

light **Shark** series.

V_1.2.16

Introduction

lightShark series is a new concept in lighting control systems that adapts to the needs of everyday life, offering a compact, powerful and economical solution. Perfect for small events, nightclubs, theatre schools, corporate events, and for small live events.

Today's technicians and lighting designers require flexible control solutions that enable impressive looks to be created in a short period of time, and that are easy to use for users with basic knowledge, but at the same time able to offer the advanced functions required by the most advanced users.

Our hardware and software departments have worked hard to provide you with a simple, powerful and compact lighting system.

At WorkPro we hope it meets all your expectations.

Thank you very much for trusting us.



LightShark series user manual

By WorkPro

Equipson S.A.

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Policy

This equipment complies with EMC Directive 2004/108/EC and LVD 2006/95/EC.

This product is approved by the following safety standards: EN 60950~1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

AND EMC standards EN55022: 2010 EN61000-3-3: 2013 EN55020:2007+ A11 EN61000-4-2: 2009 EN61000-4-3: 2006 + A1+ A2

ATTENTION: Any modification or change made to this device, unless explicitly approved by Equipson SA, will void the authorization to use this device.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

For further details please contact: Equipson SA, AV El Saler nº14, Silla, Valencia, Spain. Telephone: +34 961 216 301 E-mail: support@equipson.es

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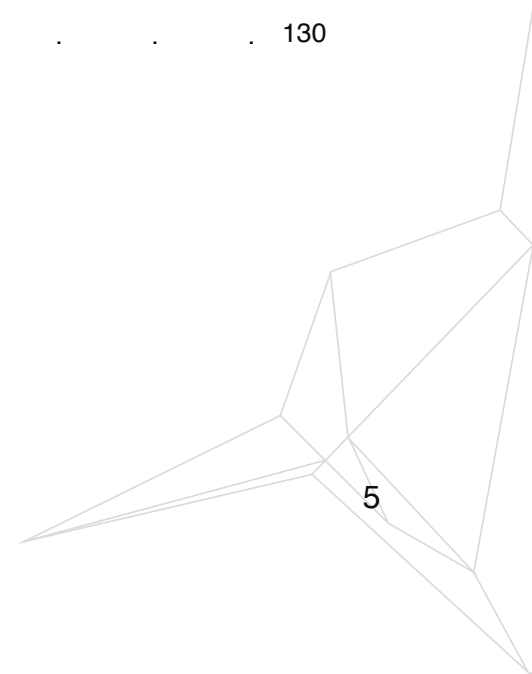
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Section 1: Introduction

Explanation of the LightShark system

The light**Shark** series family consists of two devices:

LS-1 is a new generation of web-based lighting consoles designed for all types of events. It offers a simple, powerful and portable multi-platform control system.

LS-Core is focused on those technicians who need the features of a complete lighting console but in the smallest possible space. Thanks to its internal task scheduler it is an ideal solution for fixed installations.

Both devices have the following features

- 4096 DMX channels
- ArtNet and sACN output
- 1200 Cues
- CueList
- 30 Pages
- 10 Main Playbacks
- 20 Playbacks in Wing mode
- Full MIDI mapping
- Fan Function
- Parallel execution of multiple CueLists
- Completely configured Executor Window
- Numeric keypad
- Integrated FX Generator
- Multi Touch Interface
- Simultaneous connection (up to 3 devices).
- Rapid patching
- User palettes
- Control of size and speed of the Fx through the submasters.
- Virtual Dimmer

1.2 **LS-1**

The LS-1 consoles offer the user a control system with 4 encoders, 10 master playbacks and an integrated color display combined with a set of RGB buttons to create spectacular shows.

Thanks to its small size, it can be transported as carry-on luggage. In the back, there is a support to accommodate devices such as tablets. In addition, it includes a USB charging port located on the rear panel, which allows you to charge your mobile devices .



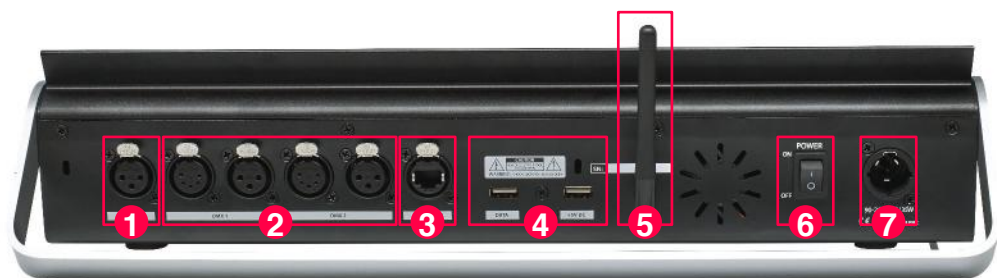
Layout

- 1 Grand Master
- 2 Blackout
- 3 Page selection
- 4 Editing functions
- 5 Selection access keys
- 6 Go Keys
- 7 Playbacks Zone
- 8 Flash Buttons
- 9 Encoders
- 10 Playback control buttons
- 11 Selection buttons
- 12 Function buttons FIND-CLEAR-REC
- 13 Parameter selection buttons
- 14 FX Generator Access Button
- 15 Information display screen



Rear Panel

- 1 Connection port for 5v lamp
- 2 DMX output (2 universes)(3-Pin or 5-Pin XLR for both)
- 3 Ethernet port (EtherCON)
- 4 USB ports, one for charging and one for data.
- 5 WiFi antenna
- 6 Power switch
- 7 Power supply connection (True1)



Dimensions (WxHxD): 430x100x330cm

Weight: 3.7Kg

1.3 **LS-Core**

The LS-Core is the smallest 8-universes lighting console on the market, incorporating all the features of the LightShark software. It has a USB port to connect a MIDI controller, allowing you to use faders and physical buttons.

LS-Core is especially useful as an architectural controller thanks to its internal event scheduler and its small size, which can be installed anywhere.



- 1 USB data port
- 2 Navigation buttons
- 3 Wifi Antenna
- 4 Information display screen



- 5 Physical DMX output ports (2 universes)
- 6 Ethernet port (EtherCON)
- 7 Power connection

Dimensions (WxHxD): 10.8x4x14.2cm

Weight: 460g

1.3 Security Information

Read the instructions contained in this manual carefully and thoroughly, they contain important information for your safety during use and maintenance. Keep this manual with the unit for future reference. If the unit is sold to another operator, be sure to always include this manual to allow the new owner to read the operating instructions.

Warning:

This product must be grounded.

DO NOT ALLOW any flammable liquids, water or metal objects into the unit.

To prevent risk of fire or electric shock, do not expose the device to high temperature or humidity.

Be careful not to damage the unit's power cord.

DO NOT open the unit, there are no operating elements inside.

NEVER attempt to repair the unit yourself. Repairs by unqualified personnel may cause damage or malfunction. Contact your dealer.

Wait at least 5 seconds to turn the unit on after turning it off.

This unit is designed for indoor use.

