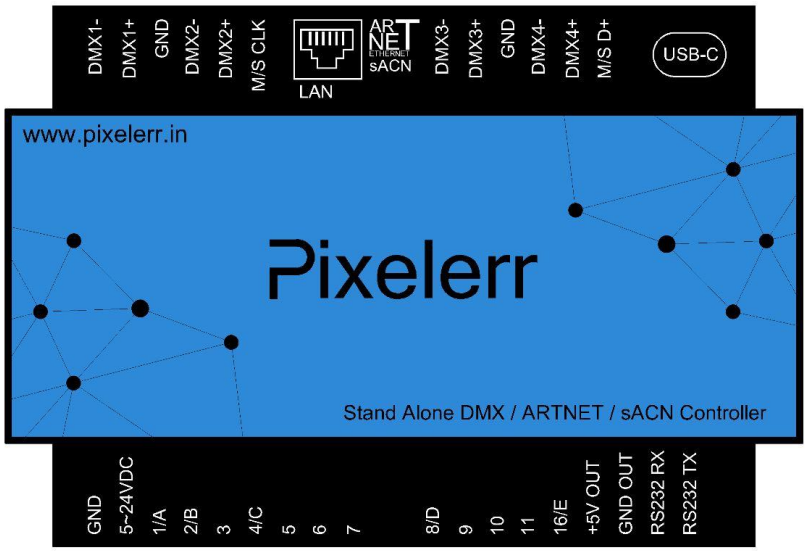
Pixelerr

USER MANUAL

PL-DIN 512/1024/2048

Version 1.01 June 2023



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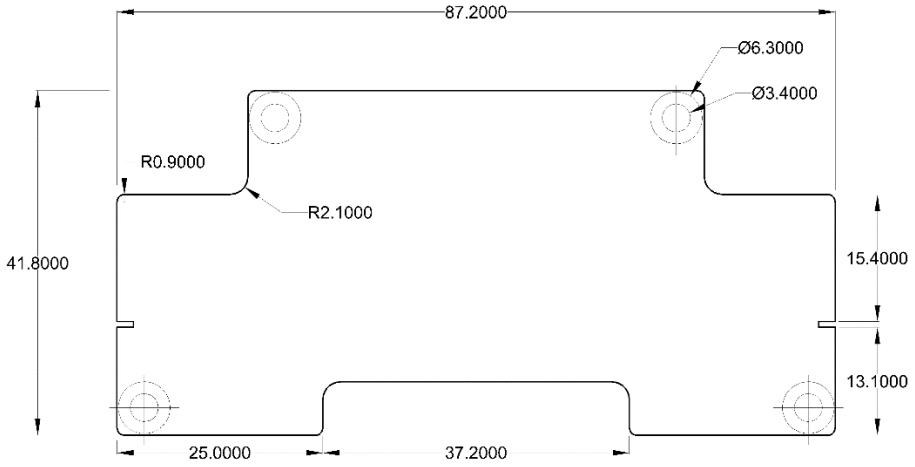
Hardware Technical Specifications

Input/Output Connectors:	Screw terminal (3*9 + 6 pins), USB TYPE C
External triggers:	x15 contacts (5V.) (20m max cable length)
Type of Case	DIN, compatible Din rail
Master/Slave connection	Yes 3 wires for 32 connected interfaces max (20m max cable length)
RS232 connection	Yes , can receive and send 16 characters max via the RS232 Protocol
Light Sensor	Yes 3 wires (15m away max)
Number of DMX Outputs	1 x 512 / 2 X 512 / 4 X 512 based on specific controller
DMX Speed	1 to 45 Hz, MaB, Bk
Stand Alone Mode	Yes
Internal Clock (RTC):	Yes
Internal calendar	Yes
Backups of the internal clock	Yes, 4 weeks without power (Internal rechargeable battery)
Internal memory	Yes (4 MB)
Memory Capacity	5000 steps with 512 channels, 100 000 steps with 16 channels
Power Input	5V to 24V DC, 0.5A max on DV connectors, 5V, 0.5A via USB
Input Current	200 mA
Power / Consummation	0.3 to 0.5W
Contact Input Voltage (stand-alone)	Contacts 3.3V~5 V DC
DMX Isolation	Fuse and diode 3000V
Dimensions:	88mm X 42mm X 110mm
Weight	0.255 Kg (with connector blocks)
Color	Black
Operating temperatures	-25 to +70 °C
Certificates	CE, RoHS
IP Rating	IP20
Place of Use	indoor
Storage	Keep in a dry place
Warranty	60 Months
Compatibility	8 and 16-bit DMX fixtures
System Compatibility	Windows 10 and later – MAC OS X (10.6 and later)

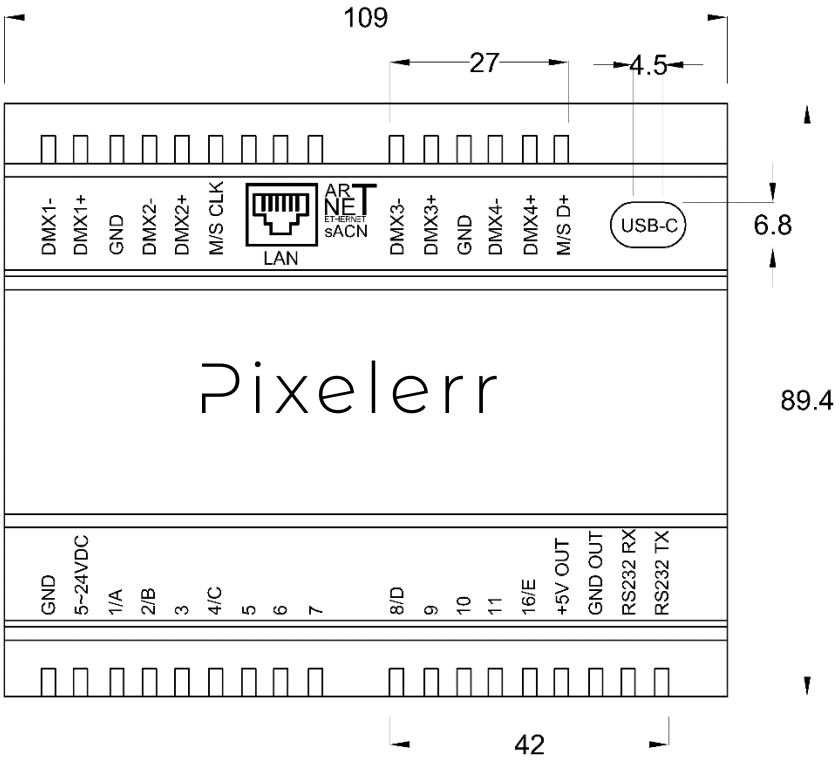
DIMENTIONS OF THE INTERFACE

The metric system is used. The unit is mm.

