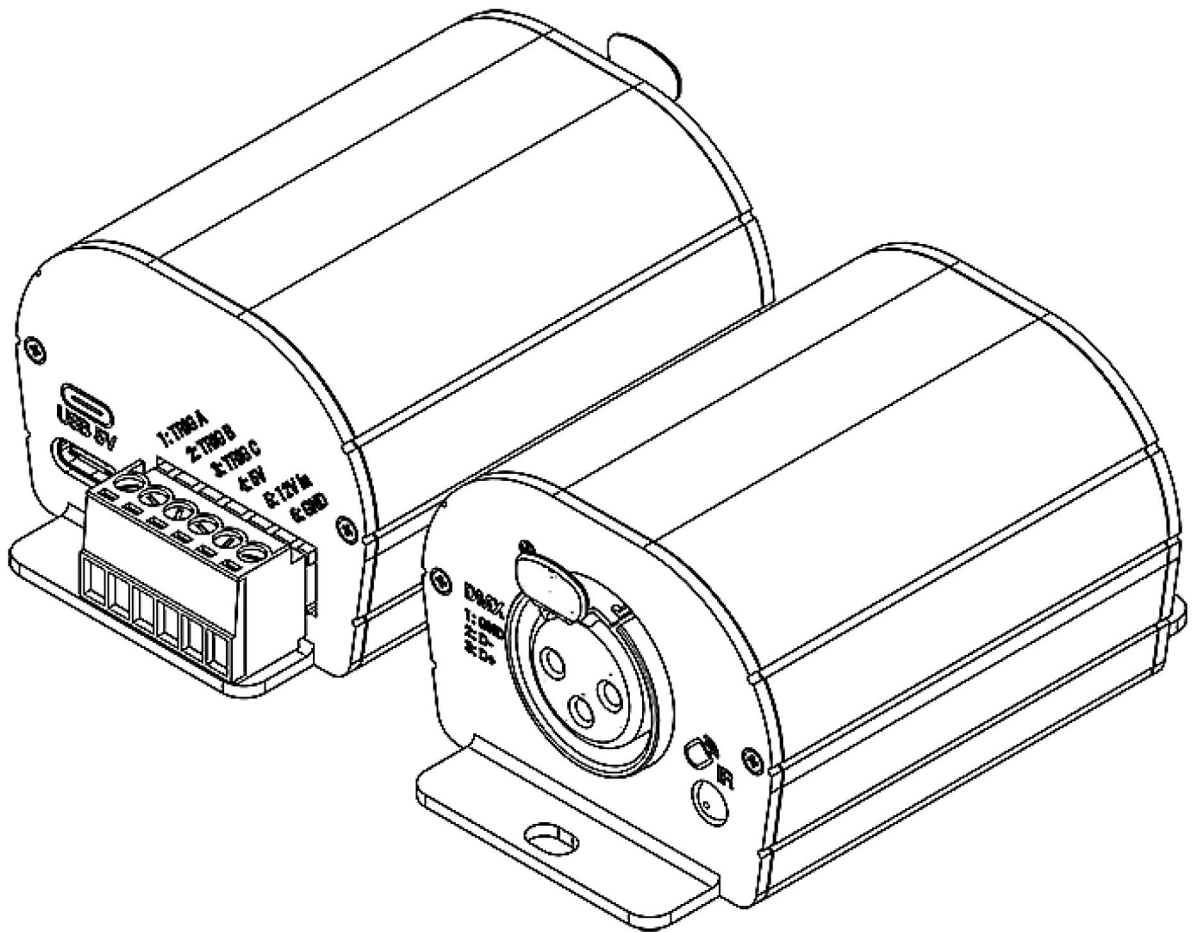


LT512S

USB to DMX interface



Datasheet &
Quickstart Guide

Table des matières

Introduction.....	1
Main features.....	1
Hardware technical specifications.....	1
Software options.....	2
Housing connectivity	3
Front panel.....	3
Rear panel.....	3
USB drivers installation	4
Multiple USB connections.....	4
Standalone mode settings	5
Device configuration	5
IN/OUT tab	5
"Merge DMX In / DMX Out" option.....	6
Art-Net/sACN universe range:.....	6
Options tab	7
Commands tab.....	8
Scenes selection and configuration	9
Choice of triggers.....	9
Infrared Trigger.....	10
External contacts Trigger:.....	10
Advanced trigger options.	12
Restore after power off.....	12
Play in priority.....	12
Save in memory option.....	13
Basic backup.....	13
Save to an internal and external micro SD card.....	14
Backing up Art-Net or sACN to an external SD card	14
Stand-alone use.....	15
Switch to stand-alone mode.....	15
External and USB power supply.....	15
How to use IR Remote.....	15
Previous Remote Control Unit (Before 2022).....	15
Functioning for Interfaces without Mode and older interfaces.....	15
Functioning for Interfaces with Modes.....	16
New Remote Control Unit (2022).....	17
Functioning for Interfaces with Modes.....	17
Functions descriptions.....	17
IR Codes.....	18
IR receiver box.....	18
Housing dimensions in mm.....	19

Front.....	19
Back.....	19
Tops.....	19
Troubleshooting	20

Introduction

Our professional package for entry-level budgets and users seeking an easy-to-operate DMX control system.

Newly designed aluminium housing with beautiful finish and updated electronics that work with all the latest 2022 Chromateq software (as well as older versions of LED Player and Pro DMX).

Capable of 3 trigger options and equipped with DC 5V input this USB to DMX controller includes USB 5V power supply and an optional infrared remote control in the package.

It is the perfect hardware for easy integration projects.

Objectives

The purpose of this technical manual is to develop the options managed by the interface in standalone mode, for software options, please refer to the software manuals

Main features

Hardware technical specifications

Input	USB 2.0 via USB-C
Number of DMX Outputs	Up to 128 or 512 on 3 pin XLR (XLR5 optional)
DMX Speed	1 to 45 Hz, MaB, Bk
Stand Alone Mode	Yes, 128 or 512 channels, fine DMX channels (16 bits)
Internal Memory	Yes (200 Kb)
Memory Capacity	200 to 2000 memory steps
Infra-red Receiver	Yes, (IR remote control for triggers available in option)
Infra-red Options	Scene selection, play, pause, speed, dimmer, next, black out
Dry Contact Triggers	Yes (3 smart contacts port with 7 actions max)
Power Supply Input	5V, 0,1A
High voltage Protection	Yes
Housing	Strong Aluminium
Infrared remote	optional, need IR Kit
USB Mode	Yes
Display of signal states	USB LED
Power	0,5 W
CPU's technology	32 bits
Dimensions	H : 55mm(2.16in) / W : 50mm(1.96in) / D : 37,5mm (1.47in)
Weight	0.085 Kgs
Package total weight	0.15 Kgs
Colour	Black

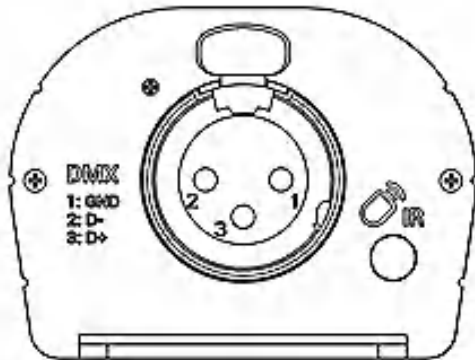
IP rating	IP40
Place of Use	Indoor
Storage	Keep in dry place
Compatibility	8 and 16 bits DMX 512 fixtures
Operating Temperature	-25 to +70 C°
Certifications	CE, RoHS, Fcc
International Warranty	Yes, 1 year

Software options

PLAYER , PRO, PRO2	128 or 512 channels Live and Stand Alone
Studio DMX 3D viewer	Yes, real time
Art-Net Output from PC	No
System Compatibility	Windows, MAC Os X (10.6 and higher) and Linux (64 Bits)
Free Software Updates	Yes

Housing connectivity

Front panel

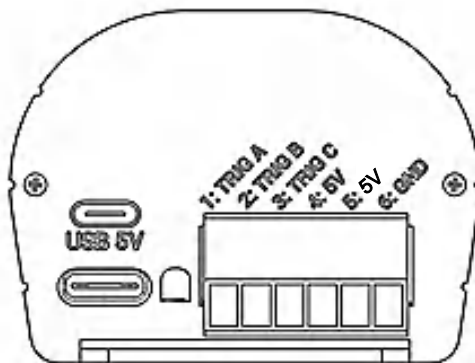


XLR Connector 3 pins

- 1: Ground
- 2: Data -
- 3: Data +

Infrared Receiver LED, (Remote unit is optional)

Rear panel



USB-C Connector (5V DC input)

Green USB Signal LED

Terminal Block Connector with screws

- 1 to 3: Trigger A, B, C
- 4: Power output for triggers A, B, C, 5V DC
- 5: Power Input 5V DC ; 0,1A or VCC (V+)
- 6: Ground (V-)

USB Signal LED operating states

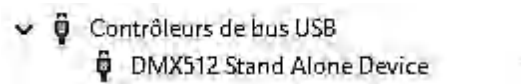
OFF	Interface not powered (check the USB cable or the power supply)
ON	Interface powered, No scene is playing
Fast Blinking	USB communication running with the software
Slow Blinking	Stand Alone mode and playing a scene
Flashing very fast	In bootloader mode, waiting to load a new firmware

USB drivers installation

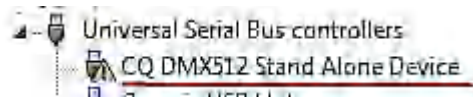
Install USB drivers to communicate with the device and change settings.
Installation of USB drivers is required only for Windows at the end of installation.
Drivers for Mac and Linux systems are installed automatically.

USB drivers verification :

In the Windows Device Manager. Check that the device icon is visible in "USB Bus Controllers".



If drivers are not installed, the Windows Device Manager lists a device with a yellow warning.



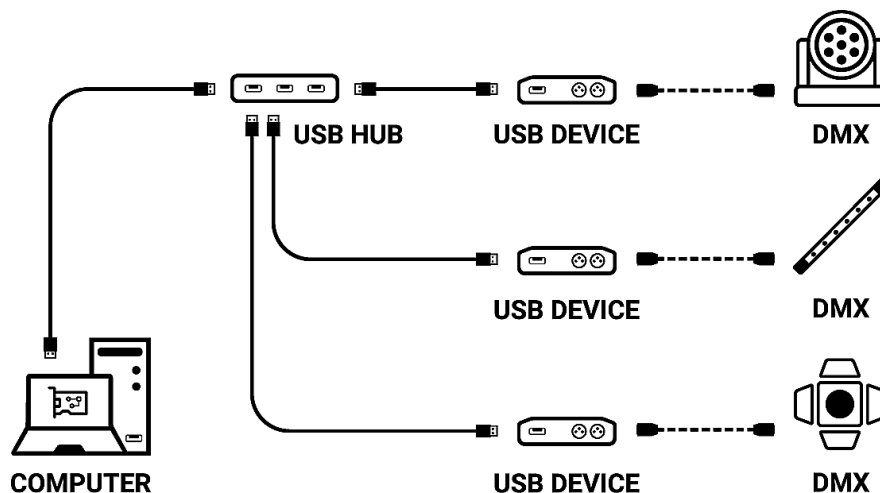
On Mac OS, simply check the USB device tree to view "DMX 512 Stand Alone Device". On Linux, use the "lsusb" command to view "DMX 512 Stand Alone Device" as a list.

After control software installation and USB drivers

- Connect the device with the USB cable.
- Start the DEVICETOOL or the software and select "Open USB Device" or "USB" to check the success of drivers installation.

All connected and detected devices are listed.

