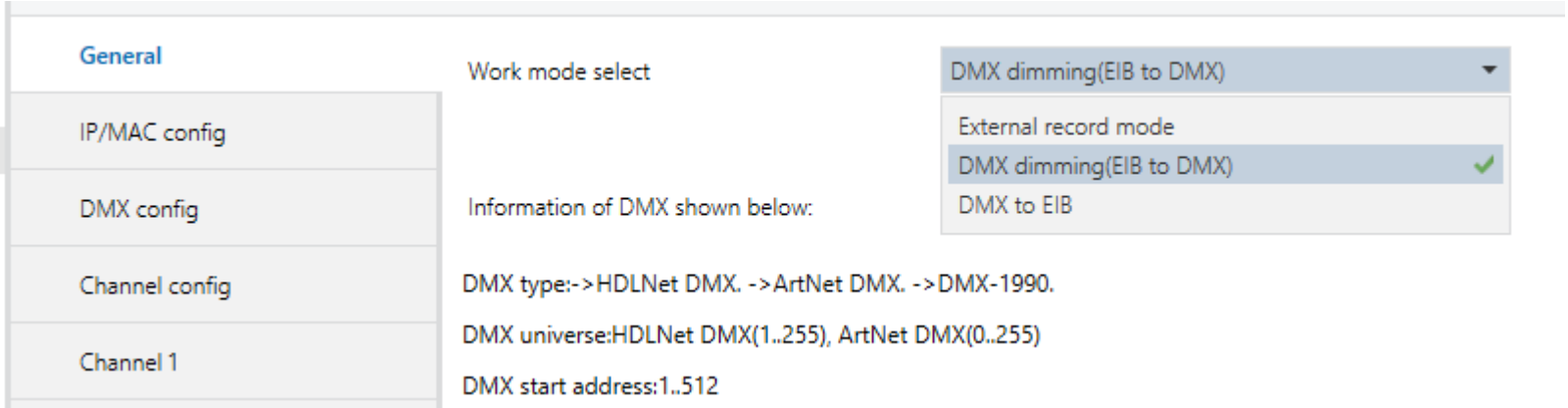
DMX512 Gateway

M/DMX512.1

Introduction

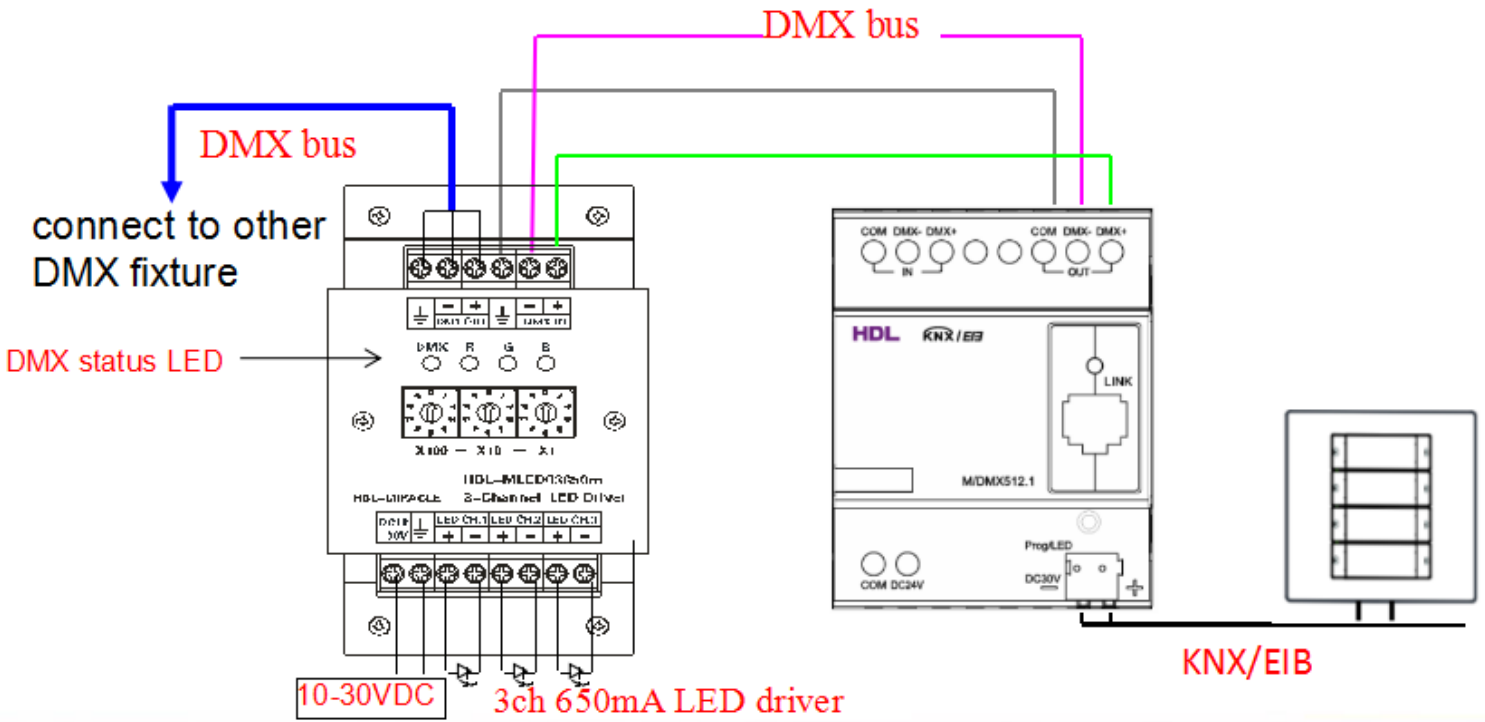
It is not only a KNX/DMX gateway, but also can make
record, play back and delete DMX program. The maximum record time is up to 4 hours. This module can be used to control devices with built-in DMX protocol, such as LED color changer, laser light, etc.