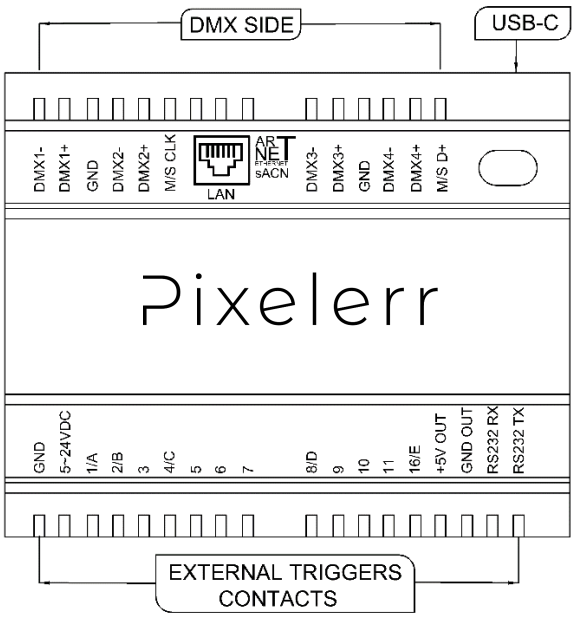
SIDE VIEW



TOP VIEW

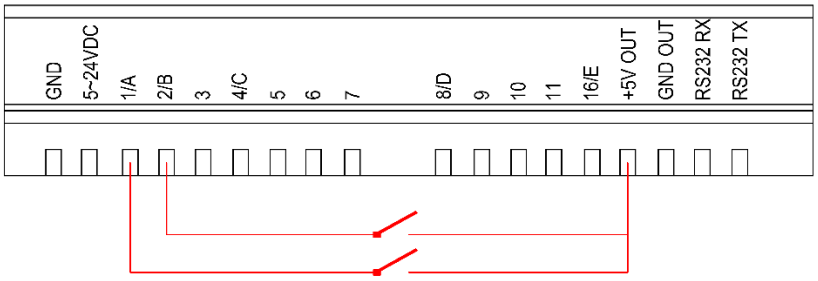


GENERAL PINOUT AND DEVICE'S CONNECTOR



EXTERNAL TRIGGERS OPERATION

It is possible to use 12 externals contacts.
You need to connect contact's Pin (here 1/A and 2/B) to 5V OUT to trigger particular scenes that are assigned to the pins 1/A and 2/B



Dry contact reaction time : 5 ms (0.005 s) / Time between 2 contacts : 500 ms (0.5 s)
Dry contact trigger options : On (Start scene only) + On/Off (start and stop scene) + Auto release (Hold con-tact to play scenes) + Restart (restart scene from beginning) + Play in priority (Scene keep playing until it pauses or stop, no other triggers allowed while playing).

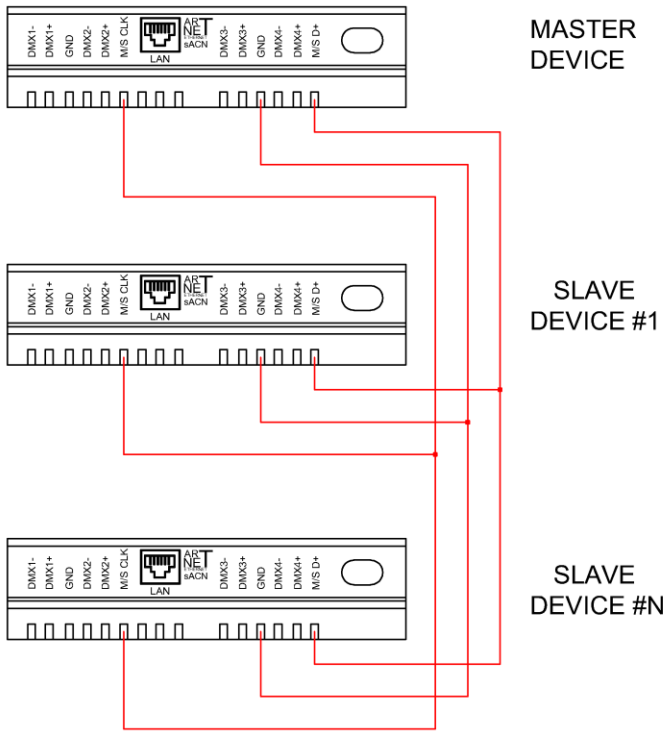
USB (YELLOW) LED OPERATION

OFF: Interface is not powered (check the power) or have a problem.
Normal Blinking: USB communication with software is active.
Slow Blinking : Interface is in standalone mode.

MASTER SLAVE CONNECTION INFORMATION

Master/Slave mode allows to synchronize scenes and trigger actions of several interfaces together.

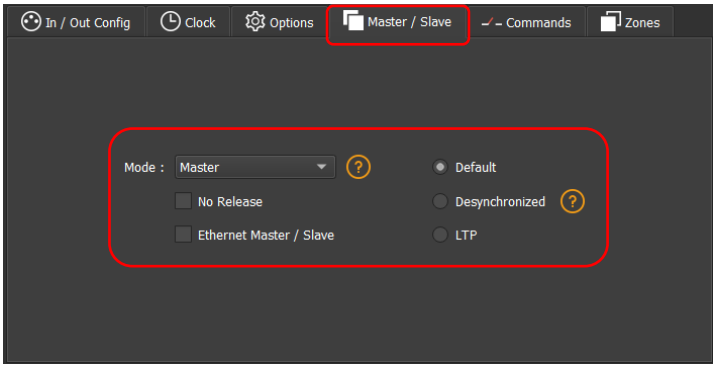
To use interfaces as Master/Slave, you need connect the interfaces each other's from the screw terminals. You need to connect the pins M/S Data, M/S CLK and GND from one controller to the other as following:



Interfaces configured as slave will strictly follow the clock, triggers and information provided by the master interface. Only one master interface at a time is possible.