Multiple USB connections



Standalone mode settings

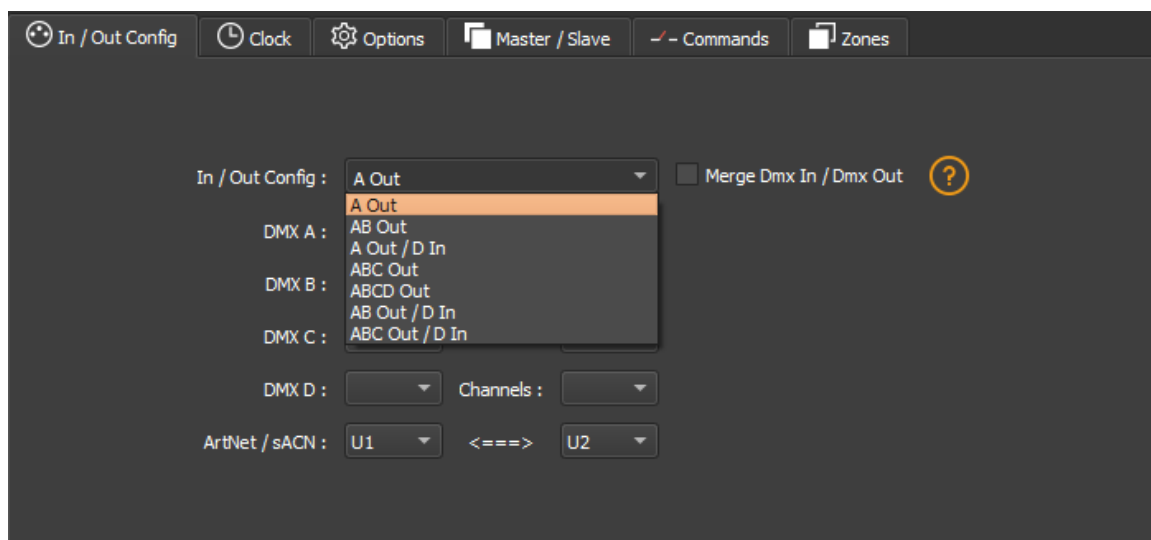


In standalone mode of the control software, configure the device according to the available options then select and configure the triggers of scenes to be written in memory.

Device configuration

IN/OUT tab

Select a DMX input/Output configuration of the interface from the drop-down menu



Available configurations will be displayed depending on the connected device depending on whether it has 1.2 or 4 DMX lines.

- **A OUT** - Assigns 1 output universe on the DMX line(s), for devices that have more than 1 DMX lines duplicate the universe on each.
- **AB OUT** - Assigns 1 different output universe on 2 DMX lines, for devices that have 4 DMX lines duplicates the first 2 lines on the next 2 lines.
- **A OUT/B or D IN** - Assigns 1 output universe on the first line(s) and uses the last DMX line as DMX input.
- **ABC OUT** - Assigns 1 different universe output on the first 3 DMX lines.
- **ABCD OUT** - Assigns 1 different universe output on 4 DMX lines.
- **AB OUT / D IN** - Assigns 1 different output universe on the first 2 lines and uses the last DMX line as DMX input.
- **ABC OUT / D IN** - Assigns 1 different output universe on the first 3 lines and uses the last DMX line as DMX input.

"Merge DMX In / DMX Out" option

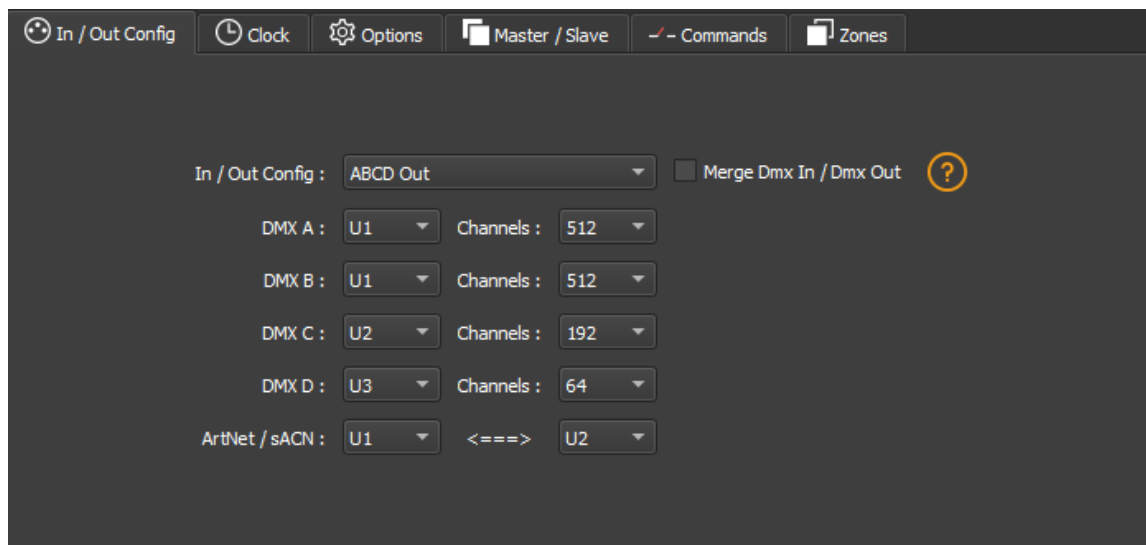
Available with interfaces with more than 2 or 4 DMX lines.

Enable the option to re-inject line configured as an input (IN) to the line(s) configured in DMX outputs and thus merge them.

The merged DMX levels are compared and the highest is retained. We are talking about HTP (Highest Takes Priority).

Maintain manual control on some circuits with an external DMX console.

Create a multi-zone system by merging several cascading interfaces to obtain only one common DMX line.



Assign any universe of the software to any DMX line assigned to output, choosing line by line (U1, U2...).

Optimize the size of shows saved in memory by reducing the number of circuits per universe depending on the channels used.

Example: If 150 channels are used in the show, select only the nearest higher value, here 192.

Art-Net/sACN universe range:

Define the starting universe and the finish universe to write in memory on an external SD card for an Art-Net/sACN show.

Cf: *"Saving Art-Net or sACN to an external SD card"*

Options tab

☐ Turn off LED display after 4s

Trigger delay (Bounce) : 500 ms

Scroll time : +1

Select Dimmer channels

	Default start scene	Dimmer (DMX In)	Direct DMX levels (0-255)
Zone A :	Scène 1		<input type="checkbox"/>
Zone B :			<input type="checkbox"/>
Zone C :			<input type="checkbox"/>
Zone D :			<input type="checkbox"/>
Zone E :			<input type="checkbox"/>

For devices with an LED display, turn it off after 4 seconds of inactivity by checking the option.

Select a default scene to play automatically after the interface is turned on (with USB or external power supply). For multi-zones devices it is possible to set a default scene for each area.

Note: The selected default start scene loses its priority if another scene uses the "Restore if power off" option.

Cf: "Advanced trigger options"

Configure the "Select Dimmer channels" option to select separately the Dimmer or RGBW light intensity channels that will be controlled directly by Dimmer mode, dry contacts or via the infrared remote control.

Sélectionner les circuits Dimmer

Univers

Select Dimmer channels

Select RGBW channels

Commands tab

Assign external contacts, among those available for your device, to trigger some standalone mode commands: Dimmer +, Dimmer -, Blackout, Speed +, Speed -, Pause, Scene +, Scene - and Zone.

Note: Be careful not to use the same command trigger as the one used for a scene and vice versa. Cf: *"Choice of triggers by external contacts"*

The last assigned contact will take priority over the other.

Use 2 types of Short/Hold contact and thus assign an identical contact to 2 different commands. (here as an example with the Dimmer +; Dimmer -)

		--- Short ---	--- Hold ---
Stop :			
Zone A :	01 - A / T1	Dimmer + :	04 - C / T3
Zone B :	02 - B / T2	Dimmer - :	04 - C / T3
Scene + :	06	Speed + :	
Zone + :		Speed - :	
Pause :		Color + :	
Zone C :	03	Color - :	
Zone D :		CCT + :	
Scene - :	07	CCT - :	
Zone - :	01 - A / T1 02 - B / T2 03 04 - C / T3 05 06 07 08 - D / T4 09		

Scenes selection and configuration

	Name	Duration	Properties	Triggers	Zone
1	✓ Scène 1	00m 04s 000	00:00:000 #oo	●	A
2	✓ Scène 2	00m 09s 960	00:00:000 #oo	●	A
3	✓ Scène 3	00m 11s 000	00:00:000 #oo	●	A
4	✓ Scène 4	00m 02s 000	00:00:000 #oo	●	A
5	✓ Scène 5	00m 02s 000	00:00:000 #oo	●	A
6	✓ Scène 6	00m 02s 000	00:00:000 #oo	●	A
7	✓ Scène 7	00m 02s 000	00:00:000 #oo	●	A
8	✓ Scène 8	00m 03s 000	00:00:000 #oo	●	A
9	✓ Scène 2	00m 03s 000	00:00:000 #oo	●	B
10	✓ Scène 3	00m 02s 400	00:00:000 #oo	●	C
11	✓ Scène 4	00m 09s 960	00:00:000 #oo	●	D

The configuration panel on the right has tabs: Device, Triggers, Time triggers, Schedule activation. It shows a device 'RS232' with a question mark icon. Below it are four trigger types: a speaker icon, a radio wave icon, a line graph icon, and a smiley face icon. Each trigger type has a dropdown menu and a question mark icon. To the right of the triggers are two checkboxes: 'Restore if power off' and 'Play in priority', each with a question mark icon. At the bottom, there is a progress bar showing 1% and a gear icon.

Check to select the scenes to write in memory and assign triggers from those available by your device.

Choice of triggers

In the "Triggers" tab, select and assign different types of triggers.

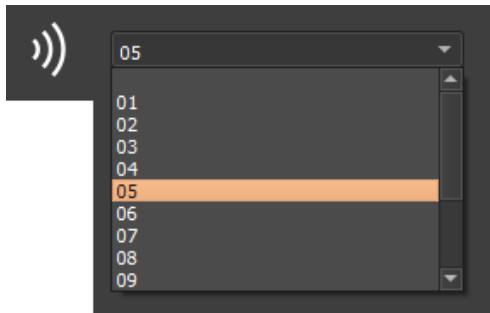
The 'Triggers' tab is selected. It shows the same device 'RS232' with a question mark icon. Below it are four trigger types: a speaker icon, a radio wave icon, a line graph icon, and a smiley face icon. Each trigger type has a dropdown menu and a question mark icon. To the right of the triggers are two checkboxes: 'Restore if power off' and 'Play in priority', each with a question mark icon.

Infrared Trigger

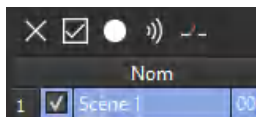
For devices that do not have this trigger option an Infrared kit is available containing an IR receiver and a remote control.

Cf: "use of the remote control by infrared"

Select a scene from the list and assign it a remote control button from the 15 available buttons.

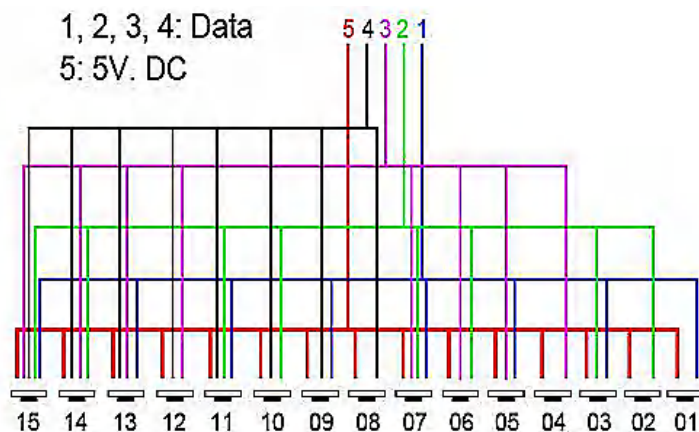


Automatically assign buttons to all scenes in the list by clicking the Infrared icon on the scene list toolbar.

