



DALI Cockpit

Startup Guide V5

DALI Configuration Tool

Commissioning of DALI-
components and DALI-line
Traffic Monitoring

DAI Cockpit Configuration Tool

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1. Software Installation

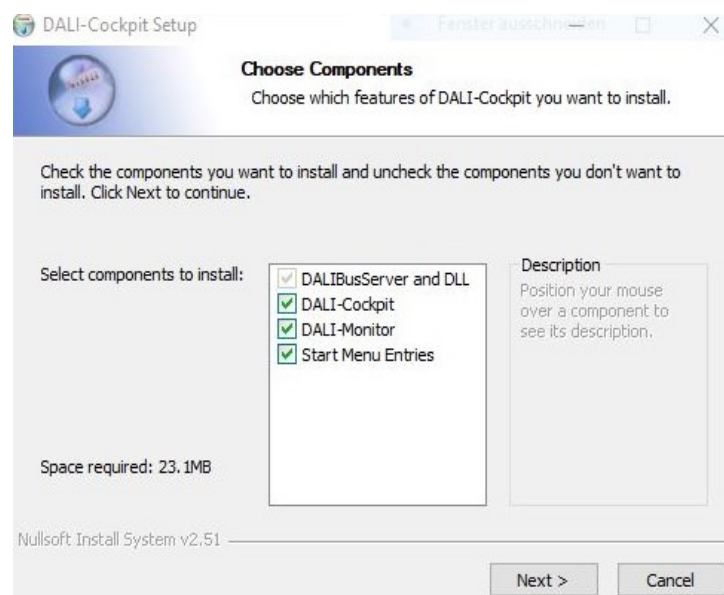
1.1. Requirements

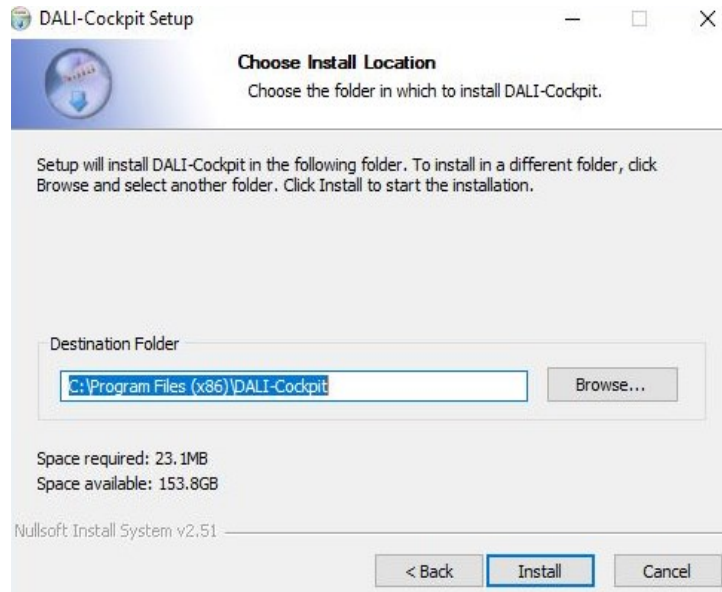
For the connection from your PC to a DALI-line an interface is required. Lunatone has different interfaces available that are supported by the DALI Cockpit software. These are the DALI USB, the DALI RS232 SCI2 and the DALI 4Net. Please check out the products on our website if you do not already have one in use. The DALI Cockpit software has been tested under Windows XP, Windows 7 and Windows 10.

1.2. Installation

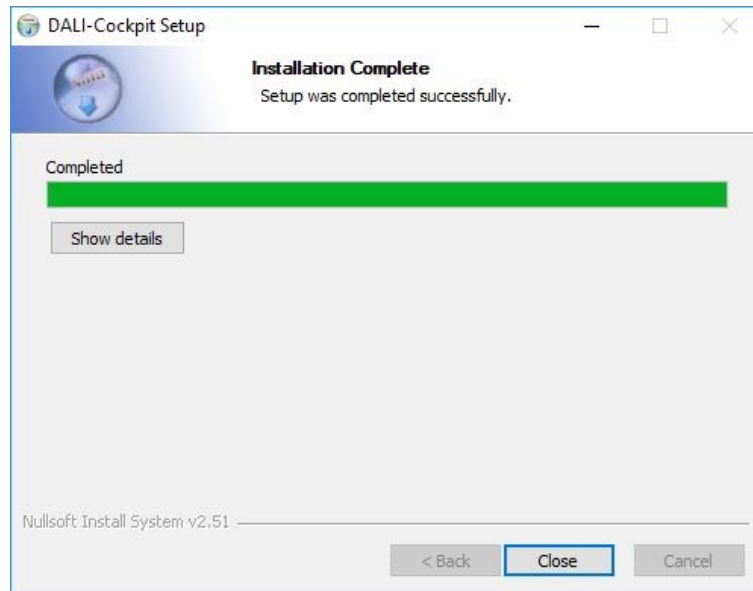
The DALI Cockpit software package consists of three parts, namely the DALI-Cockpit, the DALI Monitor and the DALI BusServer. We recommend the installation of all components to utilize full functionality. The BusServer is required for the communication between PC and the interface (DALI USB, DALI RS232 SCI2 or DALI 4Net). The DALI Cockpit itself is the configuration tool, while the DALI Monitor is a sniffing tool for DALI-line traffic monitoring.

Unpack the ZIP-File first and then execute the DALI_Cockpit_Vxxx.exe to start the installation process. After choosing the components and the destination folder the installation process can be started by pressing the “Install”-Button.





When the installation is completed the final window has to be closed manually.



After installation is finished you will find a DALI-Cockpit folder in the start menu entries.

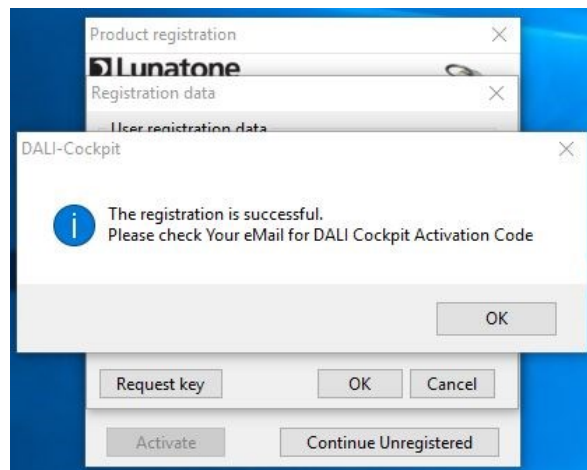
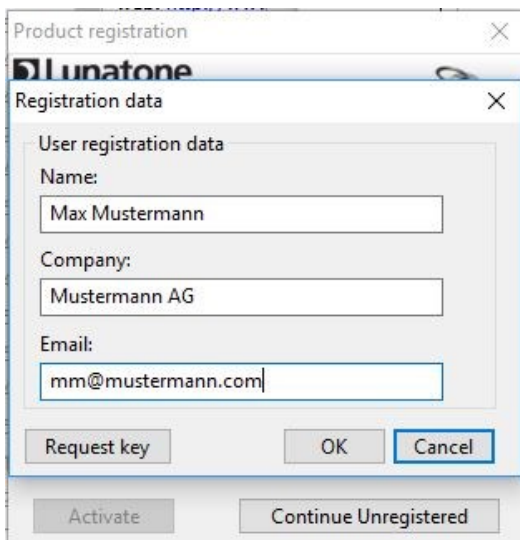


2. Registration

When the DALI Cockpit is opened for the first time after installation a window pops up where you can register and request a key for free or continue without registration and use the 30 day trial version.



Hit the request key button to get to the registration form.



All three fields have to be filled to succesfull request a key. You will get your registration key via email, if it doesn't appear in your inbox be sure to also check the spam folder.

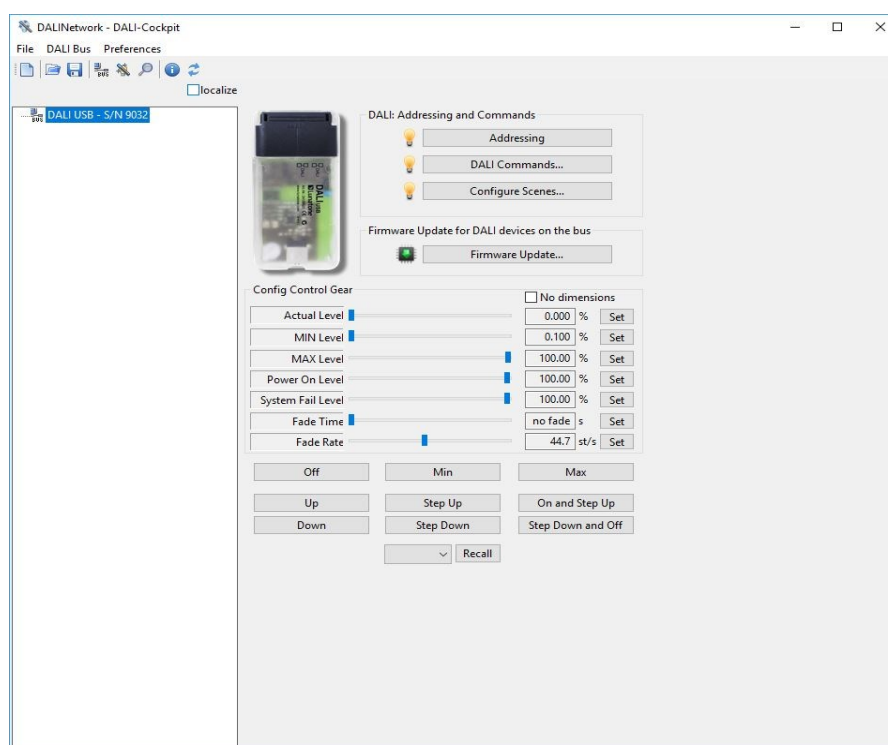


After using a correct key and pressing the activate button you will get a new window where you have to fill in your registration data again. By confirming this window the message box from above will appear and DALI Cockpit is registered.

