



DALI Touchpanel



Manual Control Device

Multifunctional DALI control device
with flexible layout

Art. Nr. 24035465
Art.Nr. 24035465-AL

DALI Touchpanel Control Module

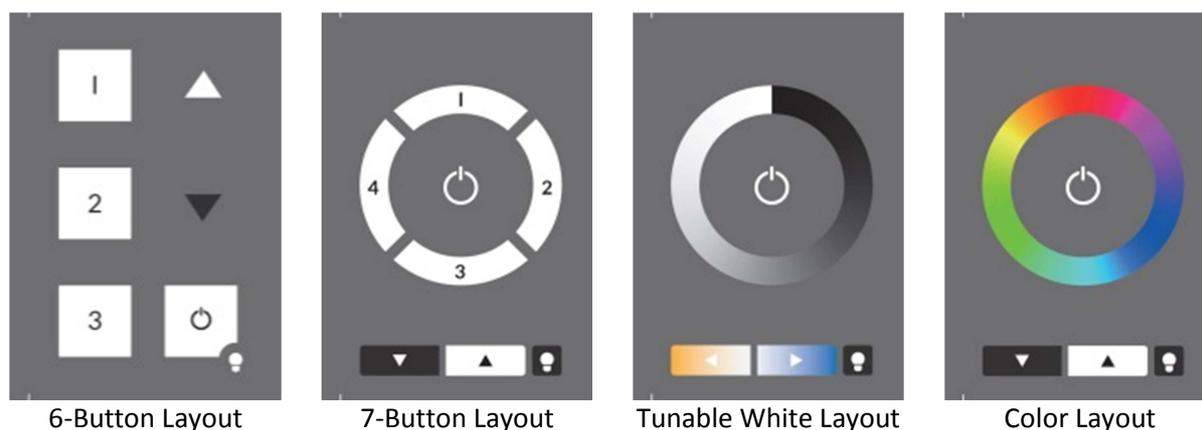
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1. Function

The DALI-Touchpanel is a multifunctional input device for the control of DALI lighting systems.

The layout of the input device can be changed easily by inserting another layout design and changing the function with the help of the DALI-Cockpit. Hence the device offers high flexibility with respect to the desired application. The following printed layout-cards are included in delivery:

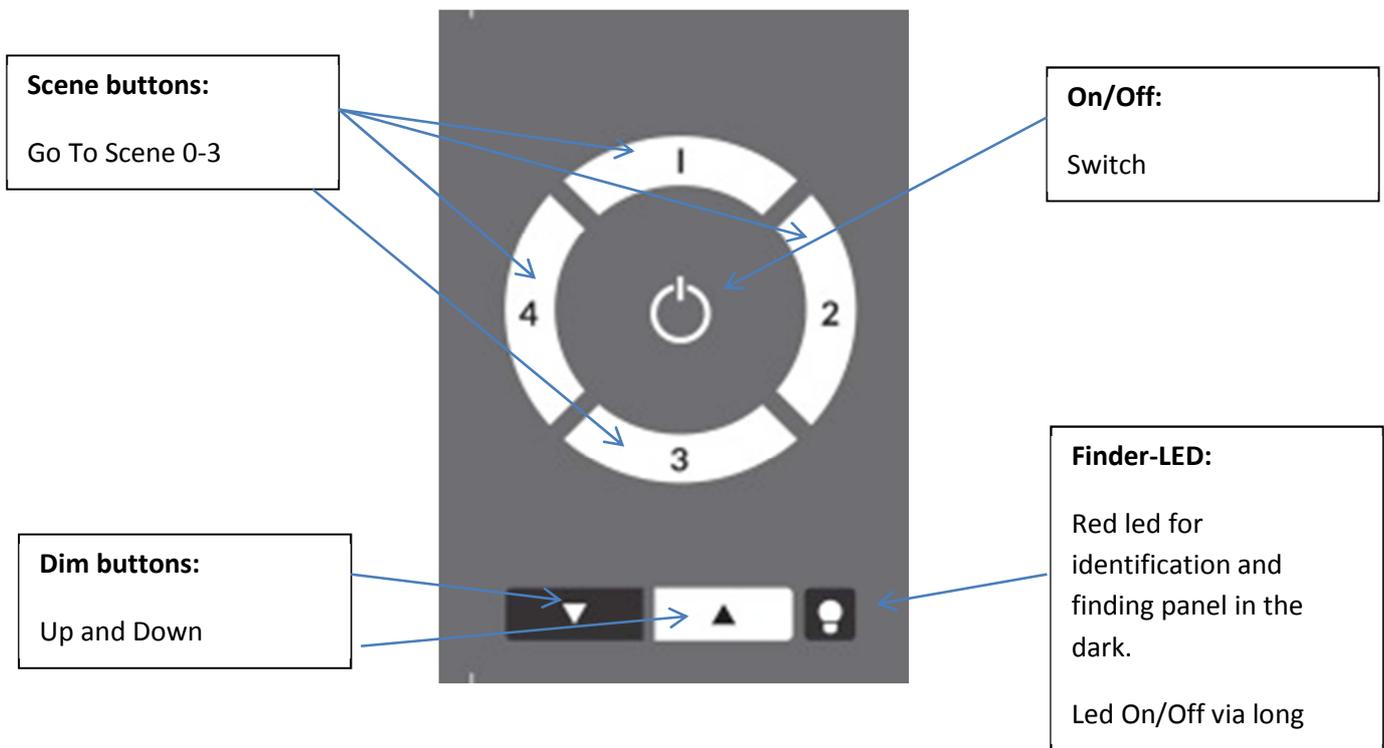
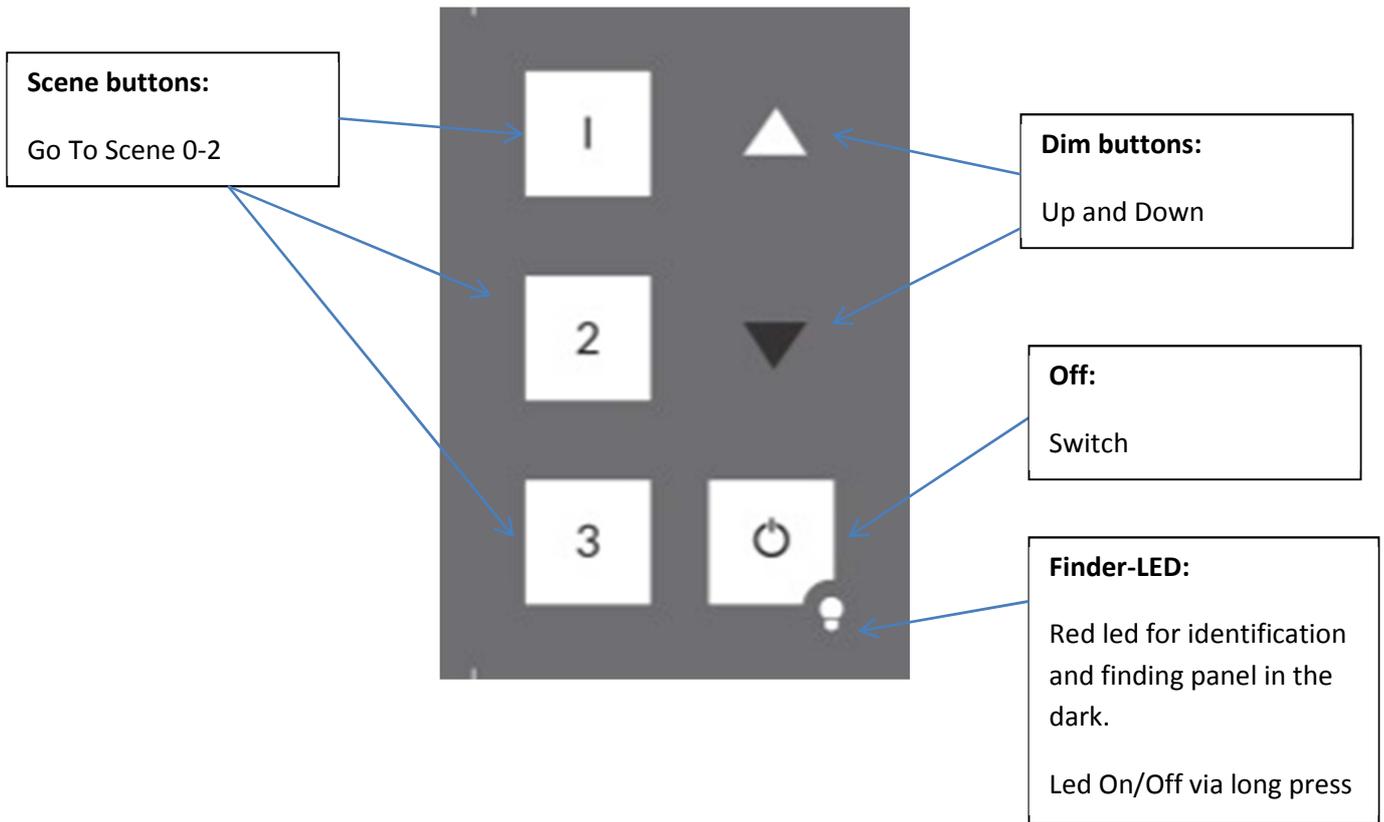


Each layout offers a default-configuration for controlling the DALI-circuit immediately out of the box. The effective range is broadcast per default.

For switching between layouts and making changes on the configuration the DALI-Cockpit software tool is available at the Lunatone website.

1.1 6-Button Layout / 7-Button Layout – Default-Settings

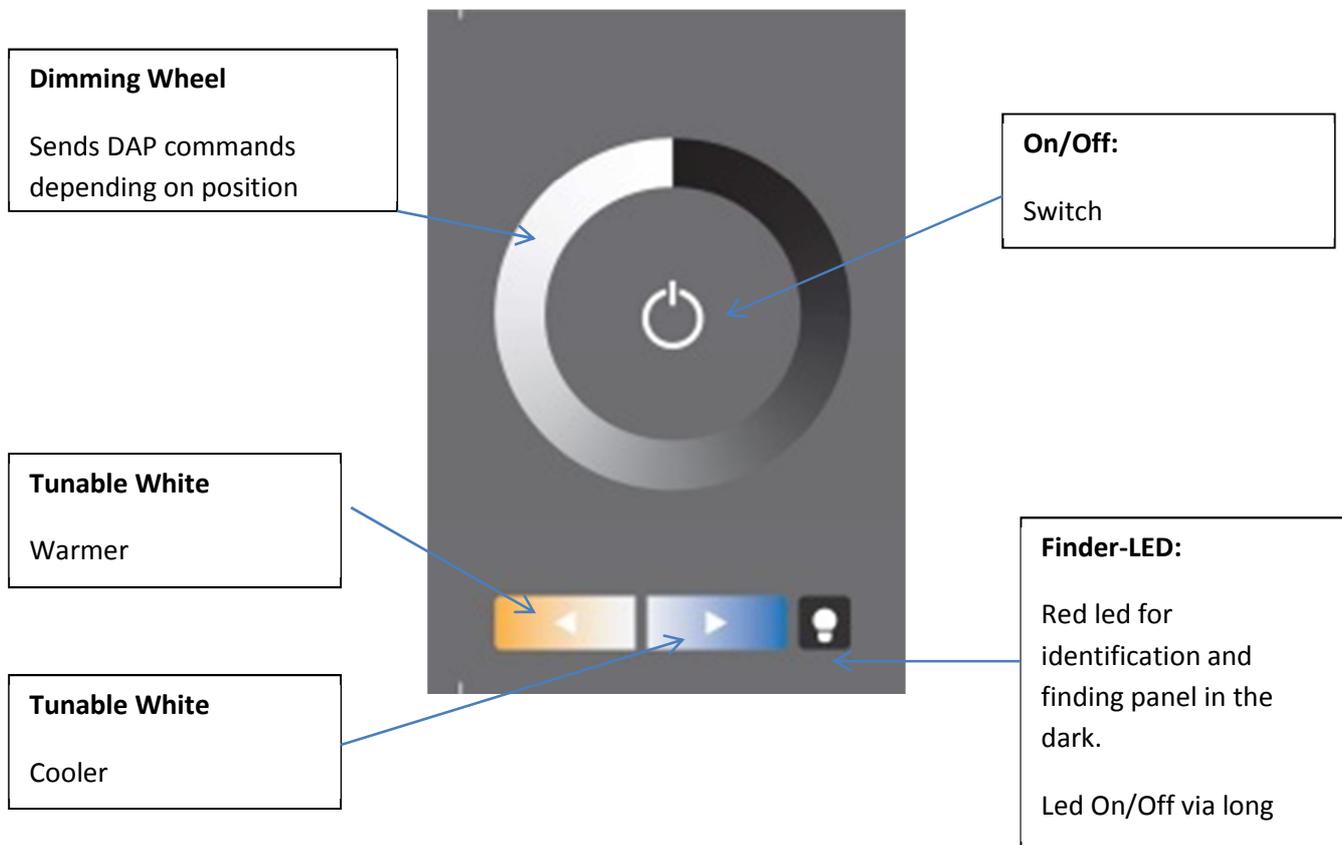
The design support s scene recalls as well as dimming the effective range (default=broadcast).