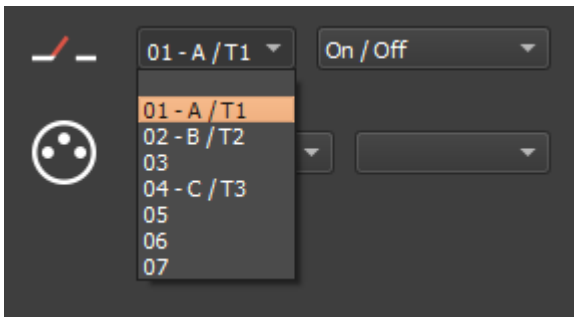


External contacts Trigger:

Depending on the interface, several external contacts are available: Trig A, Trig B, Trig C ..., and the Use a multiplexing interface to extend the number of contacts when possible.(from 3 to 7; from 4 to 15; from 5 to 31 ...) Contact reaction time, 5ms (0.005s)

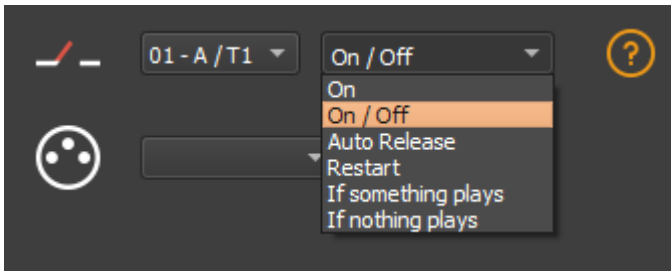


Example of multiplexing system with 4 external contacts extended to 15.



Select a scene from the list and assign it a contact from those available through the interface.

Option of triggers



Select a trigger option from the drop-down menu next to it.

On: Activating the contact makes the scene play (the only trigger action is to start the scene).

On/Off: Activating the contact starts the scene, subsequent activation stops the scene. Each trigger action will reverse the stage state (start/stop).

Auto Release: The scene is played only while the contact is enabled. When the contact is released, the scene stops.

Restart: If the scene is playing, enabling the contact restarts the scene from its beginning. If the scene is not being played, it will start. External contact reaction time: 8 ms (0.008 s) / time between 2 contacts: 500 ms (0.5 s)

If something plays: Play the selected scene if a scene is already played.

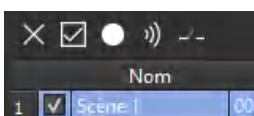
If nothing plays: Play the selected scene if nothing plays.

These two interdependent options allow the same contact to be assigned to two different scenes.

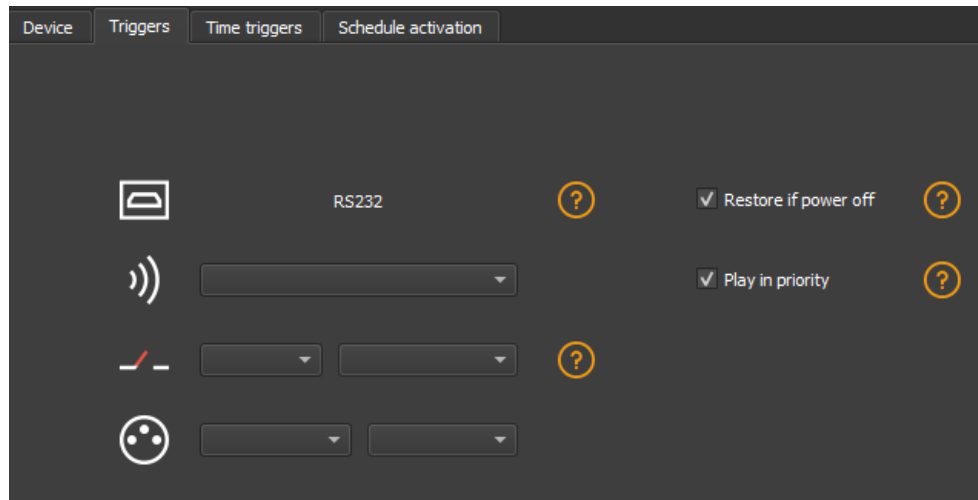
Note: Be careful not to use the same scene trigger as the one used for a command and vice versa. Cf: "Order tab"

The last assigned contact will take precedence over the other.

Automatically assign external contacts to all scenes in the list by clicking the external contact icon on the scene list toolbar.



Advanced trigger options.



Restore after power off

By checking this option in the "Triggers" tab, the selected scene takes priority on the boot scene (see "*Options tab*") when the power supply is restored.

If all scenes have the option checked, the last active scene is replayed.

Play in priority

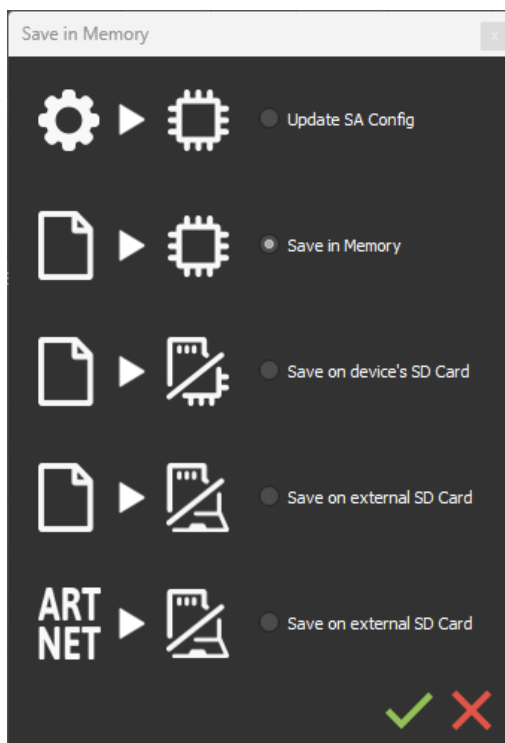
By checking this option in the "Triggers" tab, the selected scene plays continuously until its end, without taking into account other triggers, except for time triggers and physical buttons on the device.

Save in memory option

Check scenes that need to be saved in memory.

		Name	Duration	Properties	Triggers	Zone
1	<input checked="" type="checkbox"/>	Scene 1	00m 14s 400	00:05:000 #00		A
2	<input checked="" type="checkbox"/>	Scene 3	00m 00s 480	00:03:000 #00		A
3	<input checked="" type="checkbox"/>	Scene 4	00m 05s 720	00:05:000 #1		A
4	<input type="checkbox"/>	Scene 5	00m 18s 000	00:07:000 #1		A
5	<input type="checkbox"/>	Scene 6	00m 05s 000	00:00:000 #00		A
6	<input checked="" type="checkbox"/>	Scene 6_copy_1	00m 05s 000	00:00:000 #00		A
7	<input type="checkbox"/>	Scene 6_copy_2	00m 07s 000	00:00:000 #00		A
8	<input type="checkbox"/>	Scene 6_copy_3	00m 07s 000	00:00:000 #00		A
9	<input type="checkbox"/>	Scene 6_copy_4	00m 07s 000	00:00:000 #00		A
10	<input type="checkbox"/>	Scene 6_copy_5	00m 07s 000	00:00:000 #00		A
11	<input type="checkbox"/>	Scene 6_copy_6	00m 07s 000	00:00:000 #00		A
12	<input type="checkbox"/>	Scene 6_copy_7	00m 07s 000	00:00:000 #00		A
13	<input type="checkbox"/>	Scene 6_copy_8	00m 07s 000	00:00:000 #00		A
14	<input type="checkbox"/>	Scene 6_copy_9	00m 07s 000	00:00:000 #00		A
15	<input type="checkbox"/>	Scene 16	00m 03s 000	00:05:000 #3		A
16	<input type="checkbox"/>	Scene 17	00m 08s 000	00:00:000 #2		A
17	<input type="checkbox"/>	Scene 18	00m 03s 200	00:00:000 #40		A
18	<input type="checkbox"/>	Scene 19	00m 13s 000	00:00:000 #2		A
19	<input type="checkbox"/>	Scene 20	00m 04s 000	00:00:000 #2		A
20	<input type="checkbox"/>	Scene 21	00m 03s 500	00:00:000 #2		A

Click on the "Write in Memory" button



Select the desired option in the Scenes Write window.

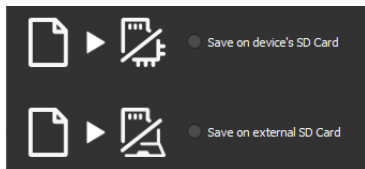
Basic backup

Write standalone configuration: Change only certain settings in the configuration of a show already written in memory. Reduces backup time.

Write to Memory: Default backup in the internal memory of the device.

Save to an internal and external micro SD card

For devices with a micro SD port.



Save scenes to a micro SD card (Class 10) installed in the device's SD card reader or in the computer drive. The card must be CLASS 10, formatted in FAT or FAT 32 with a maximum capacity of 256 GB. It is recommended to use the largest allocation unit size available when formatting.

Write to the SD card of the device: SD card installed in the interface drive

Write to an external SD card: SD card connected to the computer

Note: Save to the root directory of the SD card.

Backing up Art-Net or sACN to an external SD card

For devices with a micro SD port and an Ethernet port.



Art-Net - Write to an external SD card: Save up to 8 universes only on micro SD to render an Art-Net or sACN show independently.

Set the universe range in the IN/OUT config tab. Cf:

Pre-commissioning verification:

Connecting the RJ45 cable before power on.

Connection to the local network. Cf: "Ether Ethernet connection and configuration"

Configuring the device in Art-net or sACN mode via the software or DeviceTool.

Note: Once in Art-Net (Ar) or sACN (AC) mode, the interface is no longer visible on the local network.

In Art-Net the interface will use Broadcast to play the show on the network.

In sACN the interface will use the Multicast to play the show on the network.

Stand-alone use

Switch to stand-alone mode

The interface switches to standalone mode automatically after 5 seconds after power on and if no software connection is made.

External and USB power supply

The external power supply is only used for "Autonomous" mode. But it is possible to connect a USB cable and power supply at the same time, even if this configuration is not recommended. If a USB cable is connected to the interface when running in standalone mode, the device will detect a possible connection to a computer but this will not affect the scenes that play.

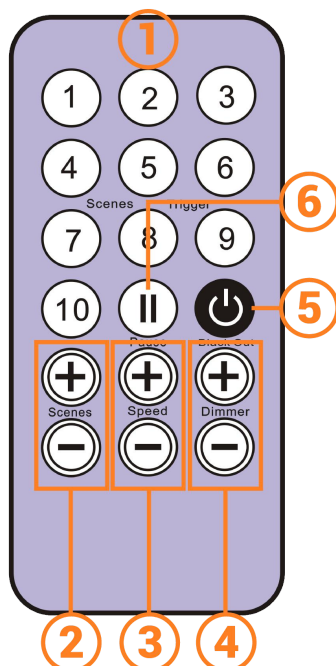
How to use IR Remote

Infrared Remote triggers work in Stand Alone and in Live mode when "Get Stand Alone Triggers" is checked in software option window, at the bottom of "Device" section.

☒ Get Stand Alone triggers

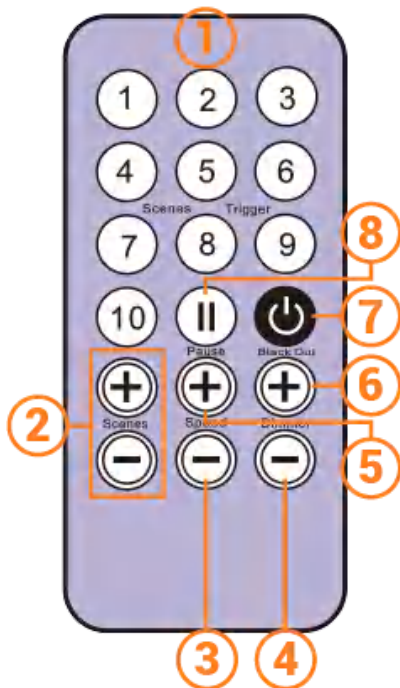
Previous Remote Control Unit (Before 2022)

Functioning for Interfaces without Mode and older interfaces.



1. **Scene trigger buttons** (1 to 10) assigned via the software.
2. **Scene selector**, next or previous.
3. **Speed value**, increase & decrease
4. **Dimmer value**, increase & decrease
5. **Blackout**: Stops the current scene and plays the scene 00. All DMX levels are set to zero.
6. **Pause**: Freezes the current scene in its state

Functioning for Interfaces with Modes



1. **Scene trigger buttons** (1 to 10) assigned via the software
2. **Increase or decrease** the value of the selected mode:
Scene +/-, Dimmer +/-, Speed +/-, Color +/-.
3. **Color mode**
4. **Scene mode**
5. **Dimmer mode**
6. **Speed mode**
7. **Blackout:** Stops the current scene and plays the scene 00.
All DMX levels are set to zero.
8. **Pause:** Freezes the current scene in its state.