SETTING MASTER/SLAVE INTERFCES IN SOFTWARE

When multiple interfaces are connected by USB, the standalone mode allows to set them as Master/Slave. This mode allows to synchronize many interfaces and mutualize their standalone spaces combining the universes. (Up to 32 standalone universes)



The Stand-Alone mode allows to choose 1 interface and to define this interface as Master from the inter-face list, it is possible to choose only one to be the Master, all the other one will be configured as slave by default. The interfaces are always ordered by serial number ascending order.

MODE MASTER/SLAVE -- « Default »

A single interface can be defined as master (lower serial number by default), other ones are automatically set to slaves. The master device plays the current scene and synchronizes the slave ones. The master forces the slave interfaces to play the same scene and the same step at the same time. The slave interfaces are forced to follow the master timings and triggers and they cannot act, play, or trigger a scene independently. Master can trigger on and trigger off scenes of the slave interfaces.

MODE MASTER/SLAVE -- «Desynchronized»

An interface can be defined as master, others are automatically set to slaves. All Triggers On or Off operated on the master interface are effective to slave ones. However, slave interfaces are not synchronized with master's timing and keep individual controls. Consequently, slaves can trigger and play different scenes at any time and not synchronized with the master ones. The master acts like a general remote imposing triggering to the slaves with total priority. Master can trigger ON and trigger OFF scenes of the slave interface.

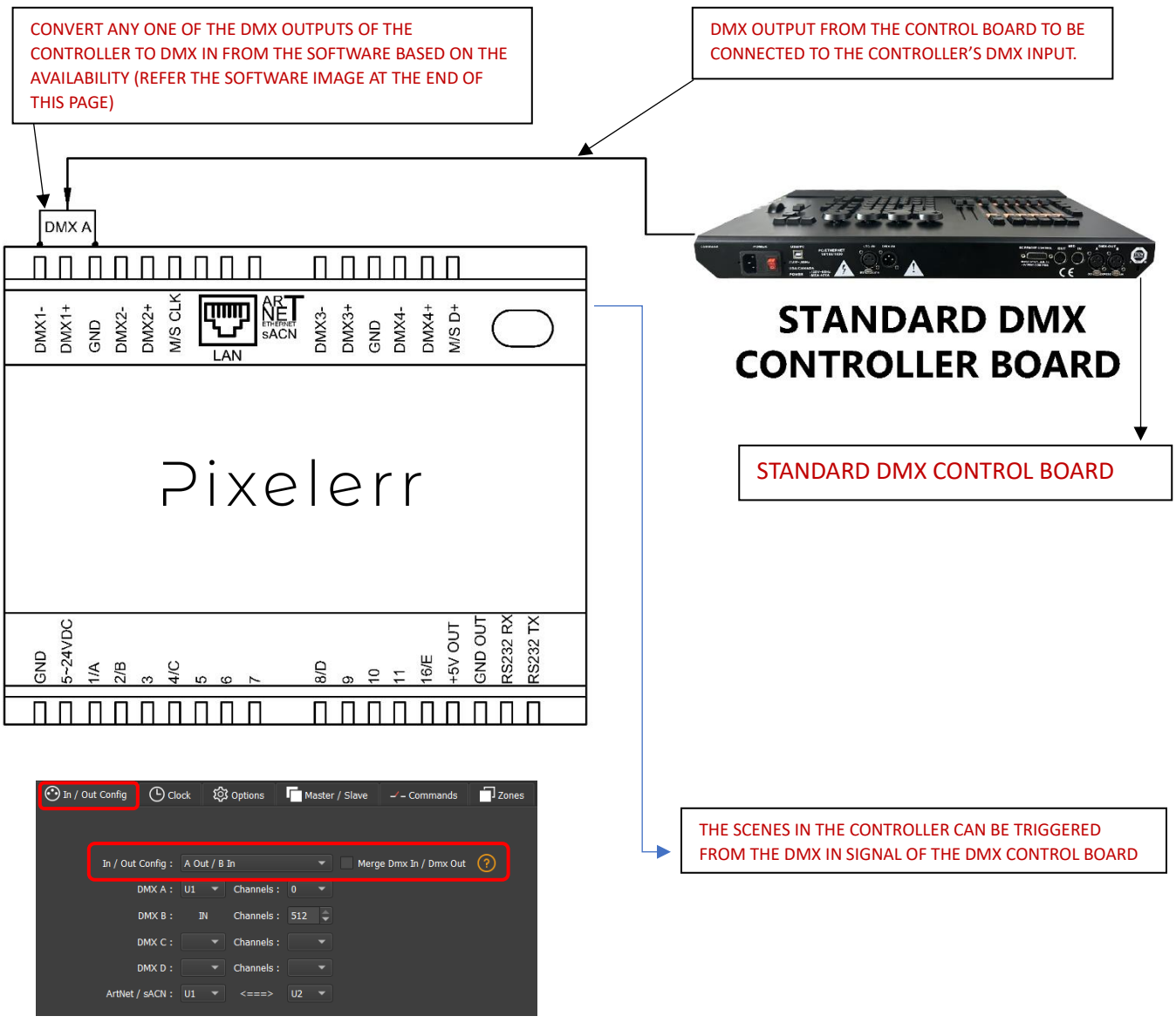
MODE MASTER/SLAVE -- « LTP »

LTP means Latest Takes Priority. All interfaces are defined as slaves. Interfaces are not synchronized with timing and can trigger and play different scenes by themselves. However, triggers from an interface are passed to the others connected interfaces automatically and slave interfaces are forced to trigger the same scene. Here Each interface acts like a general remote imposing triggering to the other slaves without synchronization.

THE «NO RELEASE» Option

This option is only available with LTP or DESYNCHRONIZED modes. Only triggers ON from the master interface are executed and effective. All triggers OFF are ignored and slaves interfaces keep playing their cur-rent scene. Each Slave interface can choose to release or not its scene depending on whether the option is activated or not.