The 7-Button Layout is supported from firmware version 3.1 and higher.

1.2 Tunable White Layout

The tunable white layout is used for switching, dimming and adjusting the colour temperature of DT8-DALI ballasts with tunable white luminaires (DALI DT8, Mode Tc). The effective range can be defined via the DALI-Cockpit (Default=Broadcast)



The tunable white layout is supported from firmware version 2.7 and higher.

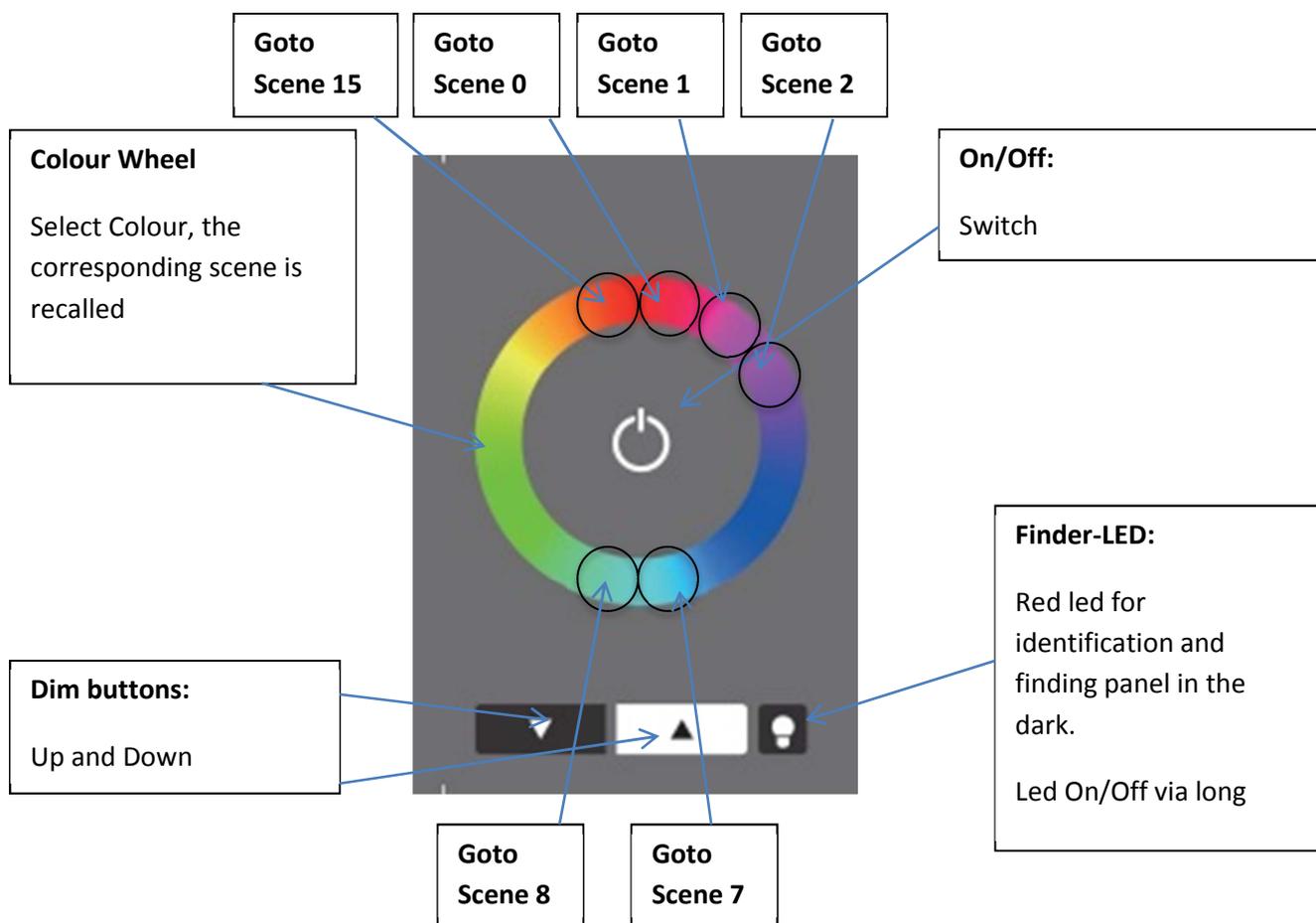
1.3 Colour Layout

The Colour Layout is used for colour control in DALI lighting systems. The colour wheel is divided in 16 scenes. When pressing on the colour wheel the corresponding scene is recalled for the defined effective range.