New Remote Control Unit (2022)

Functioning for Interfaces with Modes



1. **Scene trigger buttons** (1 to 15) assigned via the software Trigger 1 to 15 with 1 Zone. Trigger 1 to 9 with several Zone.
2. **5 Control Zones** available: A, B, C, D, E and Global Zone: [] to trigger each Zone in the same time.
3. **Increase or decrease** the value of the selected mode: Scene +/-, Dimmer +/-, Speed +/-, Color +/-.
4. **Release Color mode**
5. **Color mode**
6. **Scene mode**
7. **Dimmer mode**
8. **Speed mode**
9. **Blackout:** Stops the current scene and plays the scene 00. All DMX levels are set to zero.
10. **Pause:** Freezes the current scene in its state.

Functions descriptions

Scene +/-: Each push selects the next or previous scene of the current Zone. Scene are play immediately.

Master Dimmer: Increases or decreases the RGB, CMY and dimmer channels of the current zone. The CMY, RGB, Dimmer channels are defined in the Profile of the fixture and the stand-alone mode.

Scene Speed: Increases or decreases the speed of the current scene in the current zone. A different speed can be chosen separately for each scene.

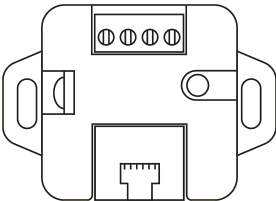
Zones: Choose a Zone (A,B,C,D,E or Global []). Then select a scene or mode to trig in the selected zone.

Modes: Select a Mode from Speed, Dimmer, Color or Scenes, then use +/- to change values.

IR Codes



IR receiver box



To use the optional IR remote control, an external circuit with an IR receiver must be connected via an RJ45 port or via the stand-alone interface terminal block.

IR PCB pinout

- With RJ45 cable, use pins: #8 = Ground; #4 = IR data; #7 = 5V.
- With connectors, use pins: O = IR data; V = 5V; G = Ground.

Maximum distance from cable to receiver is approx. 20 m.

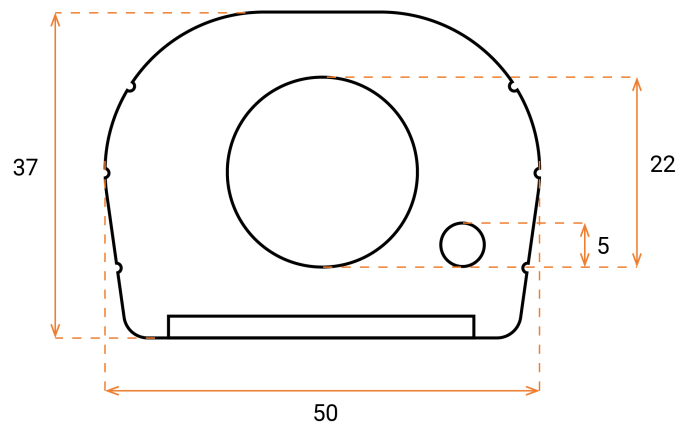
Light sensor

The light sensor integrated in the IR box circuit **only works with hourly triggers**. The external card must be connected via the RJ45 port or via the terminal block. Light sensitivity must be set in the software.

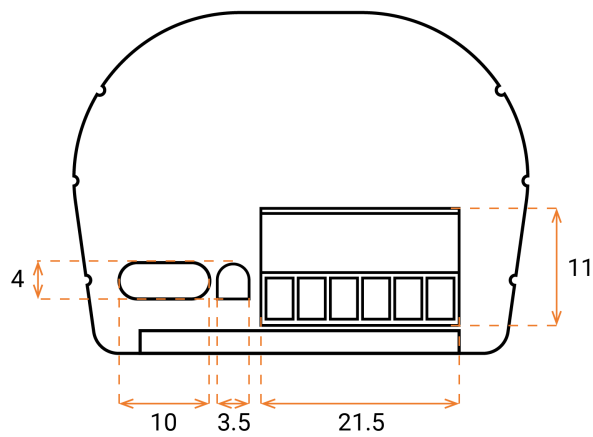
See "Time-controlled scenes".

Housing dimensions in mm.

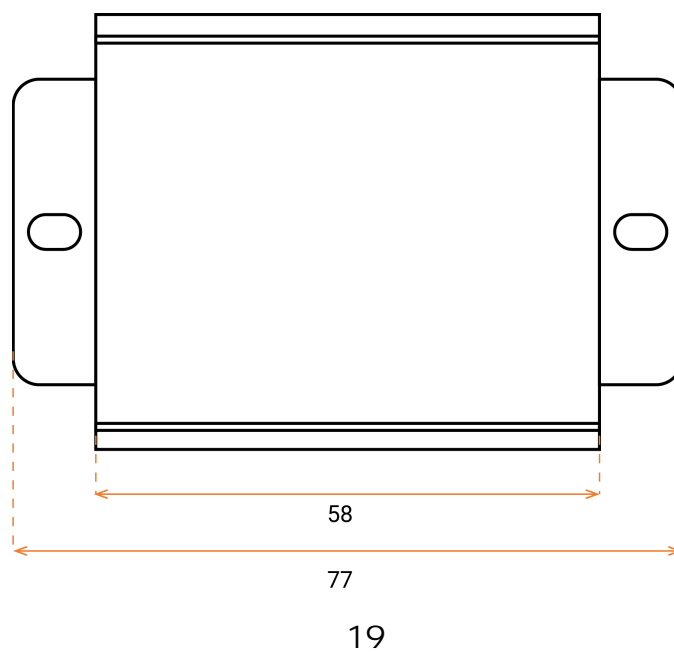
Front



Back



Tops



Troubleshooting

The device is not detected by the DeviceTool or USB software.	Unplug to restart the device.
	Change the USB cable
The device is not detected by the DeviceTool or Ethernet software.	Unplug to restart the device.
	Change the Ethernet cable
	Check the selection of the Ethernet network before opening.
The device is not detected on the network.	Check the mode of communication with LED signals and reconfigure the device via USB if necessary
	Verify that the IP addresses and subnet mask are configured correctly.
	Update the firmware of the device via the software or DeviceTool
	Update the software with the latest version and try again
	Open and allow communication ports used by the device. Some local networks may require manual opening of the following UDP Ports: 8011 + 8012 for communication between the device and software.
The device is blocked in standalone mode and it cannot establish communication with the software.	Check the firmware and software version.
	Device with display When working properly: The screen indicates "ON" when connected to the computer, then it displays "SA" and "00" (or a scene number). When you start the software and the interface is properly detected, you should see "PC". Device without display Check the mode of communication with LED signals.
	During the 5 seconds before the device switches to standalone mode: 1) Create a small show with a scene (in demo mode) and close the software after saving the show.(optional) 2) Unplug the interface. 3) Start the software and wait for the software to be on the 1st page of the wizard with the selected USB device.

	<p>4) Plug in the interface and start the software IMMEDIATELY .Simply confirm all the steps of the wizard.You should see the interface well detected and listed in the wizard.</p> <p>5) Open the software and quickly write the small show in memory.</p> <p>Writing a new scene cleanses memory and does not allow the infinite loop to reproduce.</p>
The device does not restore the Art-Net or sACN show.	Before commissioning, plug the RJ45 cable before powering.
	Replugging the power supply
	Insert the SD card again (Reset)
	<p>Device with display Select ArtNet (Ar) mode again, sACN (AC) in the advanced F3 menus of the interface (mode button).</p> <p>Device without display Select ArtNet, sACN mode again via the software or DeviceTool.</p>

If you experience unlisted issues, contact your seller or manufacturer directly to indicate your problem and receive a solution.

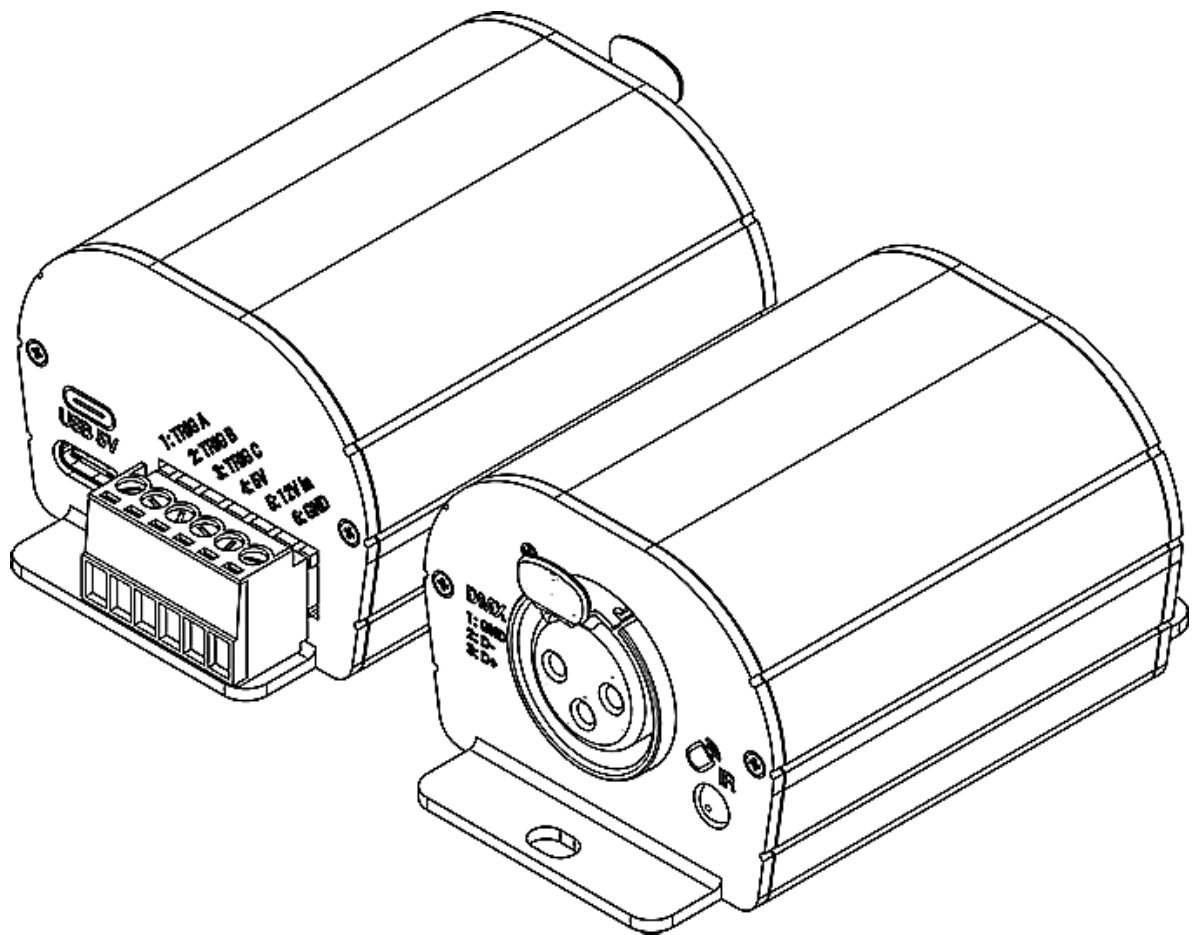
Product design and specifications are subject to change without prior notice.