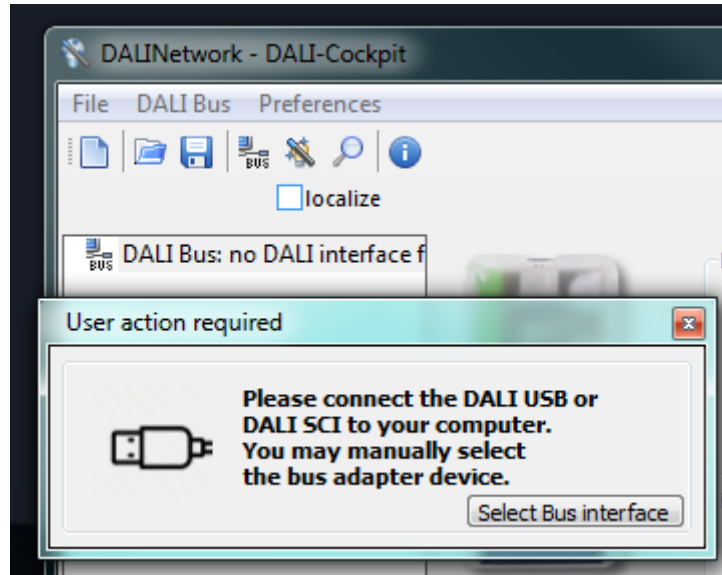
3. System Preparation

3.1. Build connection to the DALI-System

Connect the PC to the DALI-line via DALI USB, DALI SCI RS232 or DALI 4Net interface. After having started the DALI Cockpit DALI USB interfaces are found and shown automatically in the component tree. To connect to one of the other Interfaces choose “DALI Bus → Bus Interface” in the menu. For a connection with a DALI SCI RS232 you have to select COM and the respective port. For a DALI 4Net you have to select Ethernet and Lunatone TCP and then fill in the IP address. You also can search after DALI 4Net devices in the network with the “Search” button.



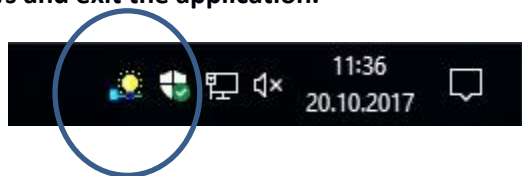
If there is no interface found, check out the connection between your PC and the DALI interface. If you use a DALI USB or DALI 4Net the interface should be detected even in the case of no DALI-line connected. In case you use a DALI SCI2 you have to connect the DALI-line before the DALI Cockpit can recognise the interface.



For Further details on the interfaces check the datasheets of the interfaces on the Lunatone website.

HINT:

If your DALI Interface won't connect to your PC you can try to close the DALIBusServer (an application that is running in the background during the time DALI Cockpit or Monitor is open). Thereto close DALI Cockpit and Monitor and right click the DALIBusServer symbol in the info area of windows and exit the application.



3.2. Language Settings

The language can be changed in the preferences menu. The languages available are German and English. DALI Cockpit has to be restarted to activate this change.

4. Test Communication

Before starting commissioning the DALI communication should be tested. In the menu of the DALI USB the DALI communication can be tested easily by sending commands broadcast on the DALI-line. This can be done e.g. by pressing RECALL MAX and OFF button and check the reaction of DALI control gear (optical feedback). Furthermore you can check the traffic on the DALI-line with the help of the DALI monitor (check chapter 6 for details).

The screenshot shows the DALI Cockpit software interface. On the left is a photo of the DALI USB device. The main interface is divided into several sections:

- DALI: Addressing and Commands:** Contains buttons for "Addressing", "DALI Commands...", and "Configure Scenes...".
- Firmware Update for DALI devices on the bus:** Contains a "Firmware Update..." button.
- Config Control Gear:** A table of sliders and input fields for various parameters:

Parameter	Value	Unit	Action
Actual Level	0.000	%	Set
MIN Level	0.100	%	Set
MAX Level	100.00	%	Set
Power On Level	100.00	%	Set
System Fail Level	100.00	%	Set
Fade Time	no fade	s	Set
Fade Rate	44.7	st/s	Set
- Control Buttons:** A grid of buttons including "Off", "Min", "Max", "Up", "Step Up", "On and Step Up", "Down", "Step Down", "Step Down and Off", and "Recall".

Callouts from external boxes explain the functions of specific buttons:

- A box on the right titled "Commissioning" points to the "Addressing" button, with sub-points "Addressing" and "Scene Configuration".
- A box on the left titled "Sends DALI command OFF to all devices" points to the "Off" button.
- A box on the right titled "Sends DALI command RECALL MAX to all devices" points to the "Recall" button.

5. DALI System Commissioning

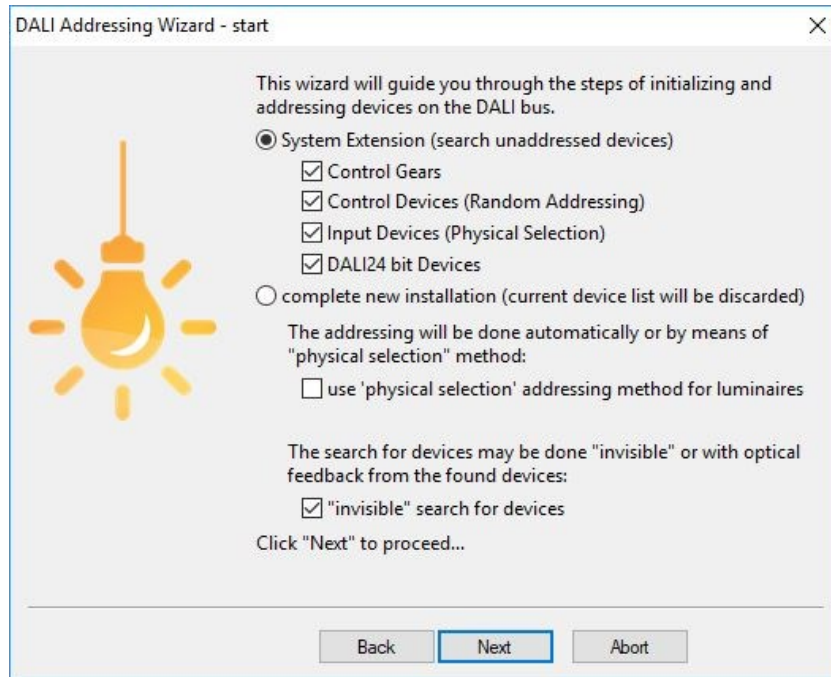
5.1. DALI Addressing Procedure

The addressing procedure can be initiated by pressing the "Addressing"- button on the DALI USB site. An alternative is to start the process via the DALI-Bus menu.

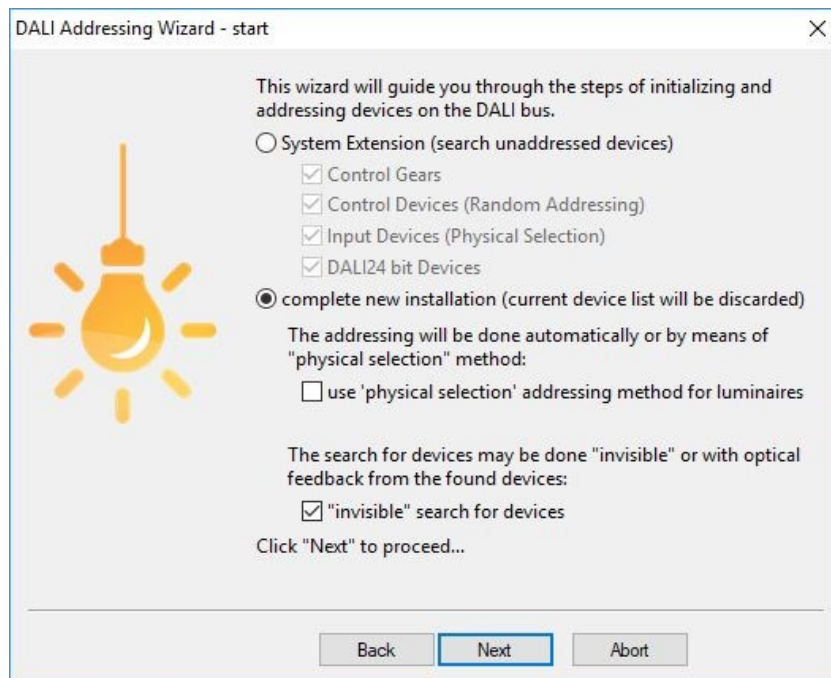
In the DALI Addressing Wizard there are several options. You can choose between system extension and new installation. Furthermore the physical selection mode for luminaries and an optical feedback for detected devices can be selected.

You can select between a complete new installation and system extension. Performing a complete new installation will delete all existing DALI-addresses and already defined group dependencies, whereas the system extension mode keeps already defined DALI addresses and group dependencies, only unaddressed devices will get an address.