DMX IN TRIGGER CONNECTION



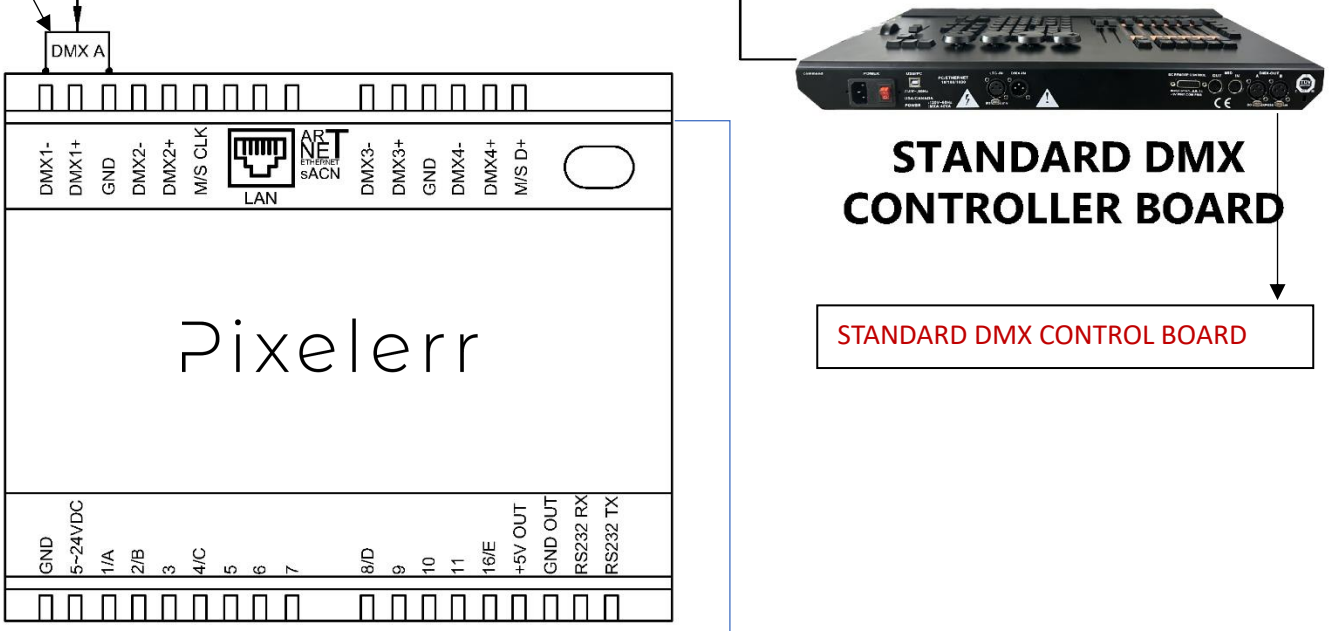
DMX MERGING IN STAND ALONE

DMX Merging is available for the PL-DIN interfaces because it takes two DMX lines to make a merge.
One DMX line must be turned into an input to capture the DMX signal provided by an external DMX board or by another DMX interface.

The interface will merge the input signal with its own output signal by comparing DMX levels with a HTP filter. Merging is a solution to keep manual control on channels, using a DMX Board for example. It's also a way to create a multi-zones system by merging several interfaces on one final DMX line.

CONVERT ANY ONE OF THE DMX OUTPUTS OF THE CONTROLLER TO DMX IN FROM THE SOFTWARE BASED ON THE AVAILABILITY (REFER THE SOFTWARE IMAGE AT THE END OF THIS PAGE)

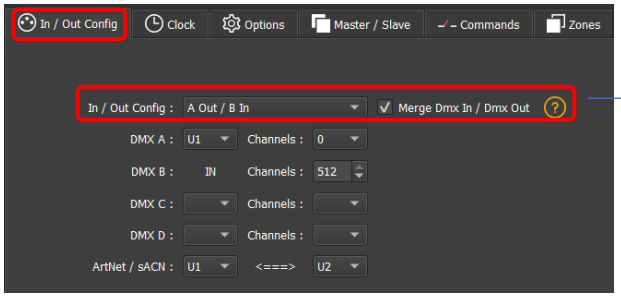
DMX OUTPUT FROM THE CONTROL BOARD TO BE CONNECTED TO THE CONTROLLER'S DMX INPUT.



STANDARD DMX CONTROLLER BOARD

STANDARD DMX CONTROL BOARD

THE OUTPUT WILL BE THE MARGE BETWEEN WHAT THE CONTROLLER IS PLAYING AND WHAT IS COMING IN THE INPUT LINE



SELECT THE APPROPRIATE IN/OUT CONFIGURATION FROM THE DROPDOWN MENU AND TICK THE CHECKBOX TO MERGE THE DMX IN / DMX OUT

TRIGGERS CONFIGURATION WITH THE SOFTWARE

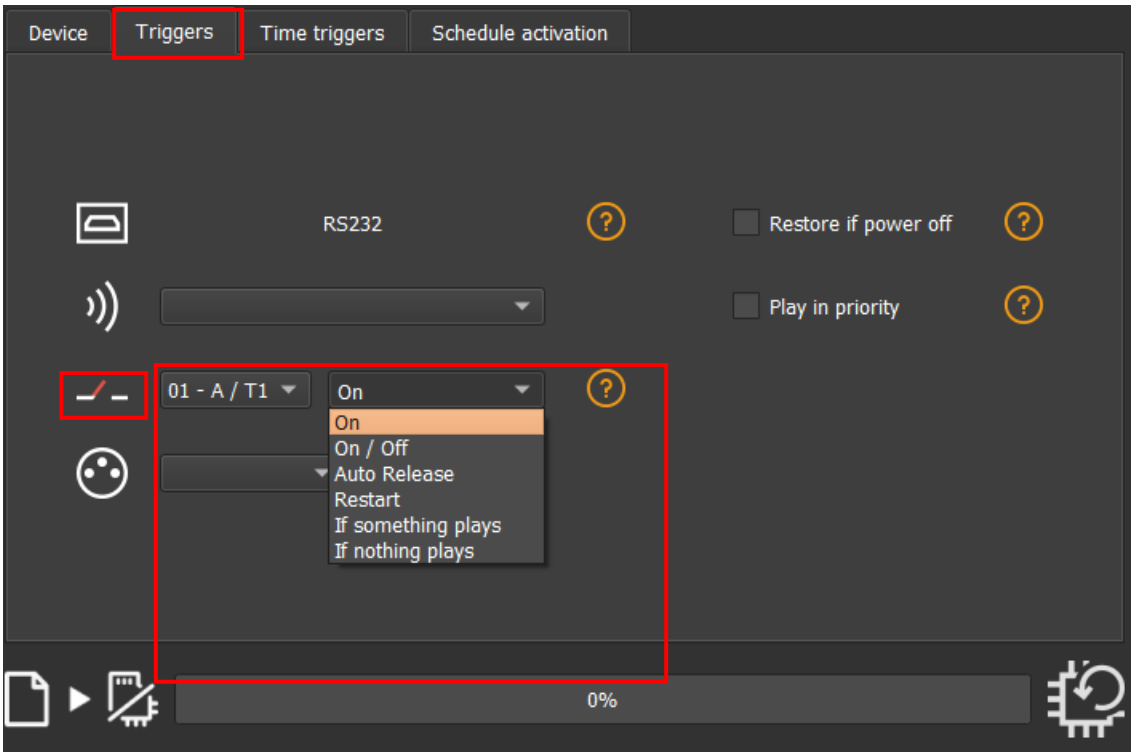
The Stand-Alone mode of the software enables you to configure and personalize all the triggers.
The information will be directly saved in the DMX interface memory with the memory writing function.