After removing the packaging, check that the unit has not been damaged. If in doubt, do not use it and contact your dealer.

Packaging material (plastics, boxes, foam, etc.) should not be placed within the reach of children, as this may be dangerous.

Stop using the unit immediately in case of serious operating problems and contact your dealer.

Do not dismantle or modify the unit.

Section 2: Getting Started with lightShark

2.1 Connection Options

LightShark uses an integrated Web Server to provide all its functions to computers, tablets and smartphones that have a web browser. Simply connect to the LS-1 or LS-Core's integrated WiFi access point. Alternatively, you can connect via the computer's Ethernet port for a wired connection.

Due to the technology used by lightShark, the use of the following web browsers is recommended:

FireFox: <https://www.mozilla.org>

Google Chrome: <https://www.google.com>

Opera: <https://www.opera.com>

Safari: <https://www.apple.com/safari>

All of these web browsers have versions for both desktop and mobile devices.

It is possible to connect up to three devices simultaneously to lightShark, so you can access different windows on each of the devices at the same time. Once the third device has been connected, lightShark will reject the rest of the connections.

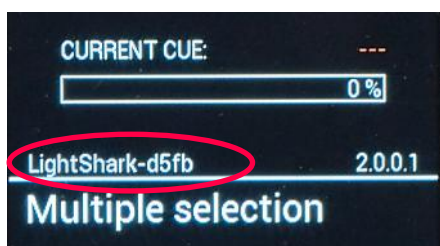
All lightShark devices have two network interfaces, one wireless and one wired.

The wireless network interface is an integrated 2.4GHz Wifi access point. This access point creates a wireless network with the default SSID "**lightsharkXXXX**". where XXXX refers to the last four digits of the MAC address of the wireless interface. How to modify the SSID of the device is detailed below.

By default the WiFi network password is "**sharkjaws**". How to modify the device password is detailed below.

It is possible to find the name of the SSID of the devices in the screen of each one of them:

En LS-1:



En LS-Core:



-The wired network interface allows lightShark to be connected to other network devices or to integrate lightShark into an existing network.

The ethernet port has 2 different IP addresses, so it is possible to connect lightShark devices to multiple networks using the same physical connection:

Ethernet: Allow connection to the local area network shared with other devices. It can be configured in either manual or automatic mode. By default it is configured with a fixed IP.

DMX Streaming: Allows the transmission of DMX through Art-Net or sACN. By default it is configured to be able to communicate from factory to a Class A IP address scheme in the 2.x.y.z range.

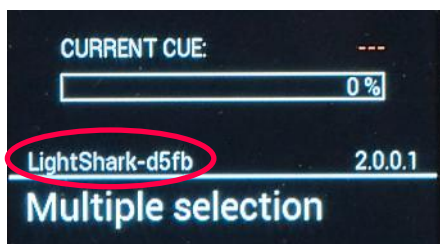
The default address for lightShark devices is 2.0.0.1 and the subnet mask 255.0.0.0. This allows Art-Net or sACN devices to communicate directly to lightShark without the need for a DHCP server connected to the network.

This allows to control lightShark from the same network where there are other devices (sound tables, control software...) and at the same time emit DMX to the Nodes that require a specific network configuration according to the protocol used.

To connect to lightShark through ethernet you must configure the IP address of your device in the same subnet.

It is possible to find the name of the SSID of the devices in the screen of each one of them:

LS-1:



LS-Core:



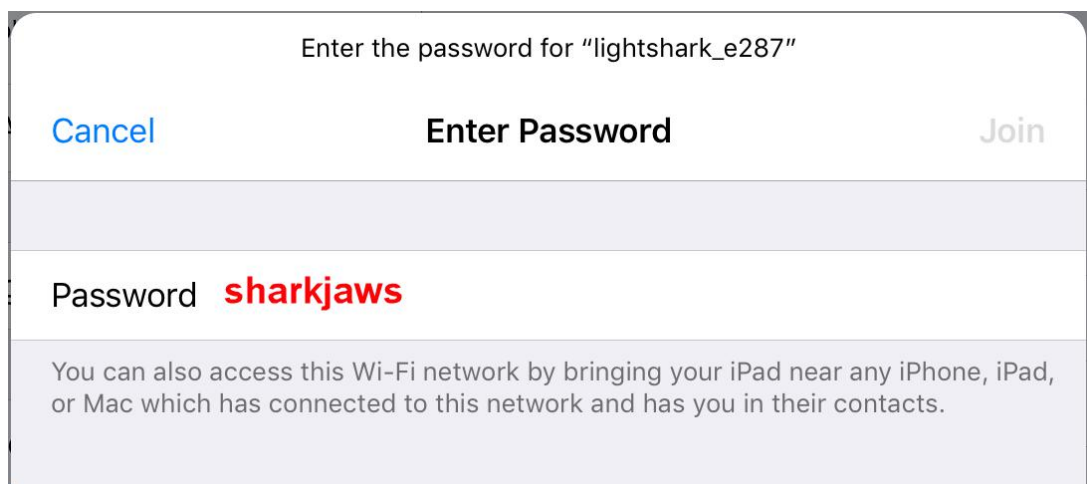
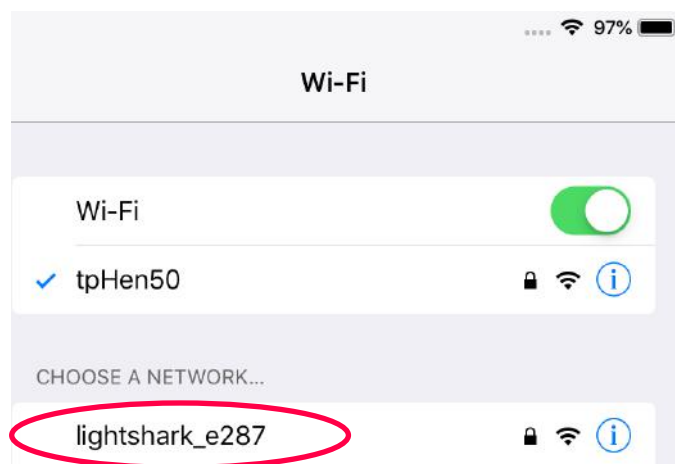
2.2 Using lightShark from mobile devices

To connect to LightShark devices, through the wireless network using a tablet device, the steps are as follows:

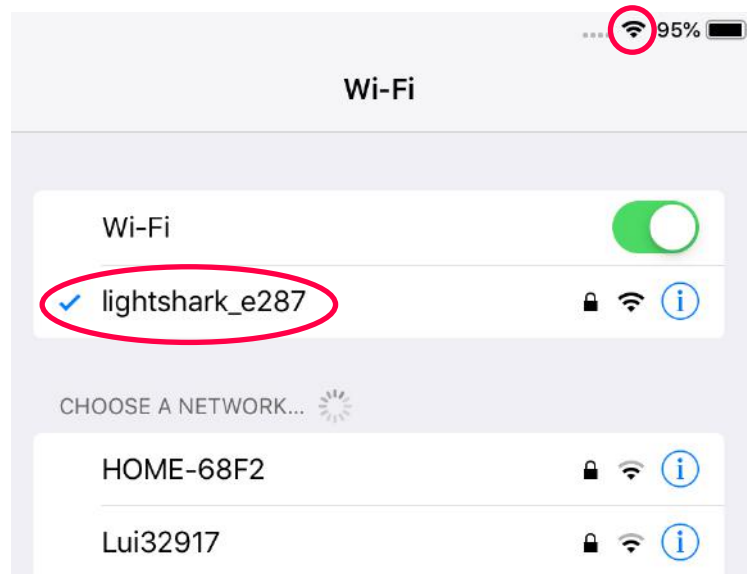
1 Check that the WiFi antenna is correctly connected to the device, then connect the external power supply and turn it on.