Work Mode

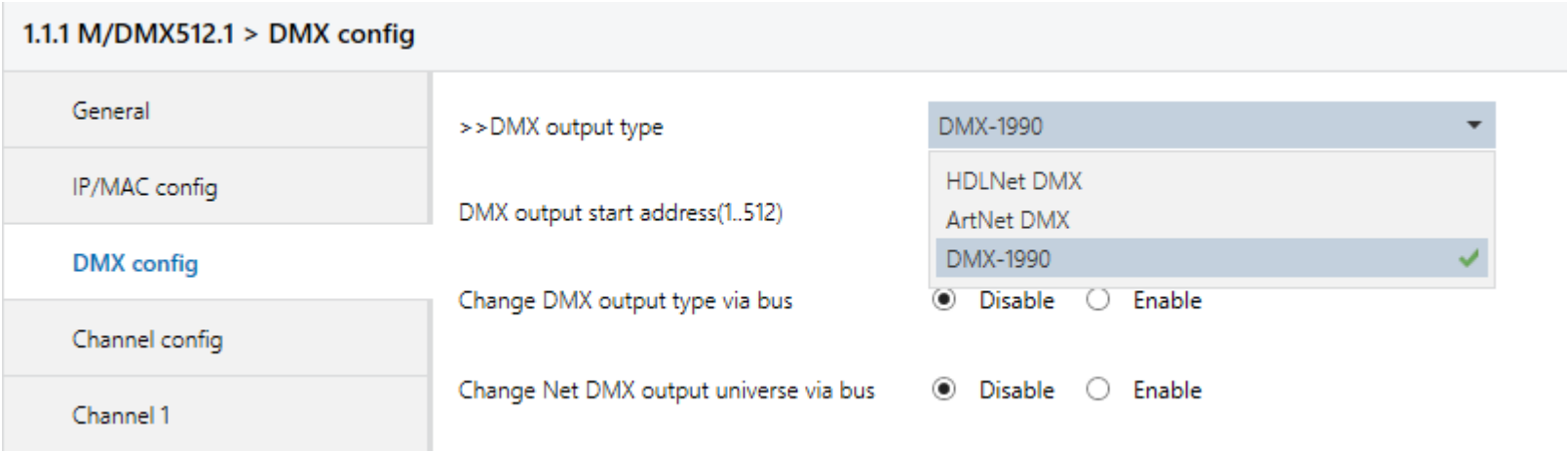


External record mode: work as a recorder, it can record some scenes, and then you can play the scenes by other devices after record.
DMX dimming(EIB to DMX): work as a dimmer, it can control channel, scene and sequence.
DMX to EIB: work as a converter, can control EIB devices(dimmer/relay) via the DMX signal
this file is talking about the DMX dimming mode, there are 48 channels totally.

Wiring Diagram



DMX Output Type



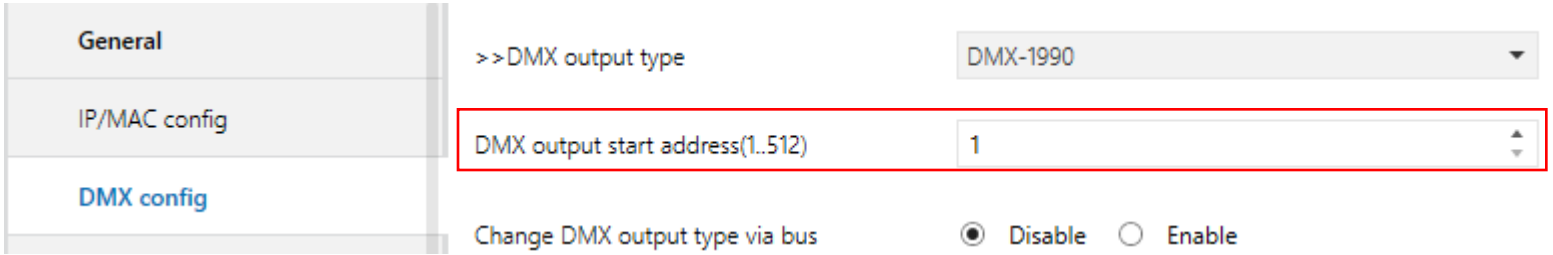
HDL Net DMX: it's belong to HDL protocol

ArtNet DMX: it's an Ethernet protocol based on the TCP/IP protocol

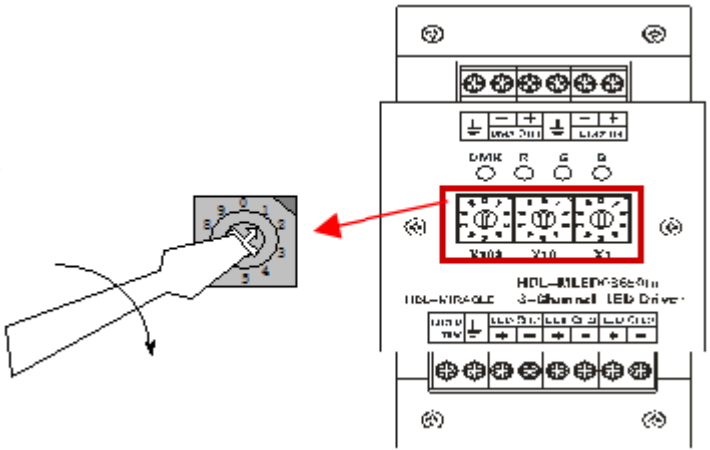
DMX-1990: standard DMX512 protocol

for the 'wiring diagram', the output type is 'DMX-1990'

DMX Output Start Address



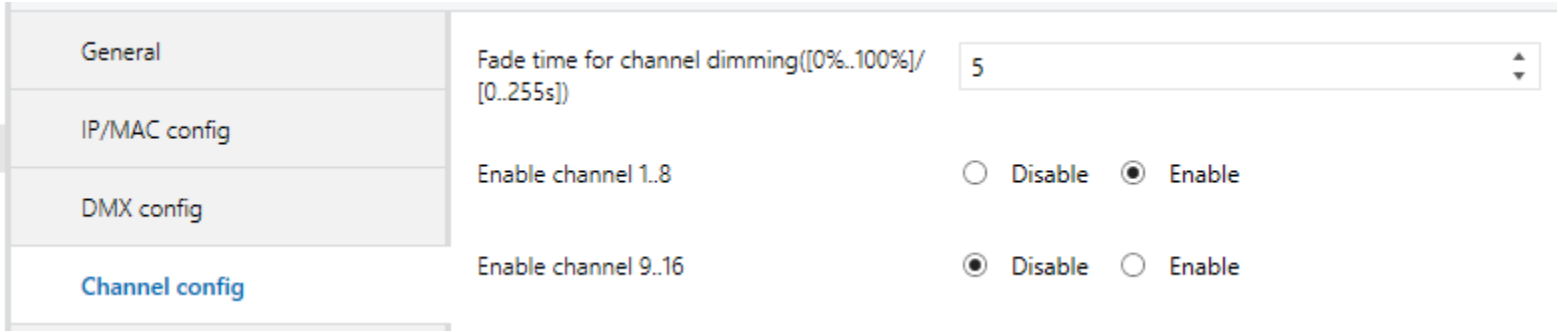
Start channel(range001-512)：
e.g., If you use screw driver to set the start channel as 001, then the rest two channels will be ch2 & ch3, so R channel=1, G channel=2, B channel=3.
if the start address is 004, then the R channel=4, G channel=5, B channel=6



