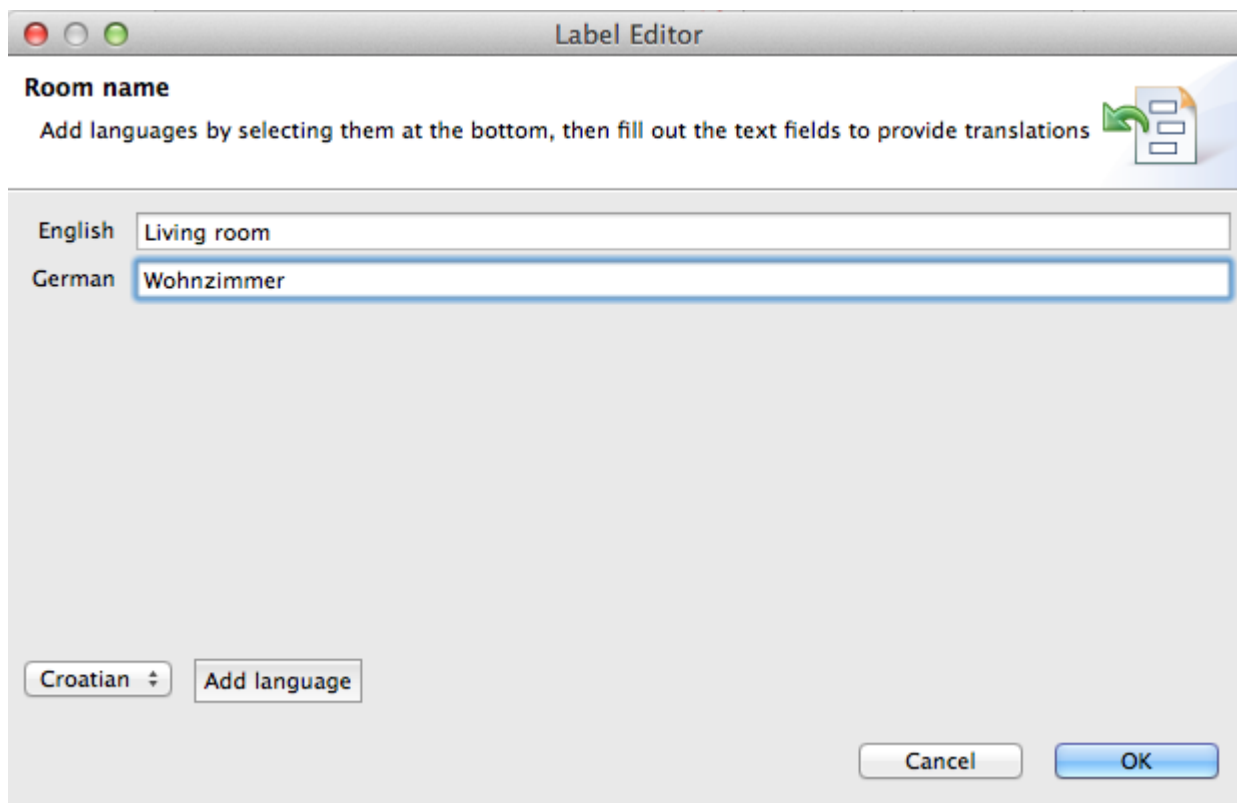
Next to almost every text that the user has to provide (profile names, welcome messages, section and room names, labels...) there is the Languages... button.

Room Information

Room name  Languages...

Symbol 

Using this button, the translations of the text can be added. A language can be selected in the bottom of the window and then added by pressing the Add button. The translation in the specific language can then be entered.



The screenshot shows a window titled "Label Editor". Inside, under the "Room name" section, there is a text field containing "Living room" and a "Languages..." button with a document icon. Below this, a message says: "Add languages by selecting them at the bottom, then fill out the text fields to provide translations". The main area of the window contains two text input fields: the first is labeled "English" and contains "Living room"; the second is labeled "German" and contains "Wohnzimmer". At the bottom left, there is a dropdown menu currently showing "Croatian" and an "Add language" button. At the bottom right, there are "Cancel" and "OK" buttons.

When the profile is transferred to a mobile device, the ayControl App will check the language settings of your device. Then, the app will check if the translation is provided in the language that your device has been set to. If so, the proper translation will be shown, otherwise the text in the default language will be displayed. This is why it is important to select a proper default language when creating a new profile.

Connections

The Connections tab allows you to create and manage connections and addresses. When creating a new profile, the first thing you have to do is to create a new connection.

When creating a new connection, there are five possibilities:

- [HTTP](#)
- [Infrared](#)
- [IoT](#)
- [KNX](#)
- [Sonos](#)

I created a connection, what now?

After you have successfully created one or more connections and entered the addresses, you can go to the [Controls](#) tab and start creating a configuring the control elements.

KNX IP Connection

This connection type is designed for communication with KNX-IP devices like KNX-IP Interfaces or KNX-IP Routers. When creating a new KNX connection, enter your desired name like KNX - IP - Router - 3rd - floor, the IP address and the port 3671 of the KNX IP device.

KNX connections can be established using two different protocols: KNXnet/IP Tunneling and KNXnet/IP Routing. ayControl automatically uses the right protocol depending on the IP address which is entered in the connection.

For your KNX IP Connection you can [export KNX group addresses from ETS](#) and [import them in the ayControl Editor](#).

KNXnet/IP Tunneling or KNXnet/IP Routing - which to use?

The difference between these two protocols is that with Routing the data is sent via multicast (e.g. IP 224.23.0.12) to all devices, whereas with the Tunneling protocol a direct connection with a device is established. We strongly **recommend you to use the Tunneling protocol** because it contains more advanced conformation and with it ayControl can display the current connection state.

KNXnet/IP Routing

- Supported by KNX IP Routers only
- Can be used to connect with many clients simultaneously
- **Can not** be used for remote access via VPN or port forwarding
- Uses the IP Routing Multicast address which is configured in the KNX IP Router with ETS. Typically it is 224.0.23.12

KNXnet/IP Tunneling (recommended)

- **Supported by both KNX IP interfaces and KNX IP Routers**
- Number of simultaneous connections depending on the KNX IP interface model. We recommend you to use improved models supporting at least 4 or 5 simultaneous connections
- KNX IP interfaces supporting 4-5 simultaneous connections are often the cheapest solution to connect with KNX as these typically cost only 50-60% of an KNX IP router.
- Can be used to remote control the building via VPN connection or port forwarding
- IP address: Use the IP address which has been assigned with ETS to the KNX IP device. It must match the configuration of your LAN e.g. 192.168.x.y where x is depending on your LAN configuration and must match the subnet of your LAN. For y you should use a value which is out of the DHCP range. E.g. if your DHCP starts handing out IP addresses automatically from 192.168.x.1 to 100 then 101 or 220 would be good fits.
- **Important:** Use static IP instead of DHCP assigned IP in the ETS configuration to **make sure that the IP never changes**.

Adding/Importing the KNX Group Addresses

After you have created the KNX connection, you need to enter the addresses to which commands can be sent to and received from. You can enter addresses manually, or you can import them if you have them saved as `.csv` or `.knxproj` files.

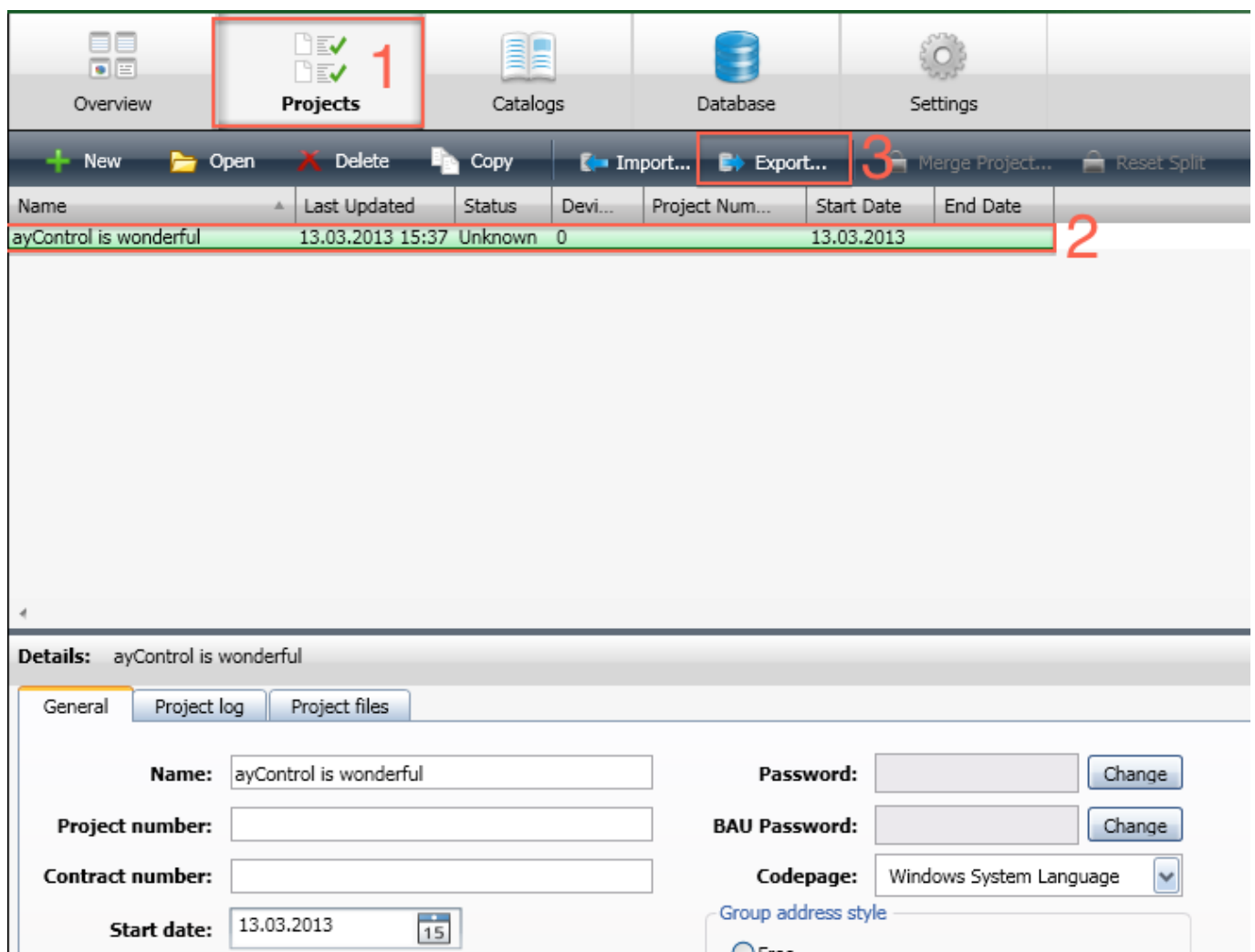
When adding a new address manually, you have to assign a data type for the Address, enter a name, as well as the exact KNX group addresses from which values can be read from and written to. Try to choose meaningful, distinct names for your addresses as you have to identify them by their name in other sections of the Editor. If you are not sure which data type you need to assign to a specific address but you do know for which control element it is intended for, you can refer to description of this control element and see which data type corresponds to it. If you want to import the addresses, please take a look at our [import help page](#).

Exporting the KNX Group Addresses from ETS

If you have a KNX project in ETS, you can export the group addresses as either a .csv or .knxproj file. Using a **.knxproj file is the most convenient and time saving way** to import KNX group addresses.

Exporting the ".knxproj" files (ETS 4 and higher)

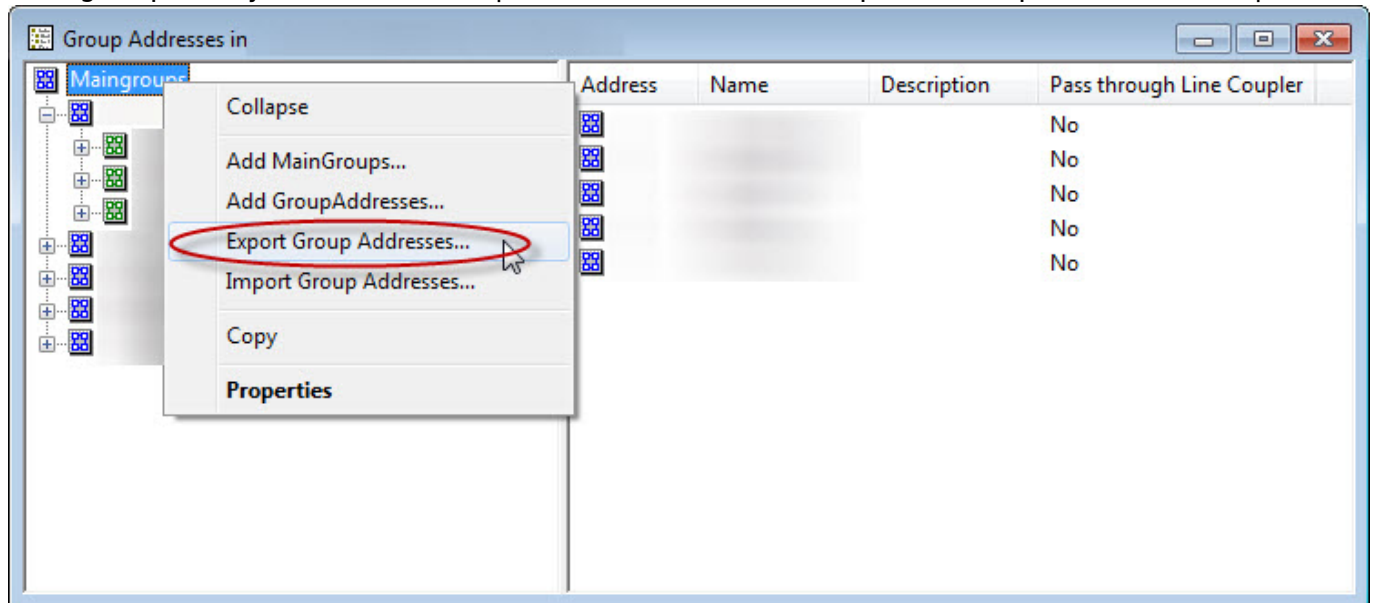
ETS 4, 5 (and higher versions) are supporting the most efficient way via .knxproj. If you want to export your group addresses as **.knxproj**, select the project you want to export from the list of projects and then click on the Export... button in the toolbar.



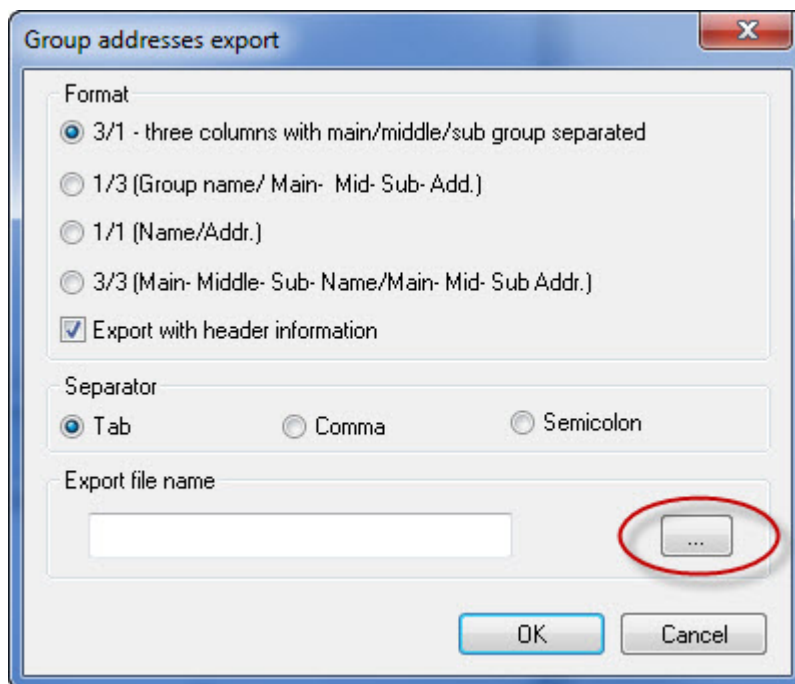
A new window will appear where you select the place in your file system where the exported file will be saved, as well as the name of the exported file and the file type. For the file type select **.knxproj** and click on the Save button.

Exporting the ".csv" files (fallback for ETS 3 only)

To export your group addresses from ETS as .csv file, go to the Overview tab, do a right-click on the Maingroups entry and from the drop-down menu select the Export Group Addresses... option.



In the window that has just appeared, click on the ... button.



A new window will appear where you will have to select where the file will be saved as well as the file type. Select .csv file type and click on the Save button.

Once you have the group addresses exported successfully, you can import them in the ayControl Editor.

Importing the KNX Group Addresses

Instead of creating KNX group addresses yourself, you can import in the ayControl Editor if you have them saved in a `.csv` or `.knxproj` file.

Exporting first

If you are working with ETS 4 or 5, we **strongly recommend** to export the group addresses as `.knxproj` because this format already contains DPTs connected to the group addresses. Most of them will already have a data type assigned. Only in case the DPT of some group addresses can not be automatically recognized by the ayControl Editor, you need to assign them manually.

If you are an ETS 3 user, you can import group addresses that are saved in a `.csv` file. In this case you need to assign a data type to each address as the format doesn't contain this information.

For more information take a look at our [ETS export help page](#).

Importing Step 1

When importing group addresses you should select only the group addresses which you currently need. You can always go back to import this step and import more group addresses later (without the old ones being overwritten).

Importing Step 2

In this step you will have to define for each address whether it is a write- or read-address by selecting them from the table on the left / right. Join corresponding write- and read- or feedback-addresses if possible. With this information controls can be configured automatically. If group addresses are only writeable or readable then click Add without joining it to a second address. You can also join the addresses [using a name pattern](#) or an [address pattern](#).

Join Using Address Pattern

Join using address pattern is a feature that allows ayControl editor to automatically recognize and connect the read and write addresses based on a pattern. This is especially interesting and time saving if you have a larger project.

After importing the group addresses you have to join the read and write group addresses. Instead of selecting each write group address and the appropriate read group address manually, you can join them by an address pattern. One such pattern might be that all addresses for light switches have write addresses ending with the subgroup "0" and read addresses ending with the subgroup "1".

You can find further information on this topic in the [ayControl blog](#).

Detect pattern

If you select a write address and a corresponding read address before clicking the "Join using address pattern" button, the ayControl Editor will try to guess the pattern behind the addresses and pre-fill the form. You have to check the result preview at the bottom of the page to see if the guess was correct. If it is incorrect you have to adjust the pattern manually or try out some sample patterns (see below for more details).

Import addresses

Step 2 - Assign write- and read-addresses and join addresses

Please select for at least one address whether it is a write- or read-address or join at least one pair of write and read addresses.

Write address			Read- / Feedback-address		
Name	Address	Type	Name	Address	Type
L1=Licht Zentralraum	0/0/10	1 Bit - (DPT 1.*) Boolean	L1=Licht Zentralraum	0/0/10	1 Bit - (DPT 1.*) Boolean
L1=Licht Zentralraum_RM	0/0/11	1 Bit - (DPT 1.*) Boolean	L1=Licht Zentralraum_RM	0/0/11	1 Bit - (DPT 1.*) Boolean
L2=Licht Eingang	0/0/20	1 Bit - (DPT 1.*) Boolean	L2=Licht Eingang	0/0/20	1 Bit - (DPT 1.*) Boolean
L2=Licht Eingang_RM	0/0/21	1 Bit - (DPT 1.*) Boolean	L2=Licht Eingang_RM	0/0/21	1 Bit - (DPT 1.*) Boolean
L3=Licht Büro Management	0/0/30	1 Bit - (DPT 1.*) Boolean	L3=Licht Büro Management	0/0/30	1 Bit - (DPT 1.*) Boolean
L3=Licht Büro Management_RM	0/0/31	1 Bit - (DPT 1.*) Boolean	L3=Licht Büro Management_RM	0/0/31	1 Bit - (DPT 1.*) Boolean
L4=Res n/a	0/0/40	1 Bit - (DPT 1.*) Boolean	L4=Res n/a	0/0/40	1 Bit - (DPT 1.*) Boolean
L4=Res n/a_RM	0/0/41	1 Bit - (DPT 1.*) Boolean	L4=Res n/a_RM	0/0/41	1 Bit - (DPT 1.*) Boolean
L5=Licht ayControl	0/0/50	1 Bit - (DPT 1.*) Boolean	L5=Licht ayControl	0/0/50	1 Bit - (DPT 1.*) Boolean
L5=Licht ayControl_RM	0/0/51	1 Bit - (DPT 1.*) Boolean	L5=Licht ayControl_RM	0/0/51	1 Bit - (DPT 1.*) Boolean
L6=Licht Profesional Apps außen	0/0/60	1 Bit - (DPT 1.*) Boolean	L6=Licht Profesional Apps außen	0/0/60	1 Bit - (DPT 1.*) Boolean

Join using name pattern... **Join using address pattern...** Add / Join Clear selections

Added / joined addresses

Name	Type	Write To	Read From	Status
------	------	----------	-----------	--------

Remove

< Back Next > Cancel Finish

Pattern presets

We have included a number of pattern presets which are commonly used. You can try and see if you find one that matches your address scheme. You can edit the presets by clicking the Edit presets button.