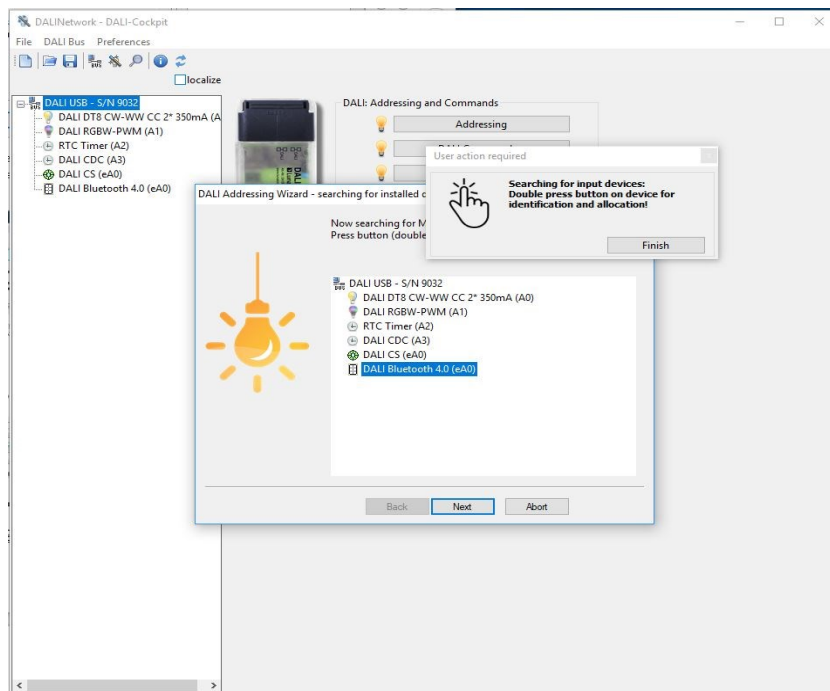
In the system extension mode you can furthermore select which kind of devices the DALI Cockpit should search for: Control Gear, Control Devices using Random Addressing Method and/or Input Devices using Addressing Method with physical selection.



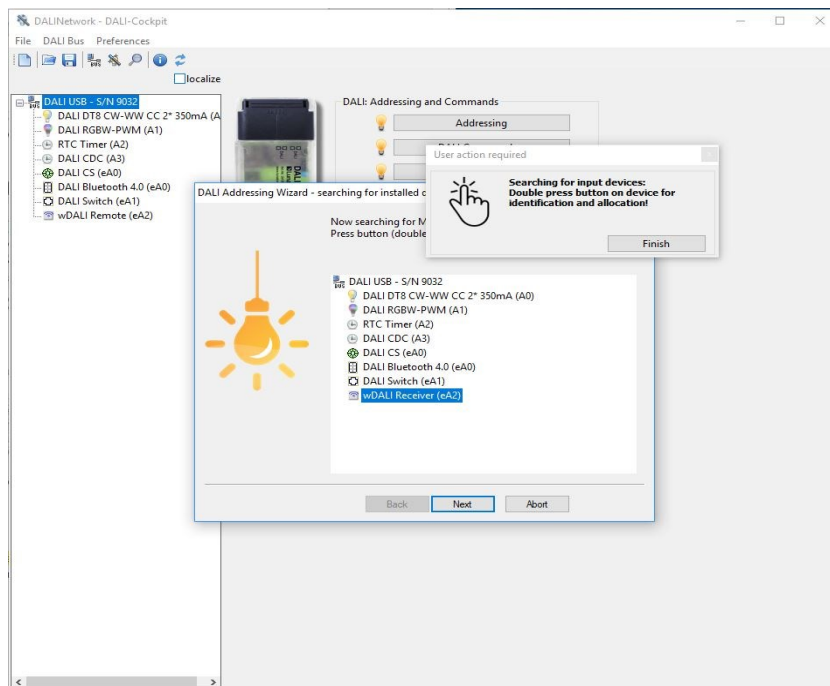
or



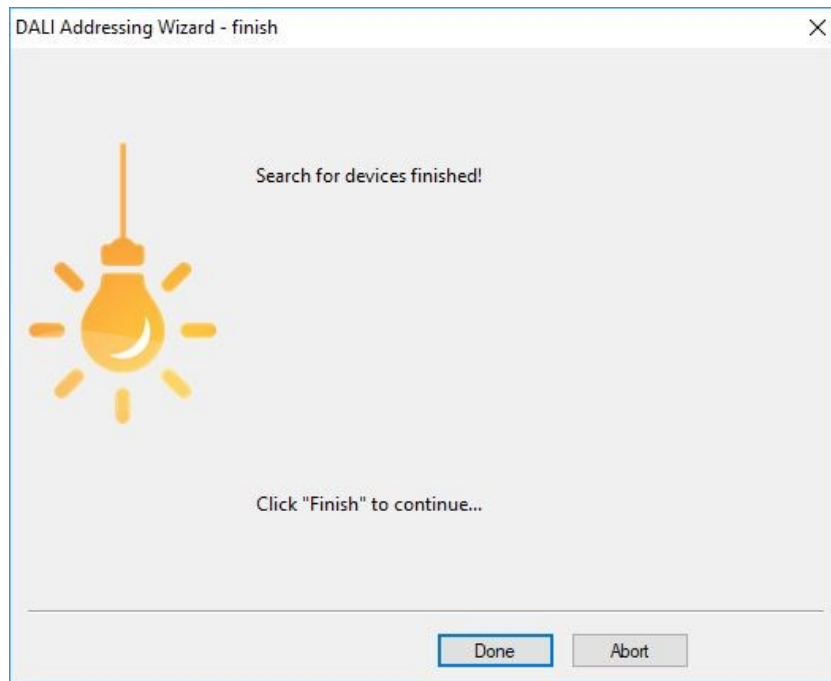
After the automatic process has finished you will get the following window with a popup request to manually add control devices by pressing buttons on the device (Like DALI-Switch, DALI MC or DALI Touch Panel).



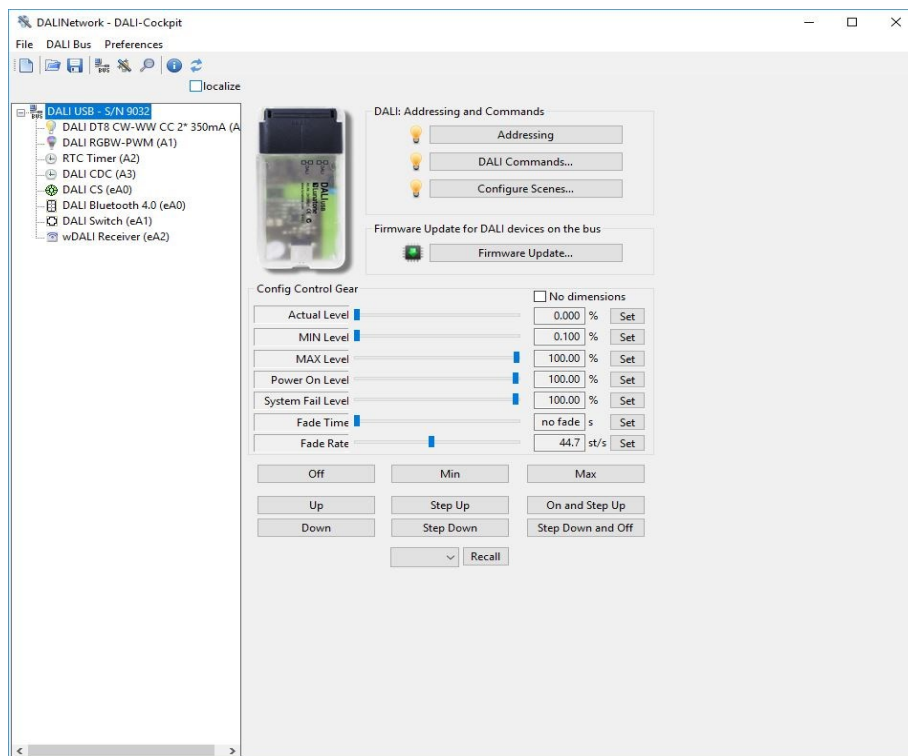
In this example we will add a DALI switch and a wDALI Remote. When detected correctly the components will be added in the DALI device list as shown below.

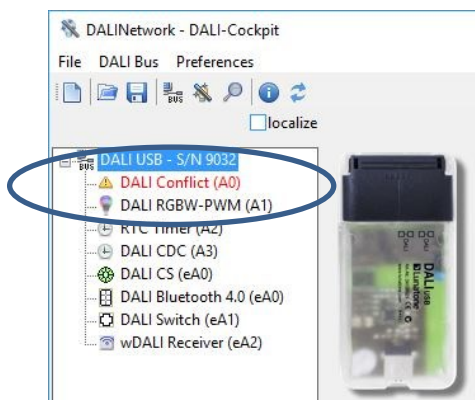


Pressing the finish button will close the popup, “Next”-Button finishes the Addressing procedure. For leaving the DALI Addressing Wizard finally press “Done”.



After leaving the DALI Addressing Wizard you will find an overview of all addressed DALI-components in your system in the component tree on the left. All Lunatone devices will be shown with a specific symbol, name and DALI address. All other devices will show up accordingly to their DALI device type and with DALI address.





Sometimes it can happen that a DALI Conflict is shown in DALI Cockpit, if you add additional devices to an existing DALI system. To resolve this, delete this DALI address and do a new addressing procedure (extension).

Conflicts can be avoided by always deleting the address of devices you previously addressed before adding them to the DALI system.

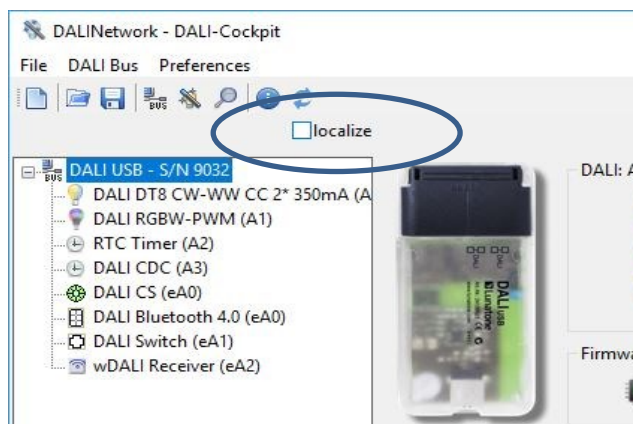
HINT:

For a better overview the devices can be renamed by right click → rename. The DALI address is not changed.