Hint: The correct scene values have to be stored in the ballasts to ensure that the correct colours are recalled (see attachment B).

Due to the use of scenes the method can be used for different colour wheels as well as for colour temperature wheels. The method is working with DT8 control gear as well as with systems at which for each colour another control gear is used. The design can be easily adapted for other colours by changing the inserted slide.



Colour layout supported from firmware version 3.0 and higher

2. Configuration via DALI-Cockpit Software

The options of setup depend on the firmware version. Up from firmware version 4.8 the user can create layouts by his own, i.e. arranging buttons and assigning functions. In older firmware version the standard layouts can be set up. For configuring the devices the DALI-Cockpit software tool and a DALI USB interface are required.

2.1 Configuration of DALI Touch for Firmwareversion below 4.8

With the help of the DALI-Cockpit tool the active layout can be selected and the function can be configured. For the predefined layouts only the effective range can be set. For Colour and Tunable White effective range and fading can be configured.

For the 6- and 7-Button layout customized types are available at which the function of each button can be configured individually (see screenshot below).

In the most upper dropdown-menu the layout can be selected. The firmware-version of the device is shown, hence you have information about the supported layouts.

The screenshot shows the DALI-Cockpit configuration window. It features a 'Layout' dropdown menu set to '6 Tasten anwenderspezifisch' and a 'Firmware Version' field showing 'V3.1'. Below these are six buttons labeled 'Button1' through 'Button6'. The configuration options include a 'Zieladresse' dropdown set to 'Alle (DALI Broadcast)', radio buttons for 'Lichtwerte als EIN/AUS Befehl verwenden' and 'DALI Command als EIN/AUS Befehl verwenden', and dropdowns for 'ON Cmd' and 'OFF Cmd' both set to 'GOTO Scene0'. There are also 'FadeTime' settings for EIN and AUS, each set to '0.7sec'. At the bottom, there are checkboxes for 'TouchPanel- LED ein' and 'Pieps bei Tastendruck', and buttons for 'auslesen' and 'speichern'.

Callouts from the left side of the image point to specific elements in the screenshot:

- Selected button**: Points to the top-left button in the 2x3 grid.
- effective range**: Points to the 'Zieladresse' dropdown menu.
- ON/OFF-Command**: Points to the 'DALI Command als EIN/AUS Befehl verwenden' radio button and the 'ON Cmd' and 'OFF Cmd' dropdowns.
- Dim-Mode and Fading**: Points to the 'Dim Mode' dropdown and the 'FadeTime' settings.
- firmware version**: Points to the 'Firmware Version' field.

For each Button effective range, ON/OFF-Command and Dim-Mode can be configured.

Parameter Dim Mode:

Dim-Mode	Short Press	Long Press
Toggle ON/OFF	Toggles between ON and OFF Command	
Dim Up Only	ignored	Switch On if required, Dim Up
Dim Up and ON for Short Press	On-Cmd	Switch On if required, Dim Up
Dim Down Only	ignored	Dim Down
Dim Down and OFF for Short Press	Off-Cmd	Dim Down
Toggle UP/DOWN	ignored	Alternating Dim Up/Down
Toggle UP/DOWN and ON/OFF for Shortpress	Alternating ON- and OFF-Cmd	Alternating Dim Up/Down

Example1:

- Effective Range: Group G2
- Dim Mode: toggle ON/OFF
- ON/OFF-Cmd: On – GoTo Scene 1, Off – GoTo Scene 1

On each press the command I GOTO SCENE 1 is sent to group 2.

Example 2:

- Effective Range: short addressA03
- Dim Mode: ToggleUp/Down and On/Off for Short Press
- ON/OFF-Cmd: On-Recall Max, Off-Off

On short press alternating on/off using cmds RECALL MAX and OFF. On long press alternating dim up and down. This way it is possible to switch on/off and dim A03 by one button only.

2.2 Configuration of DALI Touch with firmware version =4.8)

The configuration site is divided in several tabs. For each layout and for the general settings tabs are available.

The menu on the left provides general functions: display of the existing layouts, creating new layouts, deleting existing layout, adding pics for layouts etc. Furthermore the calibration algorithm of the touch panel can be started.

On the top of each site general device information is shown (manufacturer, article name, article number, serial number, firmware version etc.)

General Settings:

Device Info:
Type, Manufacturer ...

Firmwareversion, Update

Add New Layout:
Standard layout
Empty layout
Copy of layout
Import layout

General Settings:
PowerUp behaviour
Touchpanel LED
Touchpanel Beeper

General Settings:

Power-Up: Behaviour of the device after power up

TouchPanel-LED and Beeper: De-/activate Led and Beeper of the panel

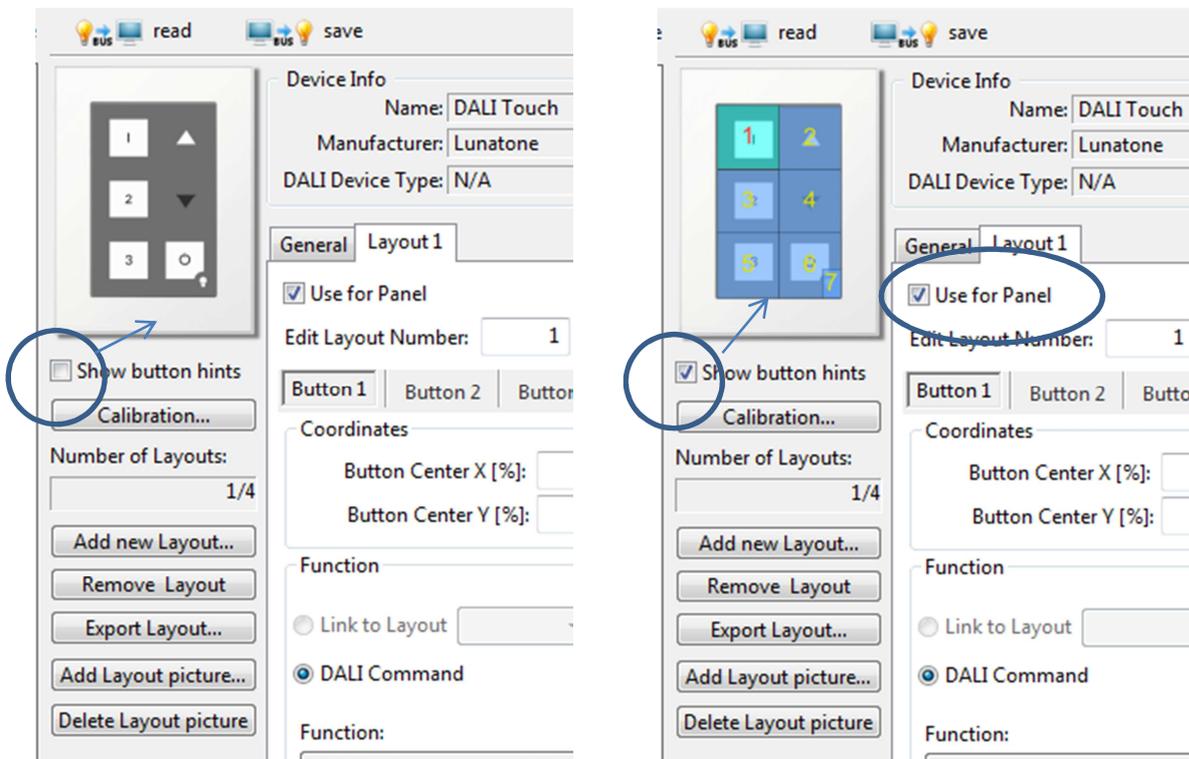
Create New Layout:

With „Add New Layout“ a new layout can be generated . As new layout either a standard layout, an empty layout or a copy of an already existing layout or a previous exported layout can be chosen. For each new layout a new tab appears (maximum 4). Only one can be used as currently active layout.

Layout Settings:

In the layout tab several options for configuration are available. The layout can be deleted and a pic can be assigned. This is useful when coordinates of the buttons are defined. The areas of the buttons can be displayed in the as well by using the checkbox “Show button hints”.

If a standard layout has been selected the buttons and background pic are already predefined, but can be edited by the user.



Beside of adding and deleting layouts, layouts can be exported and the profile can then be imported for other devices. Hence the time intensive generation of a layout has to be done only once and can be copied easily to other devices with the Export/Import feature

The layout that has to be used has to be activated using the “Use For Panel” checkbox.

Buttons:

Each layout can consist of up to 12 buttons. Each button is defined by its coordinates (respectively its center and width and height). The values are in % of the complete layout size (0/0 top left, 100/100 bottom right)

If „Show button hints“ is activated all buttons are displayed in the layout overview. The active button is highlighted.

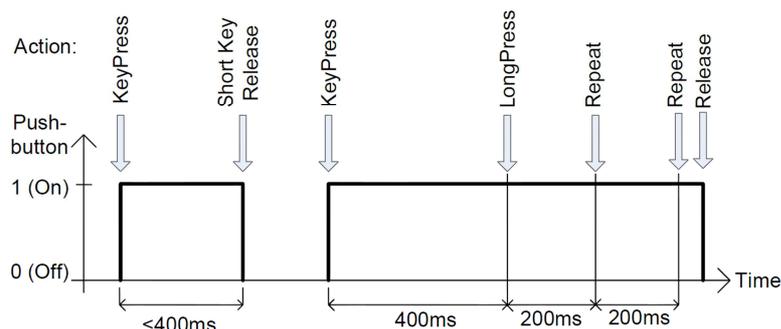
Buttons may overlap, in this case the button with the highest number is selected (in the example below -> button 7 overrules button 6 in the area of button 7)

The screenshot shows the configuration interface for a DALI Touch device. On the left, a 'Display buttons' panel shows a 2x4 grid of buttons numbered 1 to 7, with button 7 overlapping button 6. Below this are controls for 'Show button hints', 'Calibration...', 'Number of Layouts: 1/4', and buttons for 'Add new Layout...', 'Remove Layout', 'Export Layout...', 'Add Layout picture...', and 'Delete Layout picture'. The main configuration area is titled 'Device Info' and includes fields for Name (DALI Touch), Article Number (24035465), Manufacturer (Lunatone), Serial Number (N/A), DALI Device Type (N/A), and Short Address (eA1). It also has 'Update...' and 'Set' buttons. Below this is the 'General' tab for 'Layout 1', which includes a 'Use for Panel' checkbox, 'Buttons count: 7', and 'Add Button'/'Delete Button' buttons. A 'Coordinates' section has fields for 'Button Center X [%]: 25', 'Button Center Y [%]: 16', 'Button Width [%]: 50', and 'Button Height [%]: 33'. The 'Function' section has radio buttons for 'Link to Layout' and 'DALI Command' (selected), with a 'Destination Address' table containing three rows (1: All (DALI Broadca), 2: none, 3: none). The 'Function:' dropdown is set to 'BF1 - Pushbutton: sends CmdX', and the 'Cmd X (ON Cmd)' dropdown is set to 'GOTO SCENE 0'. A 'Fade time' section has a checkbox and a dropdown set to '[0] fastest'. Callout boxes point to the button grid, the 'Buttons count' field, the 'Add/Delete Button' buttons, the 'DALI Command' section, and the 'Coordinates' fields.