Join addresses with pattern

Join multiple addresses using a write / read address pattern

Specify write and read address patterns for batch address merging. Use placeholders (#1, #2, ...) to indicate common address parts.

Preset: Subgroup + 1

Write address: #1/#2/#3

Read address: #1/#2/#3+1

Preview

Address name	Write address Name	Write address	Read address Name	Read address
B Schalten	B Schalten	0/2/2	R Status	0/2/3
B Wert	B Wert	0/2/8	R Wert Status	0/2/9
Status	G Status	0/2/4	B Status	0/2/5
Wert Status	G Wert Status	0/2/10	B Wert Status	0/2/11
L1=Licht Zentralraum	L1=Licht Zentralraum	0/0/10	L1=Licht Zentralraum_RM	0/0/11
L2=Licht Eingang	L2=Licht Eingang	0/0/20	L2=Licht Eingang_RM	0/0/21
L3=Licht Büro Management	L3=Licht Büro Management	0/0/30	L3=Licht Büro Management_RM	0/0/31
L4=Res n/a	L4=Res n/a	0/0/40	L4=Res n/a_RM	0/0/41
L5=Licht ayControl	L5=Licht ayControl	0/0/50	L5=Licht ayControl_RM	0/0/51
L6=Licht Profesional Apps außen	L6=Licht Profesional Apps außen	0/0/60	L6=Licht Profesional Apps außen_RM	0/0/61
L7=Licht Profesional Apps innen	L7=Licht Profesional Apps innen	0/0/70	L7=Licht Profesional Apps innen_RM	0/0/71
L8=Licht Besprechungsraum >>Powerline	L8=Licht Besprechungsraum >>Powerline	0/0/80	L8=Licht Besprechungsraum >>Powerline_RM	0/0/81
L9=Licht Geschäftsführer >>Powerline	L9=Licht Geschäftsführer >>Powerline	0/0/90	L9=Licht Geschäftsführer >>Powerline_RM	0/0/91
Schalten	R Schalten	0/2/0	G Schalten	0/2/1
Wert	R Wert	0/2/6	G Wert	0/2/7
Sollwert	Sollwert Kühlen Eingang	2/0/0	Sollwert Heizen Eingang	2/0/1

Matching a write address to a read address

In order to match addresses you must provide a pattern for the write and the read address. You can use the following functions:

Placeholders

You can use the placeholders #1, #2 and #3 to match common parts among the write and read addresses. For instance, the write address pattern #1/#2/0 and read address pattern #1/#2/1 would match any two addresses with the same main and middle groups where the subgroup is 0 for the write address and 1 for the read address.

Wildcards

You can use the wildcard . to match any single digit and the wildcard * to match any number of digits. For instance, the pattern 0/1/* will match any address with the main group 0 and the middle group 1 such as 0/1/1 or 0/1/42.

Additions and subtractions

You can also use additions and subtractions in your patterns. For instance the write address pattern #1/#2/#3 and the read address pattern #1/#2/#3+1 will match any pair of write and read addresses that have an identical main and middle group while the subgroup of the read address is 1 higher than that of the write address, e.g. 2/1/12 and 2/1/13.

Join Using Name Pattern

Join using name pattern is a feature that allows ayControl editor to automatically recognize and connect the read and write addresses based on the name of the address.

You can find further information on this topic in the [ayControl blog](#).

After importing the group addresses (and assigning the DPT to them if necessary) you have to connect the read and write group addresses. Instead of selecting each write group address and the appropriate read group address manually, you can join them by pattern search.

In the example below, read addresses are named the same as the write address with the addition of “_status” at the end. Because almost all addresses are named in the same way, they don't have to be connected manually - you can join them by using name patterns.

You can select one pair of read and write address which correspond to the naming pattern and then click on the Join using name pattern... button or press Alt + M.

Import addresses

Step 2 – Assign write- and read-addresses and join addresses

Please select for at least one address whether it is a write- or read-address or join at least one pair of write and read addresses.

Write address

Name	Address	Type
L1=Licht Zentralraum	0/0/10	1 Bit - (DPT 1.*) Boolean
L1=Licht Zentralraum_RM	0/0/11	1 Bit - (DPT 1.*) Boolean
L2=Licht Eingang	0/0/20	1 Bit - (DPT 1.*) Boolean
L2=Licht Eingang_RM	0/0/21	1 Bit - (DPT 1.*) Boolean
L3=Licht Büro Management	0/0/30	1 Bit - (DPT 1.*) Boolean
L3=Licht Büro Management_RM	0/0/31	1 Bit - (DPT 1.*) Boolean
L4=Res n/a	0/0/40	1 Bit - (DPT 1.*) Boolean
L4=Res n/a_RM	0/0/41	1 Bit - (DPT 1.*) Boolean
L5=Licht ayControl	0/0/50	1 Bit - (DPT 1.*) Boolean
L5=Licht ayControl_RM	0/0/51	1 Bit - (DPT 1.*) Boolean
L6=Licht Profesional Apps außen	0/0/60	1 Bit - (DPT 1.*) Boolean

Read- / Feedback-address

Name	Address	Type
L1=Licht Zentralraum	0/0/10	1 Bit - (DPT 1.*) Boolean
L1=Licht Zentralraum_RM	0/0/11	1 Bit - (DPT 1.*) Boolean
L2=Licht Eingang	0/0/20	1 Bit - (DPT 1.*) Boolean
L2=Licht Eingang_RM	0/0/21	1 Bit - (DPT 1.*) Boolean
L3=Licht Büro Management	0/0/30	1 Bit - (DPT 1.*) Boolean
L3=Licht Büro Management_RM	0/0/31	1 Bit - (DPT 1.*) Boolean
L4=Res n/a	0/0/40	1 Bit - (DPT 1.*) Boolean
L4=Res n/a_RM	0/0/41	1 Bit - (DPT 1.*) Boolean
L5=Licht ayControl	0/0/50	1 Bit - (DPT 1.*) Boolean
L5=Licht ayControl_RM	0/0/51	1 Bit - (DPT 1.*) Boolean
L6=Licht Profesional Apps außen	0/0/60	1 Bit - (DPT 1.*) Boolean

Join using name pattern...

Join using address pattern...

Add / Join

Clear selections

Added / joined addresses

Name	Type	Write To	Read From	Status
------	------	----------	-----------	--------

Remove

< Back

Next >

Cancel

Finish

Join addresses with name pattern

Join multiple addresses using a name pattern

Specify name patterns for batch address merging. Use placeholders (#1, #2, ...) to indicate common address name parts.

Write address

#1

Read address

#1_RM

Combined address

#1

Preview

Write address name	Read address name	Resulting name	Write To	Read From
L1=Licht Zentralraum	L1=Licht Zentralraum_RM	L1=Licht Zentralraum	0/0/10	0/0/11
L2=Licht Eingang	L2=Licht Eingang_RM	L2=Licht Eingang	0/0/20	0/0/21
L3=Licht Büro Management	L3=Licht Büro Management_RM	L3=Licht Büro Management	0/0/30	0/0/31
L4=Res n/a	L4=Res n/a_RM	L4=Res n/a	0/0/40	0/0/41
L5=Licht ayControl	L5=Licht ayControl_RM	L5=Licht ayControl	0/0/50	0/0/51
L6=Licht Profesional Apps außen	L6=Licht Profesional Apps außen_RM	L6=Licht Profesional Apps außen	0/0/60	0/0/61
L7=Licht Profesional Apps innen	L7=Licht Profesional Apps innen_RM	L7=Licht Profesional Apps innen	0/0/70	0/0/71
L8=Licht Besprechungsraum >>Powerline	L8=Licht Besprechungsraum >>Powerline_RM	L8=Licht Besprechungsraum >>Powerline	0/0/80	0/0/81
L9=Licht Geschäftsführer >>Powerline	L9=Licht Geschäftsführer >>Powerline_RM	L9=Licht Geschäftsführer >>Powerline	0/0/90	0/0/91

Close

Join addresses

In the Write address field you will see the following string: #1. This string is called a placeholder, and in the pattern matching it's purpose is to indicate what part of the string that we want to find is arbitrary. In our case, write addresses have arbitrary names, but read addresses all have “_status” at the end. So in the Write address field we will write #1 but in the Read address field we will write #1_status. This basically tells the editor that if a group address with some name and another group address with the same name and ending with “_status” is found, the first one is a write address and the second one read address and these two should be connected. In the Combined address field, you can leave #1 if you want to have the name of the connected read-write address pair to be same as the name of the write address, or you can add any other string to the name, e.g. #1 combined.

In the lower part of the window, you can find all addresses that will be joined using the given pattern. You can check if all read/write pairs are correct and then click on the Join addresses to finish.

You can also use more than one placeholder for matching your address names, e.g. if you have write addresses named something like “Kitchen_blinds”, “Bathroom_lights”, “Livingroom_rgb” and the read addresses “Kitchen_status_blinds”, “Bathroom_status_lights”, “Livingroom_status_rgb” you could match the read and write addresses as follows: In the “Write address” field type: #1 _#2 and in the “Read address” field type: #1_status_#2.

HTTP Connection

This connection sends HTTP GET requests to a specific domain. A typical example usage of this is a remote control of (PTZ) IP Cameras. You can find a detailed explanation of how this can be achieved in the description of the [button](#) control element.

When creating an HTTP connection, apart from the arbitrary name, you have to enter a Base-URL of the device which should be controlled e.g.

```
http://mycam.no-ip.org/ptz/ or http://192.168.1.149
```

For example, if you send a GET request to

```
http://192.168.1.122/api/audio/test
```

then you need to set up an http connection for

```
http://192.168.1.122
```

and for example a button that sends the value “/api/audio/test” to this http connection.

If you need to enter authentication information (username and password) you can do this in the http connection according to the scheme

```
http://benutzername:passwort@IP-address
```

It is also possible to use an https connection, but the device you want to access needs a valid certificate from a trusted certificate authority (CA). If you want to use a self-signed certificate, this certificate must be imported on your Android and iOS devices and be classified as trusted.

If there are any problems with the https connection, it is advisable to open the desired page (or command) in the webbrowser of the iOS or Android device first. If there is a message about an untrusted certificate, it was not imported (correctly) and classified as trustworthy.

Infrared Connection

This connection type is designed for communication with Infrared gateways such as the IRTrans Ethernet/IR Gateways or the Broadlink remote devices (e.g. Broadlink RM Mini3). Like any other universal IR remote, the ayControl Editor can learn IR commands. These commands can later be sent from the app to the IR device which in turn sends the IR command to your device such as TV, DVD-player, etc.

In the description of a [media button](#) you will find examples of how the infrared connection communicates with devices. You can also use an normal [button](#) to send IR commands.

When creating an infrared connection, apart from the name (that can be chosen arbitrarily), you need to enter the IP address of the IRTrans / Broadlink device. The port must match your device's and is 21000 for IRTrans devices and 80 for Broadlink devices by default. Normally you shouldn't have to change the port setting.

Please close all IRTrans / Broadlink specific Software before recording IR commands in the ayControl Editor.

Device type

Here you must select whether you own a Broadlink or an IRTrans device.

Also, older and newer versions of the IRTrans devices use different ways to record infrared commands. If you own a newer device with IRDB choose the bottom option (**New IRTrans devices with IRDB**). Otherwise (if you own an old IRTrans device or if it doesn't include IRDB) choose **Old IRTrans devices or devices without IRDB**. If in doubt simply try recording one infrared command and testing it to make sure which protocol version works for you.

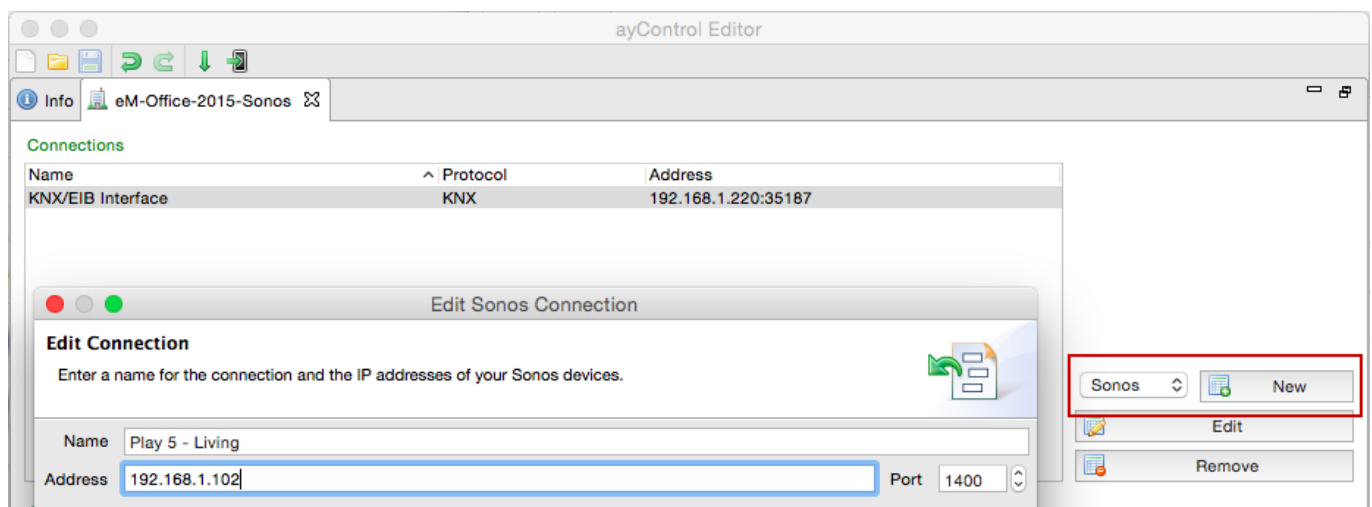
Note that you can't change the device type of an infrared connection after you have created it - you have to create a new connection instead.

Sonos Connection

A Sonos Connection allows you to integrate your Sonos audio system with ayControl. You can perform commands like changing the volume, play, pause, etc. directly from within the ayControl KNX app.

Creating a Sonos connection

Simply open the Connections tab of the Editor, select the connection type “Sonos”, and press “New”. Enter a name for the new connection, and type in the IP address of the Sonos player (Play 1, Play 3, Play 5, CONNECT or Playbar). The default port 1400 usually doesn't need to be changed.



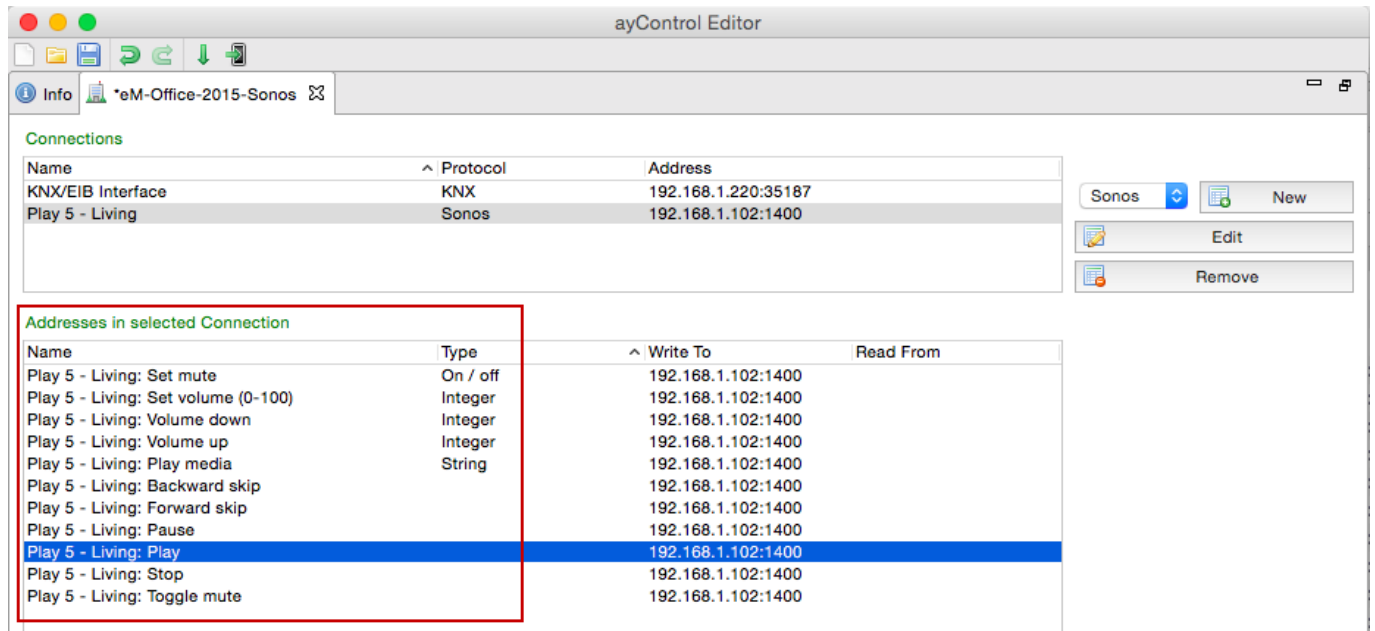
Important Note: Your Sonos device has to be bound to a static IP address. If you do not set it to a fixed IP address, ayControl would send the commands to the wrong IP address after it changes. You can achieve a static IP by binding the Sonos MAC address to a static IP address in your network router's configuration. You can find details about this topic in the documentation of your network router.

Sonos groups

You can not only control single Sonos players, but also Sonos groups. First create a group using the Sonos app (available for PC and smartphones). The first player to which all other players are added is called the “Master” of the group while the other players are called “Slaves”. When configuring the Sonos connection in ayControl you have to enter the Master device's IP address first; then, for every Slave, press the “Add additional address” button and enter the IP address.

Important: If you change the group with the Sonos app afterwards (i.e. by adding / removing players or by assigning another player as Master), ayControl will not work as expected. To solve the problem, please either change your Sonos Connection in the ayControl Editor or recreate the original group using the Sonos app.

The lower area of the Editor now lists all available addresses of the Sonos connection. For every command (e.g. Play, Pause, etc.) there is a separate address.

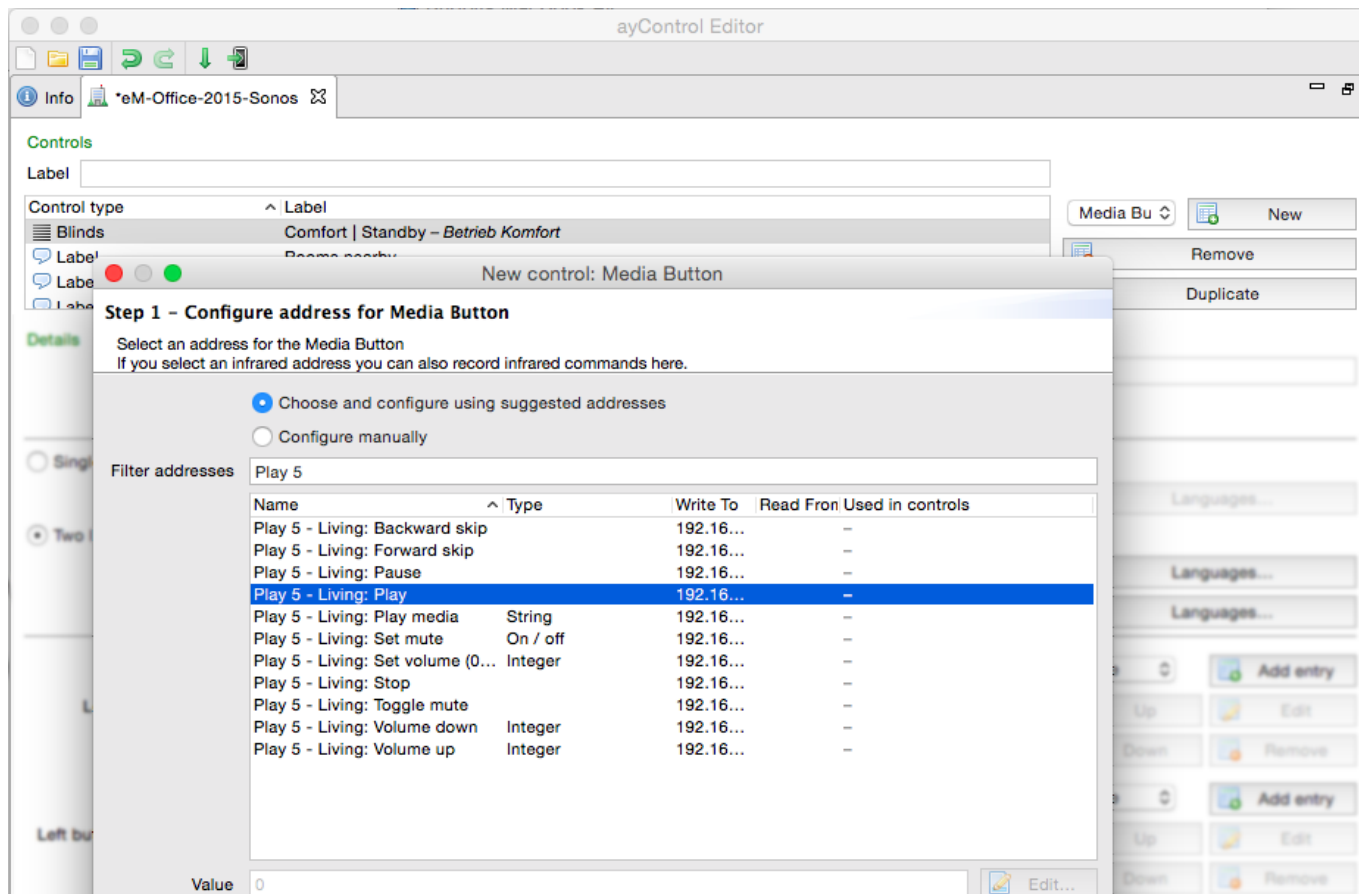


Creating Sonos controls

Sonos players can be controlled with buttons and media buttons from within ayControl. In order to send a specific command via the Sonos connection, select the respective address of the connection as target address for the control. For example, to configure a button with the functionality “Set volume to 30%”, select the address “Set volume” and enter “30” (without quotes) as the send expression.