5.2. DALI Device Localisation

5.2.1. Localize Checkbox

For easier localisation of your lamps and some control devices you can select the specific device or group and use the localize checkbox to switch between two states.

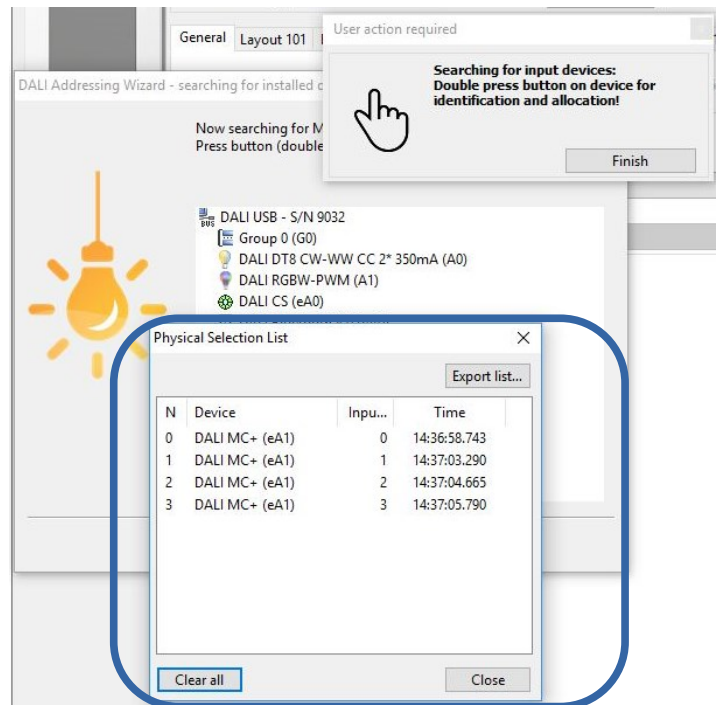


- **Control gear (e.g LED Dimmer DT6/8, PD):**
Switches between Max and Min Level. Checking sends RECALL MAX and unchecking sends RECALL MIN.

- DALI CS / Touchpanel (BT):**
 Switches between LED blinks and LED blinks not. Checking enables blinking and unchecking disables it.

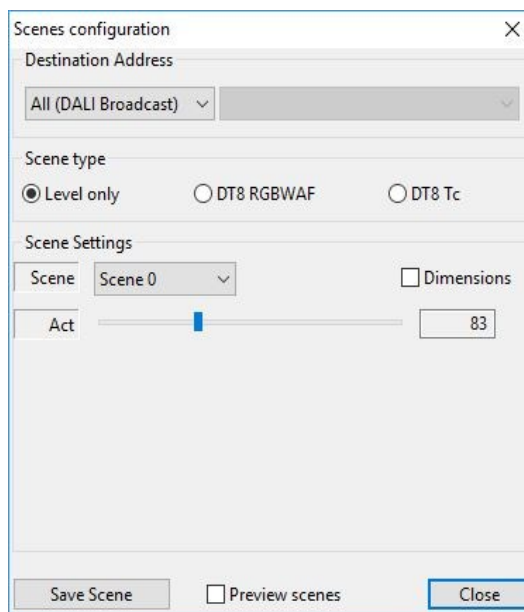
5.2.2. Physical Selection List

The “Physical Selection List” can be used for the devices DALI MC, DALI MC+, DALI Switch and DALI Touchpanel and contains the order in which the inputs/buttons are triggered. This should make locating of control devices after addressing easier. To create a “Physical Selection List” you have to trigger inputs/button at the end of the addressing routine when the “User action required” window appears. The device inputs will show up according the order you physically trigger them. This list can also be exported as a *.csv table.



5.3. Scene Configuration (Broadcast)

For fast scene configuration (or broadcast and group configuration) the “Configure Scene” menu is helpful.

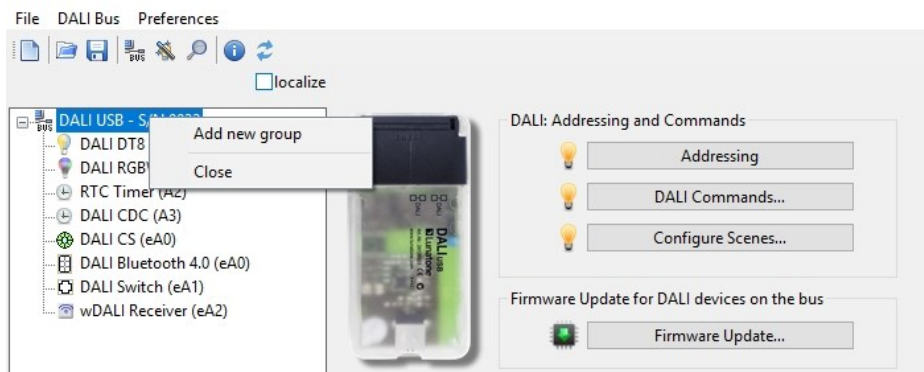


In the menu you can enter the effective range you want to configure, the type of scene (level only or special DT8 color scene type), the scene number and the values. Pressing “Save Scene” will store the parameters to the devices affected by the selected address range.

Another possibility to configure scenes for a device is on the device page itself. However this menu is helpful to configure several devices at once.

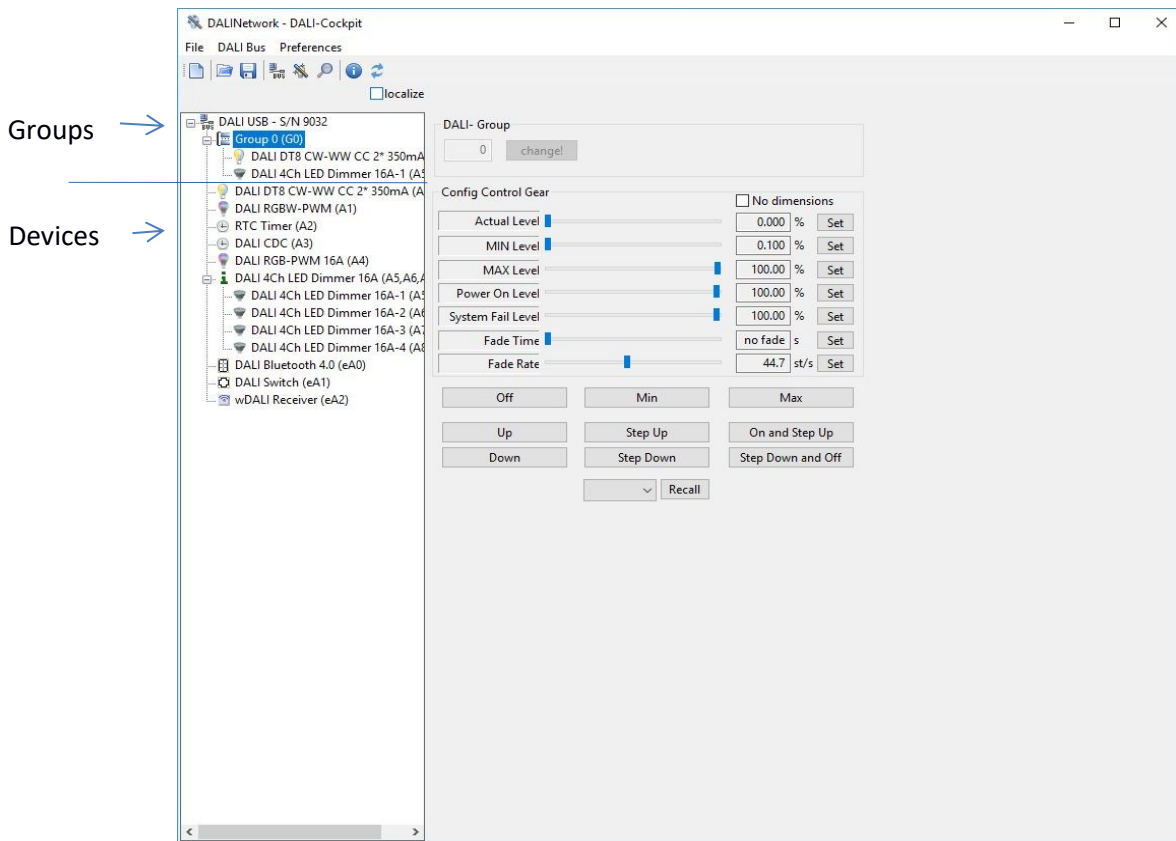
5.4. Group Handling

Add a new group by Right Clicking on the DALI USB in the component tree.



For adding group members just use the drag and drop function in the component tree. Groups are always displayed at the top of the component tree, below all addressed devices are listed. Selecting the group window allows to send configuration and control commands to the according group.

You can enter the group menu by selecting the group in the component tree. In the menu you can change the group address and turn on and off all ballasts within the group.