You will notice that the LCD screen of your device will illuminate, wait until the device has fully started and the network name is displayed.

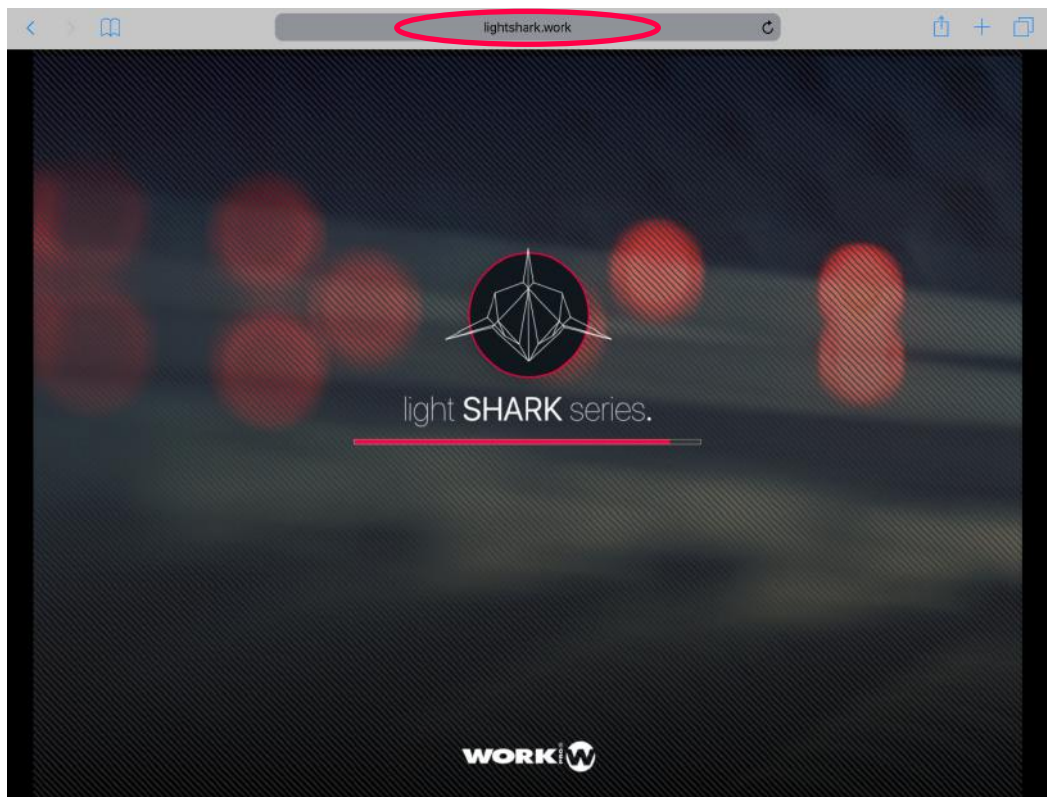
2 Navigate to the WiFi network settings of your device and connect to the "LightShark-xxxx" access point. If this is the first time you connect, the default password will be "**sharkjaws**".



-Once the password has been entered correctly, lightShark will automatically assign an IP address to your device (tablet, mobile phone, computer, etc).



3 Start your device's web browser and enter the **lightshark.work** address in the URL field or the IP address 192.168.42.1. You should see the lightShark loading screen and you will quickly be taken to the Palettes window.



-It is possible to connect via ethernet from a tablet using a lightning-ethernet adapter (for iOS devices) or an OTG-ethernet adapter (for Android devices).

For iOS



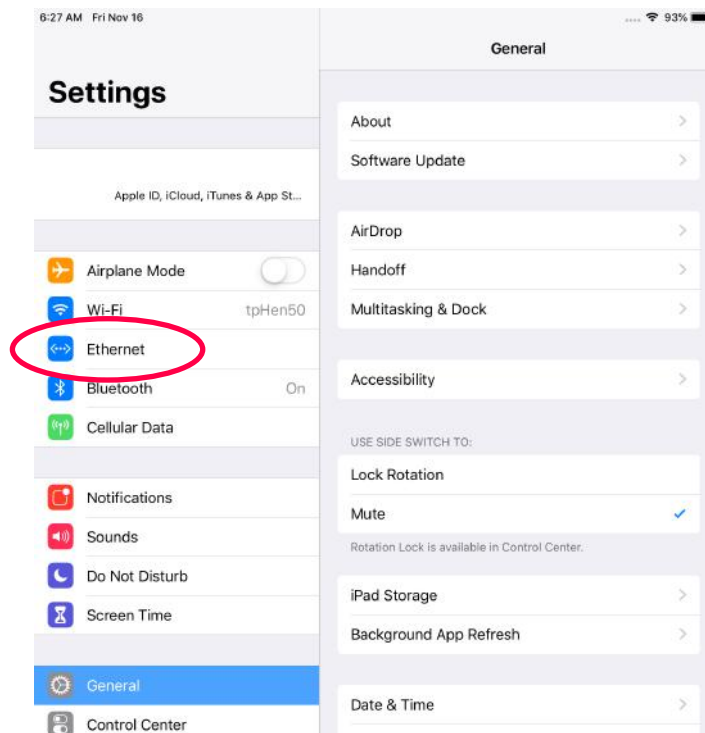
For Android



-To connect to LightShark devices through the wired network using a tablet:

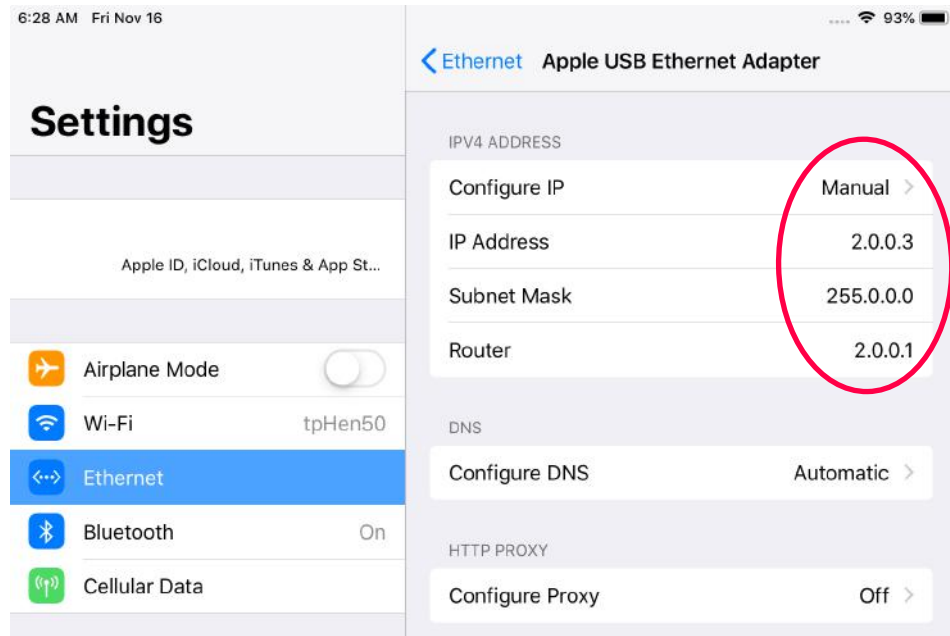
1 Check that the ethernet adapter is correctly connected to the tablet . Then connect an ethernet cable between the adapter and the lightShark device.

2 Access the preferences, in the sidebar you will find the new Ethernet interface:



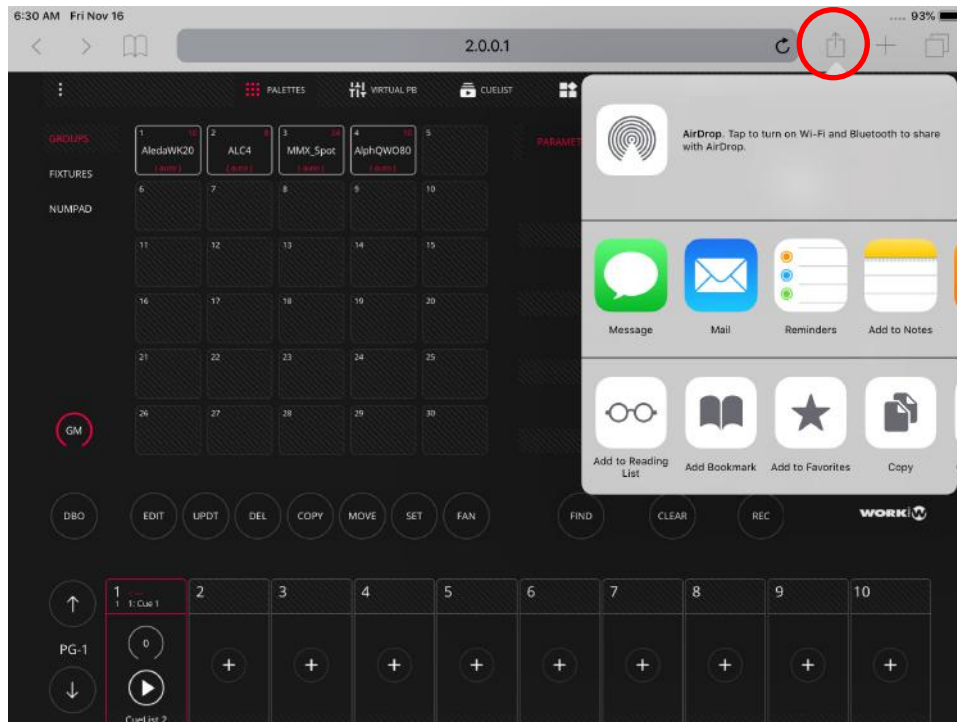


3 Then set the interface as "Manual" and the IP address and Subnet Mask as in the following example:

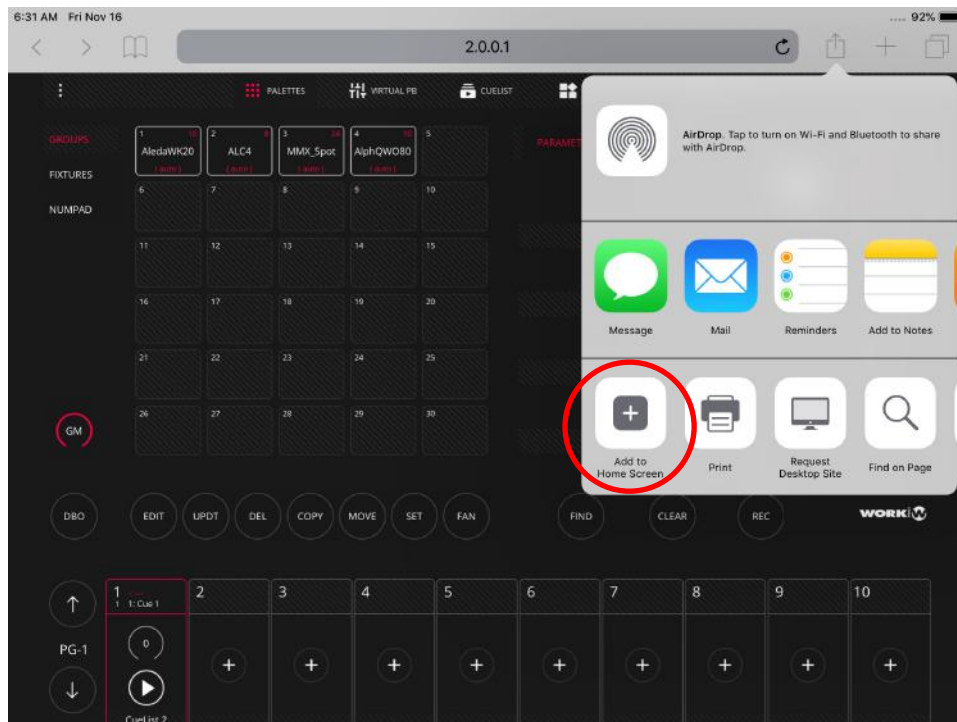


It is possible to add the lightShark website to the iOS or Android home screen. This will create an icon and will automatically access lightShark in full screen mode without having to open the web browser.