For most commands no parameters are needed. Only the following commands require parameters:

- Set volume: The absolute volume, in percent (0 to 100)
- Volume up / Volume down: The relative volume change, in percent
- Set mute: Either TRUE (to turn mute on) or FALSE (to turn mute off)
- Play media: The URI of a track or a radio station



The parameter for the command “Play media” is a URI (Uniform Resource Identifier). The Sonos system internally uses URIs as unique names for media resources. Since you usually do not have access to Sonos URIs, the ayControl Editor offers some configuration tools. Below the entry field for the send expression, you can find two buttons: “Get current track” sets the URI of the currently played track or radio station; “List radio stations” presents a dialog with radio stations which are configured in the Sonos system.

Important: If you want to configure a button to play a specific song, the ayControl editor has to have access to the Sonos system of the end user. Radio stations, however, can also be configured with another Sonos system.

Placing and using Sonos controls

Just place the newly created Sonos controls like any other multimedia or KNX control in the desired layout for your iPad, iPhone or Android device. When you transfer the profile it could look like this.

IoT Connection

This connection type is designed for communication with IoT (internet of things) and multimedia devices such as Smart TVs and AV receivers, Kodi etc. When creating a new IoT connection you will be able to select from a list of predefined drivers or create your own custom connection.

IoT templates

The easiest way to add IoT functionality to your profile is to use [Profile merging](#) to add the included IoT templates to your profile.

Predefined connection

If you choose a predefined connection you will be led through further configuration by a wizard. For most predefined connections you have to enter parameters like the IP address of the device or authentication parameters (username, password etc.).

Custom connection

You can create your own connection if you are able to write JavaScript code. For a detailed documentation on how to create custom drivers see [here](#).

Controls

Here you can add and manage Controls. Controls are parts of the user interface in the app, such as Buttons or Sliders.

Controls make use of Addresses, so you should define your Addresses before adding Controls. Once defined, the Controls can be used in Layouts (in the Structure tab).

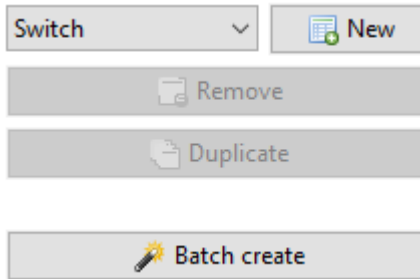
Types of Control Elements

- [Label](#)
- [Switch](#)
- [Slider](#)
- [Slider switch](#)
- [Snapper](#)
- [Snapper switch](#)
- [Webcam viewer](#)
- [RGB color light](#)
- [Button](#)
- [Media button](#)
- [Scene button](#)
- [Blinds](#)
- [Value display](#)
- [SIP Call](#)

2020-01-18 20:53

Adding New Control Elements

There are two ways to add new control elements: Batch create for automatically creating multiple controls from your addresses and the new control wizards for creating individual controls.

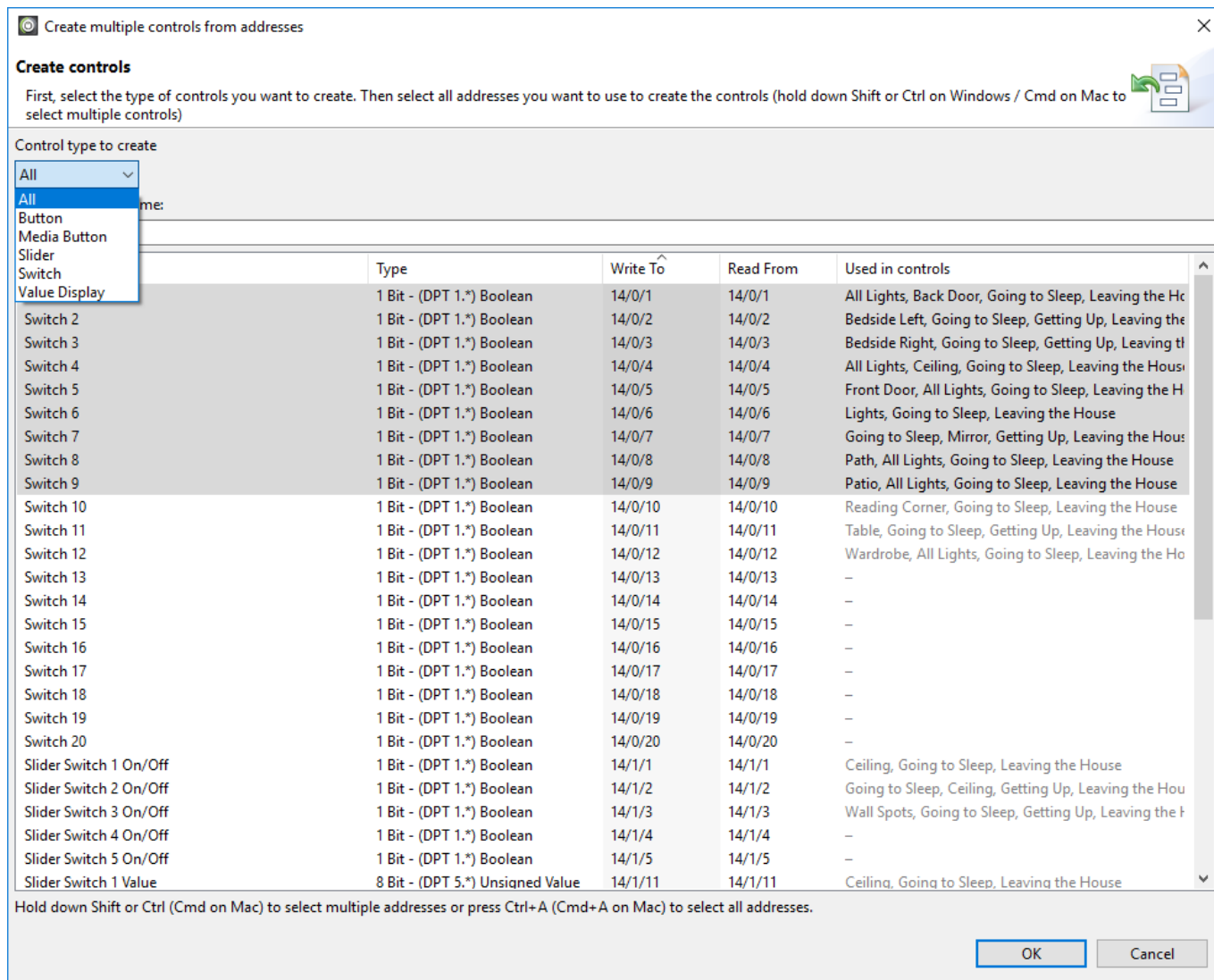


The typical workflow uses batch create. This requires you to configure all addresses before creating your controls. Batch create will save you a lot of time and work very well for simple configurations (e.g. light switches).

If you have special needs or configurations for (some of) your control elements you can add and configure them individually.

Batch Create

To get started simply click the “Batch create” button in the “Controls” tab.



This will open a dialog where you can select the addresses to create controls from. At the top left you can select the types of controls you want to create: Button, Media Button, Slider, Switch, Value Display or All.

In the table below you can select among the addresses valid for those controls. You can press Ctrl- / ⌘+A to select all addresses and hold Shift or Ctrl / ⌘ while clicking to select multiple addresses. Then simply click the OK button and the ayControl Editor will automatically create controls for you.

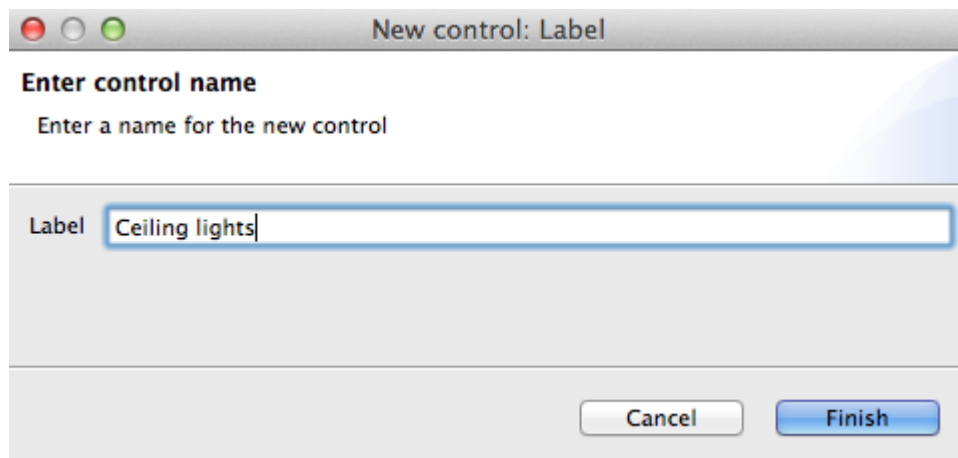
Note that batch create will use the simplest possible configuration for all those controls. This should be correct in most cases, but you should still review the created controls when batch create has finished to make adjustments if necessary.

Creating single controls

To create a single control select the type of control you want to create from the dropdown menu and then click the “New” button. A wizard will then guide you through the control creation. Below you can find some detailed examples for different control types.

Adding a Label

Adding a new Label is very simple. After clicking on the add button, just enter the wanted label in the text field, and click on the Finish button.

A screenshot of a macOS-style dialog box titled "New control: Label". The dialog has a light gray background with a blue header bar. Below the header, the text "Enter control name" is displayed, followed by a subtitle "Enter a name for the new control". A text input field is shown with the label "Label" to its left and the text "Ceiling lights" inside. At the bottom right, there are two buttons: "Cancel" and "Finish".

New control: Label

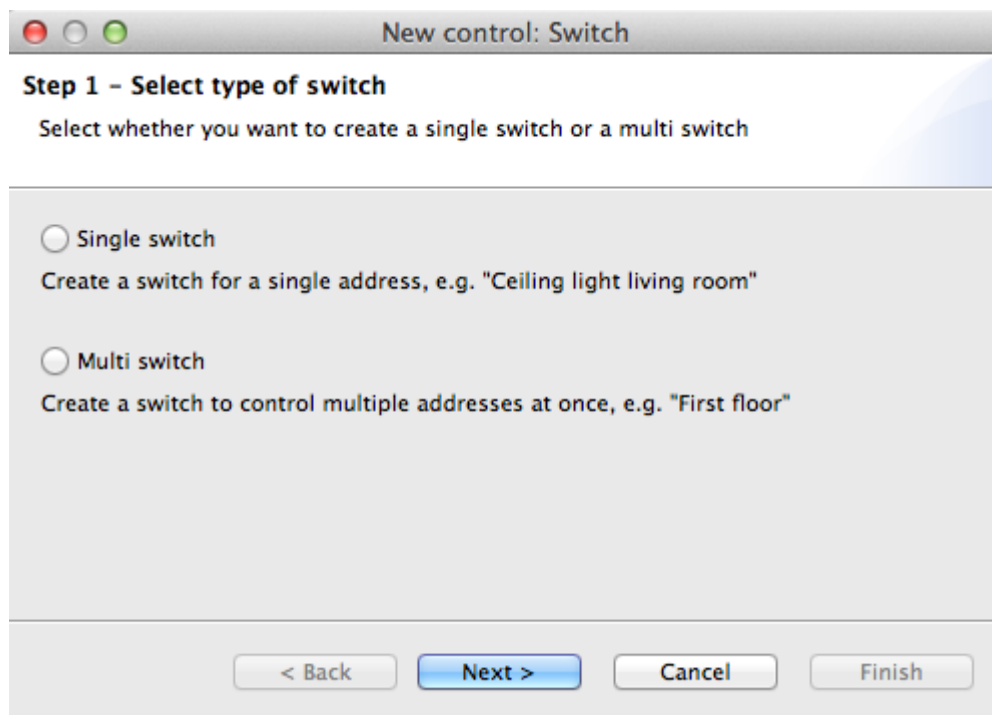
Enter control name

Enter a name for the new control

Label

Adding a Switch

Adding a switch is a three-step process. In the first step, you will have to choose between a single-switch and a multi-switch.

A screenshot of a macOS-style dialog box titled "New control: Switch". The dialog has a light gray background with a blue header bar. Below the header, the text "Step 1 - Select type of switch" is displayed, followed by a subtitle "Select whether you want to create a single switch or a multi switch". There are two radio button options: "Single switch" with the description "Create a switch for a single address, e.g. 'Ceiling light living room'" and "Multi switch" with the description "Create a switch to control multiple addresses at once, e.g. 'First floor'". At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Finish".

New control: Switch

Step 1 - Select type of switch

Select whether you want to create a single switch or a multi switch

☐ Single switch
Create a switch for a single address, e.g. "Ceiling light living room"

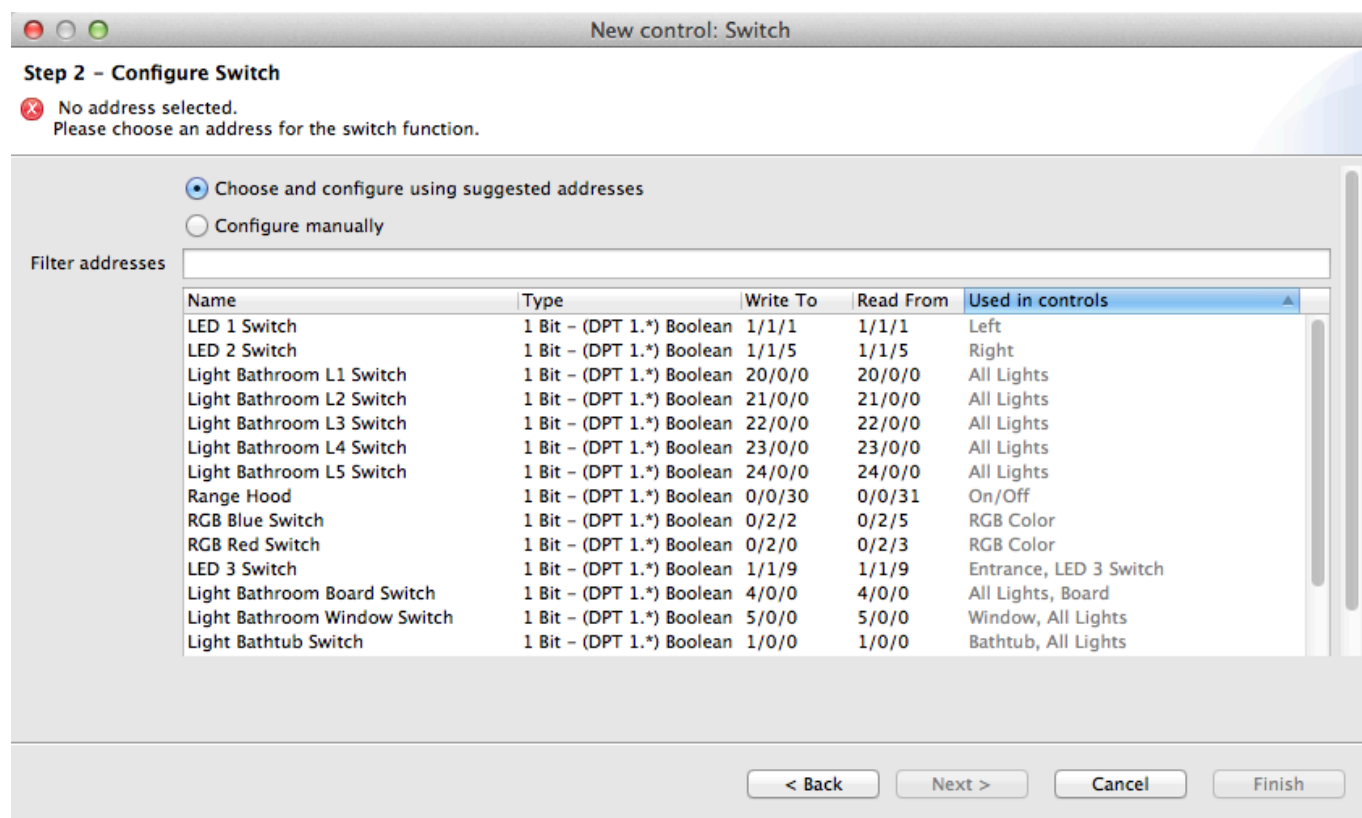
☐ Multi switch
Create a switch to control multiple addresses at once, e.g. "First floor"

Single switch can only work with one group address, whereas multi-switch can communicate with several group addresses which enables you to, e.g. turn on or off several lights at once.

Creating a Single Switch

If you select a single switch option in the first step, you will either have to select a group address

which from the list of addresses, or click on the Configure manually option and enter a group address later.



Creating a Multi Switch

If you chose to create a multi switch in the first step, you will first have to select the addresses to which you want your switch to write the values. You can select one address for central switching or more addresses.

New control: Switch

Step 2a - Configure write addresses

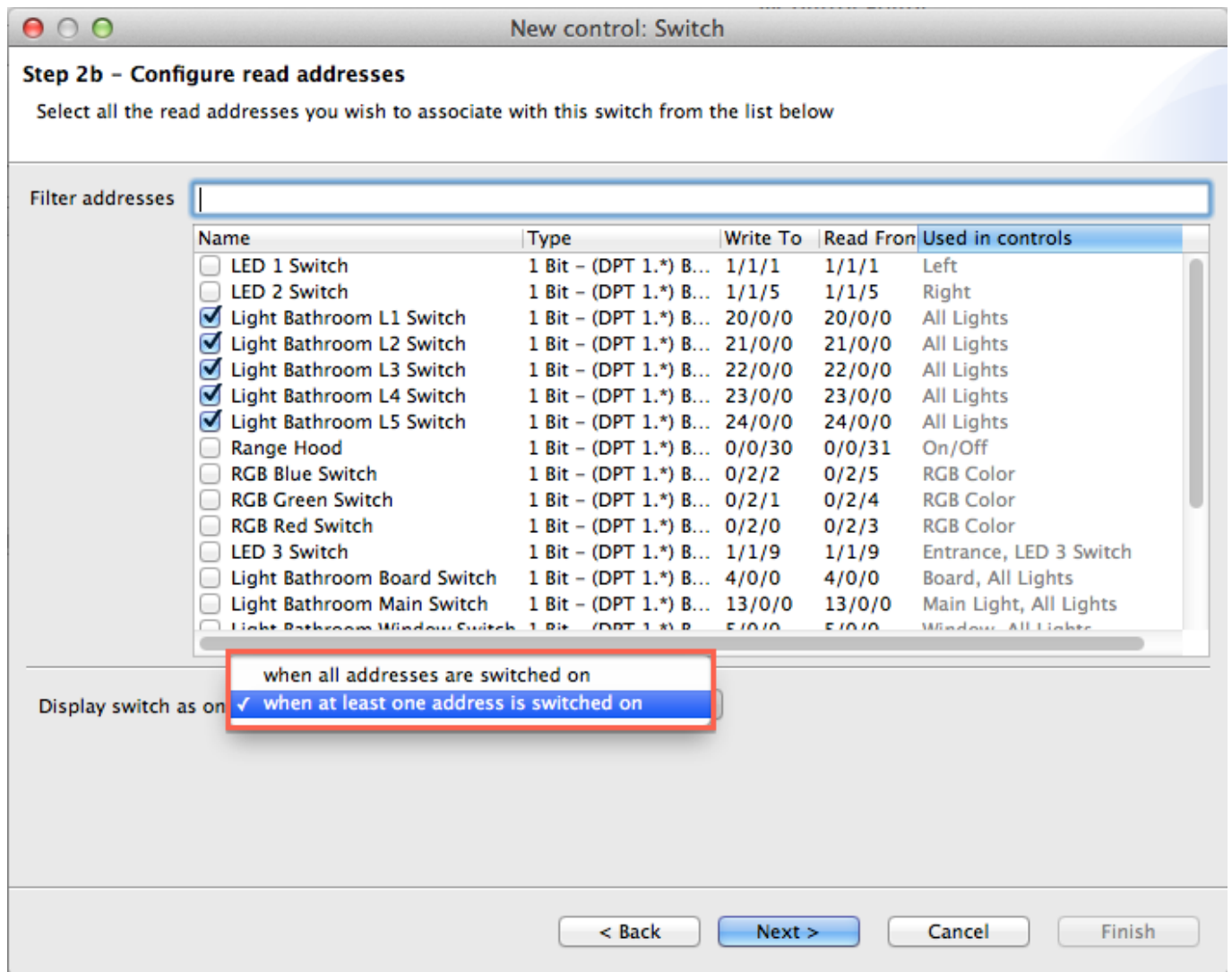
✖ Please select at least one address

Filter addresses

Name	Type	Write To	Read From	Used in controls
<input type="checkbox"/> LED 1 Switch	1 Bit - (DPT 1.*) B...	1/1/1	1/1/1	Left
<input type="checkbox"/> LED 2 Switch	1 Bit - (DPT 1.*) B...	1/1/5	1/1/5	Right
<input type="checkbox"/> Light Bathroom L1 Switch	1 Bit - (DPT 1.*) B...	20/0/0	20/0/0	All Lights
<input type="checkbox"/> Light Bathroom L2 Switch	1 Bit - (DPT 1.*) B...	21/0/0	21/0/0	All Lights
<input type="checkbox"/> Light Bathroom L3 Switch	1 Bit - (DPT 1.*) B...	22/0/0	22/0/0	All Lights
<input type="checkbox"/> Light Bathroom L4 Switch	1 Bit - (DPT 1.*) B...	23/0/0	23/0/0	All Lights
<input type="checkbox"/> Light Bathroom L5 Switch	1 Bit - (DPT 1.*) B...	24/0/0	24/0/0	All Lights
<input type="checkbox"/> Range Hood	1 Bit - (DPT 1.*) B...	0/0/30	0/0/31	On/Off
<input type="checkbox"/> RGB Blue Switch	1 Bit - (DPT 1.*) B...	0/2/2	0/2/5	RGB Color
<input type="checkbox"/> RGB Green Switch	1 Bit - (DPT 1.*) B...	0/2/1	0/2/4	RGB Color
<input type="checkbox"/> RGB Red Switch	1 Bit - (DPT 1.*) B...	0/2/0	0/2/3	RGB Color
<input type="checkbox"/> LED 3 Switch	1 Bit - (DPT 1.*) B...	1/1/9	1/1/9	Entrance, LED 3 Switch
<input type="checkbox"/> Light Bathroom Board Switch	1 Bit - (DPT 1.*) B...	4/0/0	4/0/0	Board, All Lights
<input type="checkbox"/> Light Bathroom Main Switch	1 Bit - (DPT 1.*) B...	13/0/0	13/0/0	Main Light, All Lights
<input type="checkbox"/> Light Bathroom Window Switch	1 Bit - (DPT 1.*) B...	5/0/0	5/0/0	Window, All Lights

< Back
Next >
Cancel
Finish

After clicking on the Next button, select the addresses from which you want your switch to read values. You can also select whether you want your switch to be “turned on” only when all addresses are on, or when at least one address is on.