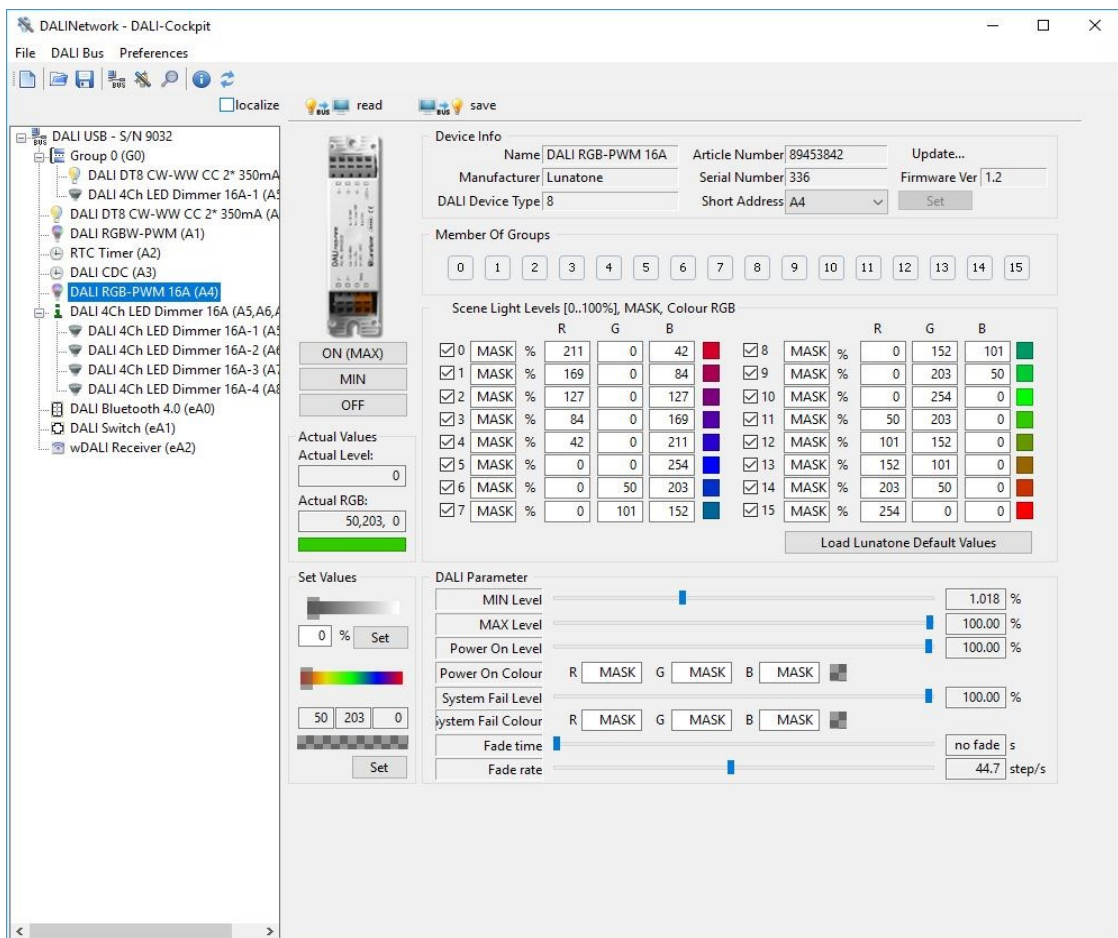
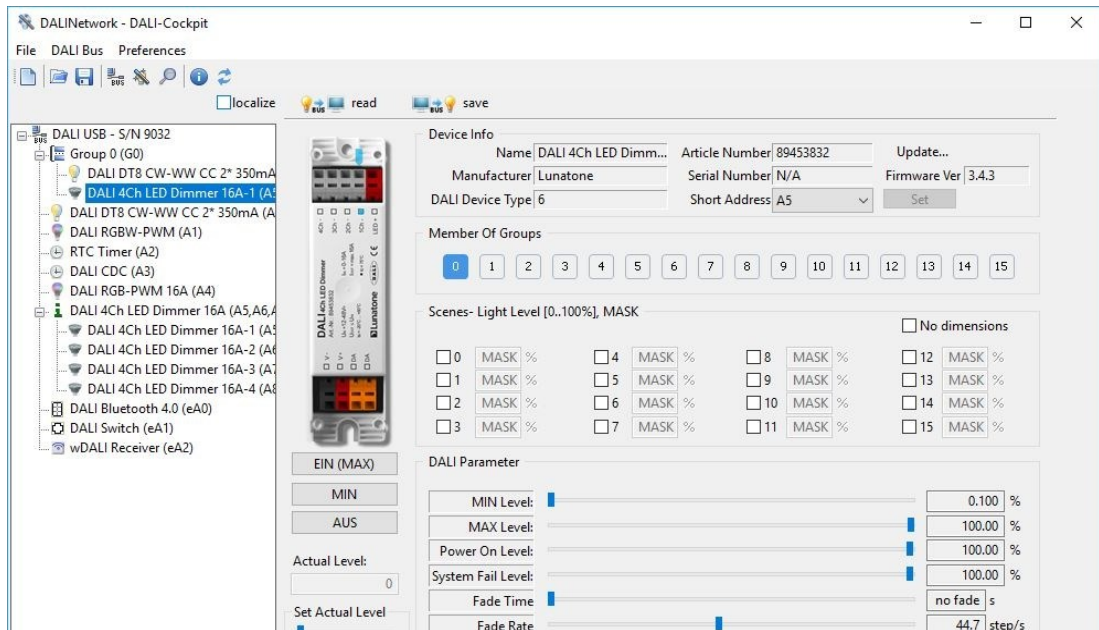
5.5. Configuration of Components

By choosing a DALI-component on the left you enter the configuration site of this component.

Find examples of a LED Dimmer and a RGB-Dimmer below.

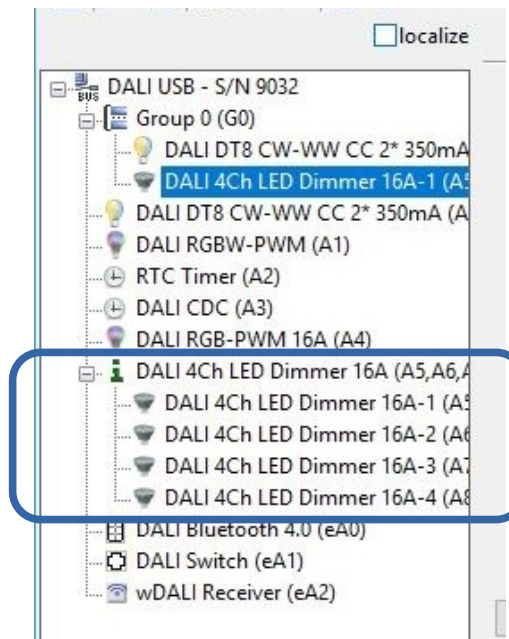
In general the control gear site is separated in the device info block, and the configuration block. In the configuration block group dependencies and scene values can be defined as well as all standard DALI parameters and other helpful Lunatone specific parameters.

For other device types (especially DT4, DT5 and DT7) additional settings may be available. They can be entered by additional tabs of the configuration block.

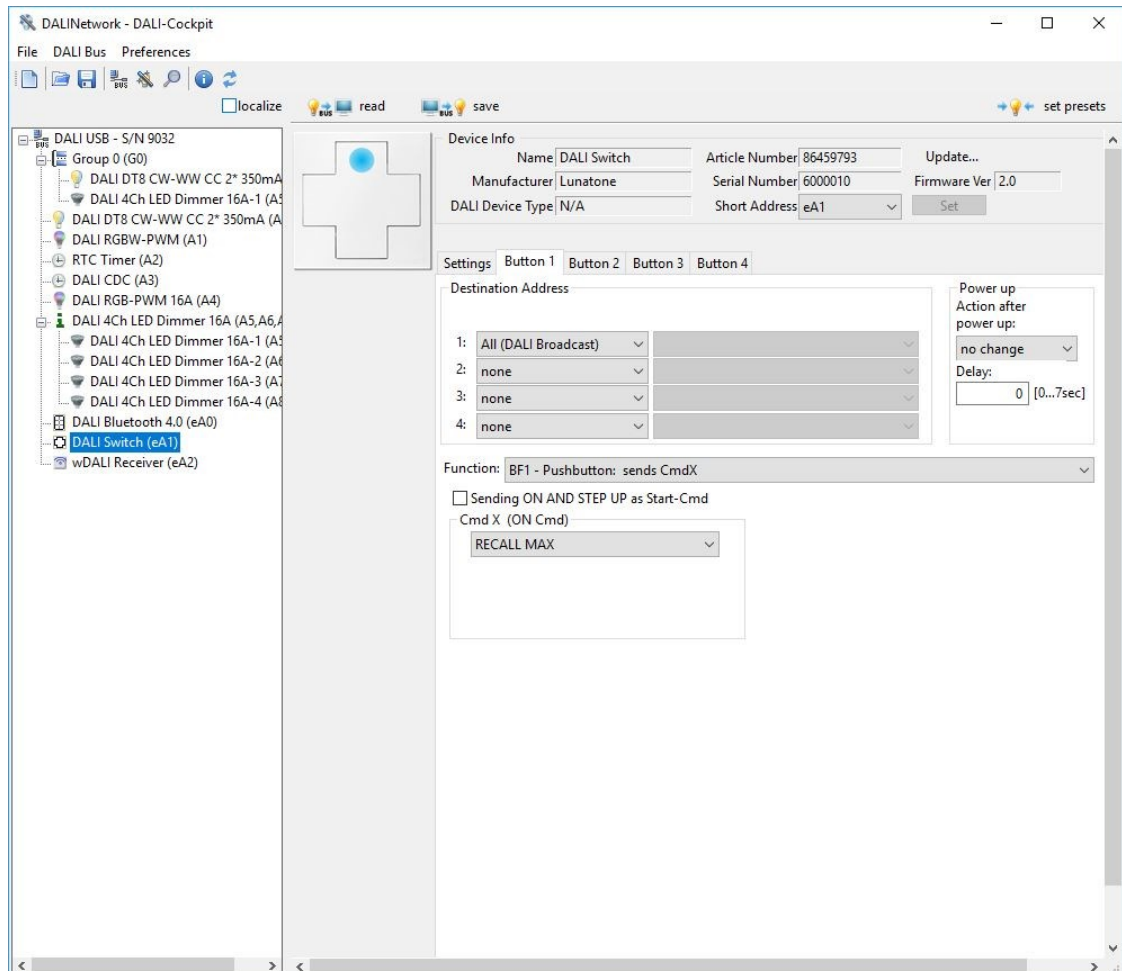


DALI controls configuration sites are divided in a device info block and a device setting block. The device setting block often consists of several tabs, in most cases a general settings tab and a tab for each input or sensor (depending on device).