Special function: mainly for testing whether the device works or not

513	light R ON
514	light G ON
515	light B ON
516	lights R&G&B ON

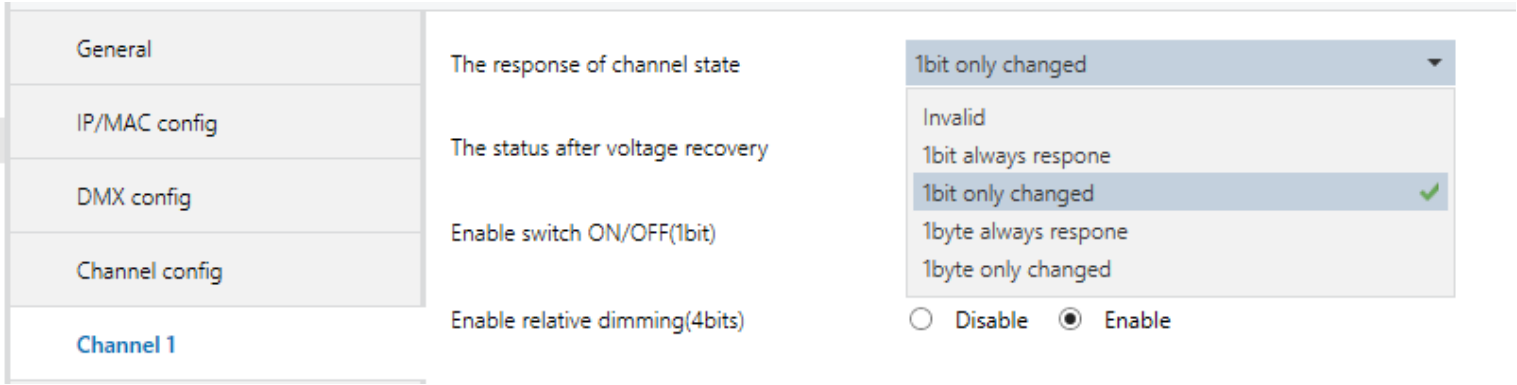
Fade time



Fade time:

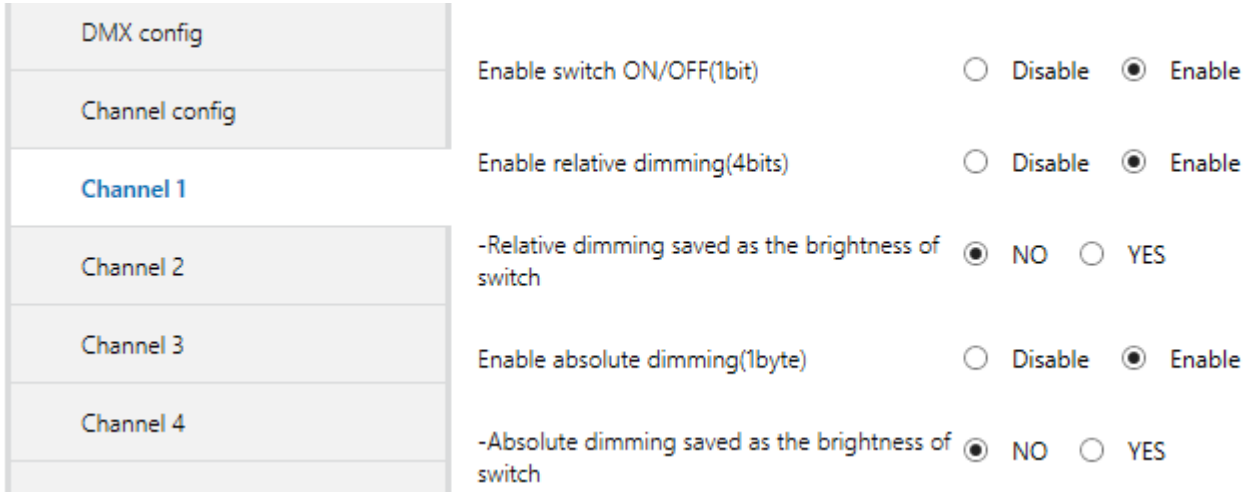
For example, you set 3 seconds and turn it on by pressing a user panel, the load will turn on slowly and reach the max brightness 3 seconds later

Channel State Feedback



1bit:
normally use this object to feedback the channel state to the button, so the button indicator can show the correct state of it. if the channel brightness>0, send out command '1'; if the brightness=0, send out command '0'.
1 byte:
normally use this object to feedback the channel specific brightness to the app, then the app can show the percentage value of its brightness.

Relative/Absolute Dimming



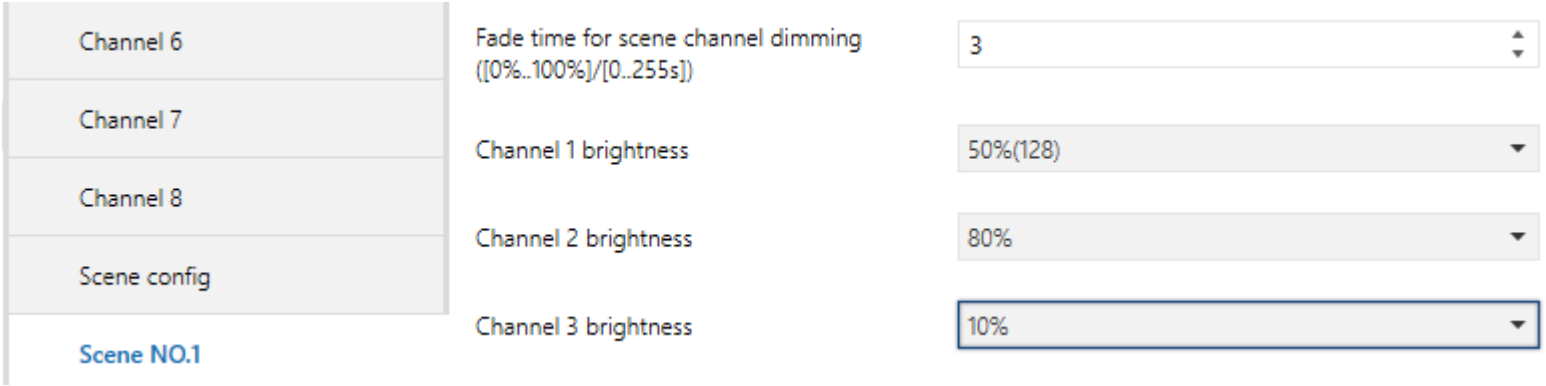
Relative dimming:

long pressing the button to dim up/down, adjust the brightness visually.