For each button a function can be defined. Therefore effective range, buttonfunction and DALI Commands have to be defined.

Up to three destination addresses can be selected. The defined commands are sent to all three destination addresses.

Configuration of the button function:



Definition:

Button Definition	Duration	
	min	max
short	40 ms	400 ms
long	>400 ms	

button-function	key press	release after short press	long press	repeat	remarks
0	-	-	-	-	-
1	CmdX	-	-	-	sends CmdX on key press
2	CmdX	-	CmdY	-	sends CmdX on key press sends CmdY after long press delay
3	CmdX	-	CmdY	CmdY	sends CmdX on key press sends CmdY with 200ms repetition after long press delay
4	CmdX / CmdY toggle	-	-	-	sends CmdX and CmdY alternating on key press
5	CmdX / CmdY toggle	-	-	-	CmdX/Y depending on bus status
6	-	CmdX / CmdY toggle	ON and STEPUP	UP / DOWN	CmdX/Y depending on bus status , UP/DOWN alternating, ON AND STEPUP, if bus state is OFF before UP
7	CmdX	-	-	-	Switch , CmdX on Press, CmdY on Release
8	CmdX / CmdY toggle	-	-	-	Changeover switch. CmdX/CmdY dependent on bus status, CmdY/CmdX on Release
9	CmdX	-	-	-	Staircase control. CmdY is sent after a programmable delay.
10	-	CmdX	CmdY	CmdY	CmdX after short press, CmdY for repeat
11	CmdX	-	-	CmdY	CmdX with repeat; repeats CmdY without long press delay
16					DAP circle
17					Scene circle
18					CCT circle
19					RGB circle
25					Address Selection - Instead of all 3 destination addresses the active address can be selected (the selection is valid for each button on the layout).
26					Finder LED toggle



Hint: The commands are sent to all effective ranges assigned to the button. The address selection macro can be used to select one of them or to switch between the destination addresses.

Configuration of CmdX/CmdY

CmdX and CmdY are commands or command lists that are executed as result on the switching action. These are:

- DALI commands
- Predefined macros (command lists)
- Customized macros

DALI-commands:

Command Number	Command Name	Function
-	DIRECT ARC POWER	direct arc power level in %
0	OFF	Light off
1	UP	Dim up (fade-rate)
2	DOWN	Dim down (fade-rate)
3	STEP UP	Increases light level by one increment
4	STEP DOWN	decreases light level by one increment
5	RECALL MAX	Recalls max level
6	RECALL MIN	Recalls min level
7	STEP DOWN AND OFF	decrease light level by one increment, if already at min level turn off
8	ON AND STEP UP	Switch to minimum if off, in any other case increase light level by one increment
10	GOTO LAST ACTIVE LEVEL (DALI 2)	DALI2 command: switch to last active level
16-31	GO TO SCENE	Recall scene 0-15

Macros:

Nr	Macro (memory)	Function
M1	Go Home (2 Byte)	The light dims to 0 with predefined fade time, at the end a new fade time is set
M2	Sequential Scenes (3Byte)	Switch to another scene with each button press, scene list can be defined
M3	Dynamic Scenes (9 Byte)	Dynamic sequences of up to 4 scenes, fade time and delay can be defined, stops with next button press
M4	DALI-Reset (1 Byte)	Sends DALI-Reset command (as option the address can be deleted, too)
M5	User Defined Cmd-List (5 Bytes for each cmd)	User defined command list
M6	3x Cooler (DT8) (0 Byte)	activates DT8 and sends 3x STEP COOLER
M7	3x Warmer (DT8) (0 Byte)	activates DT8 and sends 3x STEP WARMER



Hint: The memory for macros is limited (236-16*number of buttons) and must not exceeded (check memory of each macro in macro table)

3. Installation

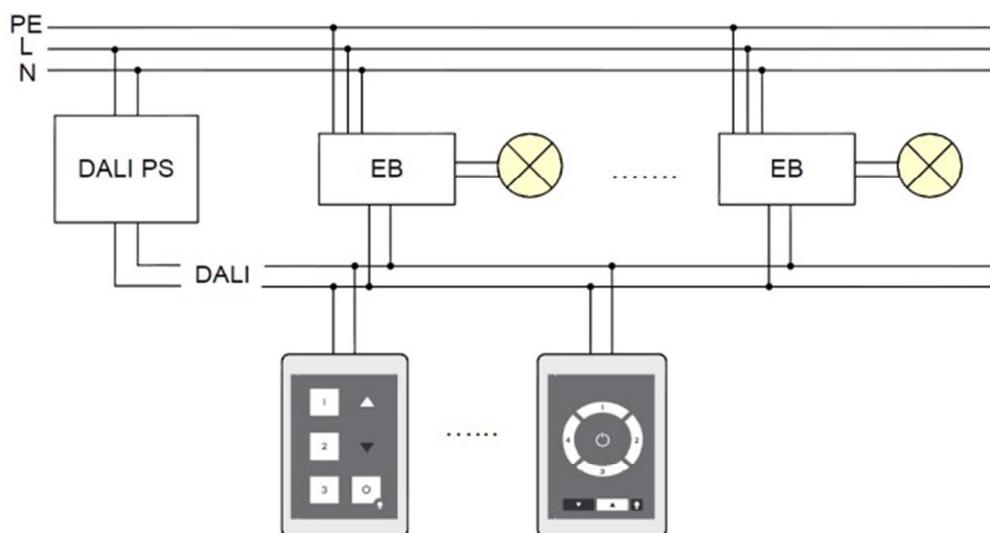
The DALI-Touchpanel is connected directly to the DALI-line. It is supplied by the DALI-line directly (typical current consumption 4mA). The connection to the DALI-line is polarity free.