Some devices are grouped like in the picture below. Devices that can have multiple addresses are displayed in DALI Cockpit like that. This “group” can contain settings that are relevant for all the addresses of the device (e.g. Change Operating Mode).



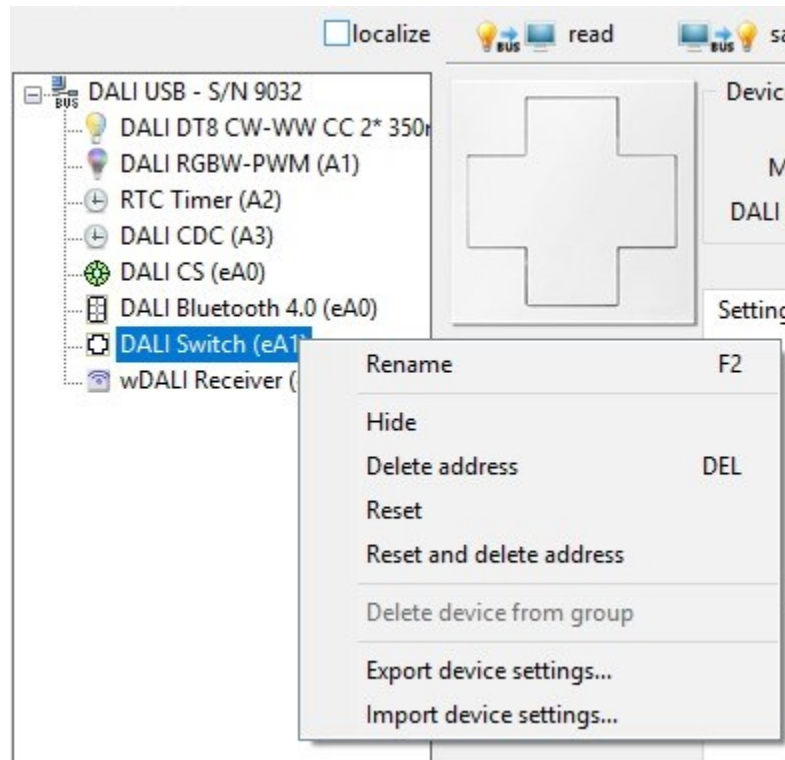
Example for an input of the DALI Switch:



For most controls you can generally define:

- Target address: What DALI devices should be controlled
- Button Function: Behaviour types if button is pressed (e.g. long/short press)
- Command(s): Action to send for the target address

For more detailed information to the parameters that can be configured check the datasheets of the components on the Lunatone site.



When a device is right clicked a menu with multiple entries shows up.

Options available for all devices:

- **Rename:** Changes the name of a device. The name is not saved in the device, just in the network file.
- **Hide:** Will hide a specific device. Can be displayed again by addressing with system extension.

Delete address: Deletes the address of a device, but it is still listening to broadcast commands.

- **Reset:** Sets the reset values.
- **Reset and delete address:** Is a combination of the two points above.

Additional options (only supported by some of our devices):

- **Export device settings:** Exports the data into a *.xds file.
- **Import device settings:** Imports data from a *.xds file.

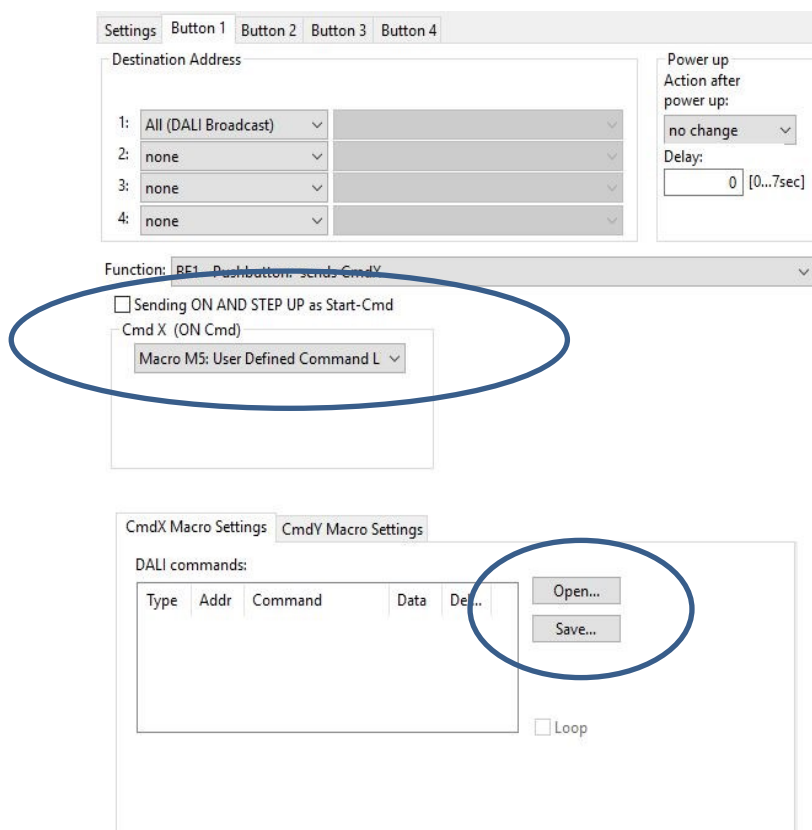
HINT:

With the “Read”-Button at the top of the form the actual component properties are read from the device. After having made changes press the “Save”-Button to store the properties to the DALI-device.

5.6. Macro Usage – Individualize your Application

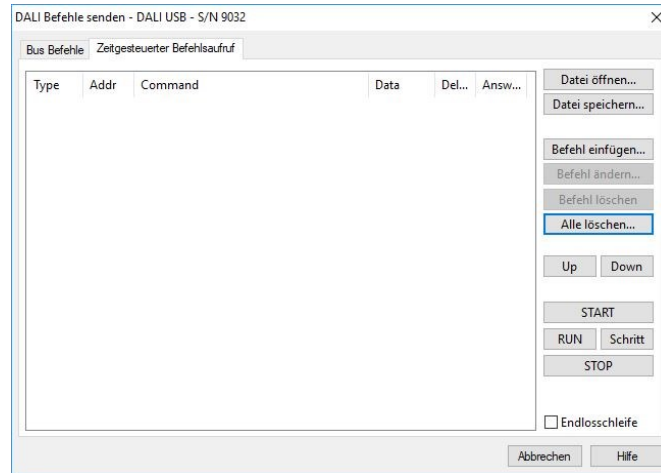
Each button of a control device can be configured by defining button function (e.g. different action for short/long press, toggle button, stairways control etc.), the effective range and the DALI-Cmd that should be sent in case of the defined input action. In the screenshot above the button 1 is configured to send RECALL MAX broadcast on a button press.

Most devices also provide the possibility to use predefined macros or user-defined command lists instead of sending a DALI Cmd to the bus.

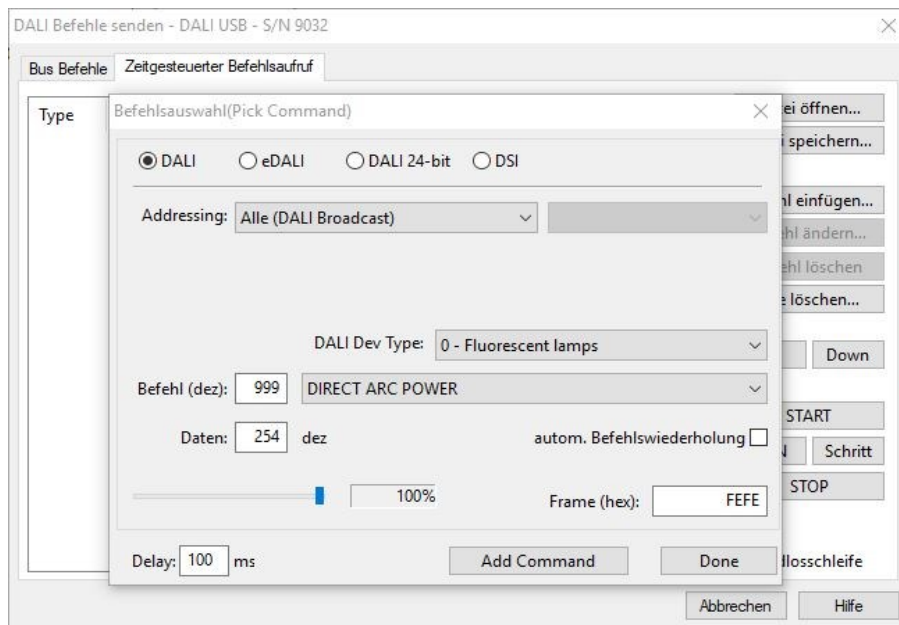


A user-defined cmd-list is an individual list of DALI-cmds. In this case the destination-addresses defined on the top of the page have no effect because the addresses are already defined in the DALI cmds themselves.

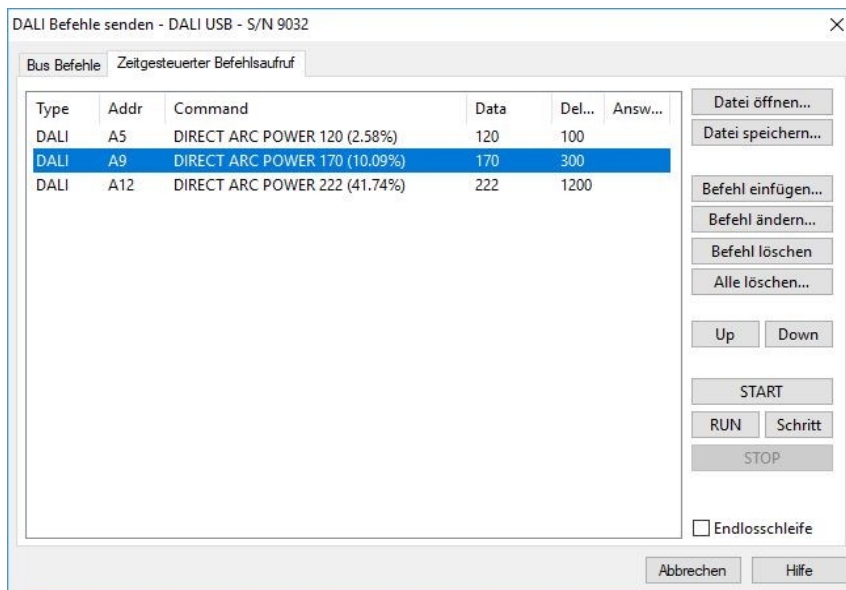
A user defined cmd-list can be generated using the “DALI-command” menu (DALI Bus -> DALI Commands -> Commands Over Time).