The third step is the same for both types of switches. This step is also optional because you can enter the label after adding any control element any time you want.

Adding a Slider

Adding a slider is a two-step process. In the first step you need to select a group address from the list of displayed addresses. The displayed addresses will all have 8-bit Unsigned or 16-bit Float DPT, because a slider can only work with these addresses.

New control: Slider

Step 1 – Configure Slider

Enter Slider details

☒ Configure control using selected address

Filter name

Name	Type	Write To	Read From
Heating Mode	8 Bit – (DPT 5.*) Unsigned Value	10/0/1	10/0/1
LED 1 Value	8 Bit – (DPT 5.*) Unsigned Value	1/1/3	1/1/3
LED 2 Value	8 Bit – (DPT 5.*) Unsigned Value	1/1/7	1/1/7
Light Bedside Tables Value	8 Bit – (DPT 5.*) Unsigned Value	14/0/1	14/0/1
Light Bookshelf Value	8 Bit – (DPT 5.*) Unsigned Value	8/0/1	8/0/1
Light Dining Table Value	8 Bit – (DPT 5.*) Unsigned Value	1/0/1	1/0/1
Light Garden Value	8 Bit – (DPT 5.*) Unsigned Value	23/0/1	23/0/1
Light Home Office Ceiling Value	8 Bit – (DPT 5.*) Unsigned Value	9/0/1	9/0/1
Light Kitchen Value	8 Bit – (DPT 5.*) Unsigned Value	13/0/1	13/0/1
Light Kitchen Window Value	8 Bit – (DPT 5.*) Unsigned Value	5/0/1	5/0/1
Light Sofa Value	8 Bit – (DPT 5.*) Unsigned Value	7/0/1	7/0/1
Light Table Home Office Value	8 Bit – (DPT 5.*) Unsigned Value	6/0/1	6/0/1
Reading Corner Living Room	8 Bit – (DPT 5.*) Unsigned Value	11/0/2	11/0/2
RGB Blue Value	8 Bit – (DPT 5.*) Unsigned Value	0/2/8	0/2/11
RGB Green Value	8 Bit – (DPT 5.*) Unsigned Value	0/2/7	0/2/10
RGB Red Value	8 Bit – (DPT 5.*) Unsigned Value	0/2/6	0/2/9

Minimum value

Maximum value

< Back Next > Cancel Finish

Additionally, you can select the minimum and maximum value for your slider. This is useful in case you want a special slider that does not go from the smallest to do highest value, but from e.g. 0 to 127. So the highest intensity you can set with that slider is only half of the possible intensity. This feature is very useful when it comes to saving energy.

Minimum value

Maximum value

If you are using an address with 16-bit Float DPT for temperature control, minimum and maximum value will automatically change to a default of 15 and 25 (°C). You can even reverse the Slider direction by swiping the minimum and maximum values.

Slider steps ☐ Stepless

☒ Step size

Using the step controls at the bottom you can set a step size for your slider. The slider will only move in increments of the step size. This way you can create a slider for a dimmer that moves in steps of 10 or a slider for temperature regulation that moves in 0.5°C steps.

Adding a Slider Switch

Slider switch is a control element that can do the slider and the switch functionality which means that you can e.g. set the light intensity and turn the lights on/off. When adding a new slider switch, you first have to select an 8-bit Unsigned or 16-bit Float DPT group address. This is the address of the slider functionality. This step is exactly the same as the first step in creating a new slider. In the next step you have to select the 1-bit DPT address which will be responsible for the switching functionality. This step is the same as the first step in creating a new switch. In the third, optional step, you can select the label and the icon for the slider switch.

Adding a Snapper

Adding a snapper is a simple two-step process. In the first step you'll have to select the 4-bit DPT address for your snapper.

The screenshot shows a macOS-style window titled "New control: Snapper". Inside, the first step is "Step 1 - Configure snapper address" with the instruction "Configure address and values for moving the snapper left and right." A checkbox "Configure control using selected address" is checked. Below this is a "Filter name" label and a text input field. A table lists available DPT addresses:

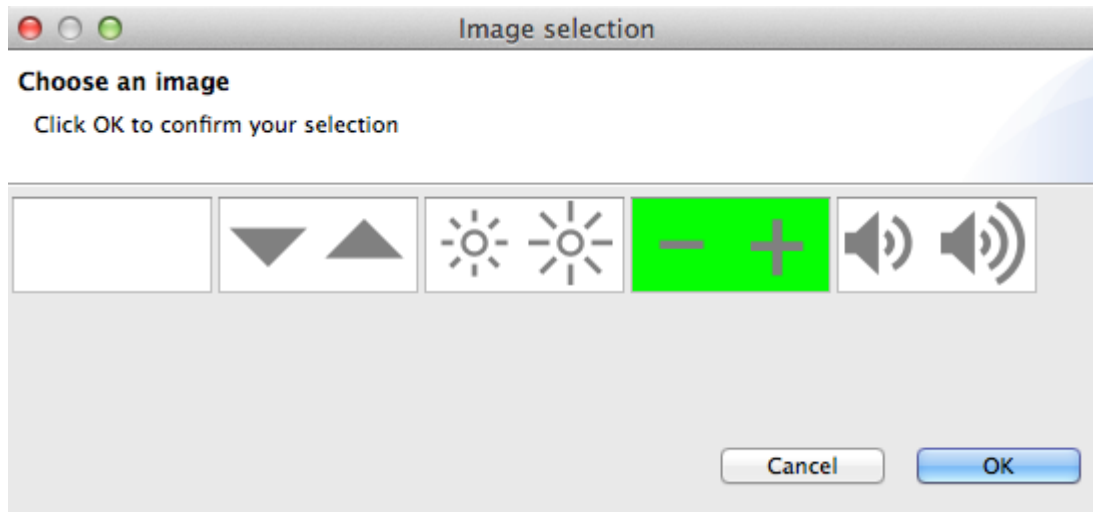
Name	Type	Write To	Read From
DIM Office	4 Bit - (DPT 3.*) Controlled / Dimming	6/6/6	6/6/6

Below the table are two spinners: "Snapper right value" set to "Up 3" and "Snapper left value" set to "Down 3". At the bottom are four buttons: "< Back", "Next >" (highlighted in blue), "Cancel", and "Finish".

You can also select the number of step-up and step-down commands that are sent to a group address.

This is a close-up of the two spinners from the previous screenshot. The "Snapper right value" spinner is set to "Up 3" and the "Snapper left value" spinner is set to "Down 3".

In the next step you can select the label and a symbol for your snapper.

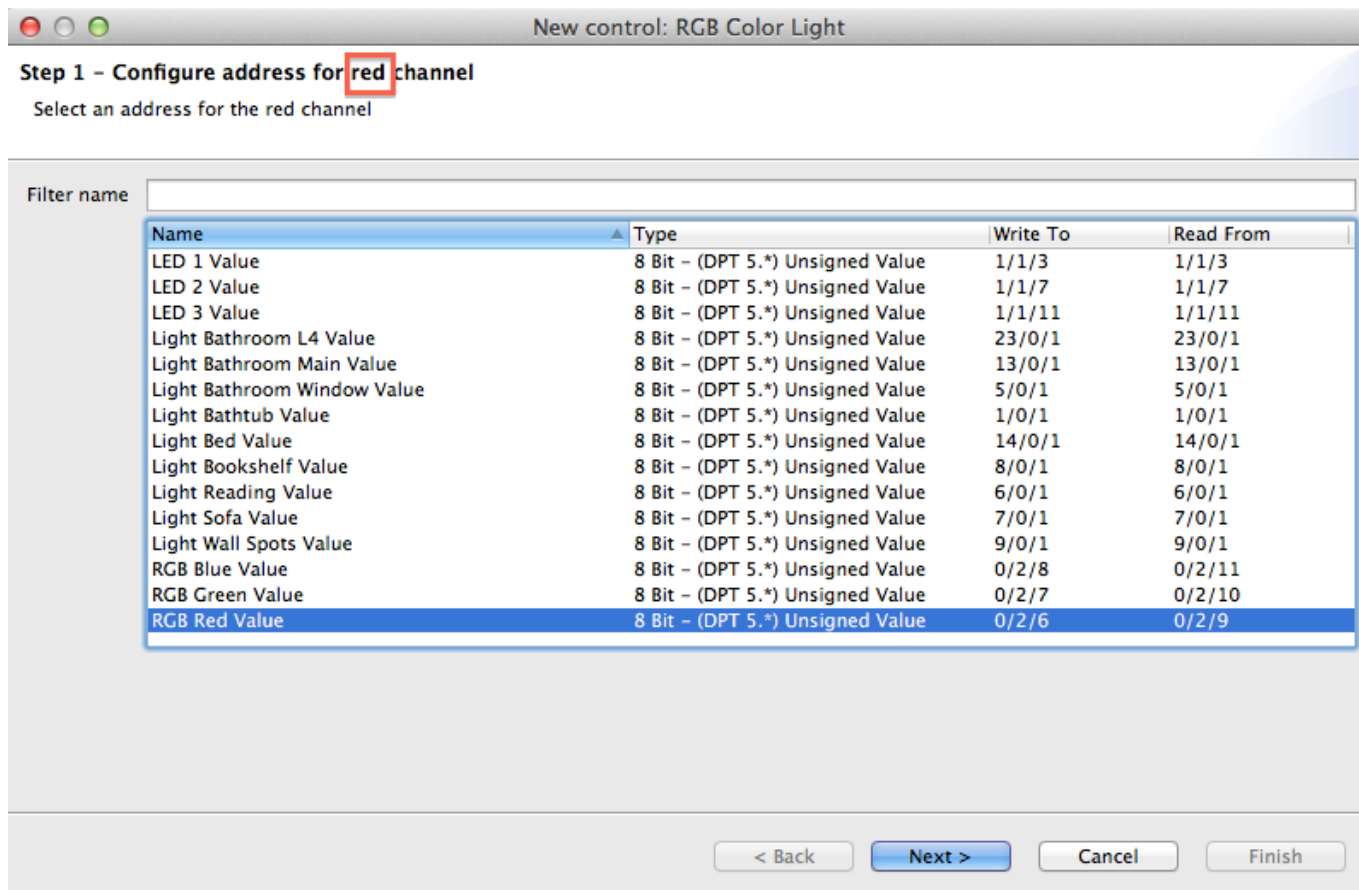


Adding a Snapper Switch

Snapper switch is a control element that can do the snapper and the switch functionality which means that you can e.g. send the up/down commands as well as turn the device on/off. When adding a new snapper switch, you first have to select an 4-bit DPT group address. This is the address of the snapper functionality. This step is exactly the same as the first step in creating a new snapper. In the next step you have to select the 1-bit DPT address which will be responsible for the switching functionality. This step is the same as the first step in creating a new switch. In the third, optional step, you can select the label and the icon for the snapper switch.

Adding an RGB Color Light

Adding an RGB Color Light is a 5 - Step process. In the first step you have to select the 8-bit DPT group address for dimming the red channel of your RGB.



In the second step you select the group address for dimming the green channel, and in the third step you select the address for dimming the blue channel.

In the fourth step you'll have to select the 1-bit DPT for switching your RGB Color Light (same as the first step when creating a switch).

The fifth step is optional. In this step you can enter the label for you RGB Control Light.

Adding a Button

A button can be configured in multiple ways using the “New Button” wizard:

Standard button: Assign an address and a value to the button. When the button is pressed and released again the value is sent to the address.

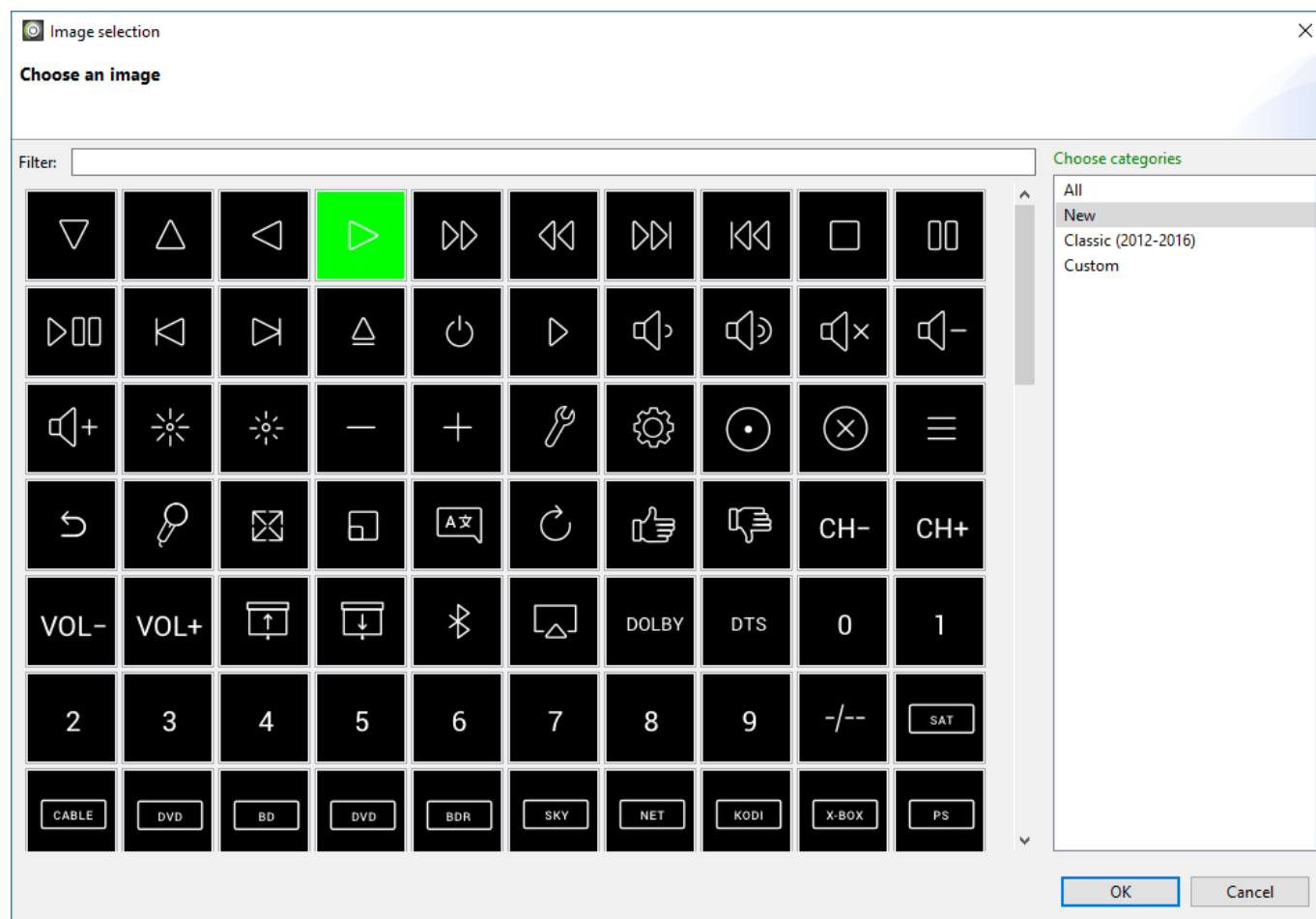
Advanced button: Like the standard button, but you can define different events for when the button is pressed and when it is released.

Open app: Choose an app which is opened on the device when the button is pressed. If the app is not installed the Google Play Store / Apple App Store page of the app is opened instead.

Open page: Choose another room in this profile to be opened in the app when this button is pressed. For rooms with multiple pages you can also choose the page to be opened. Note that smartphone and tablet layouts may contain different numbers of pages. In these cases you can set different pages for each layout.

Adding a Media Button

The process of adding a Media button is almost the same as when adding a normal button. The only difference is that in the second step you do not choose a label, but an icon.



Media buttons are usually used in combination with a multimedia device via IoT or infrared connection.

Adding Blinds

When adding blinds, the first thing you will have to do is select a 1-bit DPT address to which you can send the commands to raise and lower the blinds.

New control: Blinds

Step 1 – Configure blinds up / down

Configure blinds up / down settings

☒ Configure control using selected address

Filter name

Name	Type	Write To	Read From
Blinds Kitchen	1 Bit – (DPT 1.4) Boolean	0/4/4	0/4/4
Blinds Kitchen Max	1 Bit – (DPT 1.4) Boolean	0/4/3	0/4/3
Blinds Living Room	1 Bit – (DPT 1.4) Boolean	0/4/2	0/4/2
Blinds Living Room Max	1 Bit – (DPT 1.4) Boolean	0/4/1	0/4/1
Blu-Ray	1 Bit – (DPT 1.4) Boolean	25/1/0	25/1/0
Board Kitchen Switch	1 Bit – (DPT 1.4) Boolean	4/0/0	4/0/0
Ceiling Lights Bedroom	1 Bit – (DPT 1.4) Boolean	0/4/5	0/4/5
Ceiling Lights Entrance	1 Bit – (DPT 1.4) Boolean	20/0/0	20/0/0
Dolby	1 Bit – (DPT 1.4) Boolean	25/2/0	25/2/0
Garage Doors	1 Bit – (DPT 1.4) Boolean	0/4/9	0/4/9
Garage Switch	1 Bit – (DPT 1.4) Boolean	24/0/0	24/0/0
LED 1 Switch	1 Bit – (DPT 1.4) Boolean	1/1/1	1/1/1
LED 2 Switch	1 Bit – (DPT 1.4) Boolean	1/1/5	1/1/5
Light Backyard	1 Bit – (DPT 1.4) Boolean	0/4/8	0/4/8
Light Bedside Tables Switch	1 Bit – (DPT 1.4) Boolean	14/0/0	14/0/0
Light Bookshelf Switch	1 Bit – (DPT 1.4) Boolean	8/0/0	8/0/0

Blinds down value

< Back Next > Cancel Finish

Here you can also select which value should be sent to lower the blinds (0 or 1).

Blinds down value

In the next step you'll have to select the address which receives commands for rotating the slates of the blinds.

In the last step you can select the symbol for your blinds. You can also decide between single- and double label for your blinds control element.

Adding a Scene Button

When adding a new Scene button, all you need to do is enter the label. When the Scene Button is added you can enter the affected group addresses. You can find more details on the help page for the [Scene button](#).

Adding a Value Display

Value display is a type of control element which can work with any group address from which a value can be read. When adding a value display you need to select the address from which you want the read the values. Optionally, you can add a label for your value display.