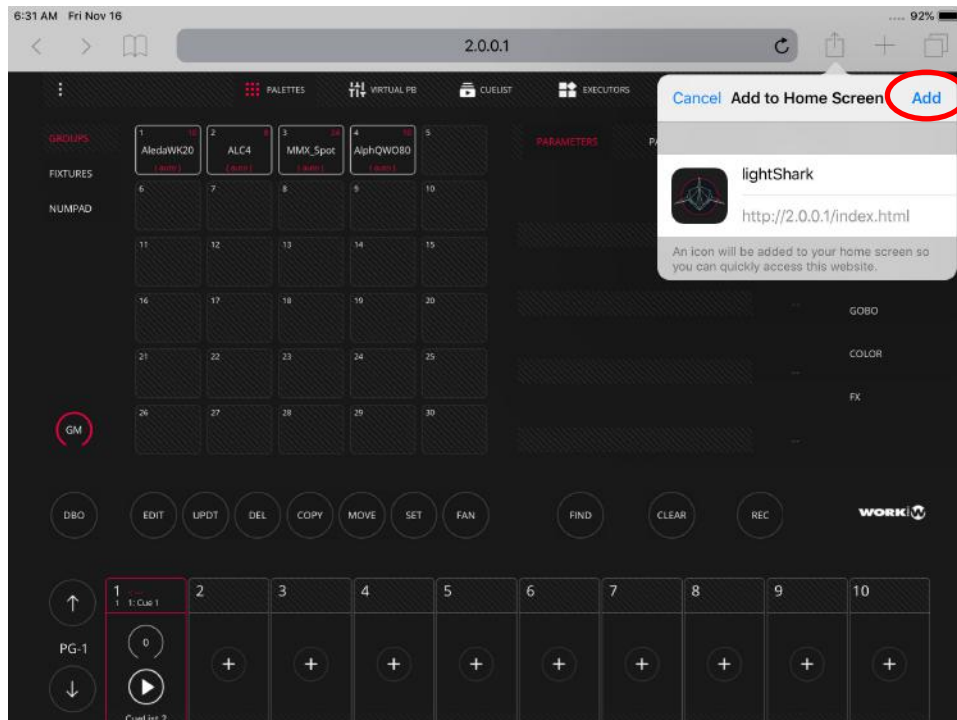
1 Launch Safari (or Chrome in Android) and select the share option:



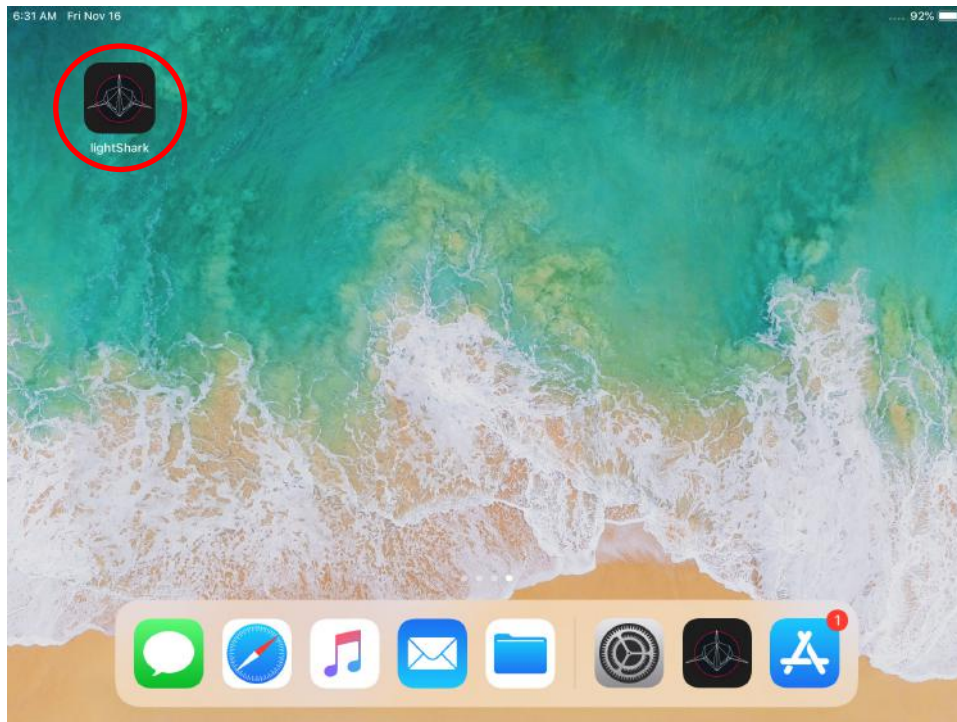
2 Then select the "Add to Home Screen" option. You may have to scroll over on the icons to access this.



3 Press “Add”:



4 The icon will be added to the home screen:

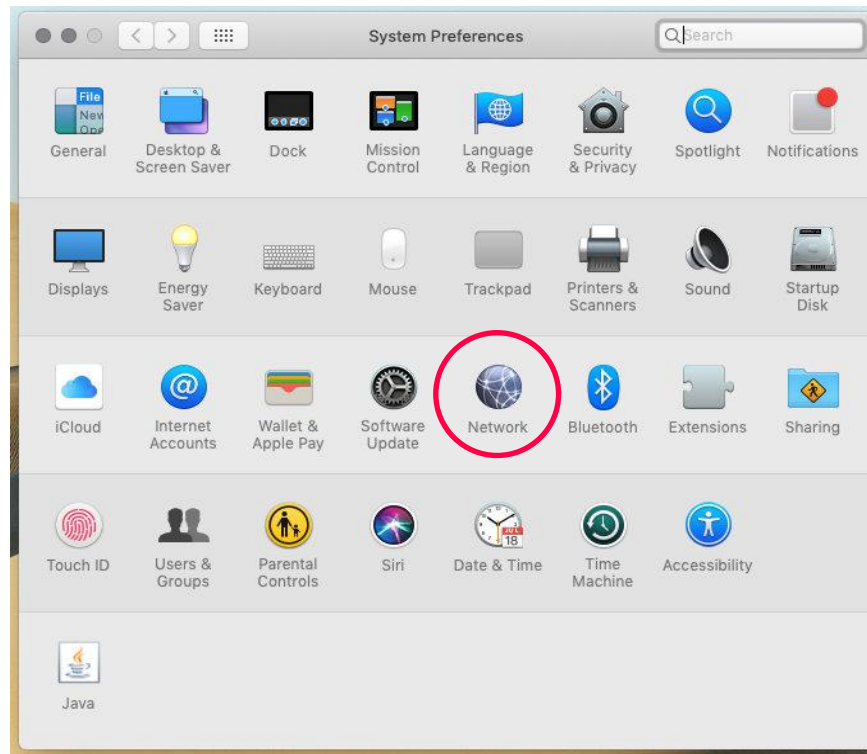


2.3 Using lightShark from a Computer

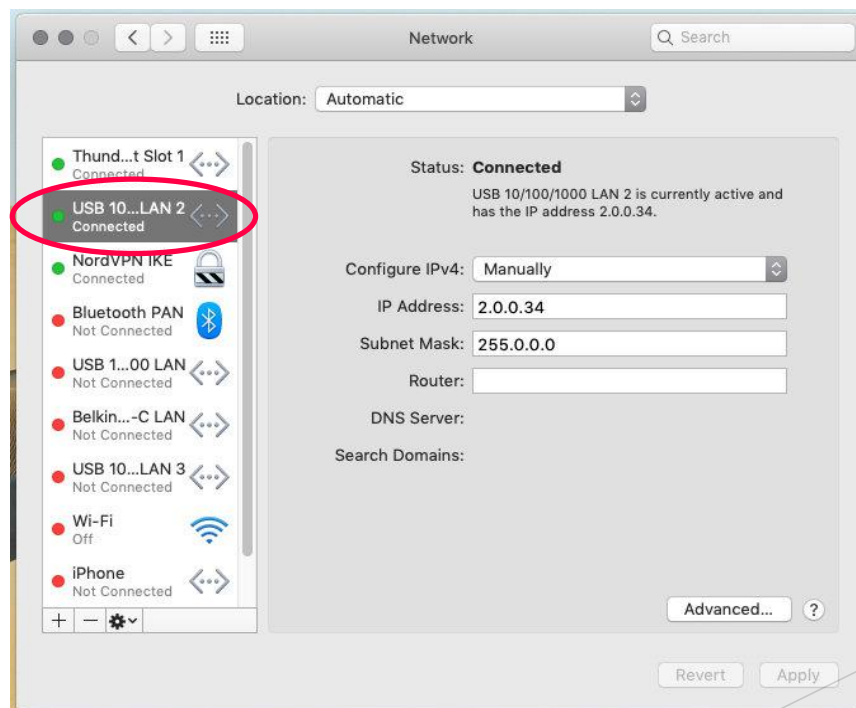
-The following steps detail the process of connecting via a computer using the wired network interface instead of the wireless network.