Absolute dimming:

The channel will output a certain brightness when receives a percentage telegram

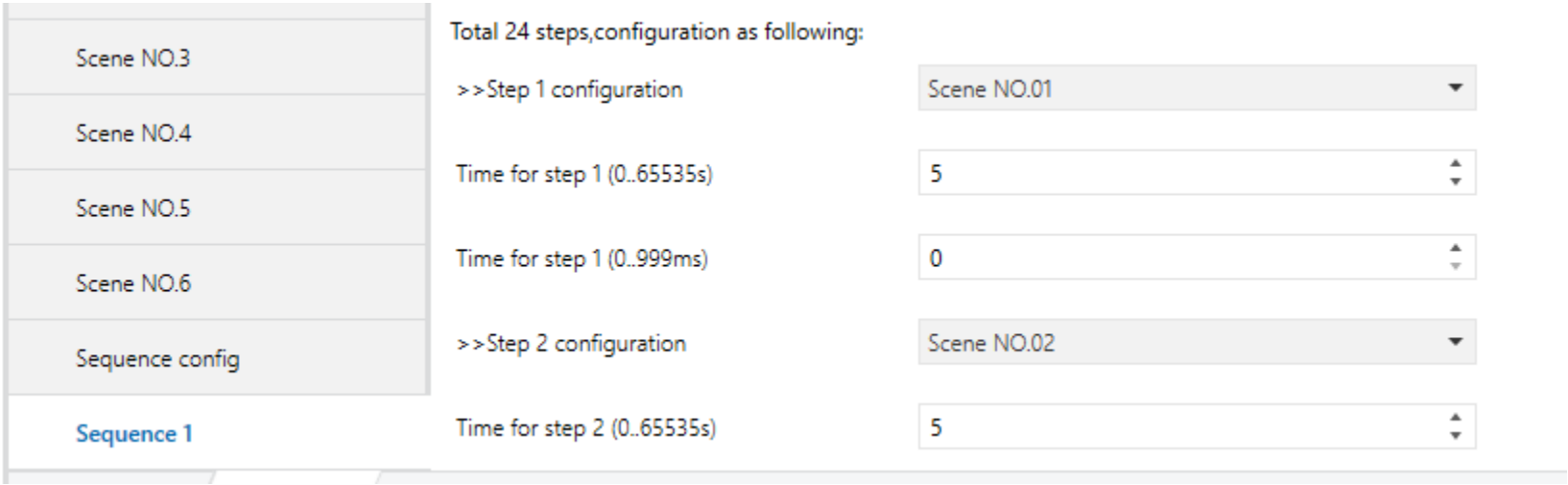
Scene



Scene: the combination of several channels’ status (on/off or different brightness levels.)

This DMX512 gateway supports 24 scenes totally, set the channels' brightness to make the RGB Stirp showing different color.

Sequence

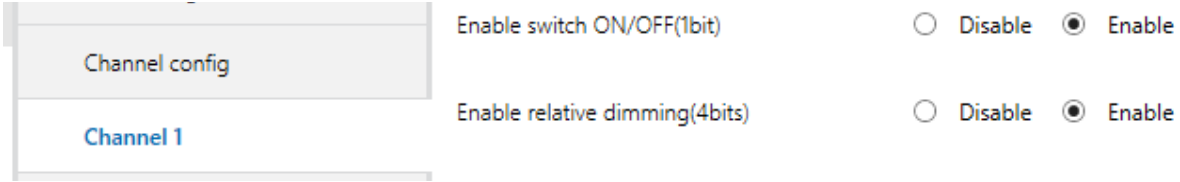


Sequence: the combination of difference scenes with playing parameters.

one sequence can have up to 24 steps, one step can call one scene, set the step running time, when this time elapses, will turn to next step.

Configuration/Dimming

on/off control & relative dimming:



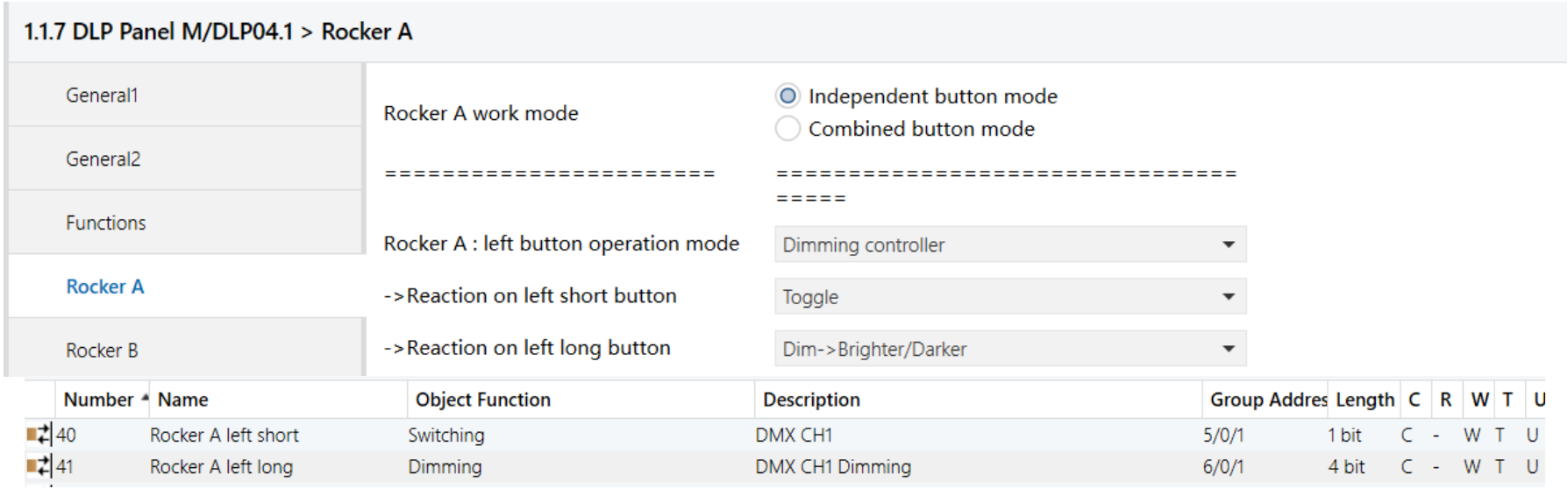
Number	Name	Object Function	Description	Group Addres	Length	C	R	W	T	U
30	Channel 1	Switching(1bit)	DMX CH1	5/0/1	1 bit	C	-	W	-	U
31	Channel 1	Relative dimming(4bits)	DMX CH1 Dimming	6/0/1	4 bit	C	-	W	-	U
32	Channel 1	Absolute dimming(1byte)			1 byte	C	-	W	-	U
33	Channel 1	Respone state(1bit)	DMX CH1 Feedback	7/0/1	1 bit	C	R	-	T	-