Adding a SIP Call Control Element

If you want to add the SIP Call control element, the first thing you'll have to do is to enter all the required data as shown in the following screenshot:

The screenshot shows a window titled "New control: SIP Call" with a subtitle "Step 1 - Configure SIP call". A red error icon and the text "Please enter a username" are displayed. The form contains the following fields and controls:

- Username:** A text input field with a red error icon to its left.
- SIP domain:** A text input field with a red error icon to its left.
- Authentication username:** A text input field.
- Password:** A text input field with a red error icon to its left. To its right is a checkbox labeled "Show password".
- Port:** A numeric input field with the value "5060" and up/down arrow buttons.
- Protocol:** A dropdown menu with "UDP" selected.
- Proxy address (optional):** A text input field.

At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Finish".

All these parameters are described in detail on the [SIP Call](#) help page.

The next two steps are optional. In the second step you can enter the username and password for the SIP station if you want to call it from your mobile device.

The screenshot shows a window titled "New control: SIP Call" with a subtitle "Step 2 - Configure SIP callee". Below the subtitle is the text: "If you want to call another SIP station from your mobile device you can enter its details here (optional)". The form contains the following fields:

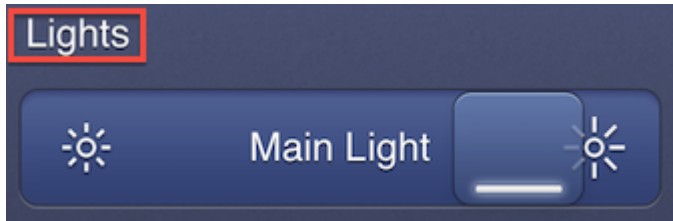
- Username:** A text input field.
- SIP domain:** A text input field.

At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Finish". The "Next >" button is highlighted in blue.

In the third step you can select a label.

Label

A Label is a control which contains **static text**. Typically it's used to provide textual description. Use it for captions like Lights, Heating, Surveillance above other controls. Also use labels to break a number of controls into groups to create a pleasant visual structure which is easier to use by the customer.



Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Style: Allows you to change the style of the label. You can modify the font size and alignment of the label and also make it bold and/or italic.

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

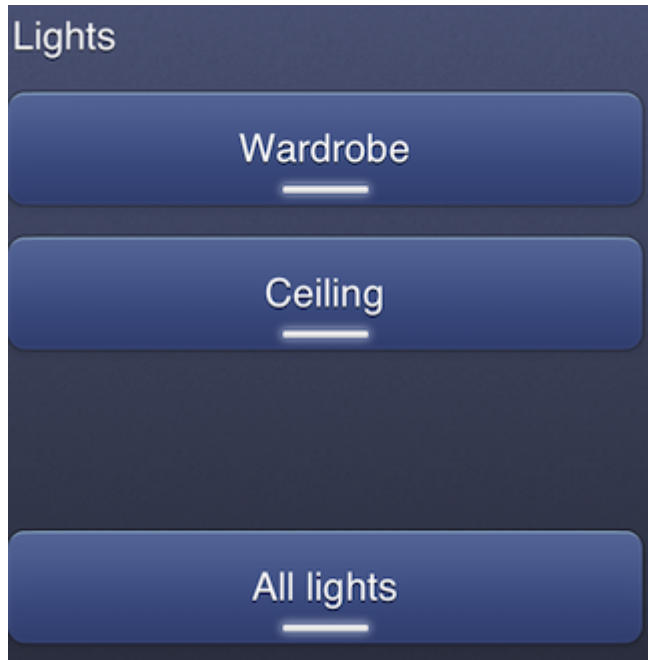
2020-01-18 20:53

Examples

Example 1: When your profile contains a room which contains different groups of controls you might want to add a caption above each of these groups. For instance, you could place a Label Lights above a group of Sliders and Switches for your lights and a Label Blinds above the blinds controls in a room.

Switch

A switch is a simple on/off control element which also shows the current status. It is typically used to turn lights on and off. The switch control element is designed to work with 1-bit [datapoint type](#) by default.



Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Switch event sequence: Defines target address or list of addresses and defines value to be written onto those addresses. Also, a pause sequence between specific commands may be defined.

Switch read expression: A logical [expression](#) containing logical operators and identifiers of affected addresses. If the switch is to control one element only, the switch expression consists of this control element's identifier (in squared brackets). If a switch is to control more than one element, the affected element's identifiers are listed (each one in squared brackets) and connected via logical operators.

Examples

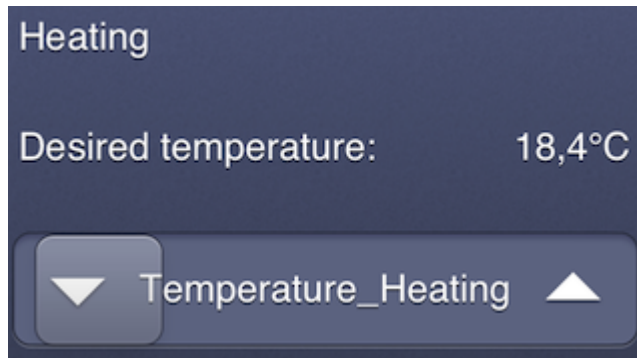
Example 1: Let's say you have a simple switch that is meant to turn on/off the ceiling lights (internally identified as `Light1`), The switch sequence in this case would hold the write command with the target address `[Light1]` . The switch expression would have the same value in this case.

Example 2: One central switch for three light addresses (named `Light1`, `Light2` and `Light3`) needs to display the status “on” if at least one of its assigned lights is turned on. The corresponding switch expression would be: `[Light1] || [Light2] || [Light3]`

Slider

This control element sets the intensity at which device is to work. Typical usages: dimming the lights or setting the room temperature.

The slider control element is designed to work with 8 bit and 16 bit [datapoint type](#) by default. A minimum and a maximum value can be set for the slider. The user can move the slider freely between these values in the app.



If you also need to turn on and off a device in addition to the Slider functionality this can be accomplished with a [Slider switch](#).

Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Slider symbol: Select the symbols to be displayed to both sides of the slider.

Slider event sequence: The sequence to be executed when the slider is moved.

Slider read expression: The expression for reading the slider's status.

Slider send interval: The delay (in milliseconds) after which the current slider value is being updated while the user moves the slider. A value of 0 means that the value will only be sent when the user lets go of the slider. Recommended value ≥ 200 ms.

2020-01-18 23:15

Step size: When creating a new slider you can also set a step size. See [Adding a Slider](#) for more information.

Examples

Example 1: A Slider can be used to control HVAC. This can be easily done using the wizard for a new Slider. Assuming that you have a Float address called Temperature. All you need to do is to select it from the table when adding a new slider control element, and enter the desired minimum and maximum values (15.0 and 25.0°C by default).

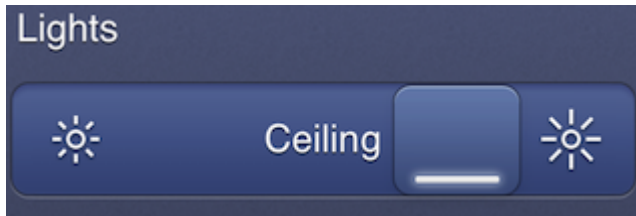
The resulting Slider sequence to send out a value between 15.0 and 25.0 would be $15.0 + [\text{Slider}] * (25.0 - 15.0)$, or in more general terms $\text{minimum value} + [\text{Slider}] * (\text{maximum value} - \text{minimum value})$. The corresponding Slider expression for the above example is $([\text{Temperature}] - 15.0) / (25.0 - 15.0)$, or $([\text{Address name}] - \text{minimum value}) / (\text{maximum value} - \text{minimum value})$.

If you would like to change the minimum value from 15°C to 18°C you would just need to replace 15.0 with 18.0 in the Slider sequence and the Slider expression.

Example 2: If you want to additionally turn on the ventilation when the temperature is above 20° you can simply add another Write entry to the Slider sequence. Select the ventilator's address as the target and enter the expression $\text{if}(15.0 + [\text{Slider}] * (25.0 - 15.0) > 20.0, \text{TRUE}, \text{FALSE})$

Slider switch

This control element is to both turn on and off the device, and to set the device's intensity. Typical usages: dimming and turning on/off lighting, turning on/off heating and setting the room temperature. The slider part of the slider switch control element is designed to work with 8-bit unsigned [datapoint type](#) by default, whereas the switch part of this control element is design to work with 1-bit [datapoint type](#).



Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Slider symbol: Select the symbols to be displayed to both sides of the slider.

Slider event sequence: The sequence to be executed when the slider is moved.

Slider read expression: The expression for reading the slider's status.

Slider send interval: The delay (in milliseconds) after which the current slider value is being updated while the user moves the slider. A value of 0 means that the value will only be sent when the user lets go of the slider. Recommended value ≥ 200 ms.

2020-01-18 23:15

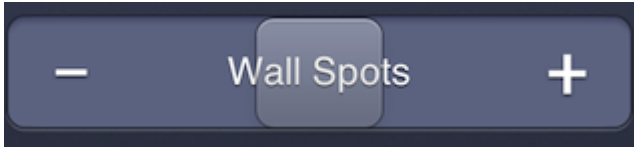
Switch sequence and switch expression: Define the behavior when the switch is pressed and how to read the status of the switch respectively. The configuration is done exactly like with a [Switch](#).

Examples

If you want to see examples of how to use specific parameters, please take a look at the pages for [Slider](#) and [Switch](#), since the configuration is virtually the same.

Snapper

The Snapper can be used for dimming light by sending step UP and step DOWN commands. The snapper control element is designed to work with 4-bit [datapoint type](#) by default.



Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Snapper symbol: Select symbol according to user's preference.

Sequence for moving left and sequence for moving right: Defines target address or list of addresses and defines value to be written onto those addresses. Also, a pause sequence between specific commands may be defined.

Snapper send interval: The send interval (in milliseconds) to be used when the snapper is fully moved to either side. This value controls the maximum frequency at which the snapper can send its sequences.

2020-01-18 20:53

Example: You can configure a Snapper for use with dimmed lights. The wizard automatically configures the Snapper to send the selected Up and Down commands when the Snapper is moved right or left. The wizard also allows you to select specific Up and Down commands, for example you can select Up 1 and Down 1 if you want to change the light's intensity only slightly when moving the Snapper. Higher Up and Down values (up to 7) can also be selected and change the light's intensity by a greater amount when the Snapper is moved.

Snapper switch

The Snapper Switch is used to turn on or off light and to increase or decrease light intensity by sending step UP and step DOWN commands. The snapper part of the snapper switch control element is designed to work with 4-bit [datapoint type](#) by default, whereas the switch part of this control element is designed to work with 1-bit [datapoint type](#).



Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Snapper symbol: Select symbol according to user's preference.

Sequence for moving left and sequence for moving right: Defines target address or list of addresses and defines value to be written onto those addresses. Also, a pause sequence between specific commands may be defined.

Snapper send interval: The send interval (in milliseconds) to be used when the snapper is fully moved to either side. This value controls the maximum frequency at which the snapper can send its sequences.

2020-01-18 20:53

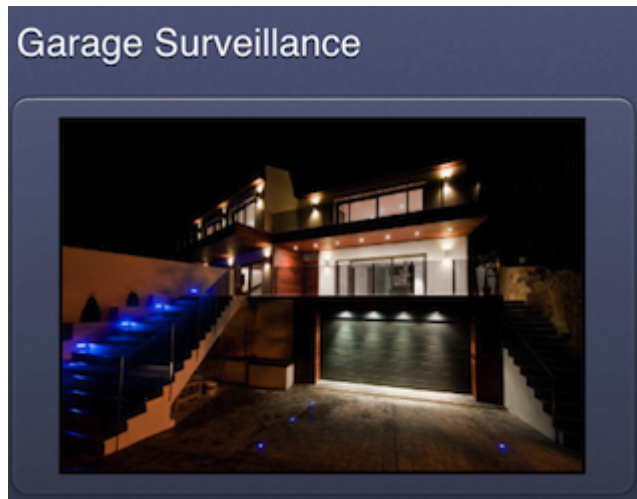
Switch sequence: Defines target address or list of addresses and defines value to be written onto those addresses. Also, a pause sequence between specific commands may be defined.

Switch expression: A logical expression containing logical operators and identifiers of affected addresses. If the slider is to control one element only, the switch expression only contains this control element's identifier (in squared brackets). If a slider is to control more than one element, the affected element's identifiers are listed (each one in squared brackets) and connected via logical operators.

For examples see the pages for [Snapper](#) and [Switch](#).

Webcam viewer

The webcam viewer is a control element used for displaying the current image recorded by an IP camera.



Configuration

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

URL to the webcam: The URL to the direct image stream of the IP camera. The image must **not** be embedded in an HTML page. This URL is predefined by the webcam's manufacturer. If you are not sure what the URL to your webcam is please refer to its manual or contact the manufacturer's support. Additionally you can also search in the camera database of iSpyConnect (<https://www.ispyconnect.com/sources.aspx>) for the correct streaming URL of your camera. This sites lists a lot of camera manufacturers and after selecting one a webpage with a list of a wide range of cameras of this manufacturer is shown. This list includes for example the protocol as well as the Stream-URL of a specific camera model.

For example the camera URL for an Axis webcam can look like this:

```
http://192.168.0.42/axis-cgi/mjpg/video.cgi?resolution=640x480&fps=5
```

If the access to your IP camera is password protected, in order to access it your URL will have to look something like this:

```
http://username:password@myhost.no-ip.org/axis-cgi/mjpg/video.cgi?resolution=640x480&fps=5
```

Webcam type: The type of image your webcam provides. This varies depending on your webcam manufacturer and type.

- Video stream: Use this for webcams using video streams with formats like MP4, H.263 or H.264. ayControl supports the protocols http://, https://, rtp://, rtsp://, rtmp:// and mms://. In some cases there could be a encoding-related problem or a problem with the authentication with username and password for example on Android devices. In this case please change the encoding parameters, deactivate the authentication in the camera settings and please try again.
- Motion JPEG: For the Motion JPEG (MJPEG) video format.
- JPEG (periodic refresh): Use this if your webcam provides still JPEG images that need to be refreshed periodically. You can set the refresh interval for the webcam viewer. By default, the webcam viewer will reload the image every 5 seconds.

RGB color light

This element provides control over RGB lights and allows user to select virtually any color and to set its intensity. It is also possible to save the color that has been set. This RGB color light control element is designed to work with both 8-bit unsigned as well as 1-bit [datapoint types](#). The 8-bit part of this control element is used to set the light intensity, whereas the 1-bit part is used for the on/off functionality.



Please note that the internal values of the RGB control ([Red], [Green] and [Blue]) must be between 0.0 and 1.0. Therefore you have to scale the values accordingly if your RGB color light uses 8-bit values between 0 and 255. The wizard will automatically handle this for you, but if you choose to edit the sequences and expressions manually you need to be aware of this.

For writing the red color channel's intensity, this means using something like $255 * [\text{Red}]$ whereas reading can be accomplished using $[\text{RGB red value}] / 255$.

Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

RGB event sequence: Defines the sequence which is executed when the user moves the RGB color light control. This means updating the intensity values for all color channels. The wizard automatically creates the sequence, for example:

Action	Target	Value
Write	RGB red value	[Red] * 255
Write	RGB green value	[Green] * 255
Write	RGB blue value	[Blue] * 255

Red, green and blue read expression: Logical expressions for reading the current values of the red, green and blue color channels. A typical red expression would be [RGB red value] / 255.

Color chooser send interval: The delay (in milliseconds) after which the current color chooser value is being updated while the user moves the control. A value of 200 milliseconds means that the updated value will be sent to the device five times per second while the user moves the control. A value of 0 presents a special case and means that the value will only be sent when the user releases the control.

Switch event sequence: Defines the sequence to be executed when the RGB color light's switch is pressed. The wizard automatically configures the control to turn the RGB color light on or off, depending on the state of the switch. You need to select whether your RGB color light has separate switch addresses for each color channel or one address to turn all channels on or off. For separate switch addresses a sequence like the following would be used.

Action	Target	Value
Write	RGB red switch	[Switch]
Write	RGB green switch	[Switch]
Write	RGB blue switch	[Switch]

For one single switch address, the sequence looks like this:

Action	Target	Value
Write	RGB switch	[Switch]

Switch read expression: A logical expression used for reading the on / off status of the RGB color light. This depends on whether the RGB color light has separate switch addresses for each color channel or one address to turn all channels on or off.

In the first case, the expression would be something like [RGB red switch] || [RGB green switch] || [RGB blue switch] whereas in the second case it would simply be [RGB switch]

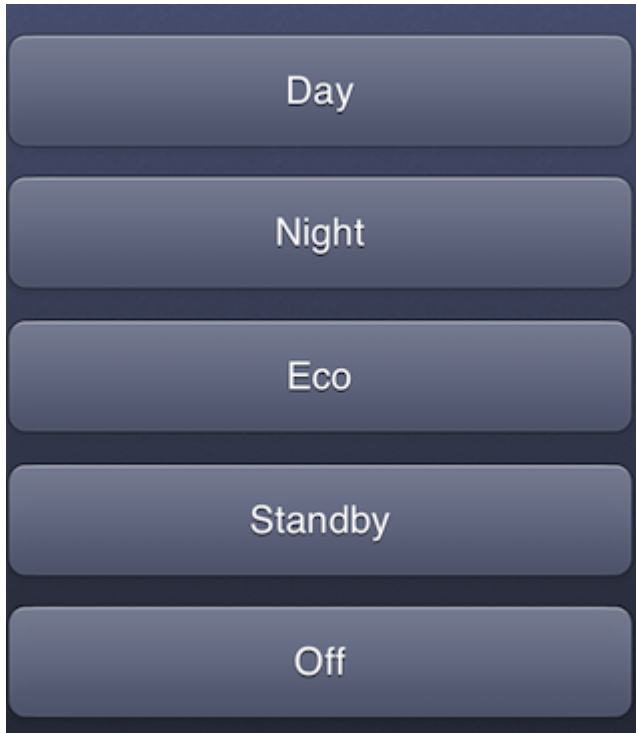
Show color indicator checkbox: Tick this box if the currently selected color indicator should be shown on screen.

Show color presets checkbox: Tick this box if the option to save colors should be shown on screen.

Button

Buttons are used to send desired values to a defined group of addresses. A button can also be used to create scenes by binding it to several group addresses, e.g.: a button can be configured to always set the room temperature to 20°C. This control element is able to work with any [datapoint type](#).

Open app / page: Buttons can also be used to open other apps or pages. See [Adding a Button](#) for more information.



Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Button pressed sequence: The event sequence to be sent when the button is pressed. Defines target address or list of addresses and defines value to be written onto those addresses. New target addresses can be added by pressing the „Add“ button. The time interval for transmission of different commands may be defined, which allows room for creativity and allows cool effects to be created by subsequent activation or deactivation of different devices.

Button released sequence: The event sequence to be sent when the button is released. For a

regular button you only need to define either the button pressed or the button released sequence. Use the button released sequence if you require advanced functionality. For instance, you can send a 1 when the user presses the button and a 0 when the user releases the button.

Examples

Example 1: Let's say you want to turn on all the lights on the 1st floor and close the garage door when you come home from work, all by pressing a single button. All you need to do is add the corresponding addresses and values to the Button sequence. For the example with the lights and the garage door the Button sequence would look like this:

Action	Target	Value
Write	Ceiling light living room	TRUE
Write	Entrance light	TRUE
Write	Garage door	TRUE

Note that the value and DPT for the garage door may differ depending on the producer of the device.

Example 2: You can also use the button to control your PTZ IP camera. This can be achieved when you are using a [HTTP connection](#). When creating a new HTTP connection, you have entered a base url of your camera, which might look something like this: <http://192.168.1.1>, Now, let's say you want move your camera to a predefined position called "position2". After you have created a button, add a new button sequence entry. In the wizard, select the corresponding address, and add the following expression: "control/ctrl.php?move=position2". The button sequence will then look like this:

Action	Target	Value
Write	Camera HTTP	"control/ctrl.php?move=position2"

When pressing the button in ayControl app, the expression you have just entered will be added to the base URL of you HTTP connection. Note that the expression above is only an example, and varies with different implementations. Please check the user manual of your HTTP controllable device for more details.