Network configuration in macOS

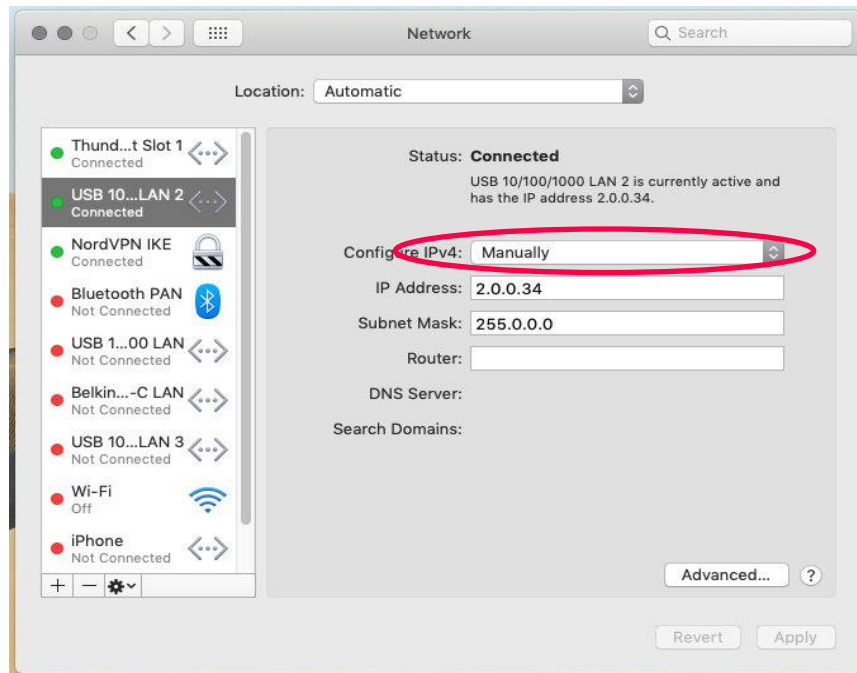
1 Access the System Preferences and then select "Network".



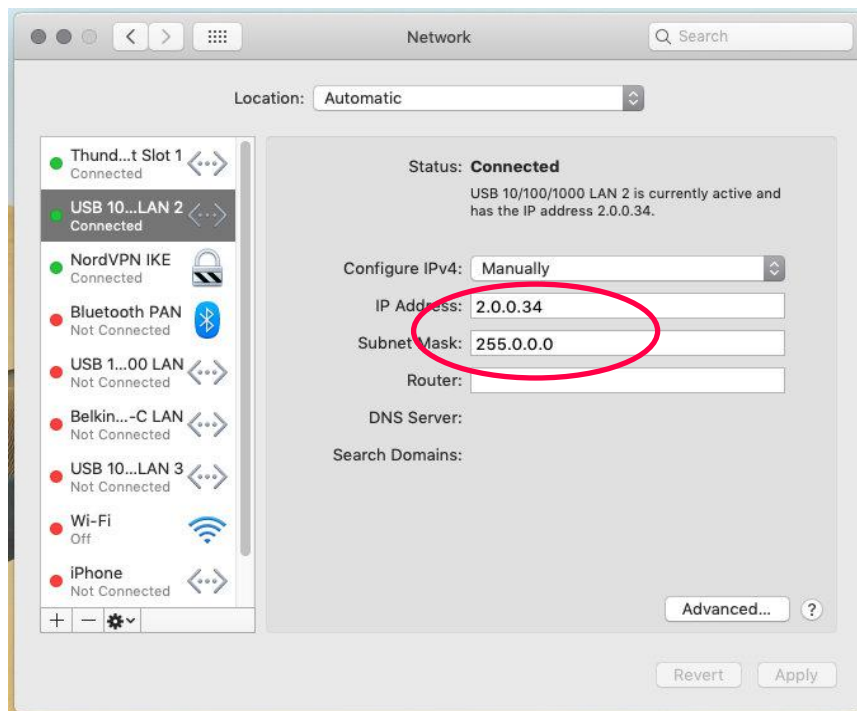
2 From the left side menu select the network interface to which the lightShark device is connected.



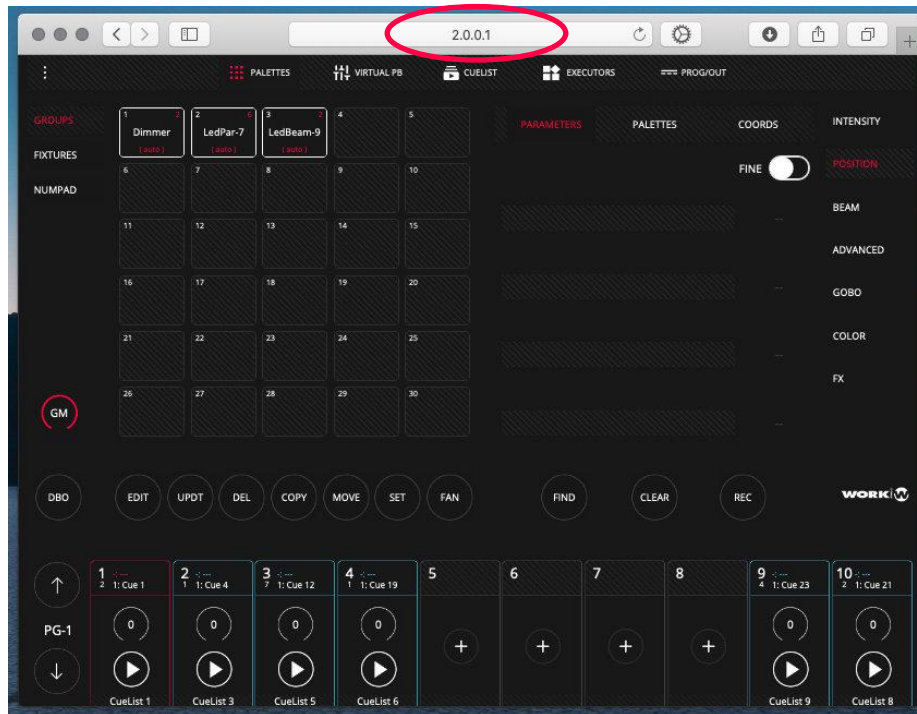
3 Then set the interface to "Manually".