on/off(switch): 1 bit data point, here we assign group address 5/0/1

response state: 7/0/1 for status feedback

relative dimming: it is enabled by default, 4 bit data point, here we assign group address 6/0/1

Configuration/Dimming



In the panel setting page, select the ‘Dimming controller’ as the work mode.

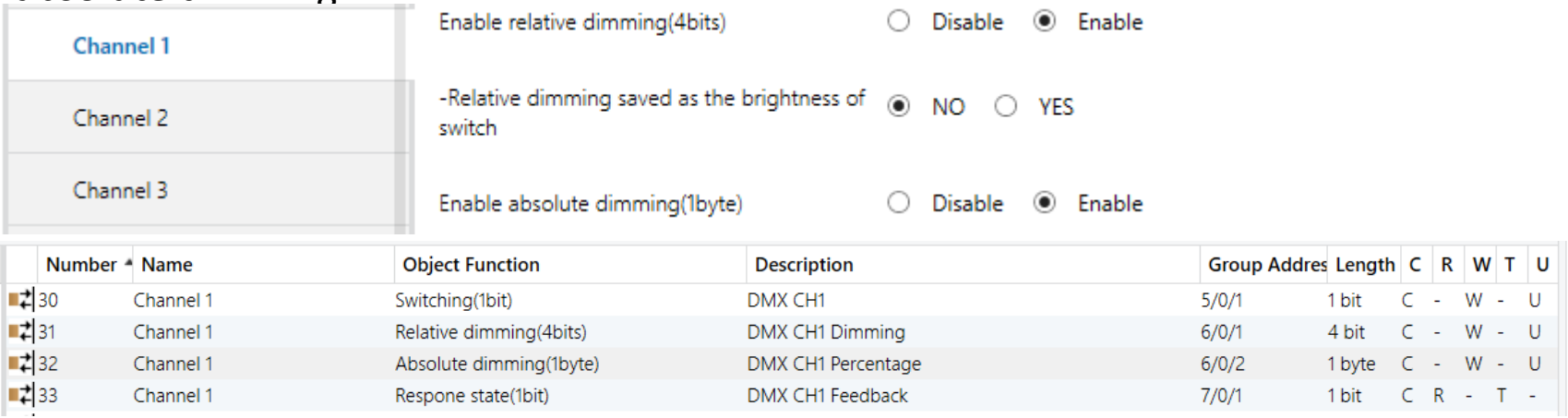
assign the switch and feedback address of dimmer for Rocker A left button switching function,

assign the relative dimming address of dimmer for Rocker A left button dimming function

short press the button, for on/off control; long press the button, for dim up/down control.

Configuration/Dimming

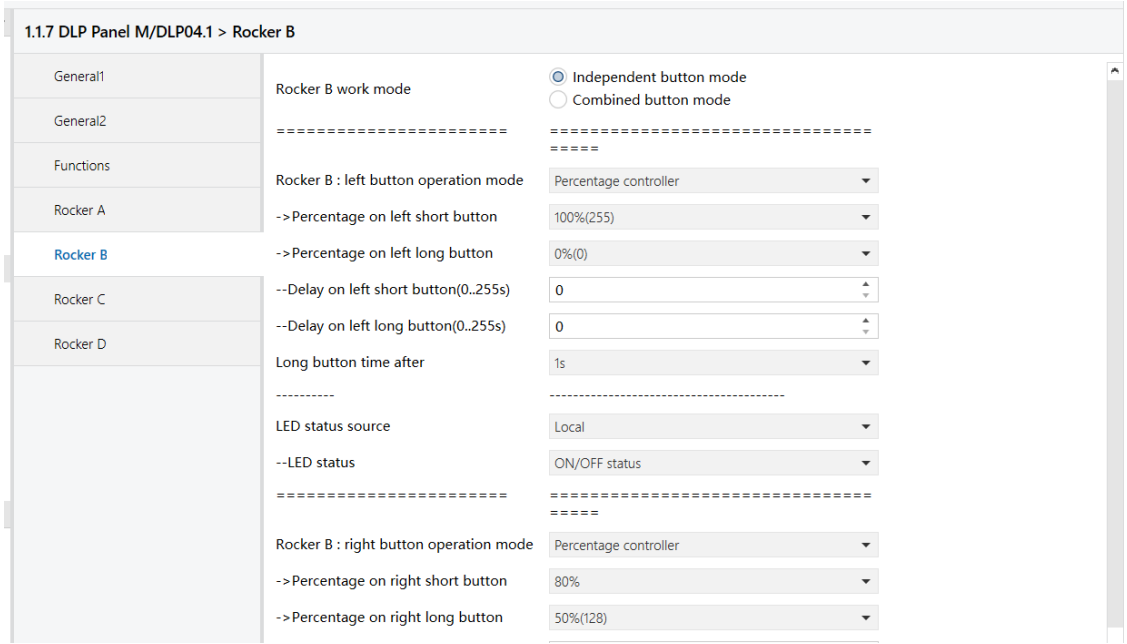
absolute dimming:



Number	Name	Object Function	Description	Group Addres	Length	C	R	W	T	U
30	Channel 1	Switching(1bit)	DMX CH1	5/0/1	1 bit	C	-	W	-	U
31	Channel 1	Relative dimming(4bits)	DMX CH1 Dimming	6/0/1	4 bit	C	-	W	-	U
32	Channel 1	Absolute dimming(1byte)	DMX CH1 Percentage	6/0/2	1 byte	C	-	W	-	U
33	Channel 1	Respone state(1bit)	DMX CH1 Feedback	7/0/1	1 bit	C	R	-	T	-

absolute dimming: it's enabled by default, it's 1 byte data point, here we assign group address 6/0/ for channel1

Configuration/Dimming



In the panel setting page, select the ‘Percentage controller’ as the work mode for rocker B.

set the favorite brightness for each button's short/long press operation

Configuration/Dimming

Number	Name	Object Function	Description	Group Addres	Length	C	R	W	T	U
40	Rocker A left short	Switching	DMX CH1	5/0/1	1 bit	C	-	W	T	U
41	Rocker A left long	Dimming	DMX CH1 Dimming	6/0/1	4 bit	C	-	W	T	U
45	Rocker A right short	Switching			1 bit	C	-	W	T	U
46	Rocker A right long	Switching			1 bit	C	-	W	T	U
50	Rocker B left	Percentage	DMX CH1 Percentage	6/0/2	1 byte	C	-	W	T	U
55	Rocker B right	Percentage	DMX CH1 Percentage	6/0/2	1 byte	C	-	W	T	U

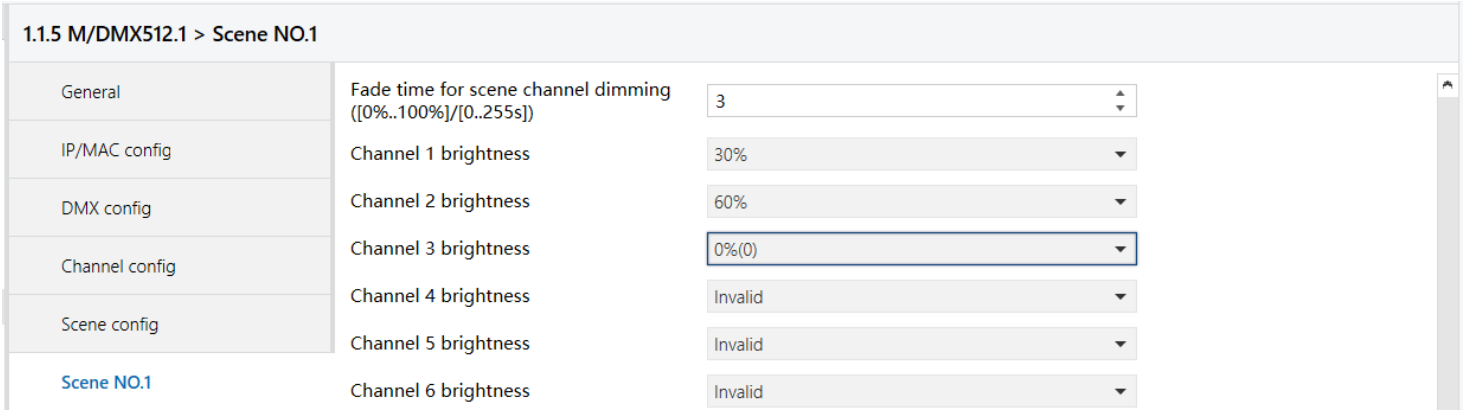
assign the same gourp address of channel1 absolute dimming object for Rocker B, then can use Rocker B to control channel1:

short press rocker B right button, channel1 will output 80%;

long press rocker B right button, channel1 will output 50%.

Configuration/Scene

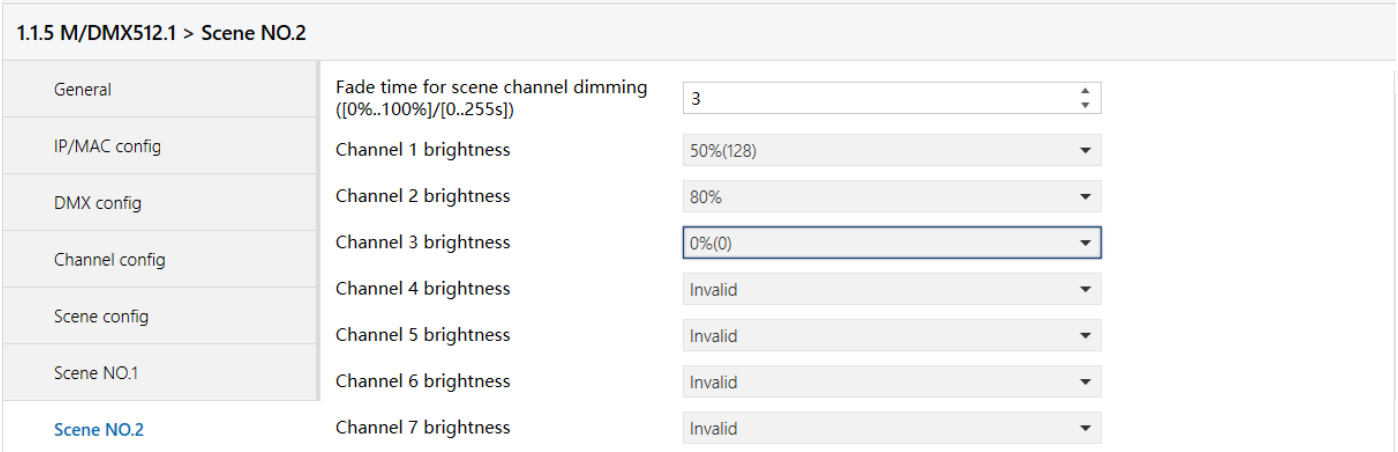
Scene 1:
Set the channels' brightness for Scene1, e.g. channel1 is 30%, channel 2 is 60%, channel 3 is 0%;



Configuration/Scene

Scene 2:

Set the channels' brightness for Scene2, e.g. channel1 is 50%, channel2 is 80%, channel3 is 0%;