Media button

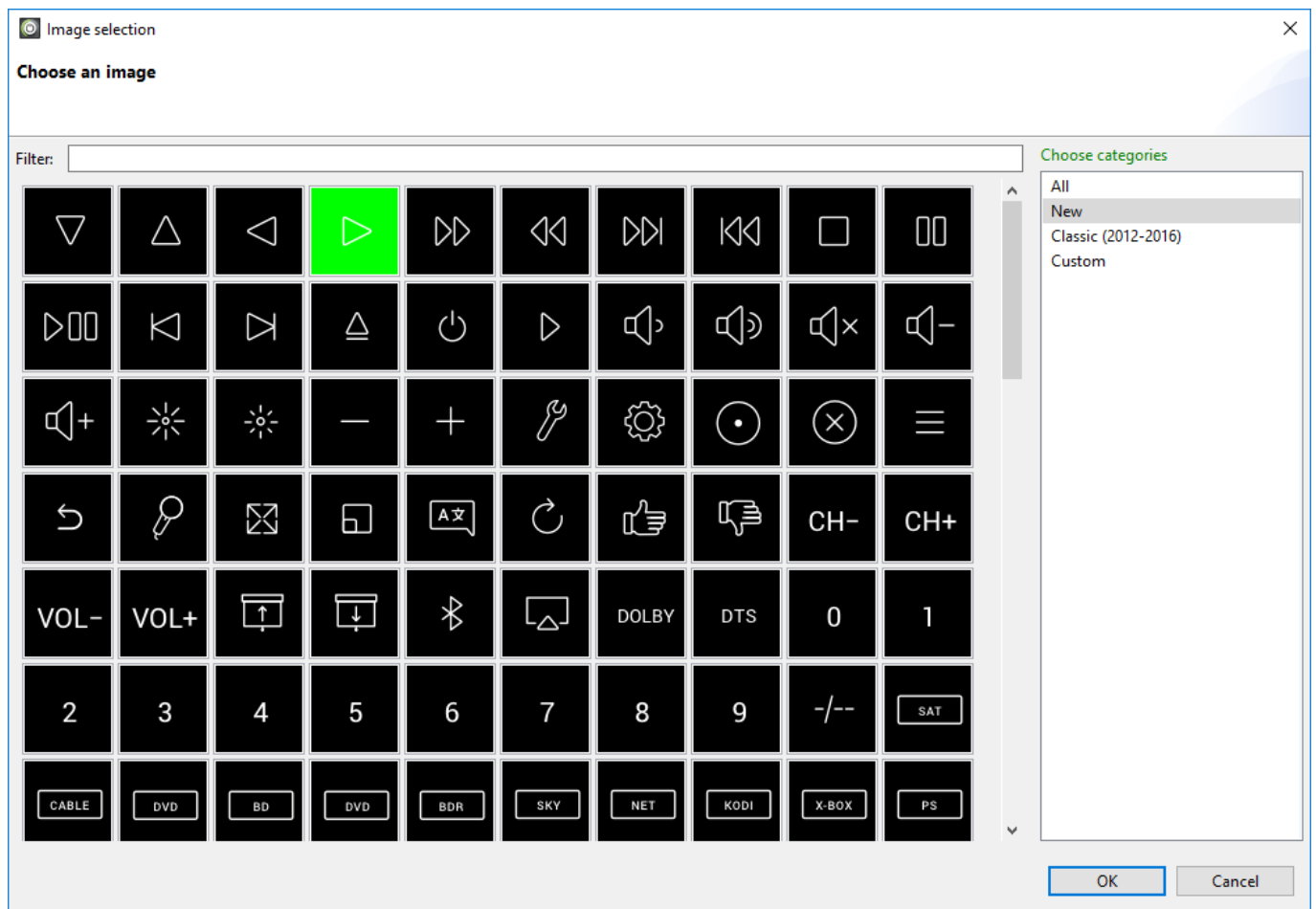
A Media button allows user to control media devices, e.g. DVD players. This button is intended to be used like the buttons on multimedia device remote controls. This control element is able to work with any [datapoint type](#).



Configuration

Note: Unlike with other control types, the note is mandatory for media buttons. While it will not be displayed in the ayControl app it is important in EcoButler to help you distinguish between your media buttons. When selecting an icon from the gallery the note will be filled out automatically. If you choose a custom icon for your media button make sure to add a descriptive note.

Type: Select an icon for the media button here, e.g. play, pause, stop, fast forward etc. A dialog will open, allowing you to choose from a variety of icons. In case you need a different icon than those provided you can select “Custom” on the right and choose a file from your computer. The icon should be roughly square and measure at least 92 x 92 pixels. Make sure to preview your icons on the devices you plan to use to ensure that they are correctly sized and well visible above the background.



Button sequence: Defines target address or list of addresses and defines value to be written onto those addresses. New target addresses can be added by pressing the add button. The time interval for transmission of different commands may be defined, which allows room for creativity and allows cool effects to be created by subsequent activation or deactivation of different devices.

Examples

Media Buttons can be used to send commands to multimedia devices. For instance you could turn on and off your DVD player, control the volume, pause, play, etc. In order to be able to send commands you first need to configure an [IoT connection](#) or [infrared connection](#).

IoT connections

Media buttons are automatically created when using the [IoT templates](#) bundled with ayControl Editor. Alternatively, you can [create an IoT connection](#) and use the [batch create feature](#) to create media buttons automatically.

Infrared connections

The Media Button can be configured just like a normal [Button](#). Additionally, if you select an infrared address the editor will also display a button for recording an infrared command. To do so, simply click the button and then hold your remote control up to the infrared receiver and press the button you want to program on the remote control (for instance the play button).

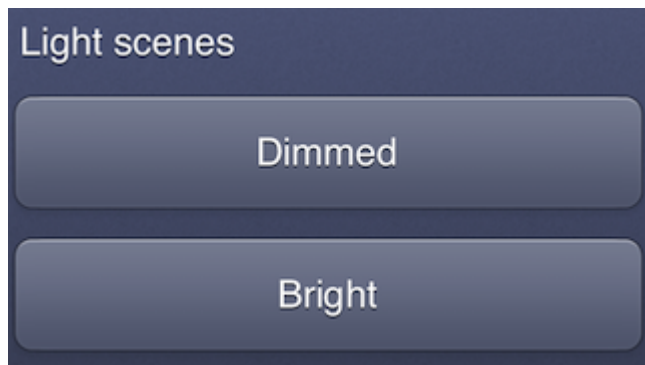
After a command has been recorded you can test it straight away. If the command has been recorded correctly, pressing the “Test recorded command” button should send the command to your device, for example start the movie on your DVD player.

Depending on the manufacturer of the IR receiver you can achieve the best results by keeping the remote control at a certain distance. This distance is usually about half a meter. Therefore the remote control should neither be too far away from the receiver nor too close to it when recording, otherwise the recorded command might be erroneous.

Scene button

The scene button enables users to control several devices at once. It is programmed as follows: When holding the scene button, all current values of affected control elements are saved automatically. In the future, when button is pressed (briefly) the affected controls are set to the saved values, e.g.: Pressing the scene button “movie night” could:

- Turn off the lights
- Turn on the RGB lights and set them to a specific color
- Lower the blinds



Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Affected controls: A list of control statuses is saved to the scene button. Controls can be easily added and removed using add/remove buttons.

Scene Button Troubleshooting

If you are facing problems with a scene button, please make sure that you have set the read flag in ETS properly and that sending and receiving packages really works. Setting the read flag is important because the scene button saves the current state of the affected control elements, and if the scene button is not getting any feedback from the bus, it will not work correctly.

Blinds

This element is designed to control blinds. In the app, the blinds button is separated in two - one part to lower and one to raise the blinds. The down/up symbols can be changed according to users' preferences. The blinds control element is designed to work with the 1-bit [Datapoint type](#) by default.

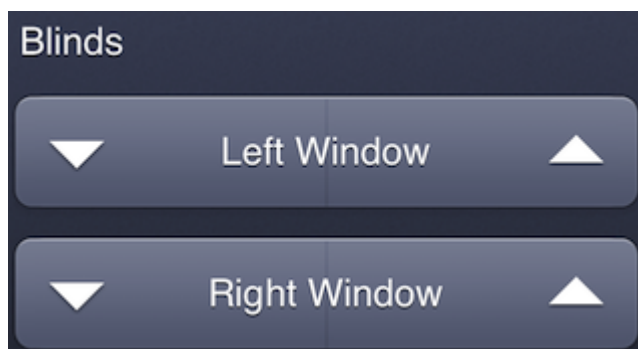
Configuration

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

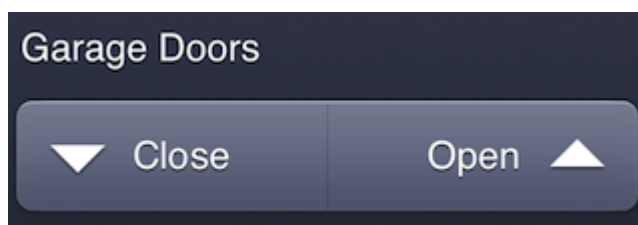
2020-01-18 20:53

Symbols: Chose symbols for the blinds' buttons (down/up) according to user's preference.

Single Label: Select this option if you want only one label for the blinds to appear in the app. The label will be displayed centered across the blinds control. Enter the label to be displayed in the "Label" field.



Two Labels: Select this option if you want separate labels for raising and lowering the blinds. If you select this option, enter the labels in the "Left" and "Right" fields.



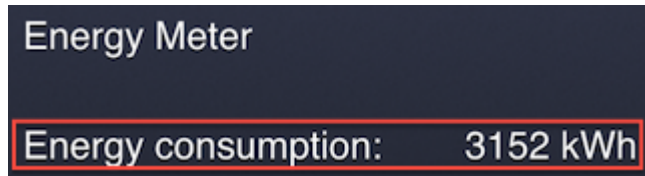
Left button click: Defines target address or list of addresses and defines values to be written onto those addresses when the down button is pressed briefly (not held down). Also, a pause sequence between specific commands may be defined.

Left button long press: Analog to down click; writes to a specified address or a list of addresses, triggered when pressing and holding down the button.

Right button click and right button long press: Analogous to left button click and left button long press.

Value display

A value display is a simple control element used to read an address' current status and display the value on the screen. All values available on KNX can be displayed (the most typical usages being: Displaying the current room temperature, CO₂ levels, intensity of dimmed lights, etc.).



Value displays allow both the representation of exact information (as read from device) or personalized representation using the [display map](#).

Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

Display control label: Tick this box if label should be displayed. If ticked, the label is displayed left of the value description and the actual value.

Value read expression: An address of a list of addresses from which the value display should read the values. It is enough just to write the name of the address of which the value should be displayed in squared brackets, e.g. [Temperature].

Value description: Optional name or designation of the displayed value. This is similar to Label, but displayed directly to the left of the actual display value.

Unit string: An optional field used to add unit identifier to displayed value, e.g.: for displaying current temperature, "°C" may be inserted.

Decimal places: Defines number of decimal places (if any) to be displayed.

Display map: Optional functionality to display values which are mapped to Input values or value ranges.

Examples

Example 1: In order to display the current temperature in the living room, simply create a new Value Display using the wizard and select the corresponding address or type its name in square brackets into the Value expression, e.g. [Temperature living room]. You can then add a label, value description and unit string as well as modify the number of decimal places to display. For this example we will use the following settings:

Attribute	Value
Label	Living room
Value expression	[Temperature living room]
Value description	Temperature:
Unit string	°C
Decimal places	1

The value display in the app would look like this:

Living room Temperature: 20.7°C

Example 2: For an example on using the display map instead of displaying the value directly, see the help on [Display map](#).

Example 3: Let's say you want your value display to display formatted instead of raw data. For example, if you want to read out the current intensity of the dimmed light, you might not want to have values between 0 and 255 displayed; you would rather have the intensity displayed in percentages. In order to do this, you have to extend the Value read expression by adding the following formula $/255 * 100$. So, if the name of the address from which you want the value to be read is Living room dimmed light, the Value read expression would be:

[Living room dimmed light]/255 * 100

Value Display - Creating display maps (optional)

A Value Display control can map pre-defined output values to defined inputs or input ranges. The input for the mapping is defined through the value expression. The value expression typically is a read address, but it may contain any expression. The input (the result of the value expression) can be accessed for expressions in the display map using [Value].

The display map contains the mappings between input and output values. Note that if you do not define any mappings, the output will be the same as the input. If you do want to define mappings, you can do so by adding logical expressions and assigning a value to display for each of them.

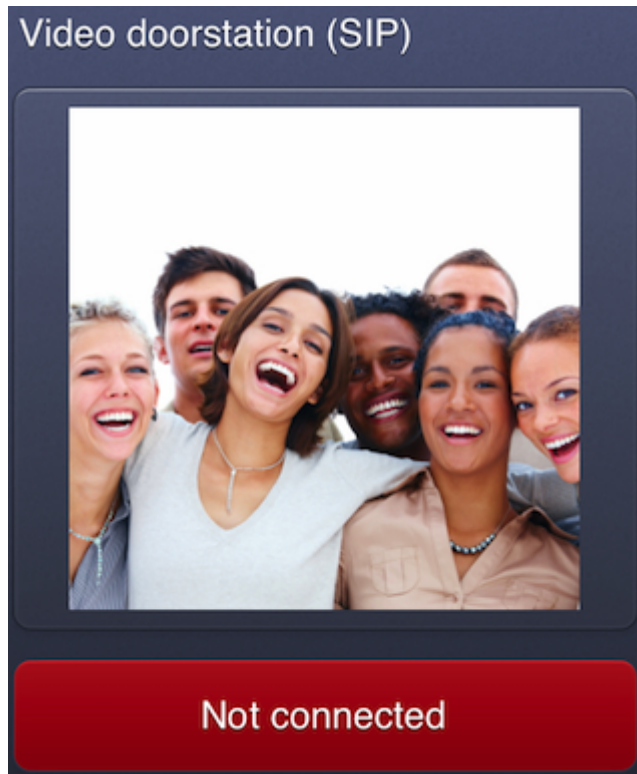
When the app checks the input at runtime, it goes through the mappings from top to bottom and displays the output for the first matching expression it can find.

Example: The Value Display reads the temperature in the room and displays an appropriate description of the temperature:

Expression	Displayed Value
[Value] < 17.0	Cold
[Value] >= 17.0 && [Value] < 19.0	Cool
[Value] >= 19.0 && [Value] < 21.0	Comfortable
[Value] >= 21.0 && [Value] < 23.0	Warm
[Value] >= 23.0	Hot

SIP Call

SIP is a protocol for “Voice over IP” (VoIP) communication. As an open standard it is used by many VoIP operators modern telephones and IP based door-stations. ayControl 3 includes a so called SIP Client (also well known as “SIP Softphone”) acting as an IP telephone to be used for door-stations and more.



It is required to set up a working VoIP environment using a SIP server or external SIP provider first. To break down the complexity make sure that your SIP environment is working fine with a normal SIP telephone or another SIP softphone before you configure ayControl. To **test it with another SIP client first** is also an essential step for trouble shooting.

Configuration

Label: The name or designation of the control element as it will be displayed in the app. Should be short and self-explanatory. The Label may be translated to different languages.

2020-01-18 20:53

Note (optional): Will not be shown in the app, serves only as additional help when finding a specific control element in the list of all elements. The text will be grayed out and appended to the Label in the list. Should this field be empty, instead of the note the name of the address will be displayed.

2020-01-18 20:53

SIP access data for mobile SIP client

Username: Name or “telephone number” set for the ayControl SIP Client. (e.g. “aycontrol”, “201”,

etc.)

SIP domain: IP address or hostname where the SIP server is located. (e.g. "192.168.1.105", "sip2sip.info", etc.)

Authentication username: Username for registration on the SIP Server. Leave blank if it's the same as "Username".

Password: Password used for registration on the SIP server.

Port: Port number for the SIP server (Default: 5060).

Protocol: The protocol used for communication with the SIP server. UDP is the most common one. TCP is battery saving when running in background. It depends on the SIP server which protocol can be used.

Proxy address: Address or host name of the SIP proxy (optional). A SIP proxy is necessary when VoIP communication is used over the internet (and not inside a LAN).

Peer SIP profile (for outgoing calls from the mobile device)

Username: Name or "telephone number" of the SIP peer to call (e.g. doorstation, IP telephone, etc.)

SIP domain: IP address or host name of the peer's SIP server.

DTMF tones: DTMF signals to send to the peer if required for authentication (optional). May only contain the characters 0-9, A-D, # and *.

Label

A Label contains text to be displayed in the ayControl app. You may provide Labels in multiple languages. The Label will then be displayed in the language set on the mobile device or in the app settings.

You can add, edit or remove translations by clicking the “Languages...” button. Note that every Label must have a text set for the default language, which is specified when creating a new profile. The default language is always displayed on top when editing Labels.

If a Label is not translated to the language used in the app the text for the default language is displayed instead. You should make sure that your translations are complete by either checking them in the ayControl Editor or by viewing the profile in the app in all languages.

Expressions

Expressions are used for sending output to devices and for reading and evaluating input from devices. Expressions can be edited using the [Expression Editor](#) and may consist of the following values:

Literal values: Integer and decimal numbers e.g. 42, 13.37, string values e.g. "Lorem ipsum" and binary data in hexadecimal notation e.g. \$1234cafe\$.

Addresses: Values from any read-capable address can be read. Address names must be enclosed in square brackets, e.g. [Light living room].

Control values: The current values of controls in the app can be accessed by putting the control name or control component name in square brackets, e.g. "[Switch]". Possible controls are: [Switch], [Slider], [Red], [Green], [Blue] and [Value]. Note that only a subset of these is actually available, depending on the control associated with the expression.

Operators: Operators for the basic arithmetical operations +, -, *, /, modulus %, comparison <, <=, ==, >=, >, != and logical and, or and not &&, ||, !.

Constants: Mathematical constants PI, TAU, E, boolean constants TRUE, FALSE, the nil expression to send nothing NIL, KNX specific values UP0 to UP7, DOWN0 to DOWN7. All constants must be entered in upper case.

Expression Editor

Expression Editor helps you build expressions needed for Button sequences, Switch/Slider read expressions or event sequences, etc. Next to every field where you need to enter an expression, you will find an Edit... button.

Controls

Label


Control type	Label
Scene Button	Wake Up
Slider	Set Temperature - <i>Temperature Bedroom</i>
Slider Switch	Bathtub - <i>Light Bathtub Switch, Light Bathtub Value</i>
Slider Switch	Bed - <i>Light Bed Switch, Light Bed Value</i>
Slider Switch	Bookshelf - <i>Light Bookshelf Switch, Light Bookshelf Value</i>
Slider Switch	Entrance - LED 3 Switch, LED 3 Value
Slider Switch	Left - <i>LED 1 Switch, LED 1 Value</i>
Slider Switch	Main Light - <i>Light Bathroom Main Switch, Light Bathroom Main Value</i>
Slider Switch	Reading Light - <i>Light Reading Switch, Light Reading Value</i>
Slider Switch	Right - <i>LED 2 Switch, LED 2 Value</i>
Slider Switch	Sofa - <i>Light Sofa Switch, Light Sofa Value</i>

Switch

Details

Label

Note (optional)

Slider symbol 

Slider event sequence

Action	Target	Value
Write	LED 3 Value	255 * [Slider]
Write	LED 3 Switch	if([Slider] > 0, TRUE, F...

Slider read expression

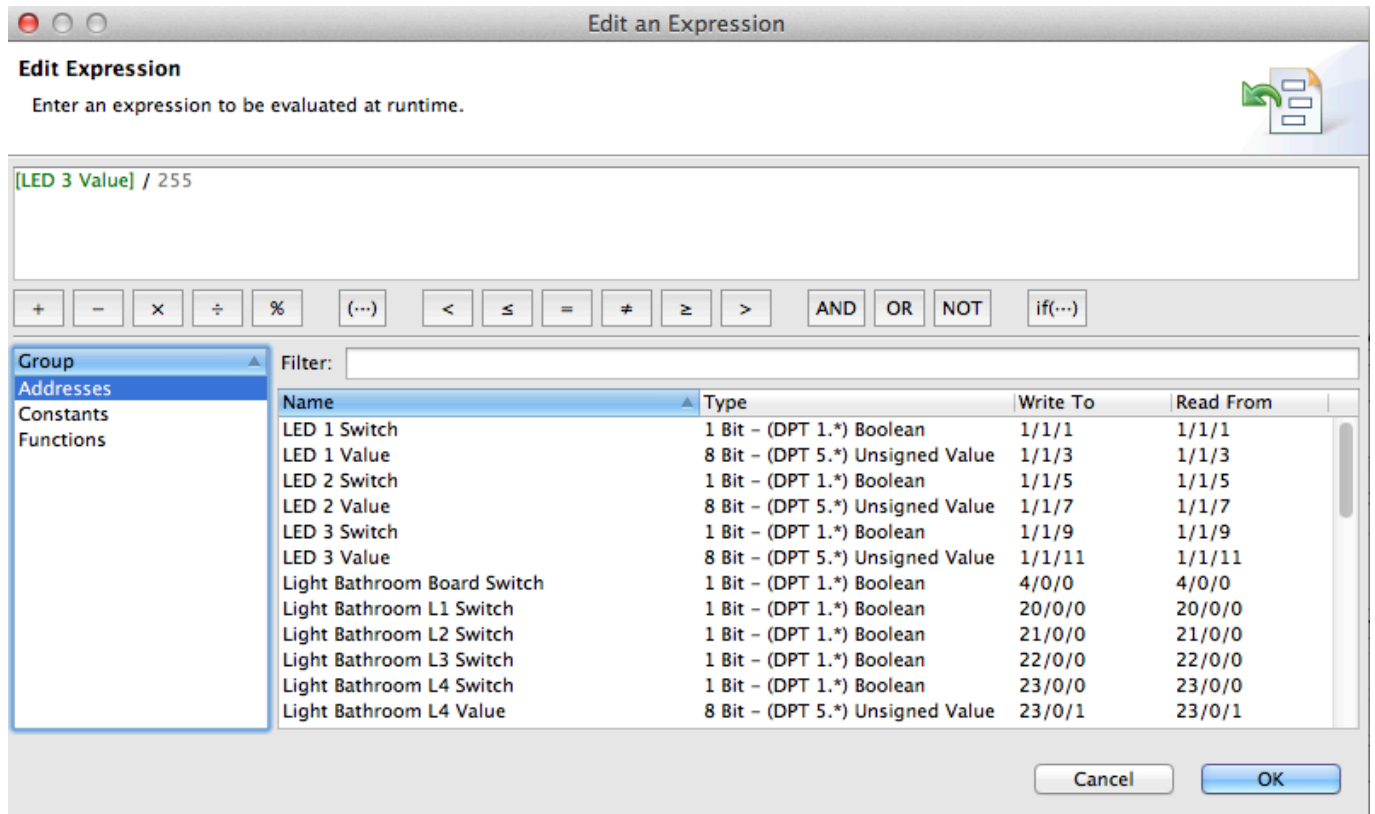
Slider send interval

Switch event sequence

Action	Target	Value
Write	LED 3 Switch	[Switch]
Write	LED 3 Value	if([Switch], 192, 0)

Switch read expression

A click on this button will open the expression editor.