4 Then set the IP address and Subnet Mask as in the following example:

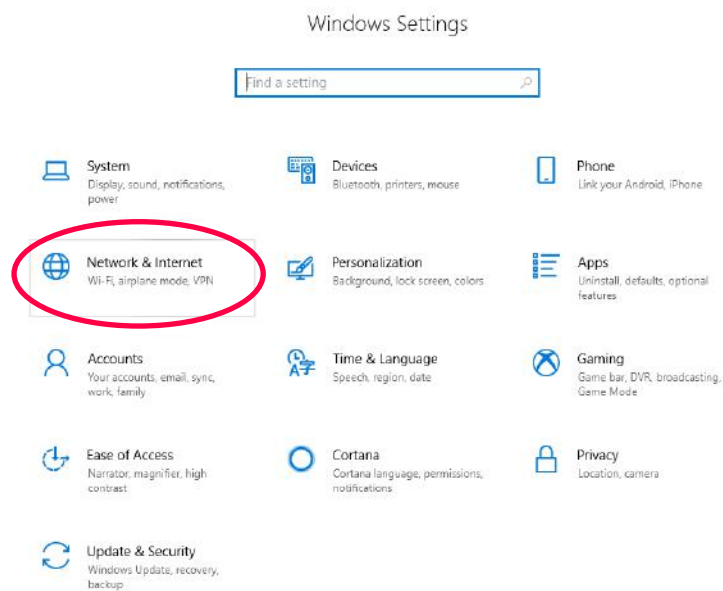


5 Start Safari and enter the address : 2.0.0.1

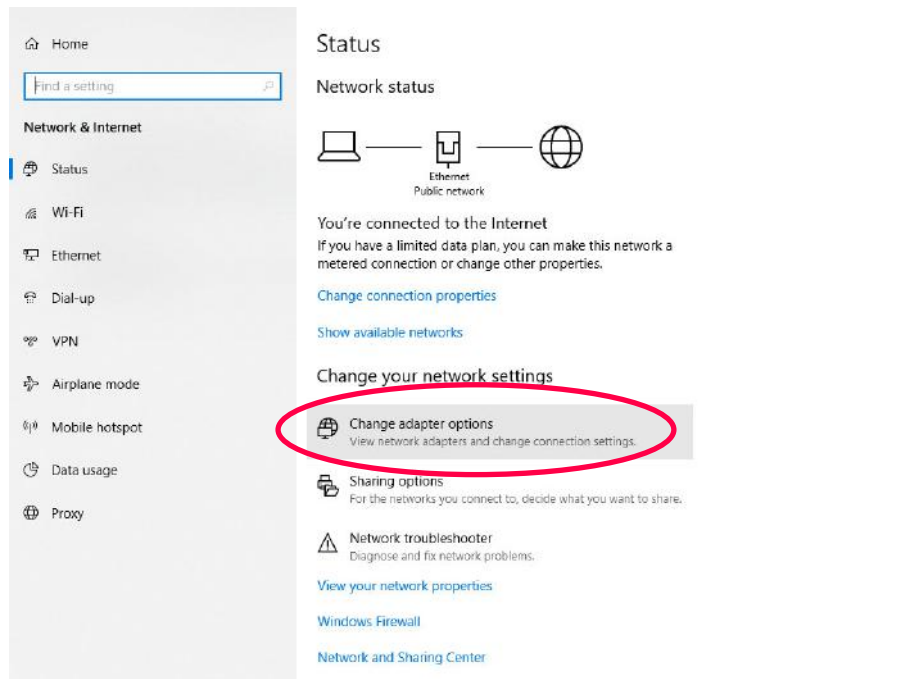


Network configuration in Windows10

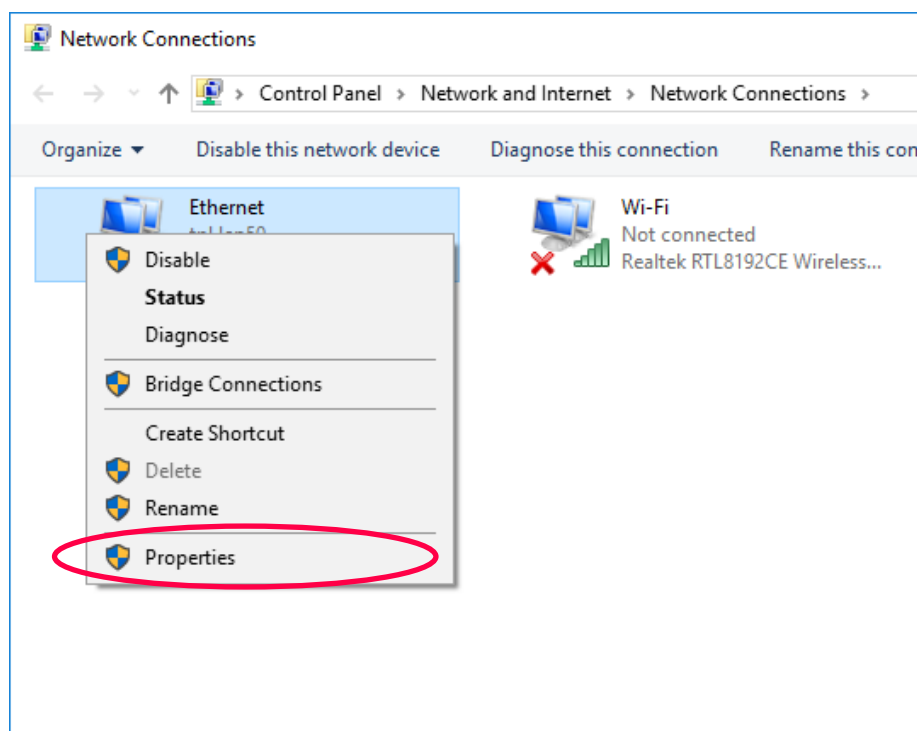
1 Access the Windows Settings and then select "Network and Internet".