SWITCH TO STANDALONE MODE

When the device isn't connected to the software or has just been powered, it enters Stand Alone mode after five (5) seconds.

EXTERNAL CONTACT TRIGGERS

The Stand-Alone mode offers up to 12 external triggers.
By selecting a scene in the list, it's possible to choose the external contact number (from 01 to 12) to trigger the scene.

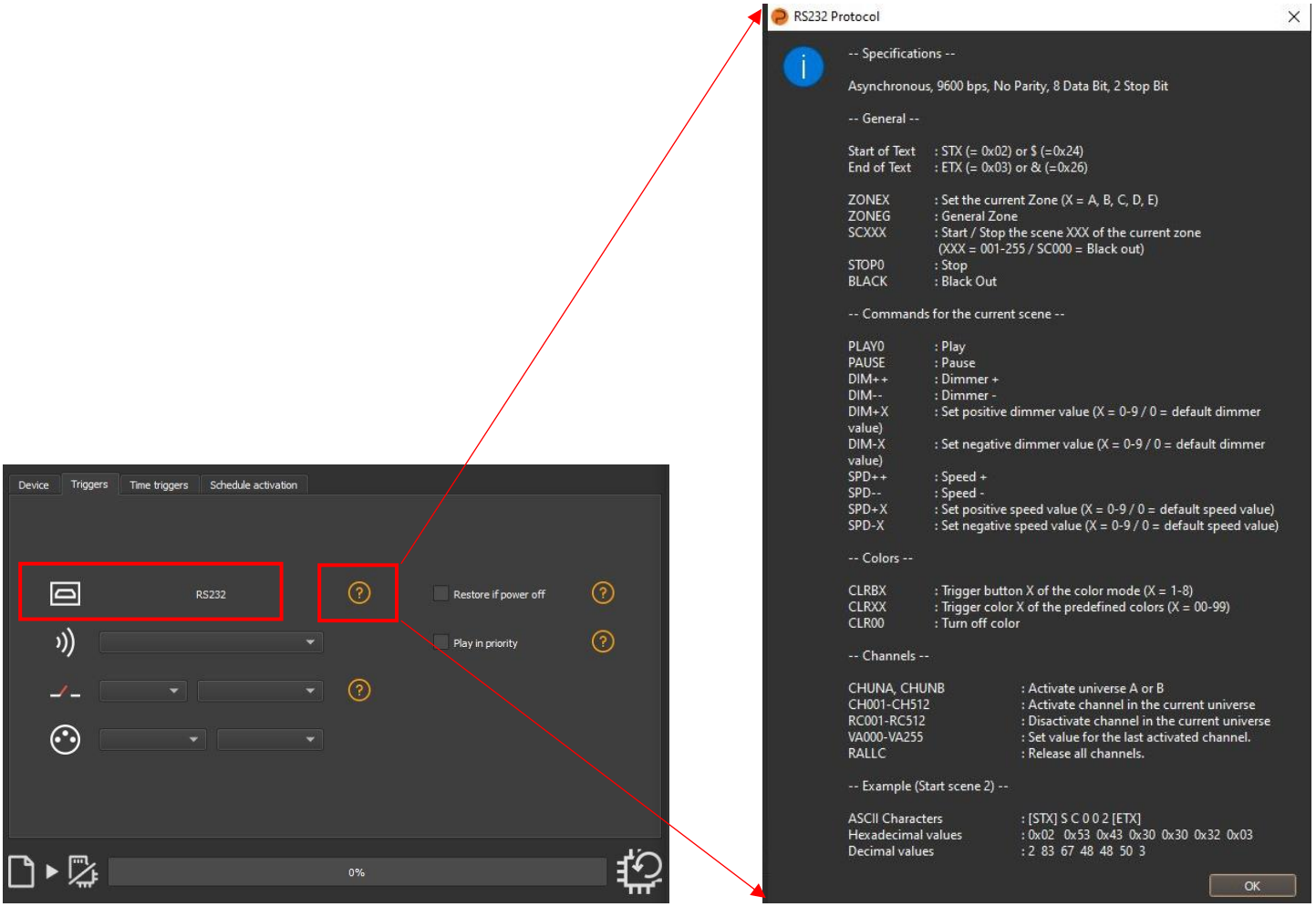


Several trigger options are available for externals contacts triggers:

On : Activate the contact only allow you to play the scene.
On/Off : Activate the contact allow you to play and stop a scene. Each trigger action will invert the state of the scene (start/stop).
Auto Release: The scene will only play until the contact is activated. The scene stops if the contact is released.
Restart : This option will start a particular scene, if the scene is already playing, it will start from the beginning.
If something plays: This option will allow a particular scene to start playing, only if some other scene is playing.
If nothing plays: This option will allow a particular scene to start playing, only if no other scene is playing.