Older devices (sold before 2020) are not compatible with PRO DMX version 2



LT512S

USB连接DMX操作界面



数据表以及快速入门指南

目录

介绍	1
主要特点	1
硬件技术规格	1
软件选项	2
机盖连接	3
前端控制面板	3
后端控制面板	3
USB 驱动软件安装	4
多种USB连接	4
单机模式设置	5
设备配置	5
输入/输出切换	5
“合并DMX输入/DMX 输出”选项	6
Art-Net/sACN 适用范围	6
选项切换	7
指令选项卡	8
场景选择和配置	9
触发器选项	9
红外线触发	10
外部触点触发：	10
高级触发选项	12
断电恢复	12
优先播放	13
保存到本地内存的选项	13
基础备份	14
保存到自带和外部微型 SD 卡	14
将 Art-Net 或 sACN 备份到外部 SD 卡	14
单机模式使用	15
切换到单机模式	15
外部和USB电源	15
如何使用红外遥控器	15
先前遥控单元（早于2022年）	15
用于无模式和更早之前的界面	15
用于有模式的界面	16
新遥控单元（2022年）	17
用于有模式的界面	17
功能描述	17
红外代码	18
红外接收盒	18
机壳单位以毫米计	19
前端	19
后端	19
顶端	19
故障种类及排除	20

介绍

我们为基础入门级预算以及寻求简单易操作多路数字传输（DMX）控制系统的用户提供专业的全套设备解决方案。

全新设计的铝合金机壳，带有精湛的面漆处理工艺以及更新的电子器件，此器件配备最新的2022年软件和更早版本的LED播放器和Pro多路数字传输（以下都称作DMX）

本USB转换成DMX控制器自带USB的5伏特电源供应以及全套设备所含可选用的红外线远程控制，此控制器能够提供三种触发选项并且配备5伏特直流电输入。这为简单的整合项目提供了最佳的硬件设备。

目的

本技术手册旨在开发由设备交互界面所控制的选项，这些交互界面一般存在单机模式中。关于软件选项，请参照软件手册。

主要特点

硬件技术规格

输入	通过USB-C接口接入USB2.0
DMX输出数量	通过三芯卡侬头（XLR）最多可128或512（五芯卡侬头可选）
DMX速度	1至45赫兹（Hz）、MaB、Bk
单机模式	支持128或512通道以及更小DMX通道（16位）
内存	支持，200 Kb
内存容量	200至2000存储节
红外线接收器	支持，可选配红外遥控触发器
红外线选项	场景选择、播放、暂停、加速、调光器、下一个、停电
干触点触发	支持，3个智能触点端口，最多7个操作动作
电源输入	5伏，0.1安
高压保护	支持
机壳	强韧铝合金
红外遥控	可选项，需IR工具才可实现
USB 模式	支持
信号状态显示	USB LED
电源	0,5 W
CPU	32位
尺寸	高：55毫米（2.16英寸）/宽：50毫米（1.96英寸）/深：37.5毫米（1.47英寸）
净重	0.085公斤
毛重	0.15公斤
颜色	黑色

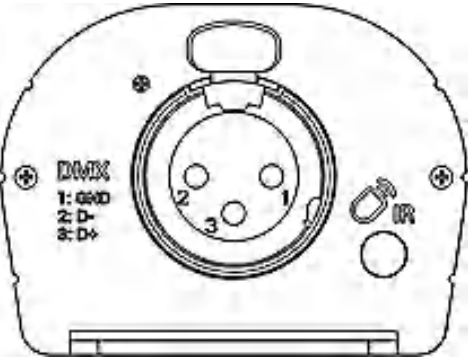
防护等级	IP40
最佳使用环境	室内
储存环境	请放置于干燥通风处
兼容性	8位和16位DMX 512灯具
运行温度	-25至+70摄氏度
认证	欧盟CE认证、欧盟RoHS、美国联邦FCC
国际质保期	支持1年

软件选项

播放器、PRO、PRO2	128或者512带电通道以及单机模式
DMX 3D查看器工作室	支持实时在线观看
电脑端Art-Net输出	不支持
系统兼容性	支持微软Windows，苹果MAC Os X（10.6和更高版本）以及Linux（64位）
免费软件更新	支持

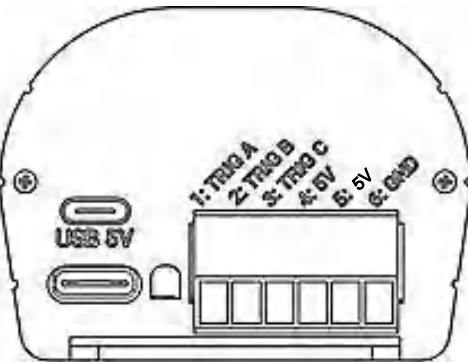
机壳连接

前端控制面板



- 三芯卡侬（XLR）接口
- 1: 接地
 - 2: 数据 -
 - 3: 数据+
- 红外线LED接收器 （可选远程单元）

后端控制面板



- USB-C 接口 （5V 直流电输入）
- USB绿色LED显示灯
- 带螺钉的接线端子接口
- 1到3接口： 分别是触发器A， B， C
 - 4接口： 触发器 A， B， C， 5伏直流电输出
 - 5接口： 5伏直流电输入， 0.1安 或者 供电电压（V+）
 - 6接口： 接地（V-）

USB LED信号灯工作状态

关闭	接口未通电（检查USB数据线或电源）
开启	接口供电，无场景运行
快速闪烁	软件和USB连接运行
慢速闪烁	单机模式和场景运行
超高速闪烁	在引导加载程序模式下，等待加载新固件

USB 驱动软件安装

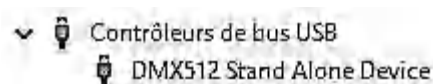
安装USB驱动软件是为了激活驱动设备同时更改设置。

若使用Windows系统安装，在安装的结束阶段需要安装USB驱动软件。

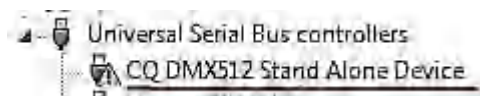
使用Mac和Linux系统，将自动安装USB驱动软件。

USB驱动软件验证

打开Windows设备管理器，检查“USB总线控制器”的设备图标是否可见。



若驱动软件尚未安装，Windows设备管理器将显示出带黄色警告标志的设备。



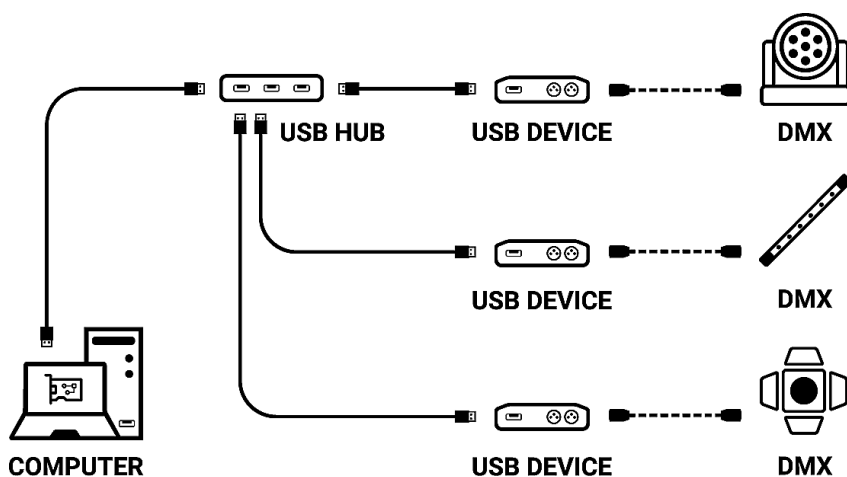
若使用Mac OS系统，只需简单检查USB设备树状图，查看“DMX 512 单机设备”。在Linux系统中，只需输入“lsusb”指令以列表的形式查看“DMX 512 单机设备”。

成功安装控制软件以及驱动器的后续操作

- 将USB数据线插入此设备
- 启动设备工具或者相应软件，选择“开启USB设备”或者“USB”，查看驱动器是否成功安装。

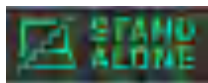
所有已连接和检测到的设备，都将以列表形式显示出来。

多种USB连接



单机模式设置

在控制软件运行的单机模式下，

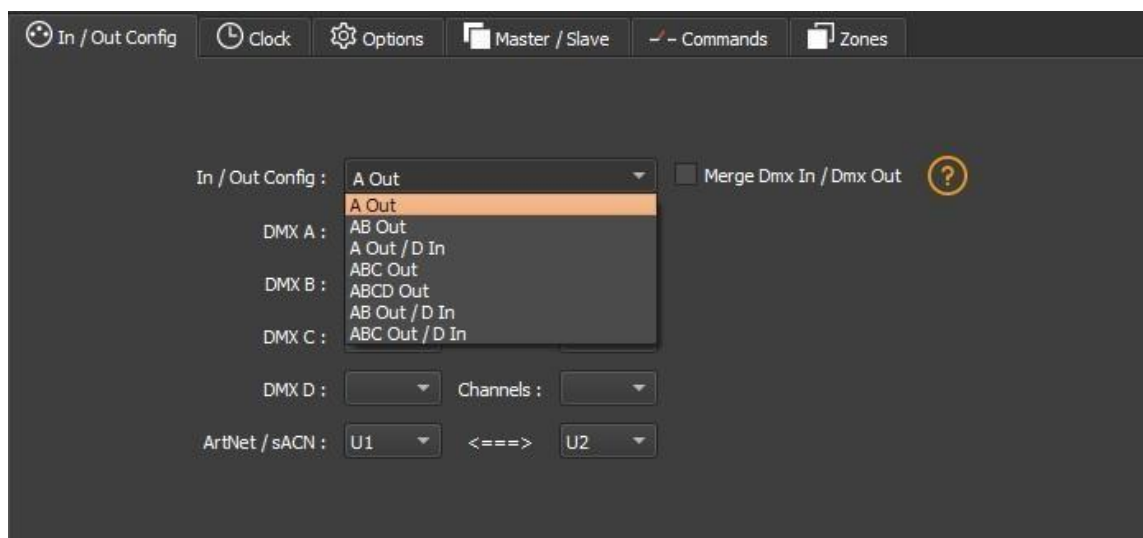


根据可用选项配置设备，选择并配置要写入内存的场景触发器。

设备配置

输入/输出切换

从下拉菜单中选择接口的 DMX 输入/输出配置



若已连接的设备配备有1.2或4条DMX线路，将显示所有可用的配置。

- A OUT -在 DMX 线路上分配1个输出域，对于具有超过1条 DMX 线路的设备，在每条线路上复制相对应的输出域。
- AB OUT -在 2 条 DMX 线路上分配1个不同的输出域，对于具有4条 DMX 线路的设备，将前 2 条线路复制到余下 2 条线路上。
- A OUT/B或 DIN -在第一条线路上分配 1个输出域，用最后一条 DMX线路作为其输入端。
- ABC OUT -在前 3 条DMX 线路上分配1个不同的域输出。
- ABCD OUT -在4 条DMX 线路上分配1个不同的域输出。
- AB OUT / D IN -在前 2 条线上分配1个不同的输出域，用最后一条 DMX线路作为其输入端。
- ABC OUT / D IN -在前 3 条线上分配1个不同的输出域，并使用最后一条 DMX 线作为 DMX 输入。