With the help of this editor a cmd-list can be generated by adding several commands of your choice:



For each command in the list a destination address and the DALI command can be configured. Furthermore the delay time after the command can be defined. E.g. adding 3 Direct Act Power Cmds for different destinations to the command list will result in a list like the following:



After saving this list to a file (*.cot) it can be loaded for each user-defined command list of your controls.

The user defined command-lists are a powerful feature. They offer a wide spectrum of additional functions that are not supported by the embedded functions of the device itself. As an example it is possible to send commands to different destinations on short and long button press (whereas in the standard setup there is always the same destination valid for the function defined for the button) or to send several commands to different destinations on a button press. Furthermore a command-list can be used to reconfigure devices (using configuration commands), which can be used to change the function of a control device or to realize dynamic groups and scenes.

HINT:

Please note that user defined commands lists offer high flexibility. Due to this reason each entry in the command list contains information about the destination address. Hence each user defined macro is unique and the list has to be adapted if its function should be applied to another address range!

6. DALI-Line Monitoring

With the DALI monitor the traffic on the DALI-line can be visualised. This may be helpful to analyse if your controls are configured correctly and send the correct commands to control gear on specific events.

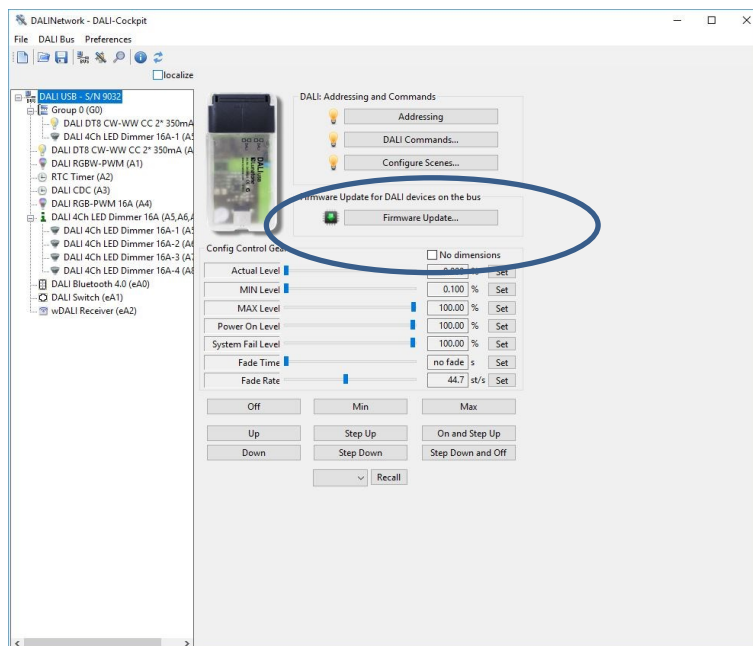
An example is shown below.

Type	Hex Data	Address	Command	Time	Date	Delta (mS)
DALI16 IAP	0105	A0	RECALL MAX LEVEL	16:17:05.463	27.09.2017	
DALI16 IAP	0106	A0	RECALL MIN LEVEL	16:17:11.713	27.09.2017	6250
DALI16 IAP	8105	G0	RECALL MAX LEVEL	16:17:19.416	27.09.2017	7703
DALI16 IAP	8100	G0	OFF	16:17:26.374	27.09.2017	6958

The monitor log can be saved to a file. This can be an important help for various analysis.

7. Firmware Update of Lunatone devices

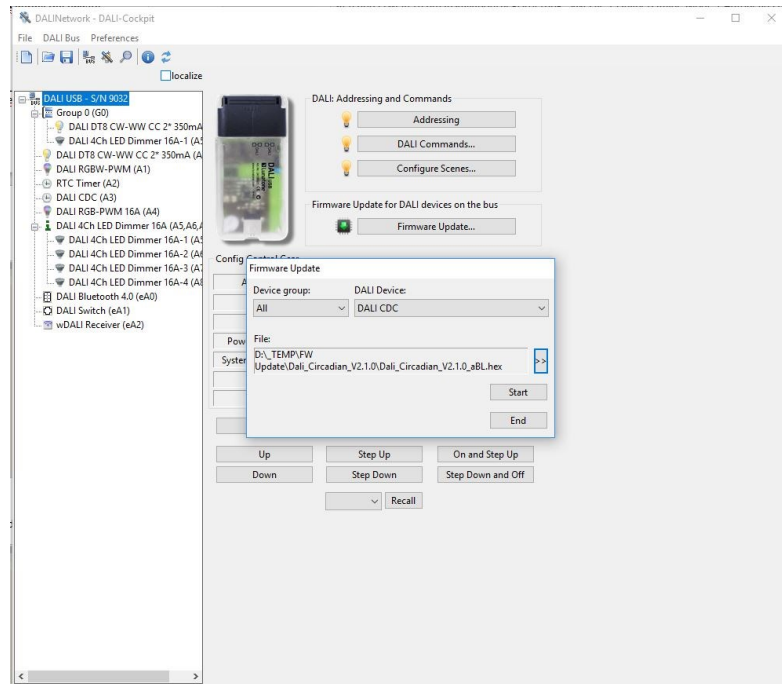
For using the firmware update functions for Lunatone DALI-components you need an activation key to activate this feature (supported from DALI-Cockpit version 1.0.6 and higher). For using this feature select the DALI-USB device in the component tree.



Then press the “Firmware Update” button and enter the activation key to enable this tool. Select the device and the location of the software and press Start.

HINT:

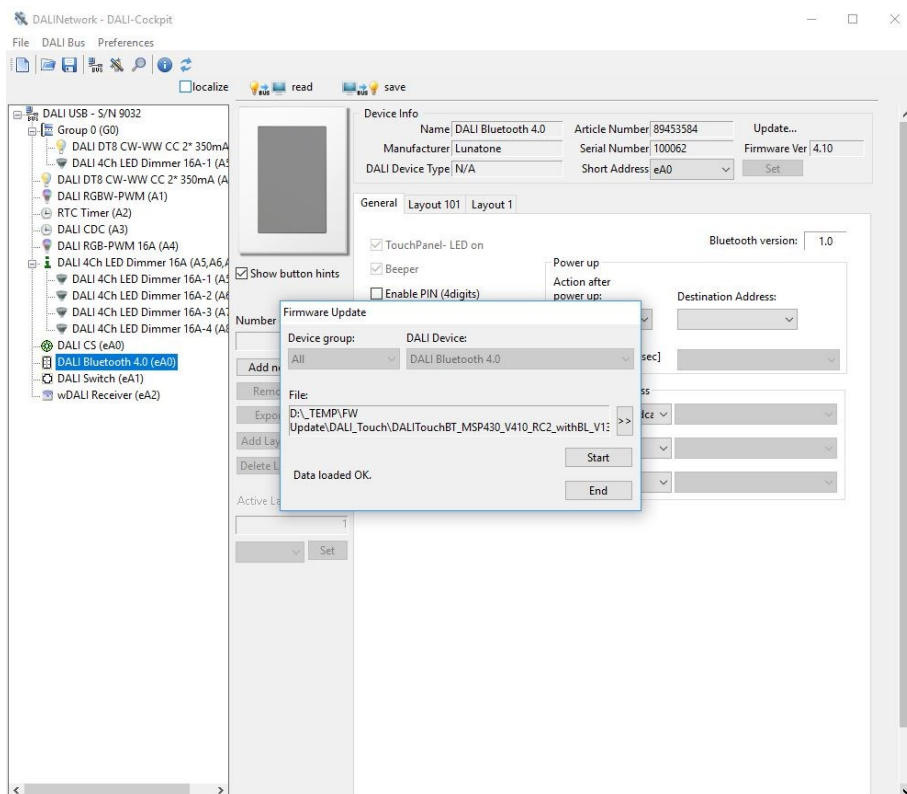
All devices that match the type you selected are updated. If you don’t want to update all of them you have to disconnect them from the DALI-line during the update procedure.



Another option to enter the Update menu is to press the “Update ...” button on the right top of the device info block.

The duration of the update procedure can last up to 15 minutes.

When the update has finished you get the message “Data loaded OK”.