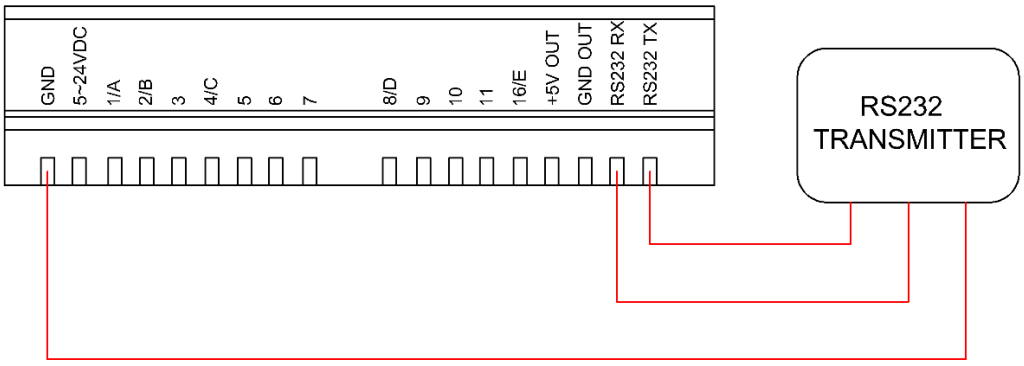
RS 232 TRIGGERS

Standalone mode allows us to use the RS232 protocol to control the DMX interface with the commands described in the help topic.



Connect the RS232 transmitter to the interface RS232 and GND pins and send the dedicated ASCII commands lines that you need.

The ASCII commands need to be sent one time only to be processed by the interface.