合并 DMX 输入/DMX 输出”选项

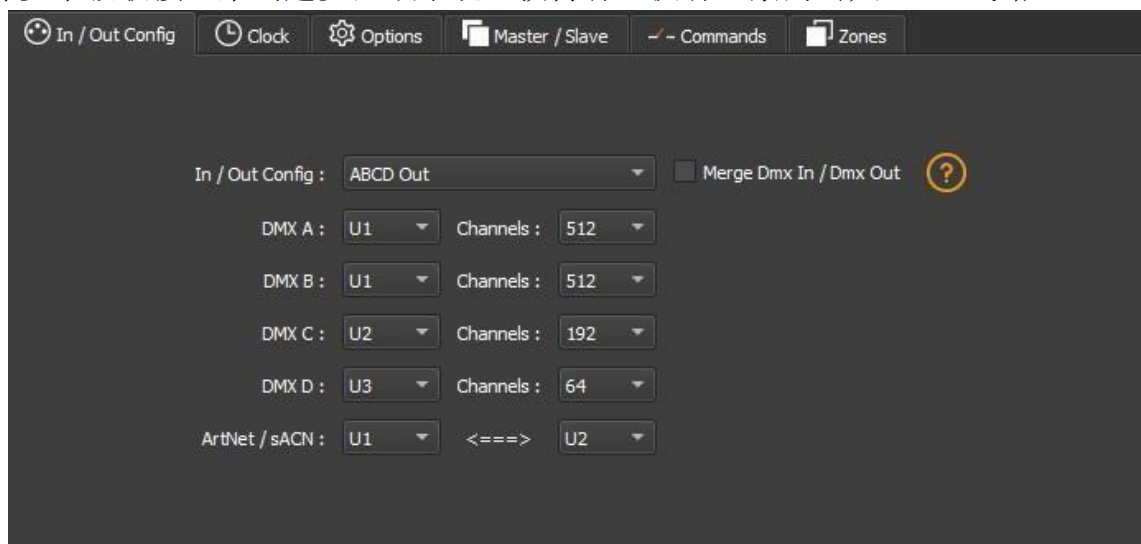
自带2或4条以上DMX线路接口的设备才有这一选项。

启用该选项，将配置为输入（IN）的线路重新整合到 DMX 输出端中配置的线路中，达到合并目的。比较合并后的 DMX 级别，保留最高级别。

最高级别优先（HTP）程序项目正在探讨中。

使用外部 DMX 控制台对某些电路进行手动控制。

通过合并多个级联接口来创建多区域系统，获得有且仅有一条的公共 DMX 线路。



将软件的任一域分配给任一指定的DMX线路输出，逐线路选择（U1、U2...）根据已使用的通道，减少每个域的电路数量，优化内存中保存的程序大小。

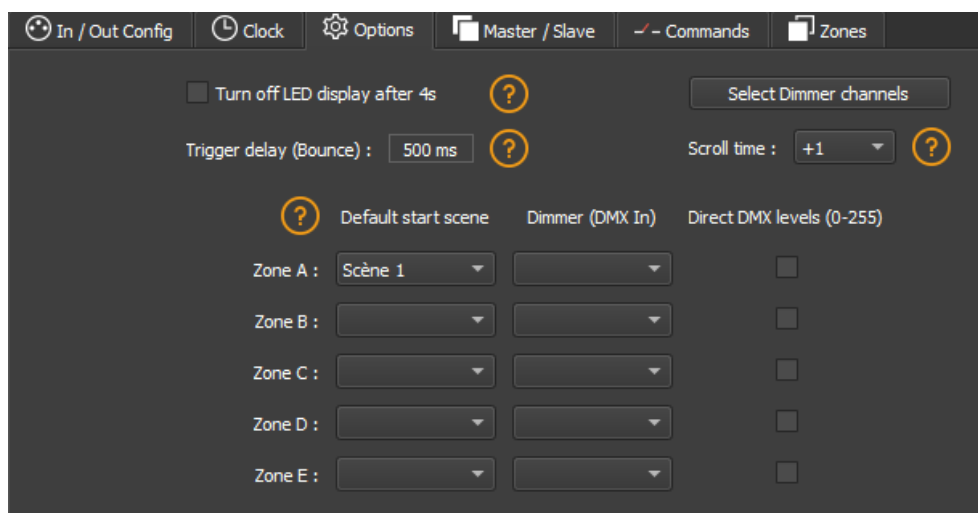
例子：若程序中已使用150个通道，仅选择最接近的较高值，此例子为 192。

Art-Net/sACN域范围：

定义要写入Art-Net/sACN程序的外部SD卡内存中的起始域和结束域。

请参见《保存Art-Net或sACN到外部SD卡》

设置选项卡

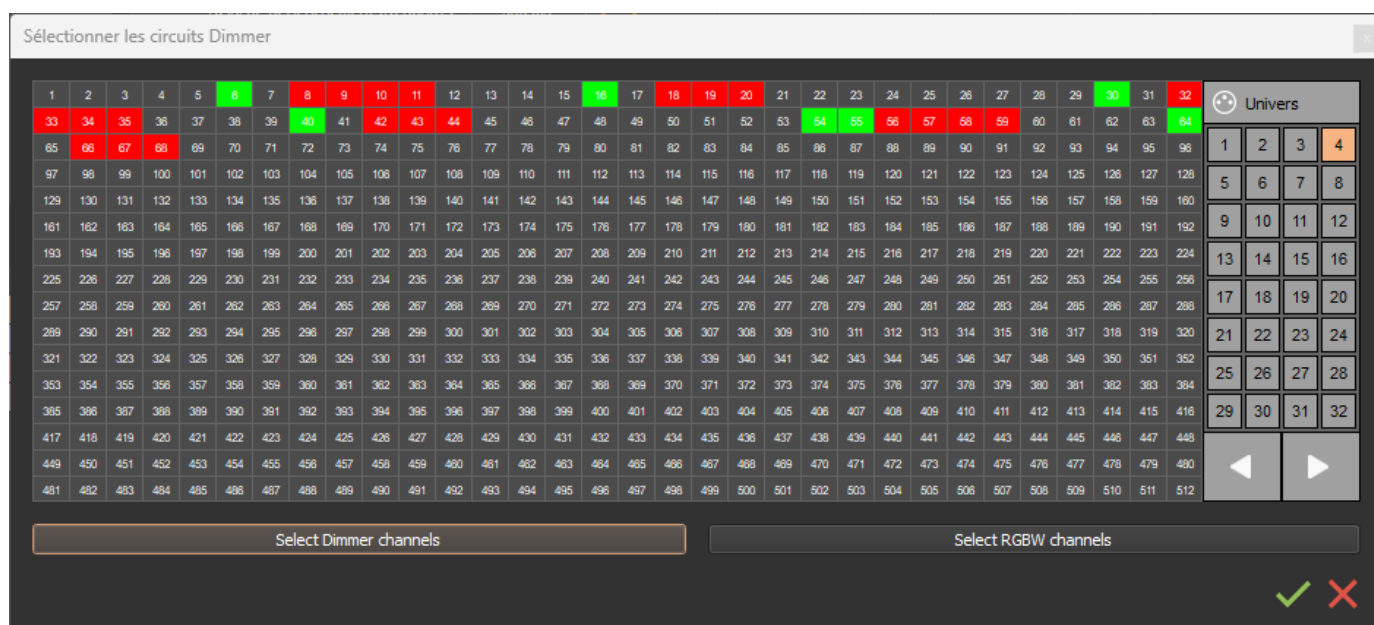


对于带有 LED 显示屏的设备，勾选该选项，4 秒内无反应关闭LED显示器（Turn off LED display after 4s）

在接口打开（带USB或外接电源）后选择默认场景自动播放。对于自带多区域的设备，每个区域都可以设置默认场景。

注意：若另一个场景使用“断电时恢复”选项，则所选的默认开始场景将失去其优先级。
参见：《高级触发选项手册》

配置“选择调光器器通道”（Select Dimmer channels）选项，以单独选择调光器器或 RGBW 光强度通道，这些通道将直接由调光器器模式、干触点或通过红外遥控器控制。



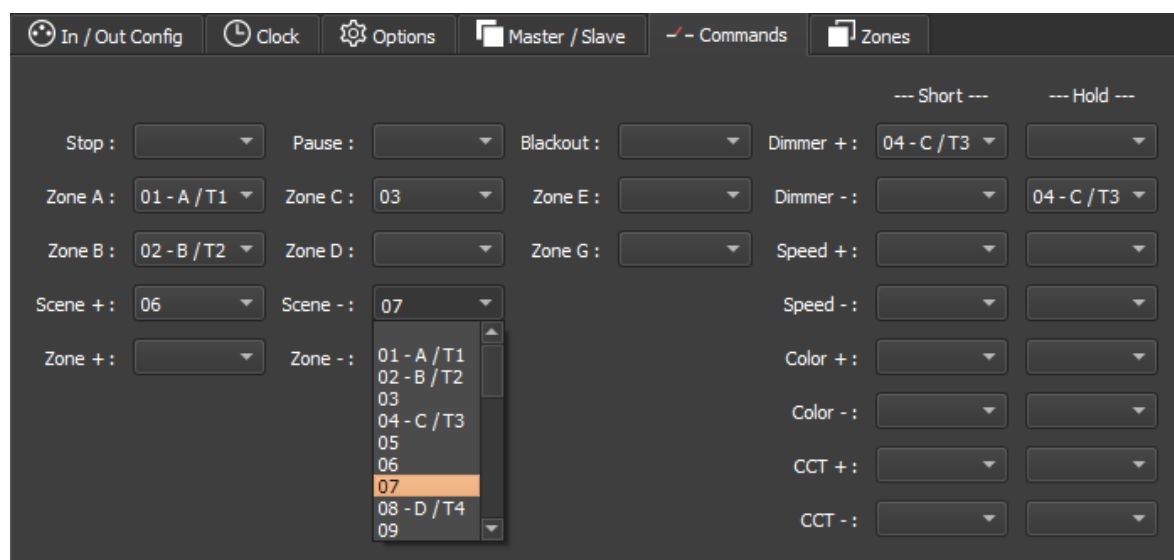
指令选项卡

在此设备的可选用外部触点中指派触点，以触发某些单机模式指令：调光器器 +、调光器器 -、停电、速度 +、速度 -、暂停、场景 +、场景 - 和区域。

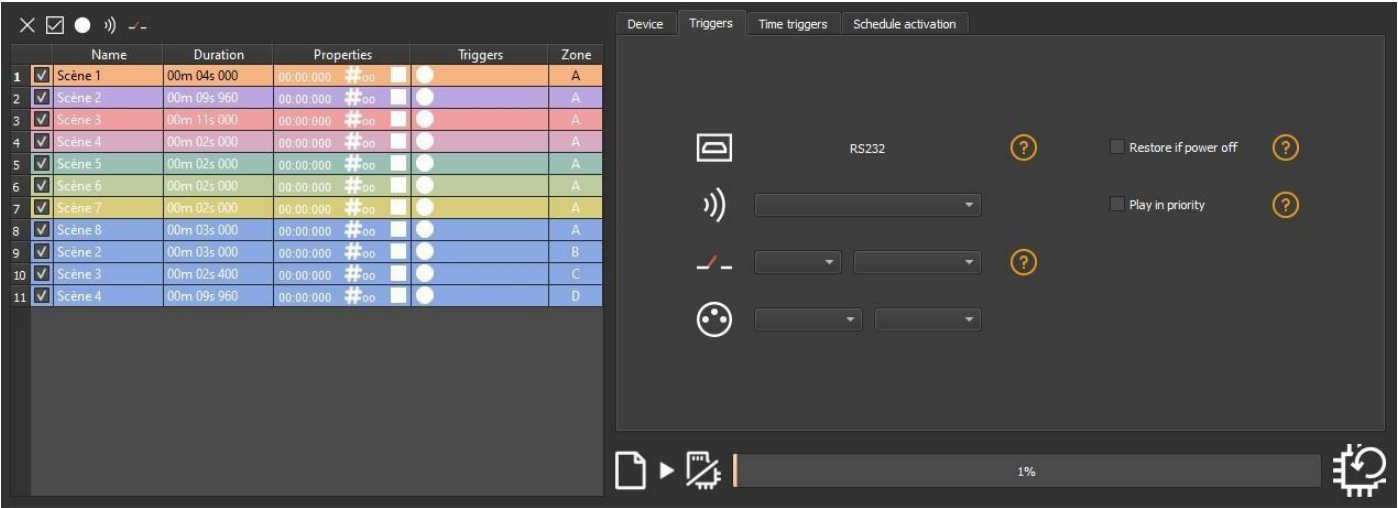
提示：请注意不要使用与场景相同的指令触发器，反之亦然。参见：外部触点选择触发器
最后指定的触点将优先于其他触点。