The DALI-Touchpanel can be mounted on a back box. Connecting wire cross section should range from 1,0mm² to 2,5mm².

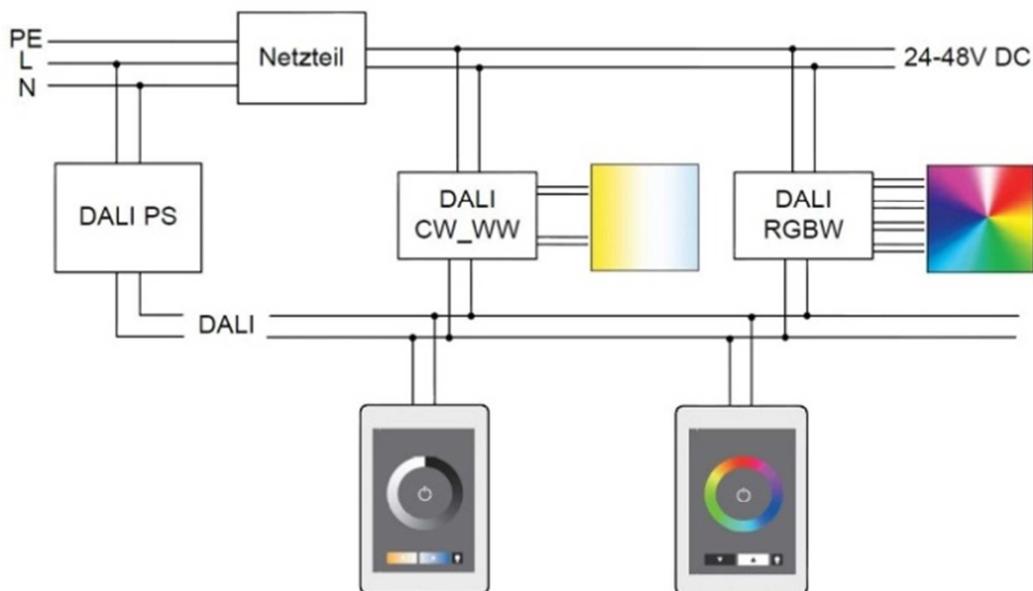
The DALI-Touchpanel supports multi-master operation, several modules can be connected to the same DALI-system.

The DALI-Touchpanel has no DALI-address.

4. Application Examples



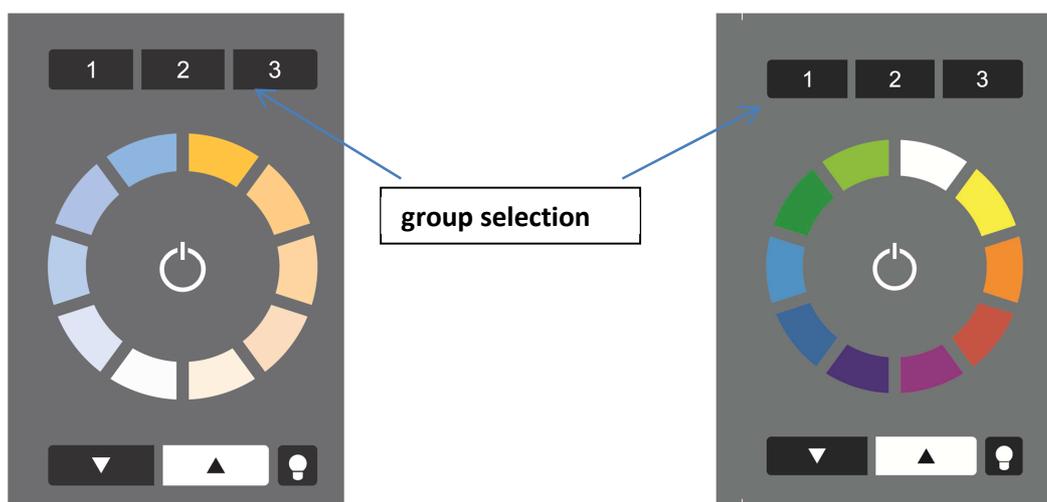
typical structure scene and group control



Typical structure colour and colour temperature control

5. Appendix A: RGBW or CW-WW for 3 Groups

In these special layouts the functionality of the colour layout is used. Press on the colour wheels recalls the corresponding scene. The buttons 1-3 can be used to change the effective range.

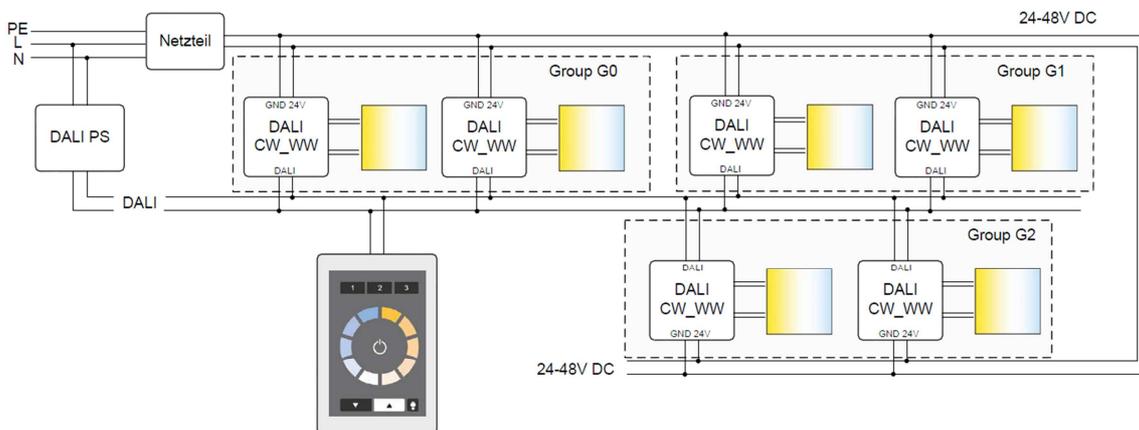


The layout with address selection is supported and the profile can be loaded. The layout card is not included in delivery.