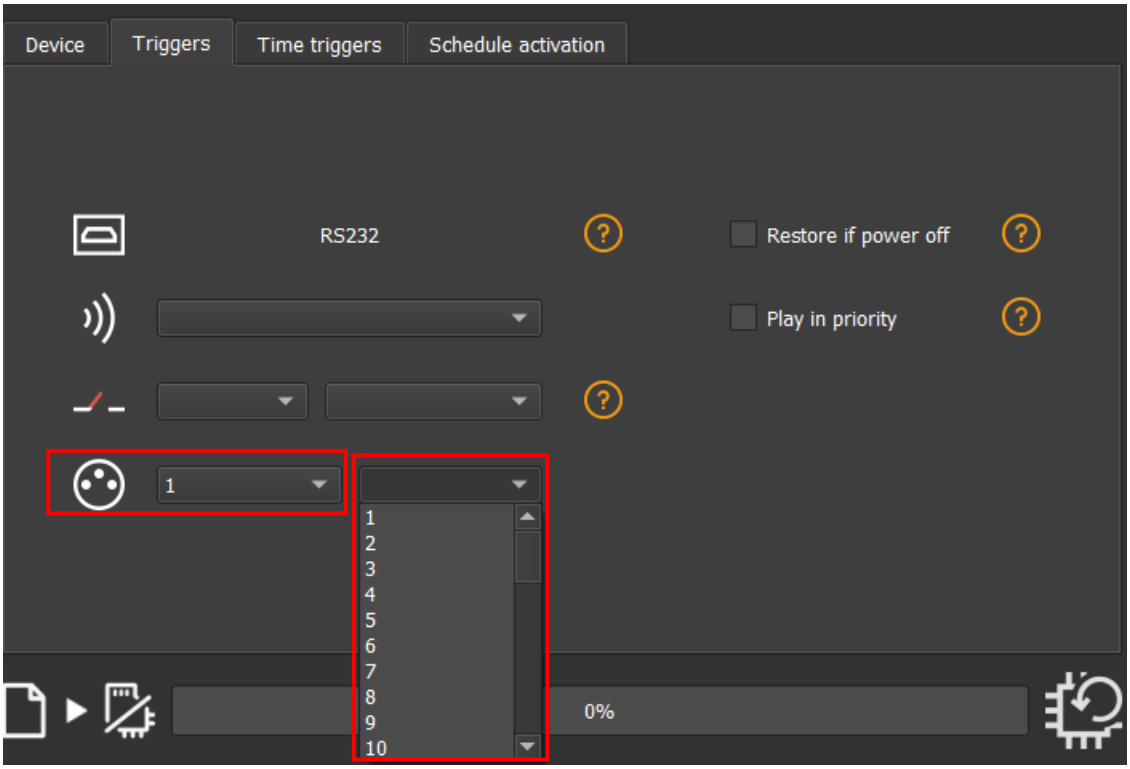


ASCII TABLE

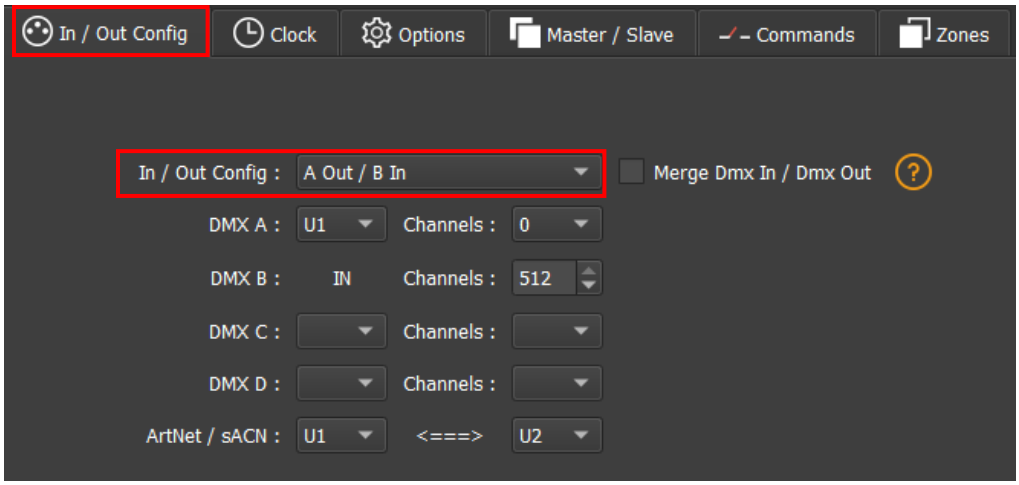
Decimal	Hexadecimal	Binary	Octal	Char
0	0	0	0	*[NULL]*
1	1	1	1	*[START OF HEADING]*
2	2	10	2	*[START OF TEXT]*
3	3	11	3	*[END OF TEXT]*
4	4	100	4	*[END OF TRANSMISSION]*
5	5	101	5	*[ENQUIRY]*
6	6	110	6	*[ACKNOWLEDGE]*
7	7	111	7	*[BELL]*
8	8	1000	10	*[BACKSPACE]*
9	9	1001	11	*[HORIZONTAL TAB]*
10	A	1010	12	*[LINE FEED]*
11	B	1011	13	*[VERTICAL TAB]*
12	C	1100	14	*[FORM FEED]*
13	D	1101	15	*[CARRIAGE RETURN]*
14	E	1110	16	*[SHIFT OUT]*
15	F	1111	17	*[SHIFT IN]*
16	10	10000	20	*[DATA LINK ESCAPE]*
17	11	10001	21	*[DEVICE CONTROL 1]*
18	12	10010	22	*[DEVICE CONTROL 2]*
19	13	10011	23	*[DEVICE CONTROL 3]*
20	14	10100	24	*[DEVICE CONTROL 4]*
21	15	10101	25	*[NEGATIVE ACKNOWLEDGE]*
22	16	10110	26	*[SYNCHRONOUS IDLE]*
23	17	10111	27	*[ENG OF TRANS. BLOCK]*
24	18	11000	30	*[CANCEL]*
25	19	11001	31	*[END OF MEDIUM]*
26	1A	11010	32	*[SUBSTITUTE]*
27	1B	11011	33	*[ESCAPE]*
28	1C	11100	34	*[FILE SEPARATOR]*
29	1D	11101	35	*[GROUP SEPARATOR]*
30	1E	11110	36	*[RECORD SEPARATOR]*
31	1F	11111	37	*[UNIT SEPARATOR]*
32	20	100000	40	*[SPACE]*
33	21	100001	41	!
34	22	100010	42	"
35	23	100011	43	#
36	24	100100	44	$
37	25	100101	45	%
38	26	100110	46	&
39	27	100111	47	'
40	28	101000	50	(
41	29	101001	51	)
42	2A	101010	52	*
43	2B	101011	53	+
44	2C	101100	54	,
45	2D	101101	55	-
46	2E	101110	56	.
47	2F	101111	57	/
48	30	110000	60	**0**
49	31	110001	61	**1**
50	32	110010	62	**2**
51	33	110011	63	**3**
52	34	110100	64	**4**
53	35	110101	65	**5**
54	36	110110	66	**6**
55	37	110111	67	**7**
56	38	111000	70	**8**
57	39	111001	71	**9**
58	3A	111010	72	:
59	3B	111011	73	;
60	3C	111100	74	<
61	3D	111101	75	=
62	3E	111110	76	>
63	3F	111111	77	?
64	40	1000000	100	@
65	41	1000001	101	**A**
66	42	1000010	102	**B**
67	43	1000011	103	**C**
68	44	1000100	104	**D**
69	45	1000101	105	**E**
70	46	1000110	106	**F**
71	47	1000111	107	**G**
72	48	1001000	110	**H**
73	49	1001001	111	**I**
74	4A	1001010	112	**J**
75	4B	1001011	113	**K**
76	4C	1001100	114	**L**
77	4D	1001101	115	**M**
78	4E	1001110	116	**N**
79	4F	1001111	117	**O**
80	50	1010000	120	**P**
81	51	1010001	121	**Q**
82	52	1010010	122	**R**
83	53	1010011	123	**S**
84	54	1010100	124	**T**
85	55	1010101	125	**U**
86	56	1010110	126	**V**
87	57	1010111	127	**W**
88	58	1011000	130	**X**
89	59	1011001	131	**Y**
90	5A	1011010	132	**Z**
91	5B	1011011	133	[
92	5C	1011100	134	\
93	5D	1011101	135	]
94	5E	1011110	136	^
95	5F	1011111	137	_
96	60	1100000	140	`
97	61	1100001	141	**a**
98	62	1100010	142	**b**
99	63	1100011	143	**c**
100	64	1100100	144	**d**
101	65	1100101	145	**e**
102	66	1100110	146	**f**
103	67	1100111	147	**g**
104	68	1101000	150	**h**
105	69	1101001	151	**i**
106	6A	1101010	152	**j**
107	6B	1101011	153	**k**
108	6C	1101100	154	**l**
109	6D	1101101	155	**m**
110	6E	1101110	156	**n**
111	6F	1101111	157	**o**
112	70	1110000	160	**p**
113	71	1110001	161	**q**
114	72	1110010	162	**r**
115	73	1110011	163	**s**
116	74	1110100	164	**t**
117	75	1110101	165	**u**
118	76	1110110	166	**v**
119	77	1110111	167	**w**
120	78	1111000	170	**x**
121	79	1111001	171	**y**
122	7A	1111010	172	**z**
123	7B	1111011	173	{
124	7C	1111100	174	|
125	7D	1111101	175	}
126	7E	1111110	176	~
127	7F	1111111	177	*[DEL]*

DMX IN TRIGGERS FROM ANOTHER DMX SIGNAL IN STANDALONE

The Stand-Alone mode offers up to 255 DMX IN channel triggers and up to 255 DMX trigger values per channel. By selecting a scene in the list, it's possible to choose the channel number and the DMX value to trigger the scene. The scene will play when the value of the DMX channel is reached or exceeded.