使用 2 种类型的点控或长按触点，从而将相同的触点分配给2个不同的命令。

以下图示是以调光器+（Dimmer +）调光器-（Dimmer -）为例



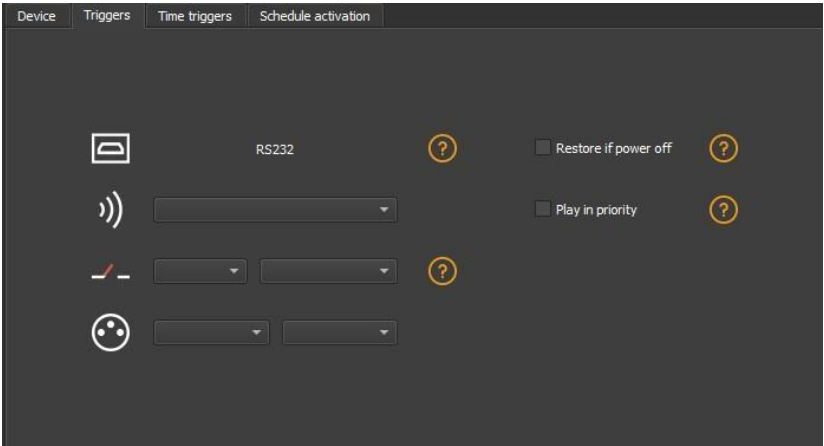
场景选择和配置



检查以选择要写入内存的场景，并从设备可用的场景中分配触发器。

触发器选择

在“触发器”选项卡中，选择并分配不同类型的触发器。

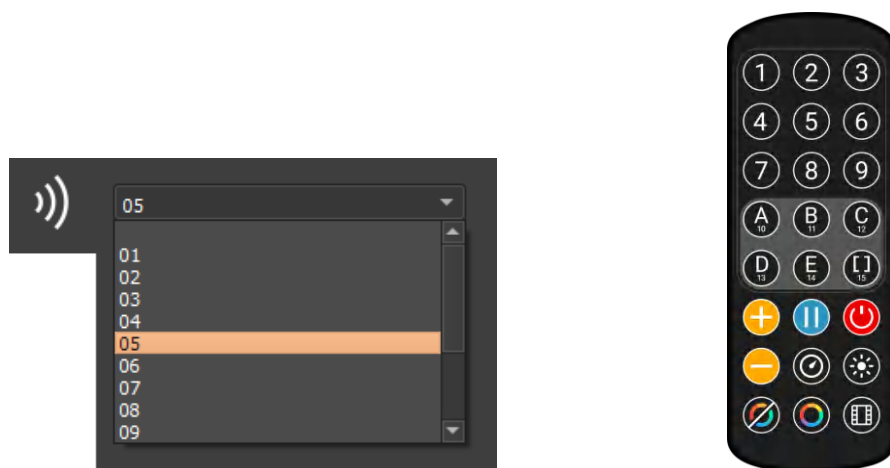


红外线触发

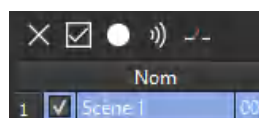
对于没有此触发选项的设备，可使用自带红外接收器和遥控器的套件。

参照：《红外遥控器的使用》

从列表选择一个运行场景，并从15个可用按钮中为其分配一个遥控按钮。

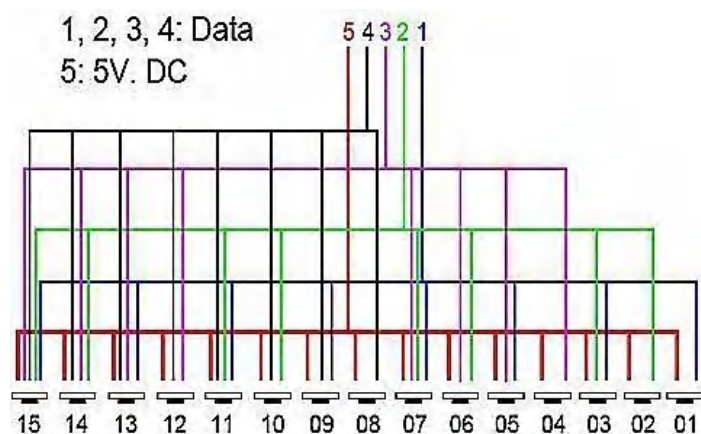


通过单击场景列表工具栏上的红外图标，自动将按钮分配给列表中的所有场景。

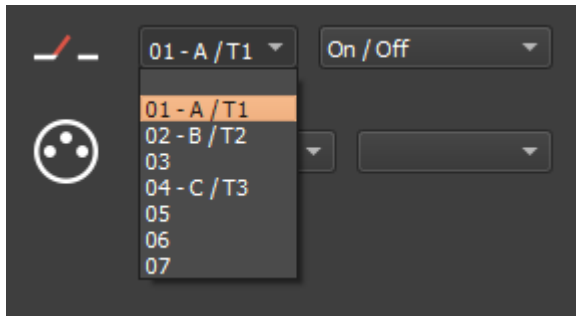


外部触点触发：

根据接口的不同，可以使用多个外部触点：触发器 A、触发器 B、触发器C ……，以及尽可能使用多路复用接口来扩展触点数量。（从 3 到 7；从 4 到 15；从 5 到 31 ……）接触反应时间，5毫秒（0.005秒）

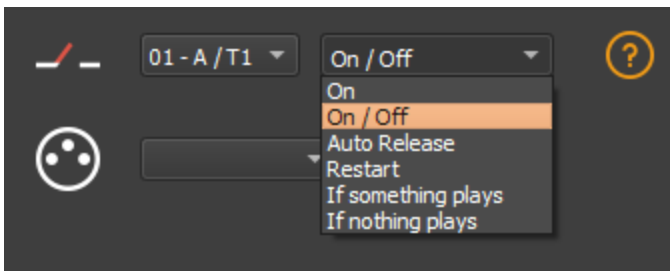


左图为多路复用系统示例：将4个外部触点扩展至15个外部触点。



从列表选择一个场景，从界面中显示的可用触点里，为其指派一个触点。

触发器选项



从旁边的下拉菜单中选择一个触发选项。

开启：激活触点使场景运行（启动场景是唯一的触发动作）

开启/关闭：激活触点后会启动场景，后续激活动作会使已启动的场景停止。每个触发动作都会颠倒阶段状态（开始/停止）。

自动释放：仅当触点启用时才播放场景。释放触点时，场景停止。

重启：若场景正在播放，启用触点则会引发重新启动场景。若场景处于关闭状态，则会自动启动。外部接触反应时间：8毫秒（0.008秒）/次。2 个触点之间：500 毫秒（0.5 秒）

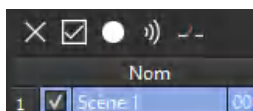
如果正在播放某些内容：若已有所选场景在播放，那么将直接播放所选场景。

如果没有播放任何内容：如果没有播放任何内容，那么将播放选定的场景。

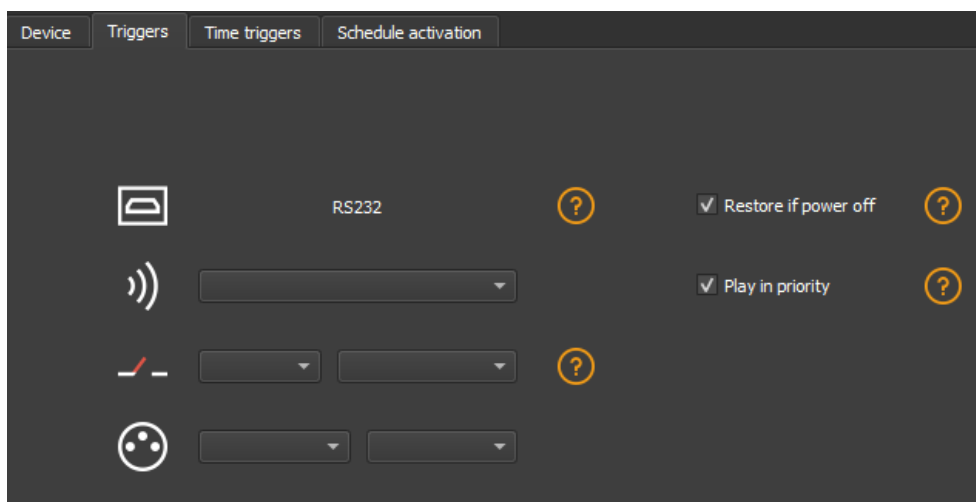
以上非此即彼的两个选项能够将同一触点分配给两个不同的场景。

提示：请注意不要使用与用于场景触发器相同的指令，反之亦然。参见：“指令选项卡”最后指派的触点将优先于其他触点。

通过点击场景列表工具栏上的外部触点图标，将自动指派外部触点给列表中的所有场景。



高级触发选项



断电后恢复

通过触发器选项卡，查看并选中断电后恢复（Restore if power off）选项设置，当电源恢复时，所选场景将优先于启动场景（参见设置选项卡）。

若所有场景都设置了该选项，那么最后激活这一选项的场景将会重新播放。

优先播放

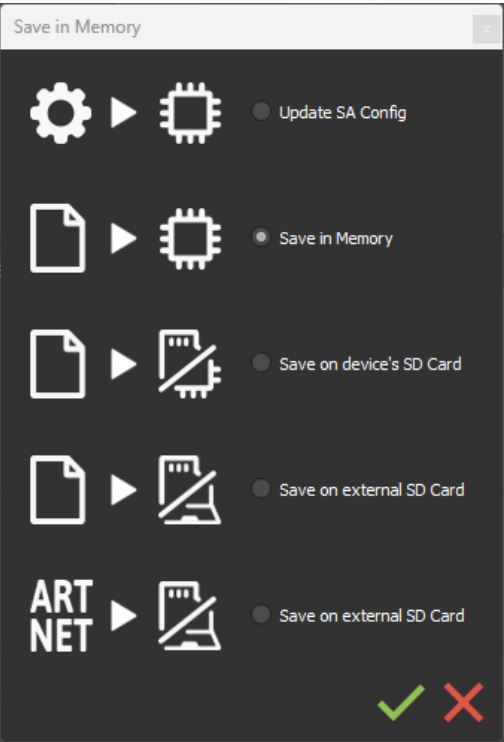
通过查看触发器选项卡，选中的场景将持续播放直到结束，在此期间其他触发器将无法播放，除非在设备上设置时间触发器以及通过物理按键来控制。

保存到本地内存的选项

查看需要保存到本地内存的场景

		Name	Duration	Properties	Triggers	Zone
1	<input checked="" type="checkbox"/>	Scene 1	00m 14s 400	00:05:000 #00		A
2	<input checked="" type="checkbox"/>	Scene 3	00m 00s 480	00:03:000 #00		A
3	<input checked="" type="checkbox"/>	Scene 4	00m 05s 720	00:05:000 #1		A
4	<input type="checkbox"/>	Scene 5	00m 18s 000	00:07:000 #1		A
5	<input type="checkbox"/>	Scene 6	00m 05s 000	00:00:000 #00		A
6	<input checked="" type="checkbox"/>	Scene 6_copy_1	00m 05s 000	00:00:000 #00		A
7	<input type="checkbox"/>	Scene 6_copy_2	00m 07s 000	00:00:000 #00		A
8	<input type="checkbox"/>	Scene 6_copy_3	00m 07s 000	00:00:000 #00		A
9	<input type="checkbox"/>	Scene 6_copy_4	00m 07s 000	00:00:000 #00		A
10	<input type="checkbox"/>	Scene 6_copy_5	00m 07s 000	00:00:000 #00		A
11	<input type="checkbox"/>	Scene 6_copy_6	00m 07s 000	00:00:000 #00		A
12	<input type="checkbox"/>	Scene 6_copy_7	00m 07s 000	00:00:000 #00		A
13	<input type="checkbox"/>	Scene 6_copy_8	00m 07s 000	00:00:000 #00		A
14	<input type="checkbox"/>	Scene 6_copy_9	00m 07s 000	00:00:000 #00		A
15	<input type="checkbox"/>	Scene 16	00m 03s 000	00:05:000 #3		A
16	<input type="checkbox"/>	Scene 17	00m 08s 000	00:00:000 #2		A
17	<input type="checkbox"/>	Scene 18	00m 03s 200	00:00:000 #40		A
18	<input type="checkbox"/>	Scene 19	00m 13s 000	00:00:000 #2		A
19	<input type="checkbox"/>	Scene 20	00m 04s 000	00:00:000 #2		A
20	<input type="checkbox"/>	Scene 21	00m 02s 500	00:00:000 #00		A