The expression editor will show you all group addresses you can work with, all available functions (e.g. min(...), max(...), if(...) etc.) as well as all available constants. Also, logical (AND, OR), arithmetical (+, -, * etc.) and other operators can be added to the expression with a simple click. This way, you can create your expressions in only a few steps and without making any syntax errors.

Examples

Example 1: If you want to create a central switch for three lights which is set to be “on” when any of the three lights is on, all you need to do is select the first affected group address from the list of addresses, add the “OR” operator and select the second group address from the list, and so on.

To see more examples of expressions, refer to the help pages of specific control elements.

KNX Data Types

KNX Data Type	Value Range	Usable Control Elements
1-Bit - (DPT 1.*) Boolean	0 - 1	Value display, Blinds, Switch, Slider switch, Snapper switch, Button, Media button, Scene button
4-Bit - (DPT 3.*) Controlled/Dimming	Up 0 - 7, Down 0 - 7	Snapper, Snapper switch, Button, Media button
8-Bit - (DPT 5.*) Unsigned Value	0 - 255	Value display, Slider, Slider switch, RGB color light, Button, Media button, Scene button
8-Bit - (DPT 6.*) Signed Value	-128 - 127	Value display, Slider, Slider switch, Button, Media button, Scene button
16-Bit - (DPT 7.*) Unsigned Value	0 - 65535	Value display, Slider, Slider switch, Button, Media button, Scene button
16-Bit - (DPT 8.*) Signed Value	-32768 - 32767	Value display, Slider, Slider switch, Button, Media button, Scene button
16-Bit - (DPT 9.*) Float Value		Value display, Slider, Slider switch, Button, Media button, Scene button
32-Bit - (DPT 12.*) Unsigned Value	0 - 4294967295	Value display, Button, Media button
32-Bit - (DPT 13.*) Signed Value	-2147483648 - 2147483647	Value display, Button, Media button
32-Bit - (DPT 14.*) Float Value		Value display, Button, Media button
14-Byte - (DPT 16.*) String Value		Value display, Button, Media button

Structure

- [Profile Details](#)
- [Section Details](#)
- [Room Details](#)
- [Layout Details](#)
- [Page Details](#)
- [Grid Layout details](#)

Profile Details

This part of the editor allows you to configure the basic profile details and to add sections the hierarchical structure of the profile. Changes made here apply to the whole profile, i.e. all device configurations.

Profile Information

Profile name: The name for your profile that will appear in the app. By clicking on the Languages... button you can add translations of the profile name in any language you want. The proper translation of the profile name will be selected according to your mobile device settings. If the translation of the profile name is not provided in the language to which your mobile device is set, ayControl will use the default language (defined when creating a new profile).

Navigation mode: Depending on your ayControl package, you can choose between several navigation modes:

- Tiles Navigation
- Moving Sheet Navigation
- Static Sheet Navigation

Welcome message: Define a welcome message that should be displayed when the ayControl app is started. The message can be written in different languages (just like the profile name). This feature is available only for the [Tiles Navigation mode](#).

Short welcome message: A shorter version of the welcome message (optional) to be displayed on smartphones (also for [Tiles Navigation mode](#) only).

Welcome Logo: Just like the Welcome Message, this feature can only be used in combination with the [Tiles Navigation mode](#). A logo image can be selected using the [Image Editor](#) and is displayed when the ayControl app is started.

Menu background: The background image to be shown behind the graphical menu. You can provide separate images for landscape and portrait layouts in the [Image Editor](#).

Default Room: When using [Static and Moving Sheet Navigation](#), you can select which room should be displayed when the profile is loaded. If the default room is not manually selected, ayControl will use the first room from the first room area as default room. This feature is not available for the Tiles Navigation mode, since this mode has a different home screen layout.

Theme: The theme to be used for this profile by default. The user can still change the theme in the app, but this will be the theme used when the profile is first loaded.

Device Layouts

Here you can select all the device layouts you want to support in your profile. These layouts will automatically be added to all rooms you create (and have created).

Unchecking a layout will also delete existing layouts of that type, but only if there are no controls inside them. This ensures that you don't accidentally delete layouts you created, but it also means that you may have to clean up manually if you want to remove existing layouts.

Are unsure to which category your devices belong? If you open the [WiFi transfer dialog](#) you can see the layout in the list of devices. The following list also shows the most common devices for each layout:

- Large Smartphones (5,5"+): iPhone X, iPhone 6-8 Plus, Galaxy S7 Edge, S8, Android Smartphones 5,5"+
- Smartphone 16:9: iPhone 5 and newer, Samsung Galaxy (Note) series, Android smartphones < 5.5"
- Smartphone 3:2: iPhone 4 and older, iPod Touch (4th generation and older), some older Android smartphones
- Tablet 10" 4:3: All iPads (including iPad Mini), Nexus 9, 4:3 Android tablets
- Tablet 10" 16:9: Galaxy Tab 10 series, Galaxy Tab S, Nexus 10, most 10" Android tablets
- Tablet 7" 16:9: Galaxy Tab 7 & 8, Nexus 7, Kindle Fire, most 7-8" Android tablets

Note that 16:10 devices also belong to the 16:9 categories.

2020-01-18 23:15

Sections

You can add, remove and rearrange sections.

A section (e.g. "First floor") can contain multiple rooms (e.g. "Kitchen", "Living Room"...). The rooms will be arranged by sections in the app, and sections will be arranged in the same order like in the list of sections. You can change the order in which the sections appear in the ayControl app simply by clicking on some area and dropping it to the wanted position in the list.

You can navigate to [section details](#) either by double-clicking the section in the list of sections, or you can use the hierarchical overview in the Profile Structure window on the left side.

Navigation Modes

Tiles Navigation

The **Tiles Navigation** mode allows the front page in the ayControl app to display a special menu where every room has its own image. These images can be configured in the [room details](#) section.

Moving Sheet Navigation

Moving Sheet Navigation allows sidebar which contains the list of all room areas and rooms to be dynamically expanded (so that the icons of the rooms as well as their names are displayed) or contracted (so that only icons are displayed).

Choosing between **Moving Sheet Navigation** and **Static Sheet Navigation** is only important if you are creating a profile for a tablet in landscape mode.

Static Sheet Navigation

Static Sheet Navigation only allows the expanded list of rooms with all details (icon **and** name). If you are importing an ayControl 2 profile, the default navigation mode will be static. If you are creating a profile for a handset it does not matter if you select Moving or Static Sheet Navigation, they will both look the same.

Note: Layouts for tablets in portrait mode will always have a dynamic sidebar, no matter which navigation mode is selected.

Section Details

Here you can modify (add, remove, rearrange) the rooms that belong to this section and edit the section name. After you have created the rooms and arranged them in the order in which you want them to appear in the app, navigate to the [room details section](#) by double-clicking the specific room or by using the hierarchical navigation available in the Profile Structure window.

Room Details

In the Room Details editor you can create one or more layouts for your mobile devices, change the room name and icon and (optionally) add a pin code for the room.

The layouts you need to create depend on the devices you want to support. For instance, if you only have an iPhone you will need to create a layout for iPhone 5-7, 16:9 Android Smartphones. If you have a smartphone and a tablet you will need to create a layout for each. If you want to use your devices in both portrait and landscape orientation you will need to add landscape and portrait layouts for each device type.

Once you're done with that you have to [add pages to your layouts](#) and then [add content to the pages](#). You don't need to start from scratch for every layout. Once you have added controls to one layout, you can [reuse them for another layout](#).

Room Information

Room name: A name for a room that will appear in the app. The name can be defined in several languages. The proper translation will be selected automatically according to the language preferences of your mobile device. If the translation in the language to which your mobile device is set is not provided, a name in default language (selected when creating a profile) will be displayed.

Symbol: You can select any icon from the list to label the room. The icon will then be shown in the room overview in the ayControl app.

Pin code: You can prevent unwanted access to controls of a room if you provide a pin code. This option is perfect if several people are using ayControl on the same mobile device.

Unlock with fingerprint: In addition to setting a pin code you can also enable unlocking the room via fingerprint scan. A pin code *must* also be set as a backup if the fingerprint scan doesn't work or the device doesn't have a fingerprint scanner. Note that the fingerprint will always be checked against the one set for the device, i.e. the current user in Android / iOS.

Tiles image: This feature is only available with the [Tiles Navigation mode](#). You can select and edit an image for the room using the [Image Editor](#). The selected image will then be displayed in the room menu in the ayControl app.

Room Layouts

You can create a layout for a room for several different device types. This way you can use the same profile on handsets, and on tablets of any size both in landscape as well as in portrait mode. When the profile is loaded on the mobile device, the ayControl app will automatically select the layout that corresponds to the device size and orientation.

Note: If the proper layout for some device is not provided, ayControl app will look for a layout with similar properties and use it if found. For example, a layout created for iPhone 4(s) will also work on newer iPhones.

You can navigate to a specific [layout](#) either by double-clicking it in the list of layouts, or by using the hierarchical navigation available in the Profile Structure window.

Layout Details

Pages for the selected layout may be added, removed and rearranged here.

In the app, users will see one page at a time and will be able to navigate from one page to another. If there are too many Controls to fit on the currently available pages you should consider adding additional pages.

You can specify the [page details](#) either by double-clicking the page in the list of pages or by using the hierarchical navigation available in the Profile Structure window.

Page Details

The layout of the page can be set here. The layout determines how many Controls will be displayed on one Page and how they will be laid out.

Entry: The layout of the page can be created either as a Grid or as a Squeeze. If you select the **grid** option here, the page will contain a grid with a fixed number of rows and columns. The number depends on the layout, for example a 10" tablet in portrait orientation will have 11 rows and 2 columns, and in landscape orientation 9 rows and 3 columns.

Squeeze acts as a normal [sub-grid](#): you are able to control the number of rows and columns, and you can add a transparent background (perfect for usage with multimedia control elements). The only difference between a sub-grid and a squeeze is that a sub-grid can be placed anywhere inside a grid whereas squeeze is automatically placed in the middle of the page.

Page background: You can select and edit a background image for the page using the [Image Editor](#).

Hint: if you have several pages for one room layout (usually for handset), you can split the image in several parts and set each part of the image as a background of the corresponding page. This creates some nice effects when switching pages in the app.

Page name: You can name your pages in order to make them easily recognizable. For instance you could have one page called "Lights" and one called "Multimedia" in your living room. These names are displayed in the tree view and in the tables in the ayControl Editor, but they are not used in the ayControl app. Therefore you don't need to translate them for your users.

After you have defined the page details, you can start placing the control elements in the page layout. Navigate to the [grid layout](#) of the page either by double-clicking on the selected entry or by using the navigation available in the Profile Structure window.

Grid Layout details

The grid layout is a representation of how the page will look like in the ayControl app. Here you can add the **control** elements you have created in the Controls tab and place them on a specific place in the grid. The control elements will then have the same relevant position on the page in the app.

Grid name: You can give a name to your grid. This name is only used in the ayControl Editor for clarity and not displayed in the apps. When creating multiple sub-grids you should consider giving each an expressive name so that you can navigate your profile structure more easily.

The grid layout editor offers some important features:

- [Moving and copying controls](#)
- [Keyboard and Mouse Controls](#)
- [Adding Sub-Grids](#)

Hint: The grid layout is where you have to get a little bit creative if you want to have nicely designed pages. In order to get a feeling about how the pages can be designed, and how you can use different functionalities (e.g.sub-grids, labels) provided by the ayControl Editor, take a look at our demo profiles that are available by default both in the ayControl Editor and app.

Checking the Endresult

After you have placed all the control elements in the grid layout, you can check the end result by [transferring](#) the created profile to your mobile device.

Moving and copying controls

The Grid layout details editor allows you to move or copy controls using drag and drop. You can select any single control by clicking it, select multiple adjacent elements by clicking the first control element and then holding down the shift key and clicking the last control element of the group you want to select, or select multiple individual controls by holding the Ctrl or ⌘ key and clicking them.

Moving controls within a grid

To move one or more controls within in a grid, simply select them and drag them to the desired new position using your mouse. Note that if the new position of one or more controls is already occupied, the controls will still be moved, but they will now overlap. This is indicated by a red background in the editor. You will need to move the overlapping controls to another position. If the current grid does not have enough room for the controls you may also move the controls to another page.

Moving / copying controls to different pages / layouts

You can also move controls to different pages or different layouts. In order to do so, simply select the controls you wish to move and drag them onto any other grid in the profile structure tree. The destination grid may also be in another room or another section. If the target grid is large enough, the controls will be inserted in the same position and with the same dimensions as in the origin grid.

If there is not enough space, the controls may be automatically moved and/or resized in order to fit in. Note that just like when moving controls within a grid, the controls may overlap after you move them. This can happen easily when the destination grid already contains controls or when moving controls from a large grid to a smaller grid. Let's say you want to move 6 rows control elements to a grid which has only 5 rows. In this case, all control elements from the 5th and 6th row will be placed in the 5th row and will now overlap. You need to manually move the overlapping controls to a different page. Therefore you should make sure to check the target grid after you have moved controls and see if any of the controls overlap.

You can also copy controls to different pages or layouts. To do this simply drag them and hold down the Ctrl or ⌘ key before releasing the mouse button. A little “+” icon will indicate that you are about to copy the controls.

Example: Copy controls from smartphone to tablet layout

Suppose you have created a layout for smartphones in Portrait format and now you also want to support 7" tablets. You just need to take the following simple steps for copying and adjusting your layouts:

Select the controls you want to copy from the smartphone layout

Profile Structure

- Profile: Drag & Drop Demo
 - Section:Ground floor
 - Room: Entrance
 - Room: Living room
 - Layout: Phone 16:9 (iPhone 5-7, Android phones)
 - Page
 - Grid
 - Layout: Tablet 7" 16:9 (7-8" Android tablets) Port
 - Room: Kitchen
 - Room: Guest room
 - Section:First floor
 - Room: Bedroom
 - Room: Bathroom
 - Room: Kids room

Grid Information

Rows Grid name

Columns Background

Placement of controls on the page

Ceiling light

Wall light

Blinds up

Current temperature

Desired temperature

Select all controls by pressing Ctrl+A / ⌘+A or by clicking them while holding down Shift or Ctrl.

Drag them to the tablet layout while holding Ctrl (⌘ on Mac)

Profile Structure

- Profile: Drag & Drop Demo
 - Section:Ground floor
 - Room: Entrance
 - Room: Living room
 - Layout: Phone 16:9 (iPhone 5-7, Android phones)
 - Page
 - Grid
 - Layout: Tablet 7" 16:9 (7-8" Android tablets) Port
 - Page
 - Ceiling light
 - Wall light
 - Room: Kitchen
 - Room: Guest room
 - Section:First floor
 - Room: Bedroom
 - Room: Bathroom
 - Room: Kids room

Grid Information

Rows Grid name

Columns Background

Placement of controls on the page

Ceiling light

Wall light

Blinds up

Current temperature

Desired temperature

Rearrange the controls in the new layout

Your controls should have been copied to the new layout now. However, they probably don't fit perfectly due to the different screen size. Rearrange and resize your controls as you see fit.

Profile Structure

- Profile: Drag & Drop Demo
 - Section:Ground floor
 - Room: Entrance
 - Room: Living room
 - Layout: Phone 16:9 (iPhone 5-7, Android phones)
 - Page
 - Grid
 - Layout: Tablet 7" 16:9 (7-8" Android tablets) Port
 - Page
 - Grid
 - Room: Kitchen
 - Room: Guest room
 - Section:First floor
 - Room: Bedroom
 - Room: Bathroom
 - Room: Kids room

Grid Information

Rows Grid name

Columns Background

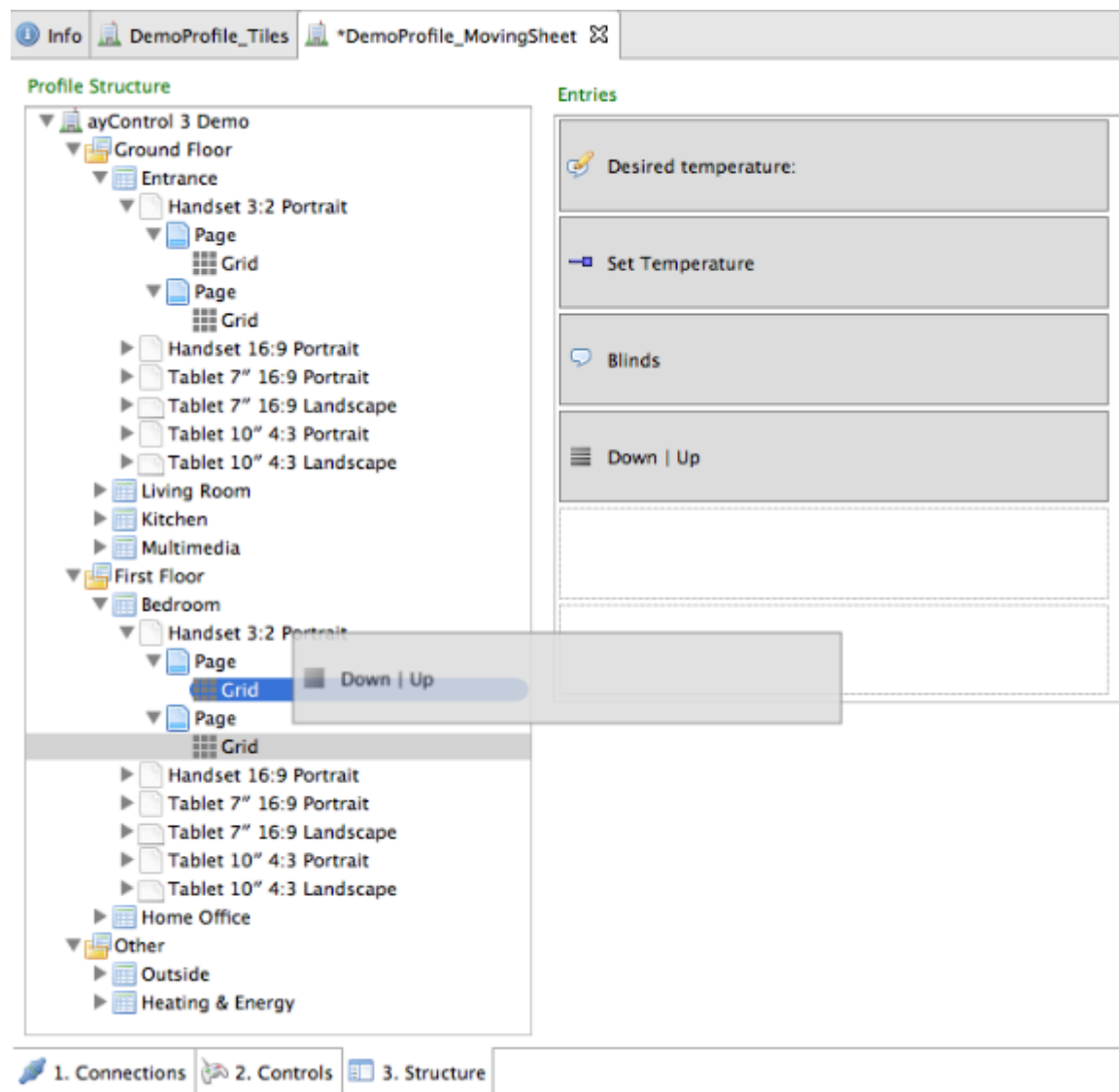
Placement of controls on the page

Ceiling light	Wall light
Wall light	
Blinds up	
Current temperature	
Desired temperature	

I have made a mistake while moving controls. What now?

Like all actions in the editor, moving and copying controls can be undone. Simply press Ctrl+Z / ⌘+Z or click the undo icon in the toolbar to undo the last action(s) until you have corrected your mistake.

Moving control elements to another grid



Overlapping control elements

Entries

Light
Bedside Tables
Ceiling
Down Up
Mirror
Ceiling

Copying control elements

Profile Structure

ayControl 3 Demo
Ground Floor
Entrance
Living Room
Kitchen
Multimedia
First Floor
Bedroom
Handset 3:2 Portrait
Page
Grid
Page
Grid
Handset 16:9 Portrait
Tablet 7" 16:9 Portrait
Tablet 7" 16:9 Landscape
Tablet 10" 4:3 Portrait
Tablet 10" 4:3 Landscape
Home Office
Other
Outside
Heating & Energy

Entries

Light
Bedside Tables
Ceiling
Bathroom
Mirror
Ceiling

Keyboard and Mouse Controls

You can use following keyboard and mouse actions to place, move and resize control elements in the grid:

Mouse click: Select a single entry or an empty cell.