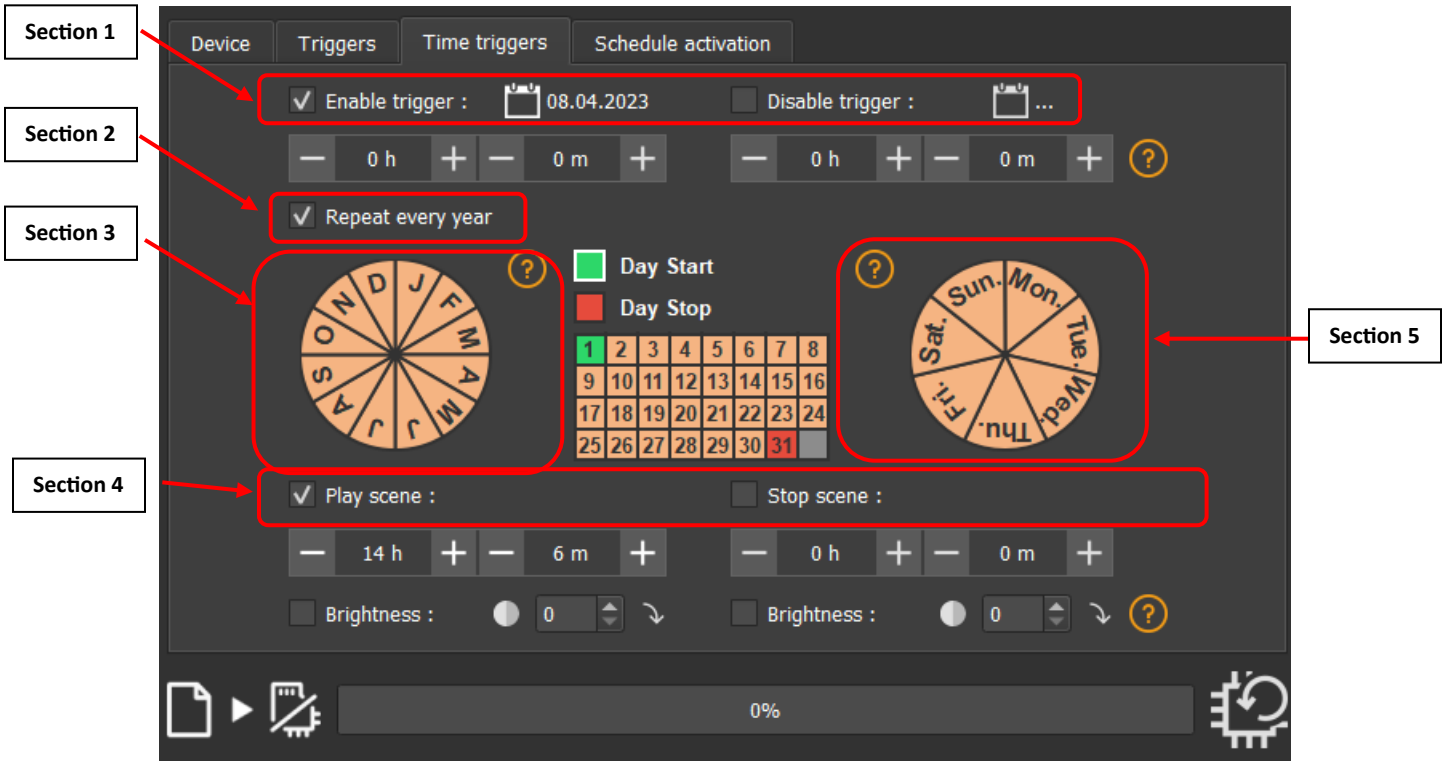


One DMX Output must be turned as an Input to set these triggers.
To set the DMX IN/OUT configuration, you need to go to STAND ALONE tab → In/Out config tab as indicated below.



TIME TRIGGERS WITH CLOCK AND CLANDER

The Stand-Alone mode has an internal clock and a calendar. It's possible to assign a time trigger on every scene of the list. By selecting a scene on the list, it's possible to choose the start and end dates and hours and days of the week. You can thus create a lot of scenarios.



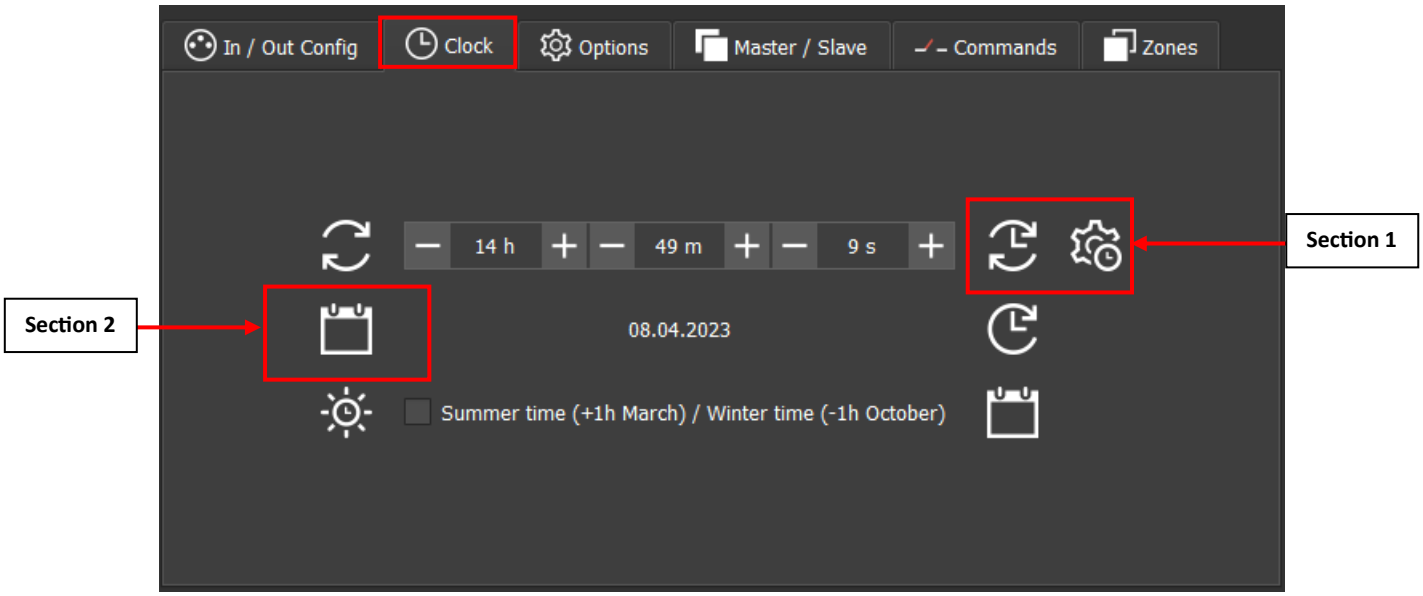
Section 1 – By using the ENABLE TRIGGER & DISABLE TRIGGER check boxes, you can create a time trigger for a particular scene to be played at a specific time between two dates.
Note – If you just select ENABLE TRIGGER check box and leave the DISABLE TRIGGER check box unchecked, then that particular scene will be played every day at the specified time for indefinite days.

Section 2 – By using the REPEAT EVERY YEAR check box, you can create a time trigger for a particular scene to be played on specific dates, days, and months.
Note – the sections marked as 3 and 5 on the above image will help selecting/deselecting the necessary months , dates, and days as per your requirement.

Section 4 – The check boxes PLAY SCENE and STOP SCENE will help setting specific times for the trigger. This section will only be enabled when REPEAT EVERY YEAR check box is enabled.

SETTING/SYNCHRONISING CONTROLLER CLOCK

By using the following window, we can set the time and date for the internal clock of the controller, which is responsible for proper functioning of time triggers.



You can manually adjust the time and date by using the + and – buttons of the above settings.
Or you can synchronize the controller time to system time by using section 1 of the above settings window.

You can set the time for the controller by using section 2 of the above settings window.

Disclaimer : please note that due to the continual process of betterment, there may be changes in this document and will publish the latest versions of this document accordingly on time.

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