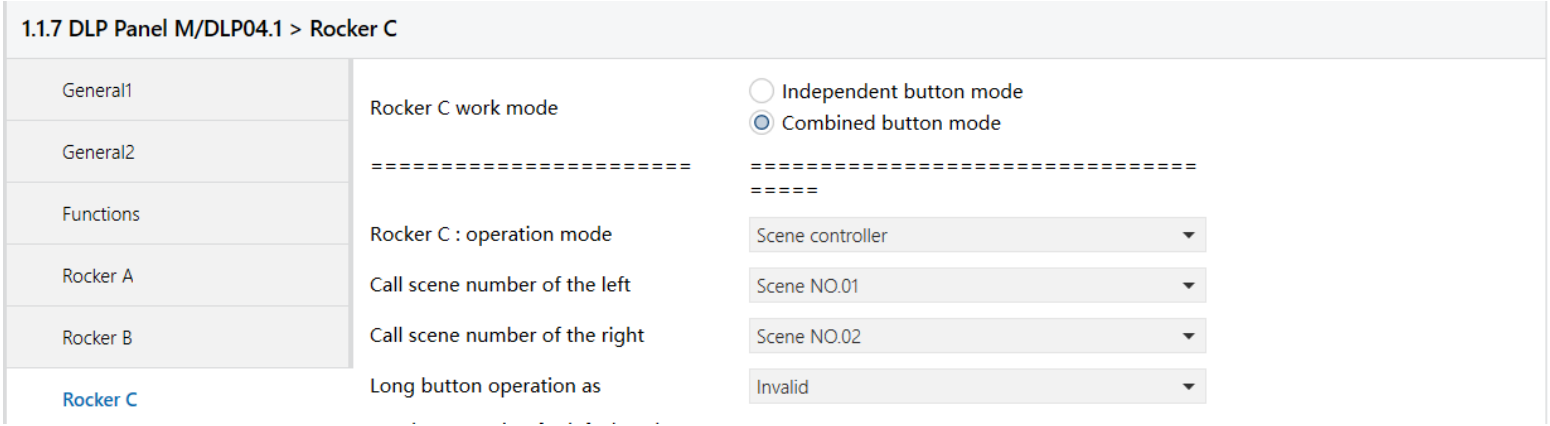
same steps for other scenes

Configuration/Scene

52	Channel 6	Absolute dimming(1byte)			1 byte	C	-	W	-
54	Channel 7	Switching(1bit)			1 bit	C	-	W	-
55	Channel 7	Relative dimming(4bits)			4 bit	C	-	W	-
56	Channel 7	Absolute dimming(1byte)			1 byte	C	-	W	-
58	Channel 8	Switching(1bit)			1 bit	C	-	W	-
59	Channel 8	Relative dimming(4bits)			4 bit	C	-	W	-
60	Channel 8	Absolute dimming(1byte)			1 byte	C	-	W	-
230	Scene	Call scene(8bit)	DMX Scene	8/0/1	1 byte	C	-	W	-

here we assign group address 8/0/1 for scene object

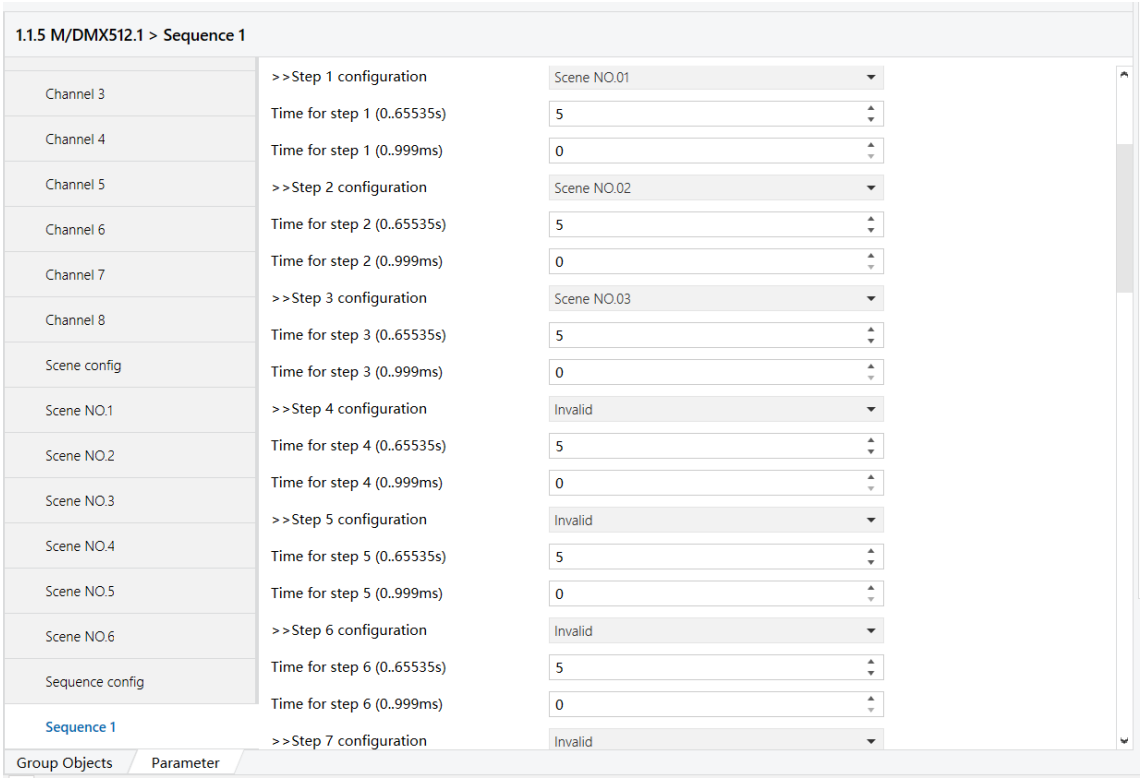
Configuration/Scene



Number	Name	Object Function	Description	Group Addres	Length	C	R	W	T	U
40	Rocker A left short	Switching	DMX CH1	5/0/1	1 bit	C	-	W	T	U
41	Rocker A left long	Dimming	DMX CH1 Dimming	6/0/1	4 bit	C	-	W	T	U
45	Rocker A right short	Switching			1 bit	C	-	W	T	U
46	Rocker A right long	Switching			1 bit	C	-	W	T	U
50	Rocker B left	Percentage	DMX CH1 Percentage	6/0/2	1 byte	C	-	W	T	U
55	Rocker B right	Percentage	DMX CH1 Percentage	6/0/2	1 byte	C	-	W	T	U
60	Rocker C short	Call scene	DMX Scene	8/0/1	1 byte	C	-	W	T	U