点击“写入内存”按钮



在场景写入窗口中选择预期的场景

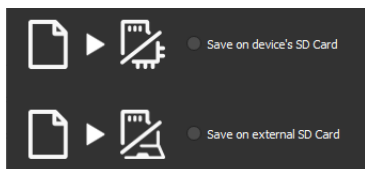
基础备份

写入单机配置：仅更改已写入内存显示配置中的某些设置，来缩短备份时间。

写入内存：默认备份将存入此设备的本地内存中。

保存到内部和外部微型 SD 卡

仅适用于带有微型 SD 端口的设备。



将场景保存到安装在设备 SD 卡读卡器或计算机驱动器中的微型 SD 卡（Class 10）。该卡最低写入速度必须10Mb/s，格式为 FAT 或 FAT 32，最大容量为 256 GB。建议使用格式化时可用的最大分配单元大小。

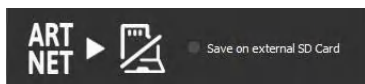
写入设备的SD卡：SD卡安装在接口驱动器中

写入外部 SD 卡：SD卡连接到电脑

注意：保存到SD卡根目录。

备份Art-Net或sACN到外部SD卡

仅适用于带有微型 SD 端口和以太网端口的设备。



Art-Net - 写入外部 SD 卡：在微型 SD 上最多只能保存 8 个域，以单独显示运行 Art-Net 或 sACN 。

在 IN/OUT 配置选项卡中设置域范围。参见：

调试前验证：

在开启电源前连接RJ45网线，连接到本地网络。

参见：《以太网连接和配置》

通过软件或设备工具（DeviceTool） 将设备设置为Art-net或sACN模式。

注意：一旦处于 Art-Net（Ar）或 sACN（AC）模式，该接口在本地网络上将不再可见。

处于Art-Net模式中，交互界面将以无线电广播的形式来播放网络上的内容。

在 sACN模式中，交互界面将以多路广播的形式来播放网络上的内容。

单机使用

切换到单机模式

通电5秒后，若尚未连接到软件，界面将会自动切换到单机模式。

外部和USB电源

外部电源仅适用于“自主”模式，这可以同时连接 USB 数据线和电源，但并不建议这样做。在单机模式下，若 USB 数据线通过接口连接到设备，设备将检测连接某计算机的可能，但这不会影响场景的播放。

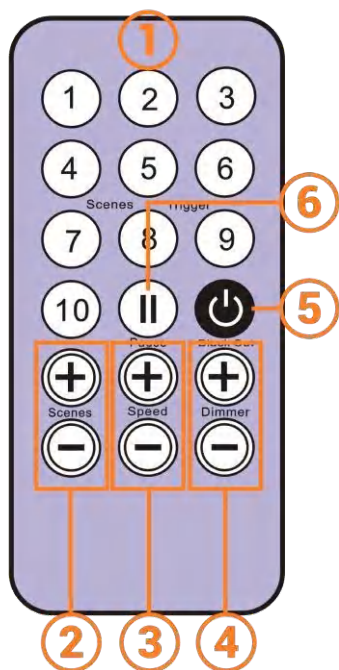
如何使用红外遥控器

当打开软件选择窗口，在“设备”设置部分的底部，勾选“启动单机触发器”选项（“Get Stand Alone Triggers”）红外远程触发器将以单机和带电模式运行。

☒ Get Stand Alone triggers

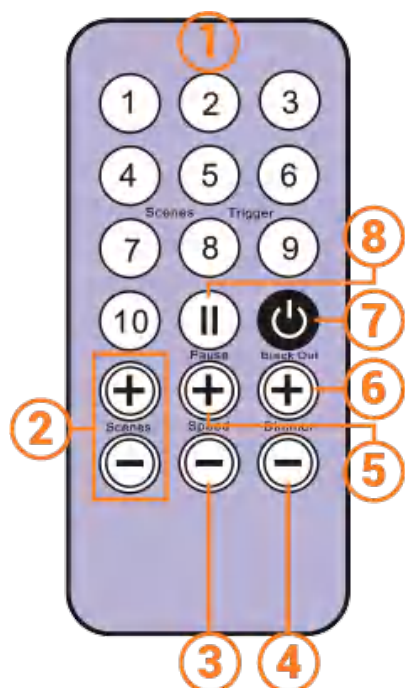
先前遥控单元（早于2022年）

适用于无模式和更早之前的界面



1. 场景触发按钮（1到10）已通过软件指定。
2. 场景选择器，下一个或上一个
3. 速度值，增加或减少
4. 调光值，增加或减少
5. 断电：立即停止当前场景并播放场景 00。所有的DMX 级别均需设置为零。
6. 暂停：中止当前场景所处的状态

适用于有模式的界面



1. 场景触发按钮（1到10）已通过软件指定
2. 增加或者减少所选模式的数值：场景（Scene）
+/-、增光（Dimmer +/-）、速度（Speed +/-）、颜色（Color +/-）。
3. 颜色模式
4. 场景模式
5. 调光模式
6. 速度模式
7. 断电：立即停止当前场景并播放场景 00。所有的DMX 级别均需设置为零。
8. 暂停：中止当前场景所处的状态。

适用于有模式的界面



1. 场景触发按钮（1到15）已通过软件设置。触发器1到触发器15在1区域中。触发器1到触发器9涵盖多个区域。
2. 5个可用控制区域：A、B、C、D、E以及全域：[]同时激活触发每一个区域
3. 增加或减少选中模式的数值：场景（Scene +/-）、调光（Dimmer +/-）、速度（Speed +/-）、色彩（Color +/-）。
4. 释放色彩模式
5. 色彩模式
6. 场景模式
7. 调光模式
8. 速度模式
9. 断电：立即停止当前场景并播放场景 00。所有的DMX 级别均需设置为零。
10. 暂停：中止当前场景所处的状态。

功能描述

场景： 每点击一次将在当前区域内选择下一个或者上一个场景，选中的场景会立即播放。

主调光器： 增加或者减少当前区域的调光通道和RGB以及CMY值。RGB、调光通道在基本配置文件和单机模式中定义。

场景速度： 增加或减少当前区域中当前场景的速度，可以为每个场景单独选择不同的速度。

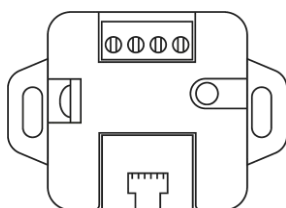
区域： 选择一个区域（A、B、C、D、E 或全局 []），再选择要在选定区域中触发的场景或模式。

模式： 从速度、调光器、颜色或场景中选择一种模式，再使用 +/- 按钮更改值。

红外代码



红外接收盒



若要使用可选的红外遥控器，必须通过 RJ45 端口或通过单机接口端子块连接带有红外接收器的外部电路。

红外PCB引脚排列

关于RJ45数据线，运用管脚：#8 = 接地；#4 = 红外数据； #7 = 5伏

关于连接器，运用管脚：0=红外数据；V=5伏；G=接地

数据线到接收器的最大距离约为20米。

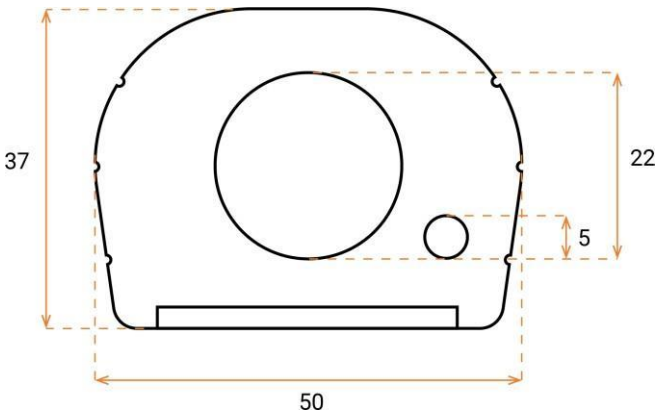
光传感器

红外盒电路中的集成光传感器仅适用于频繁启动的触发器。外部卡必须通过RJ45端口或通过端子块连接。软件中必须设置光敏感度。

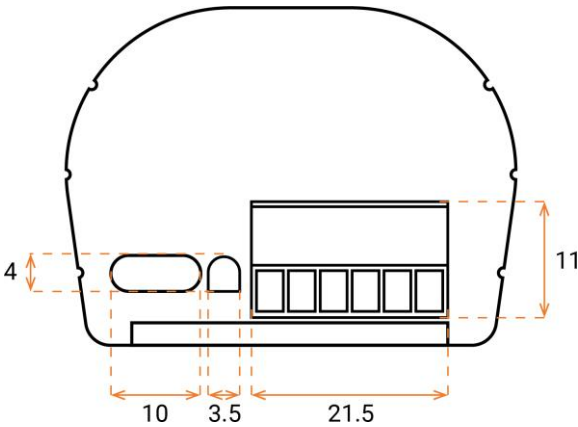
请参阅《时间控制场景》。

机壳尺寸以毫米计

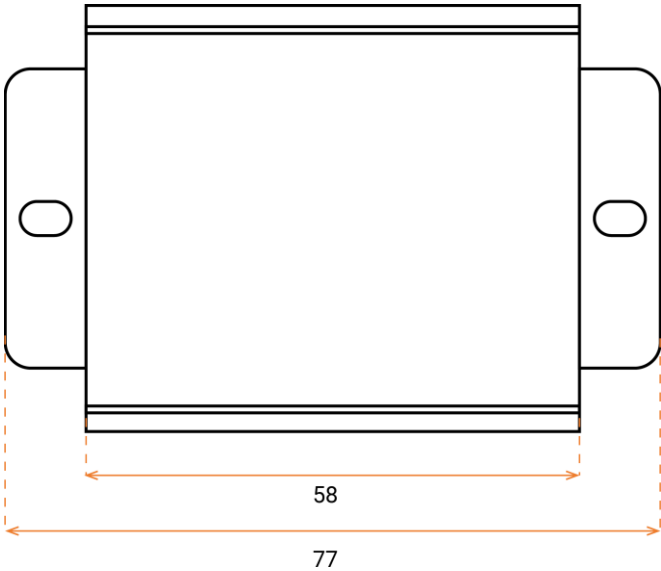
前端



后端



顶端



故障种类及排除

设备工具（DeviceTool）或USB软件未检测到该设备。	拔掉电源插头，重启设备。
	更换 USB数据线
设备工具（DeviceTool） 或以太网软件未检测到该设备。	拔掉电源插头，重启设备。
	更换以太网网线
	开启前检查以太网网络的选择
网络无法检测到该设备。	检查设备与LED信号灯的连接模式。若有必要，通过 USB 重新配置该设备
	验证 IP 地址和子网掩码是否正确配置。
	通过软件或设备工具（DeviceTool）更新设备固件。
	将软件更新为最新版本并，再试一次。
	打开并允许该设备使用的通信端口。某些本地网络可能需要手动打开以下 UDP 端口：用于该设备和软件连接的8011 + 8012
设备无法成功运行单机模式且无法与软件建立连接。	检查固件和软件版本。
	带显示屏的设备 正常工作时：连接到电脑时，其屏幕会显示“ON”，再显示“SA”和“00”（或场景编号）。当启动软件并且设备能正确检测到接口时，将明显显示出“PC”。 不带显示屏的设备 检查该设备与LED 信号灯的连接模式。
	设备切换到单机模式前 5 秒内： 1) 创建一个带有场景的小程序（演示模式），保存小程序后关闭软件。（可选1） 2) 拔下接口电源插头。 3) 启动软件并等待软件出现在向导的第一页，再选择所选的USB设备。

	<p>4) 插入接口并立即启动软件。只需确认向导程序的所有步骤即可。向导程序将列出检测到的该接口。</p> <p>5) 打开软件，快速将小程序写入内存中。写一个新的场景可以清理内存，但无限循环复制无法实现。</p>
该设备无法恢复Art-Net或sACN显示。	通电调试前，请先插好RJ45网线。
	重新插入电源
	再次插入SD卡（重置）
	<p>带显示屏的设备 再次选择ArtNet（Ar）模式，sACN（AC）在界面的高级F3菜单（模式按钮）。</p> <p>不带显示屏的设备 通过软件或设备工具（DeviceTool）更新设备固件。</p>

若您遇到的问题不包括在上述列表中，请直接联系经销商或生产商。详细阐述问题后，将提供给您解决方案。

产品设计和规格如有变更，恕不另行通知。

早先版本的设备（在2020 年之前销售）与PRO DMX版本2并不兼容