Shift + mouse click: Select range of entries.

Ctrl (or ⌘) + mouse click: Add entries to / remove entries from selection.

Drag selection: Move selected entries.

Drag selection (Ctrl or Alt held): Copy selected entries.

Double click, Enter or Ins: Open the selected sub-grid or add an entry at the selected position.

Backspace or Del: Delete selected entries.

Arrow keys: Move selection.

Ctrl (or ⌘) + arrow keys: Move selected entry (only if one single entry is selected).

Shift + arrow keys: Resize selected entry (only if one single entry is selected).

The size and position of the selected entry can also be adjusted in the bottom part of the editor.

Adding Sub-Grids

Apart from the control elements, you can also add a **sub-grid** in the grid layout. Inside a sub-grid you can control the number of rows and columns. Sub-grids can be placed anywhere inside a grid and can be of any size (starting from a single cell in a grid to the entire grid). By adding sub-grids, you can achieve different effects, like creating a number of small control within a page, such as a remote-control-like set of media buttons. You could also create three columns when there are only two in the main grid (or other way around).

Translations

The translations tab gives you a quick overview of all the labels used in your profile along with any translations (i.e. all the text that the user can see in the app).

The table lists all the labels in the current profile. The “Label” column shows the label in the default language. The “Context” column gives you additional information on where the label is used (whether it is a room label, the label of a switch etc.). The leftmost column shows a check mark if a label contains translations for all languages used in the profile. You can quickly spot missing translations by looking for missing check marks.

At the bottom you can see and edit all the translations of the selected label.

Adding and removing translations

You can add additional languages by using the button at the bottom.

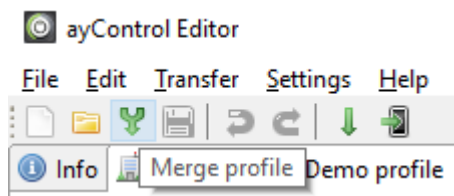
In order to remove a language from a profile you have to remove all the translations you have entered. If you want to remove the French language for instance, you have to delete the French translation from every single label before the language is removed.

Note that the default language must always be filled out. You may only set the default language when you create a new profile, it can not be changed afterwards.

Profile merging

Profile merging provides a way to quickly and easily add small, pre-configured parts to your profile. For instance, you can use the IoT templates shipped with ayControl Editor to get a fully functioning remote control for your smart TV in just a few clicks. The templates include connections, addresses, controls and device layouts. You can use them as they are or make adjustments to them as you see fit.

To merge a profile into the currently opened one, simply click the arrow icon in the toolbar or select “File” → “Merge profile” in the menu.



IoT templates

ayControl Editor contains a number of templates for various IoT devices. They will be displayed automatically when you select the “Merge profile” menu item.

The templates are updated and new ones are added regularly with ayControl Editor updates.

Your own templates

In addition to the IoT templates you can also create your own templates to save your valuable time. You could, for example, create your own template which contains all group addresses, control elements and layouts for controlling a KNX thermostat. Or you can create some other template which normally needs quite some time to create and can be used in more projects. To do so simply create a new profile that contains just the reusable parts and save it (as standard .a3z file). At a later phase when you are working on another larger profile you can merge your template in.

Configuration after merging

In most cases you will still have to make some minor configuration adjustments after you have merged a profile. The ayControl Editor will display hints telling you what needs to be done.

For the IoT templates you typically have to provide the IP address of the device in the “Connections” tab.

In some cases you might have merged a profile with different layouts, e.g. the merged profile contains only smartphone layouts and your profile contains tablet layouts. In this case you will still have to create the tablet layouts, which can be easily done using [Drag and Drop](#).

Merging conflicts

In most cases merging profiles happen automatically. However, there are some cases when you need to provide input because of conflicts. This might be due to the same part already being present in your profile or different configurations for the profile. You will be prompted with some choices on how to handle those conflicts.

Element with the same ID already exists

This means that the profile you are trying to merge contains elements that already exist in your profile. You can choose to insert these elements into your profile additionally to the existing ones. This could lead to you having two rooms called “Living room” for instance. You should double check and manually merge them when the automatic profile merging has finished.

Connection with the same configuration already exists

The ayControl Editor will detect if merging leads to the same connection being in the profile twice, e.g. having two KNX connections with the same IP address. A dialog will ask you whether you want to merge these two connections, which should lead to the desired results in most cases.

Missing translations

When creating a new profile you can choose a default language. All texts must be present in that language. This can lead to problems, e.g. when you create a profile with French as the default language but the profile you're trying to merge only contains English text. In this case the existing (English) text will be copied to the French translations. Simply check the translations tab and add missing translations after merging.

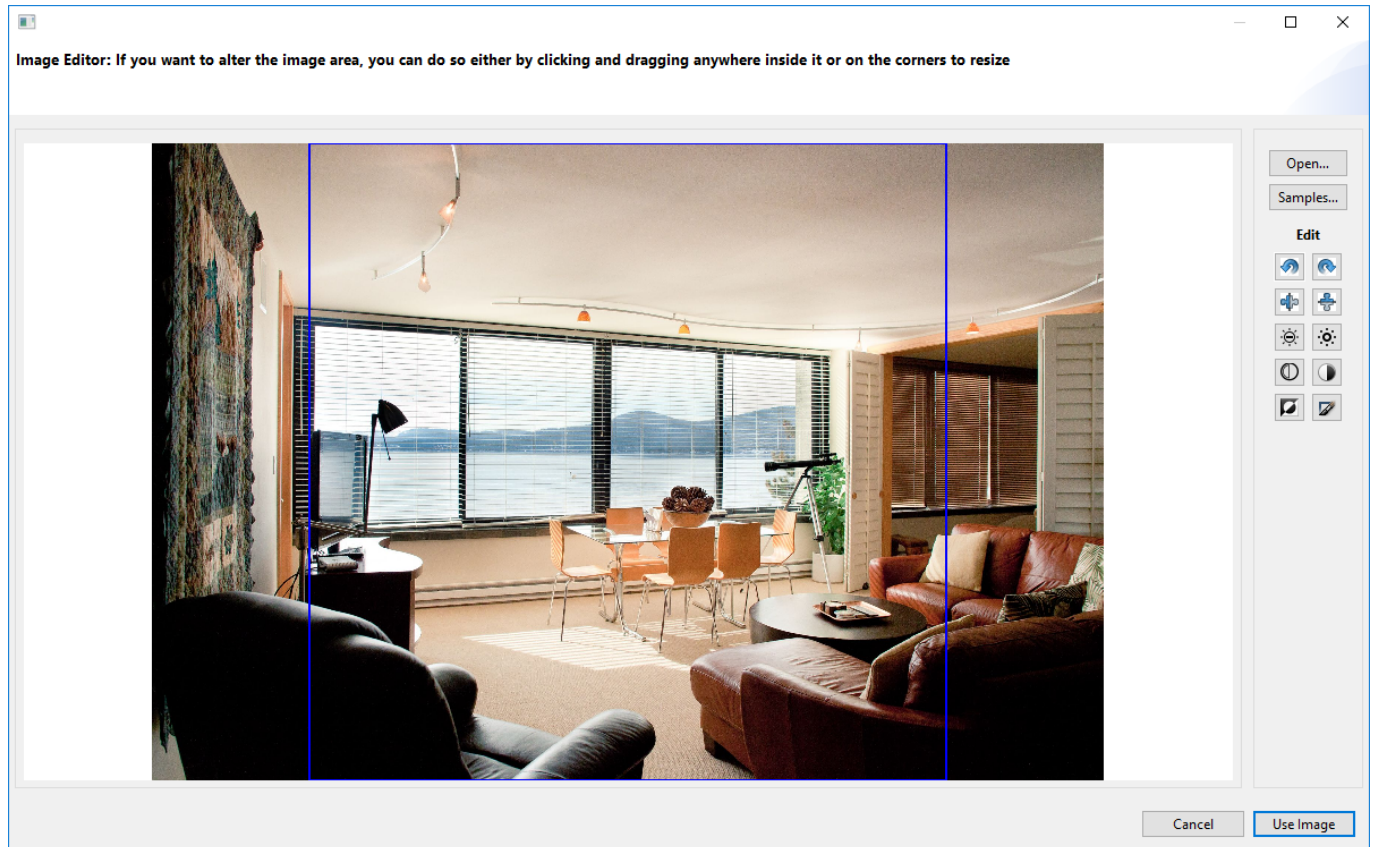
Address already exists

Address names must be unique in ayControl. If merging a profile would lead to two addresses with the same name, the ayControl Editor will offer to automatically rename the address (adding a suffix such as “(1)” to its name). This should not cause any problems; you can rename the address for more clarity or simply leave it as it is.

Image Editor

The Image Editor is a module of the ayControl Editor that is opened whenever you need to select or edit images for your profiles.

It offers a library of sample images, helps you select images with the right size and aspect ratio and allows you to make some modifications and improvements to your images.



To choose an image, open one from your computer or the image library, edit it and confirm by clicking "Use Image". The individual tools of the Image Editor are described below.

Image area

The image area takes up the majority of the space and shows you a preview of the image.

Overlaid on top of the image you can see the blue crop rectangle. It is set to the correct aspect ratio for the image you're trying to add to your profile (e.g. square for room menu images). In the image above you can see the square crop rectangle on top of the sample image, which is in landscape format.

You can move the crop area around by clicking inside it, holding down the left mouse button and dragging it. You can resize it by dragging its corners.

Open buttons

In the top right you can see two buttons labeled “Open...” and “Samples...”. The latter will let you select an image from the included image library, grouped by room / topic (e.g. living room, multimedia). The former will let you select any image file from your computer. Supported image formats are JPG and PNG.

Note: The samples need to be downloaded first. ayControl Editor should ask you whether you want to do so when you start it.

Edit Tools

Below the open buttons you can find a number of tools to edit your image:

- Rotate left / right
- Mirror horizontally / vertically
- Increase / reduce brightness
- Increase / reduce contrast
- Greyscale
- Gaussian blur

Note: Some of the tools, such as increase / reduce brightness or Gaussian blur are not undoable. If you made a mistake and want to start over you have to reopen the original image via the “Open...” or “Samples...” button.

Autosave

ayControl Editor includes an autosave feature that will automatically create backups of your profile in regular intervals. By default an autosave is created every ten minutes. You can change the time interval or turn autosave off by navigating to “Settings” → “Autosave” in the menu.

The autosaves are stored in the same directory as your profile, under the subdirectory <profile name>_Autosave. If you need to go back to an earlier version of a profile simply load it from the autosave directory.

Note: Some autosaves may be deleted automatically after a while. Only the most recent autosave per day is kept except for the current day.

Transferring a Profile to a Device

There are several ways to transfer a profile to your Android/iOS device:

- Wi-Fi transfer
- Email transfer
- Dropbox or download via web (URL)

Wi-Fi transfer

The easiest way to this is to use the Wi-Fi transfer functionality that is already available in the ayControl Editor. This works as follows:

- Turn on the Wi-Fi transfer in the ayControl app. If you are using an Android device, in the ayControl app go to menu and select the Import Profile option, and then select Transfer Mode. If you are using an iOS device, in the ayControl app go to Settings, select Wi-Fi transfer from the list and turn it on by pressing the on/off button.
- In the ayControl Editor click on the **transfer icon** (the last icon in the menu bar). A new window will be opened displaying the information about the packages to which the current profile conforms and the number of used ayControl elements.



- Click on the Wi-Fi transfer button in the lower right corner of the window that has just been opened
- The name of your mobile device should appear on the list of devices in ayControl Editor. Select one or more devices to which you want the profile transferred to, and after a few seconds the profile will open in the ayControl app on your mobile device.

Note that for Wi-Fi transfer the mobile device and the computer running the ayControl Editor need to be connected to **the same Wi-Fi network**. If you want to transfer a profile between different local networks (e.g. computer in LAN, device in Wi-Fi network) your router must support multicast forwarding and have the corresponding option enabled. Also, multicast filtering has to be disabled on your routers for the Wi-Fi transfer to work.

Connect manually: If your device is not found and displayed automatically you can also connect manually. Simply click the Connect manually... button to do so. Enter the IP address of your device in the dialog. You can find the IP address in the WiFi transfer notification in the Android app or in the profile transfer settings dialog in the iOS app.

Email transfer

Another option would be to send the saved .a3z file via email. In this case, all you need to do is to open your email app on your mobile device and open the attached file with ayControl 3 (long press on the attachment if you are using iOS device, or just a tap if you are using Android). Your mobile device will load the ayControl profile.

Hint: This option is perfect for updating a customers profile when your customer is far away. Save your valuable time and kilometers!

Dropbox

If you are a Dropbox user, you can save the profile you want to transfer to a Dropbox folder and just open it on your mobile device after Dropbox has synced your folder.

Hint: This option is perfect for your personal usage because if the ayControl profile is stored in your Dropbox folder, every time you save changes the newest version of profile will be ready to use on your mobile device. Another advantage is that Dropbox maintains revision history of your files.

Another option would be to upload the profile to a web server (if one is available to you), and then just to load the specific URL with a browser on your mobile device and download the profile.

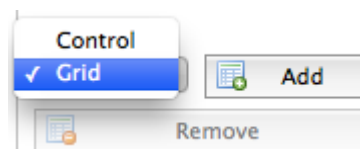
General profile design guidelines

In order to get a feeling about how to design profiles for your customers/yourself take a look at our demo profiles. These profiles are available in the ayControl Editor (in the [Info-Tab](#) as well as in Android/iOS apps. These profiles will give you a general overview of how to use different ayControl features.

Two columns in the landscape mode for tablets

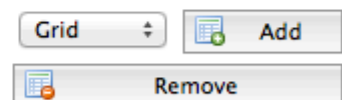
If you are designing a layout for a landscape mode and you don't have too many control elements you might want to use two columns instead of three, which is default. In order to achieve this you can use grid in grid.

In the dropdown menu, select “grid” instead of “control”, and click the “add” button.



Spread the subgrid you have just added over the entire grid.

Entries



Entry Details

Position

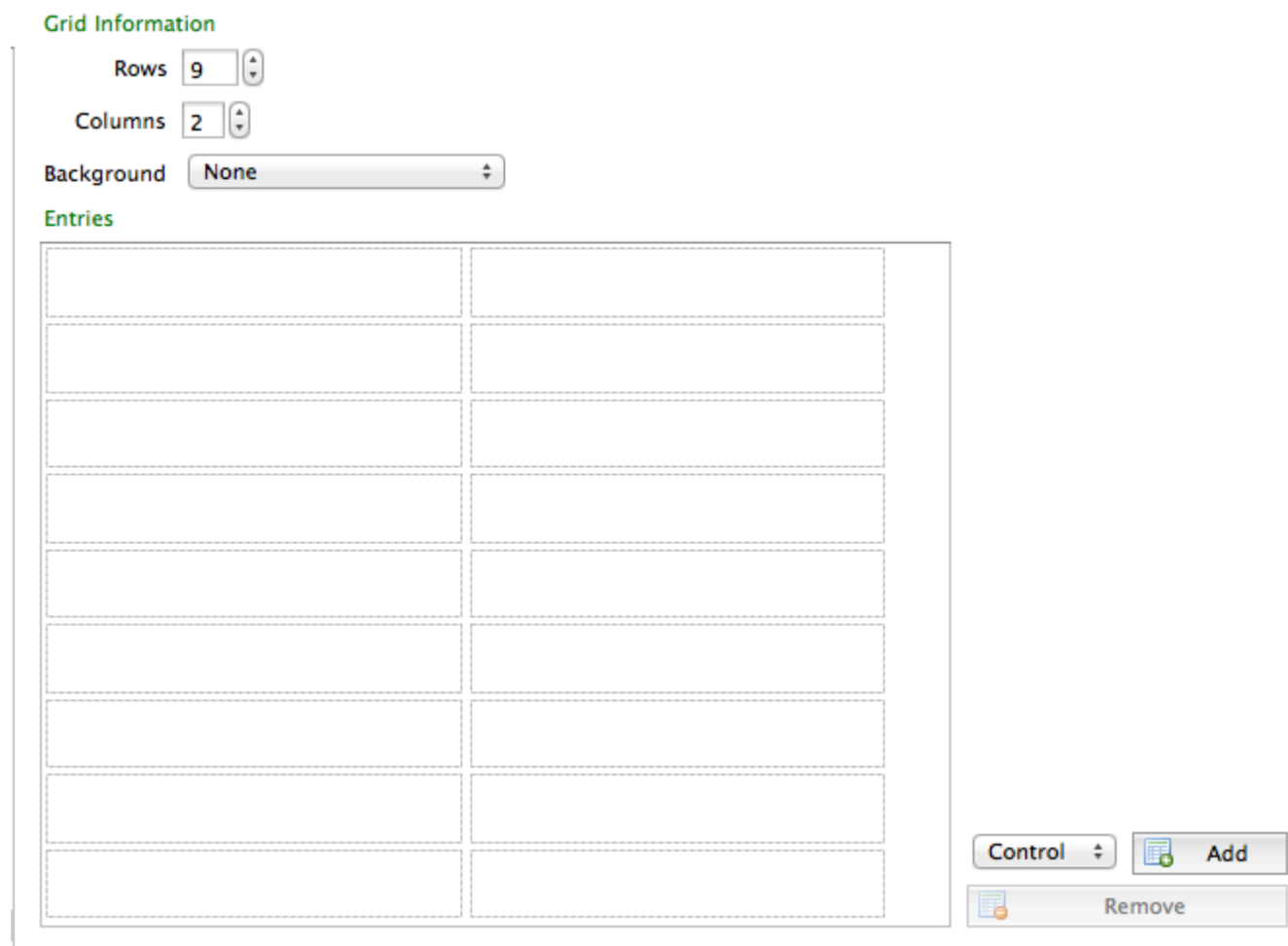
Row Column

Size

Rows Columns

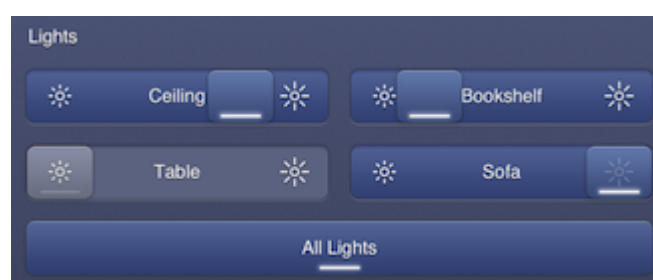
Then double click the grid to open it. There you can set the number of rows and columns according to your wishes.

When using grid in grid it is recommended to use the same number of lines as the number of lines the subgrid holds in the main grid if you don't want control elements to appear too big or too small.



Spreading control elements over several rows and/or columns

Control elements can be spread over several rows and columns. This can be very useful in many situations. Lets say you have two lights in a room and a switch for each one, but also one switch to control both lights and you are designing the room layout in the portrait mode for a tablet. You could do the following: place the two separate lights side by side, and under these two place the switch that controls both of them and spread it over two columns. This way the user will instantly know that “the wide button” controls both buttons above it.



Separating different types of control elements

Separate different types of control elements: use pages if you have a lot of elements or if there is too little space (on the phones) or group the elements in different columns if there is enough space (tablets). If you have enough space to insert two or more groups of elements on a single page, use labels to name the groups. You may also leave rows empty in order to create some spacing.

An example of too many control elements in one page:



Control elements labeled and spread over two pages:



Troubleshooting

Should you experience any problems the ayControl app, you can always contact the ayControl support. Just write an email with a detailed explanation of the problem to support@aycontrol.com. You can also call us on +43 316 34 68 00 25.

It is always recommended that you describe the problem you're experiencing as detailed as possible. Make sure you let us know what steps did you take before the error happened. The easiest way to let us know what really happened is to use the logging functionality.

iOS

In order to turn on the logging functionality on your iOS device go to the system settings, select *ayControl 3* in the “Apps” section and make sure that the logging is activated. In the advanced section select the parts of ayControl you want to be logged. In the “Log Level” section, you can select the amount of information you want to be logged. We recommend you to set the “Log Level” to “Debug” because this helps us find errors more easily.

After you have activated the logging, go to the ayControl app and then go to the settings. In the “Diagnostics” section click on the “Log”. This will display all logged data. Initially, the log might be empty, but after using the ayControl app to reproduce the error you are facing, the log will be filled with information. If the error occurs, you can just go to the log again, click on the “Edit” icon in the upper right window, write a description of the error and the steps needed to reproduce it and send the log to the ayControl support via email.

Android

When the ayControl Android app crashes, the ayControl support team should usually receive a report of your issue right away. Most Android devices automatically send crash reports to app developers unless you explicitly turned it off in the Android settings.

ayControl automatically logs error and diagnostic information if you grant the app access to the device's storage. Go to Settings > Logging to view the logs. You can also send the latest log files to the ayControl support team by selecting “Send logs”. Please provide some additional information about your problem, as it helps the support team to solve your issues as quickly as possible.