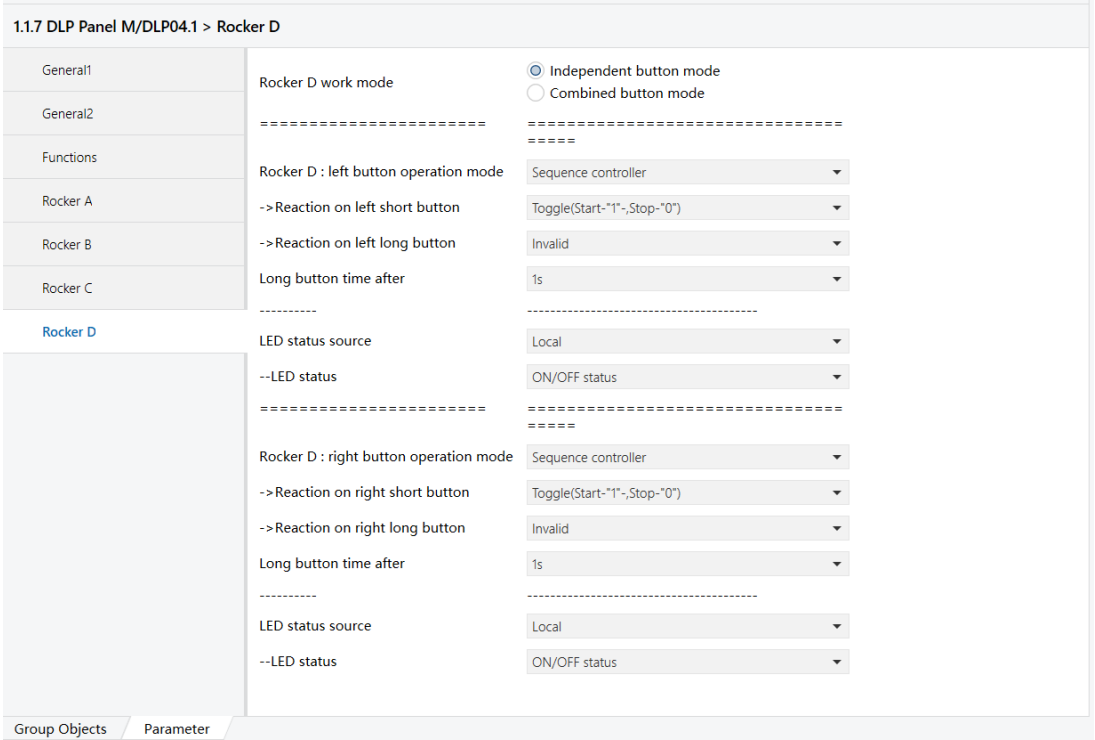
In the panel setting page, select the ‘Scene controller’ as the work mode.
press rocker D left button to call scene1, channel 1 will go to 30%, channel 2 will go to 60%, etc;
press right button to call scene2, channel 1 will go to50%, channel 2 will go to 80%, etc.

Configuration/Sequence

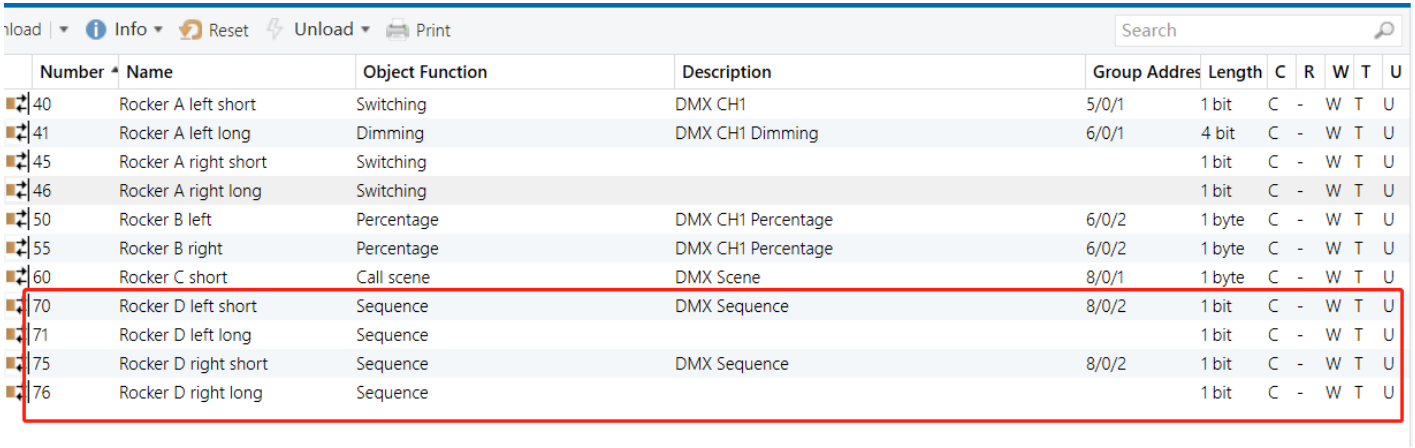


set to call one scene for each step, e.g. setp1 call scene1, step2 call scene2, step3 call scene3.
set the step running time, here is 5s.
control mode is forward, running mode is cycle, when running the sequence, it will execute: step1->step2-step3->step1->step2->...

Configuration/Sequence



In the panel setting page, select the ‘Sequence controller’ as the work mode.
assign the same group address for sequence object in dimmer and button E.



Number	Name	Object Function	Description	Group Addres	Length	C	R	W	T	U
40	Rocker A left short	Switching	DMX CH1	5/0/1	1 bit	C	-	W	T	U
41	Rocker A left long	Dimming	DMX CH1 Dimming	6/0/1	4 bit	C	-	W	T	U
45	Rocker A right short	Switching			1 bit	C	-	W	T	U
46	Rocker A right long	Switching			1 bit	C	-	W	T	U
50	Rocker B left	Percentage	DMX CH1 Percentage	6/0/2	1 byte	C	-	W	T	U
55	Rocker B right	Percentage	DMX CH1 Percentage	6/0/2	1 byte	C	-	W	T	U
60	Rocker C short	Call scene	DMX Scene	8/0/1	1 byte	C	-	W	T	U
70	Rocker D left short	Sequence	DMX Sequence	8/0/2	1 bit	C	-	W	T	U
71	Rocker D left long	Sequence			1 bit	C	-	W	T	U
75	Rocker D right short	Sequence	DMX Sequence	8/0/2	1 bit	C	-	W	T	U
76	Rocker D right long	Sequence			1 bit	C	-	W	T	U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