Example:

- default effective range: broadcast
- effective range button 1-3: G0, G1, G2

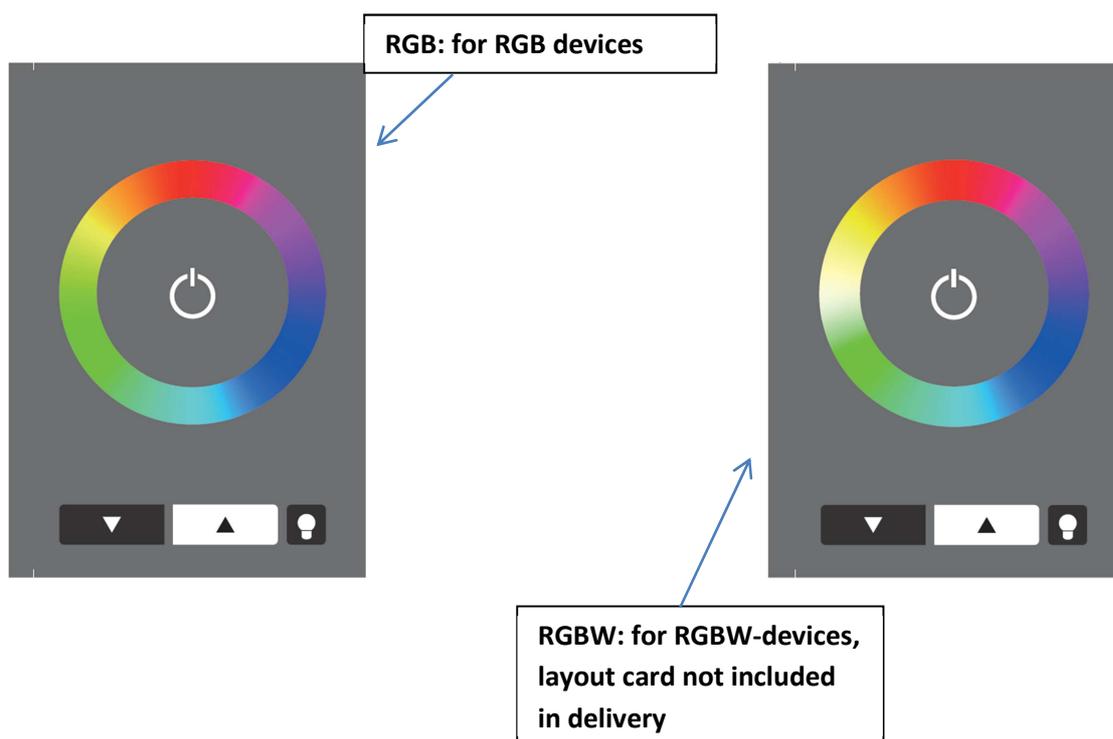
With these settings the colour control of 3 groups can be realized using one touchpanel only.



Application: tunable white control of 3 groups using one touch panel

6. Appendix B: Typical Colour Scene Values for RGB (Colour) and RGBW Layout

For making the colour wheel layouts work, the scene values of the control gear have to be set correctly.



RGB (scene ballast settings for the RGB layout, default scene values for Lunatone RGB dimmer)

Szene	DT8-scene values			Single channel devices (100% brightness)		
	R	G	B	R	G	B
0	211	0	42	83%	0%	17%
1	169	0	84	67%	0%	33%
2	127	0	127	50%	0%	50%
3	84	0	169	33%	0%	67%
4	42	0	211	17%	0%	83%
5	0	0	254	0%	0%	100%
6	0	50	203	0%	20%	80%
7	0	101	152	0%	40%	60%
8	0	152	101	0%	60%	40%
9	0	203	50	0%	80%	20%
10	0	254	0	0%	100%	0%
11	50	203	0	20%	80%	0%
12	101	152	0	40%	60%	0%
13	152	101	0	60%	40%	0%
14	203	50	0	80%	20%	0%
15	254	0	0	100%	0%	0%

RGBW (layout card not included in delivery, default scene values of Lunatone RGBW dimmers, the difference to RGB dimmers is marked in red):

Szene	DT8-Szenenwerte				Single channel devices (100% brightness)			
	R	G	B	W	R	G	B	W
0	211	0	42	0	83%	0%	17%	0%
1	169	0	84	0	67%	0%	33%	0%
2	127	0	127	0	50%	0%	50%	0%
3	84	0	169	0	33%	0%	67%	0%
4	42	0	211	0	17%	0%	83%	0%
5	0	0	254	0	0%	0%	100%	0%
6	0	50	203	0	0%	20%	80%	0%
7	0	101	152	0	0%	40%	60%	0%
8	0	152	101	0	0%	60%	40%	0%
9	0	203	50	0	0%	80%	20%	0%
10	0	254	0	0	0%	100%	0%	0%
11	0	127	0	127	0%	50%	0%	50%
12	0	0	0	254	40%	60%	0%	100%
13	152	101	0	0	60%	40%	0%	0%
14	203	50	0	0	80%	20%	0%	0%
15	254	0	0	0	100%	0%	0%	0%

7. Appendix C: Print template