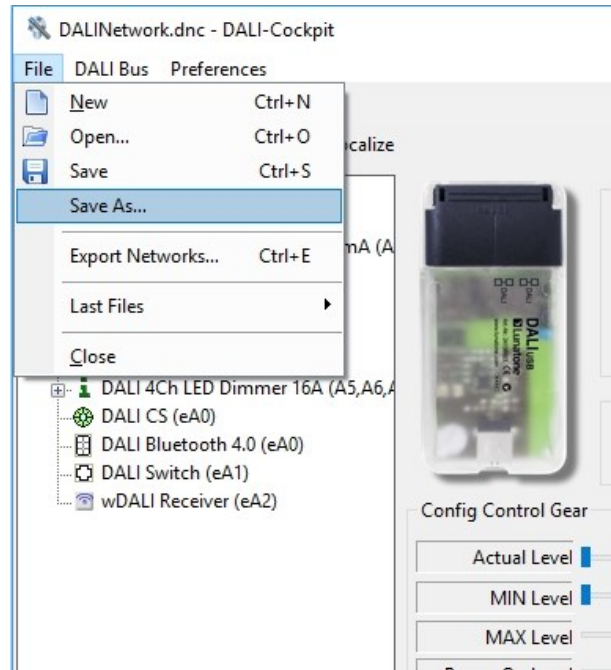


8. Offline Mode

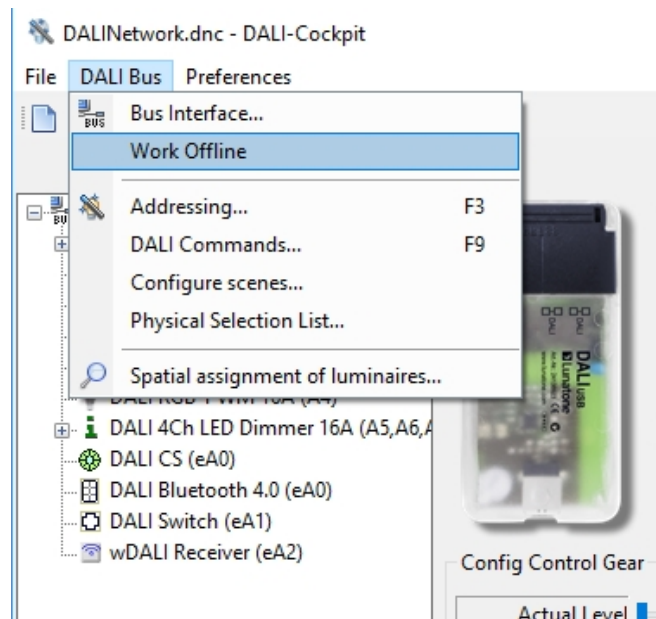
8.1. Save and open network files

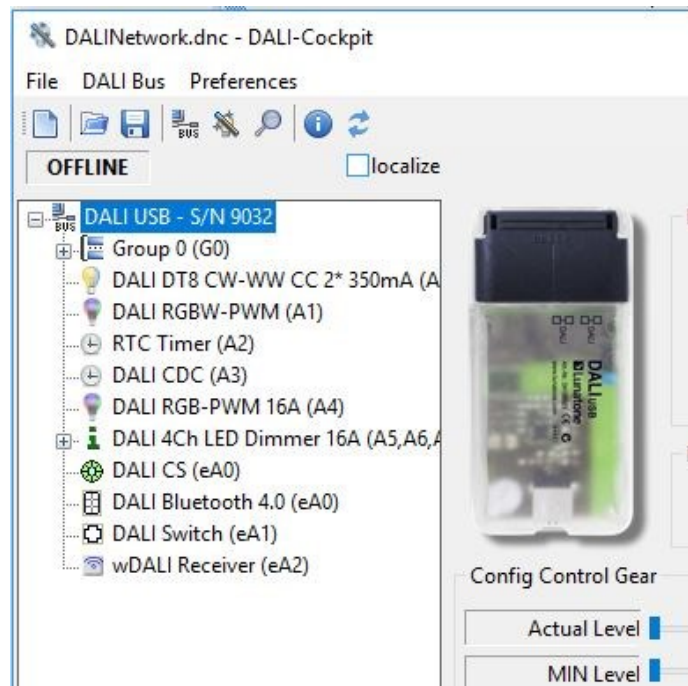
With “File → Save As” a *.dnc File is created and stores the current configuration you have in your Cockpit. This file includes all parameters from all your devices.

Note: The Parameters from the devices must be read out once.



After the file is saved, it can be opened without connection to the DALI line. To look into the configuration of the devices, Offline Mode has to be activated (DALI Bus → Work Offline).





When OFFLINE appears above the component tree the devices can be accessed without loading data from the bus.

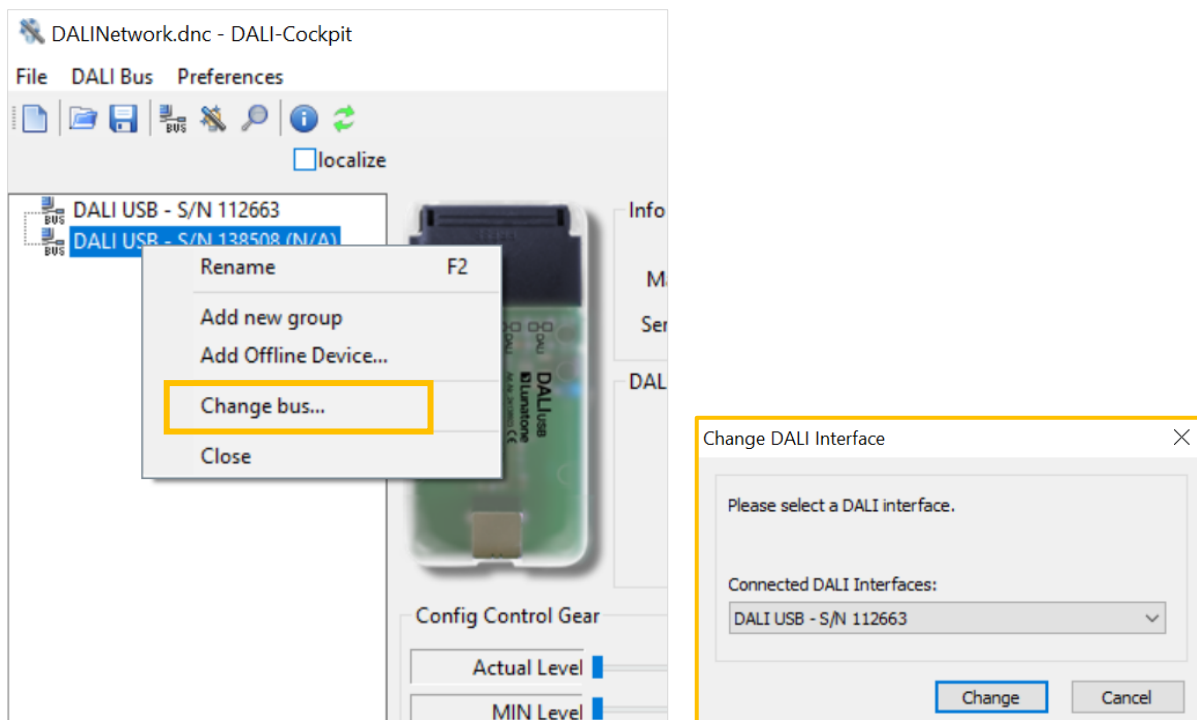
HINT:

With this file it is possible to change all parameters without directly changing the device settings. When connecting to the DALI USB / Application, the default configuration is that parameters are read out from the devices and overwrite the settings from the file. If you want to apply the changes to the actual DALI lines follow the instructions in 26.

Using the project-file with a different interface:

When saving a project, the currently used DALI interface (serial number) is also saved in the project file. If the project file needs to be used with a different DALI interface, the old interface needs to be replaced with the new interface in the cockpit:

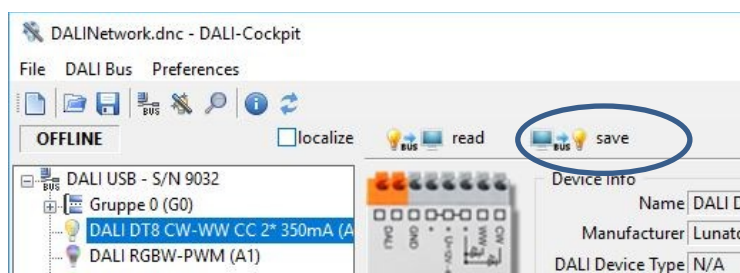
- Select the old interface in the component tree on the left (example see picture below S/N 138508, N/A indicates that this device is not connected)
- Right-click on the device to open the device menu and select "Change bus ...".
- Select the new interface in the opened dialog window (only the currently connected devices are displayed, S/N 112663 in the example below)



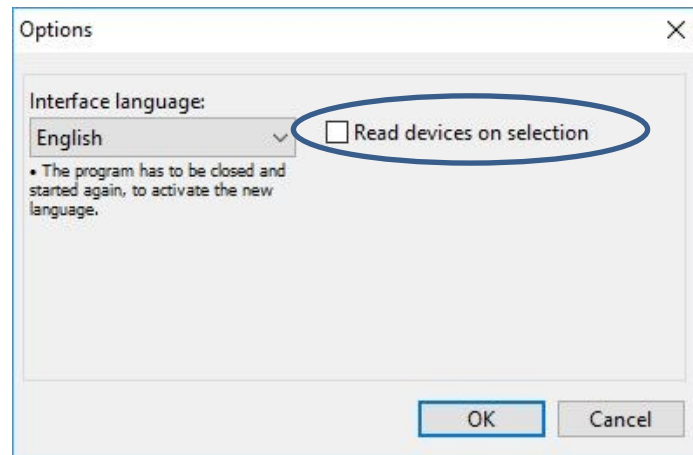
8.2. Edit network files and apply changes to DALI lines

First you have to load a *.dnc File (Creation of a *.dnc File is described in 24) via “File → Open”. After the devices are shown in the component tree you have to activate the offline mode (DALI Bus → Work Offline).

Then you click on the devices you want to configure, change the settings to your needs and click “save” (above the device configuration) and afterwards on “File → Save”.



Now if you are again connected to the DALI-line you go into Settings → Options and disable the “Read devices on selection” checkbox and click OK.



Load the *.dnc File using “File → Open”. Afterwards click on the device you changed settings and press on save. The configuration is now stored into the device.

Additional Information

DALI-Cockpit Download – <https://www.lunatone.com/produkt-kategorie/software/dali-cockpit/>

Lunatone products – <https://www.lunatone.com/>

Lunatone Datasheets and Manuals – <https://www.lunatone.com/downloads-a-z/>

Disclaimer

Subject to changes. All statements without guarantee.