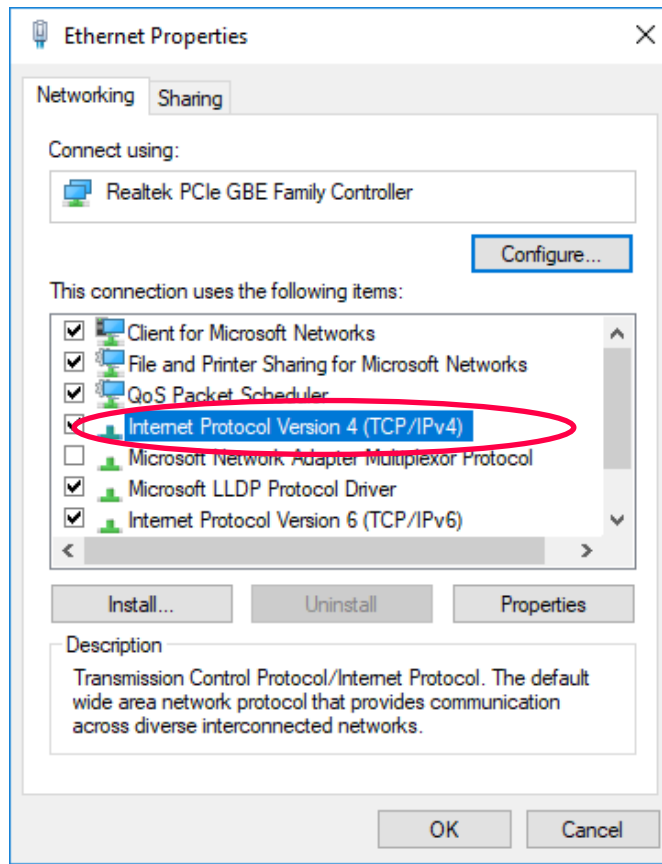
2 Select the "Change Adapter Options" option.



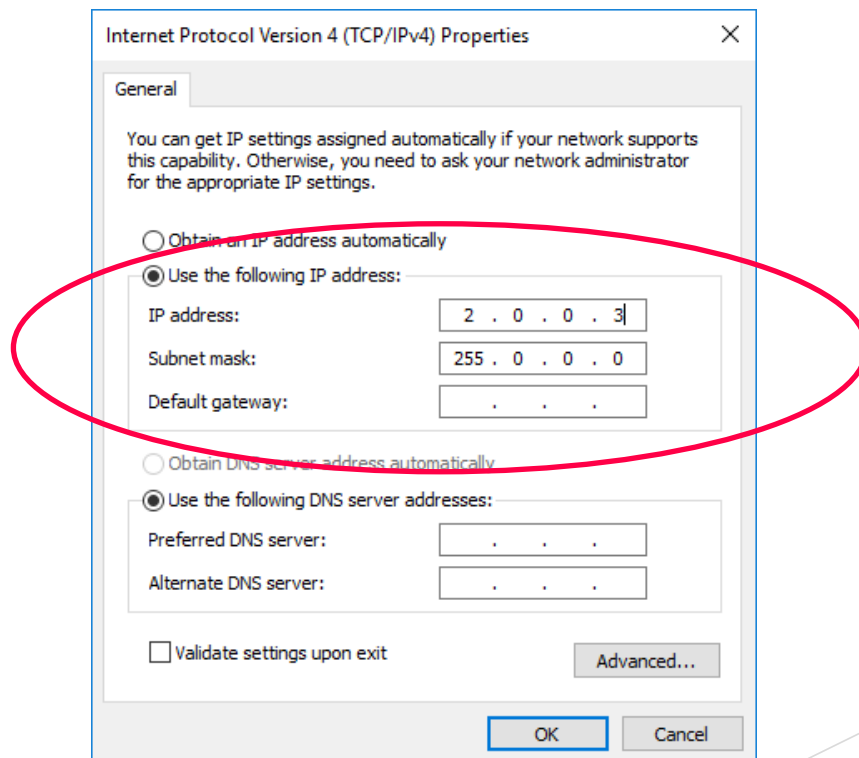
3 Right click on the network interface to which lightShark is connected, then select "Properties".



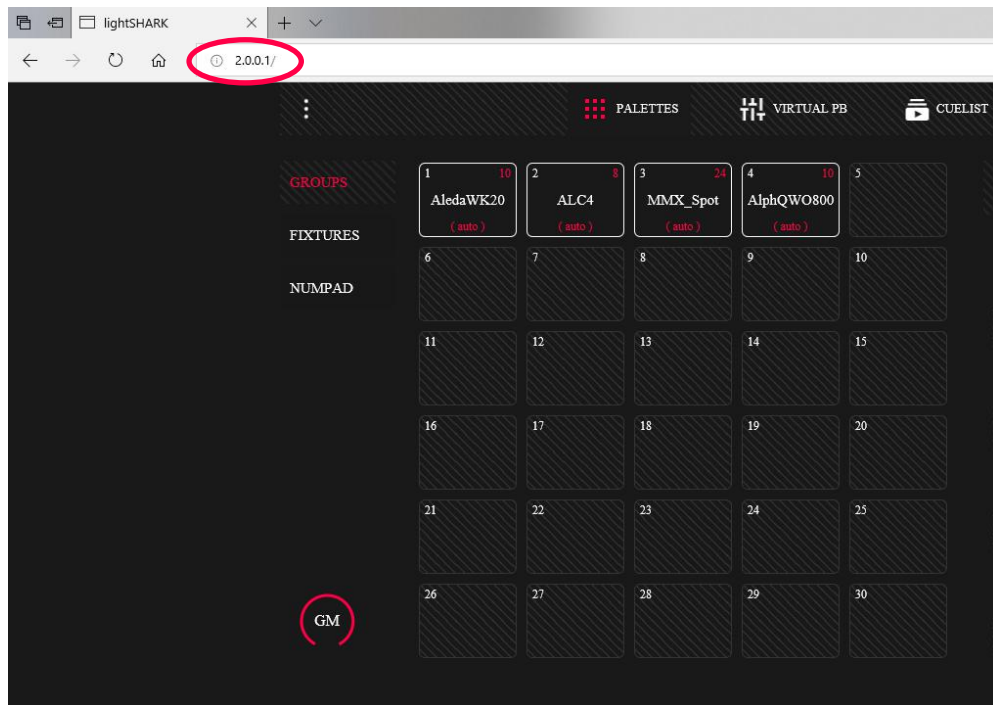
4 Then "Double click" on "Internet Protocol version 4 (TCP/IPv4)".



5 Enter the network configuration as shown in the following example and accept the changes:

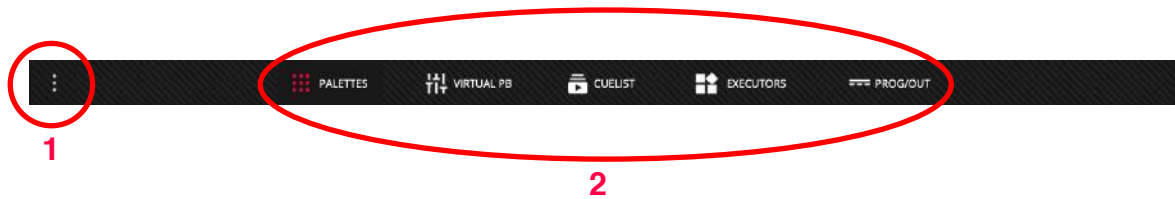


6 Start your web browser and enter the address "2.0.0.1" as shown below:



2.4 LightShark graphical user interface

LightShark has a simple but complete user interface, from which the user can control all the parameters of the fixtures, record scenes and perform shows. The interface is organized with 5 different views and a menu button:

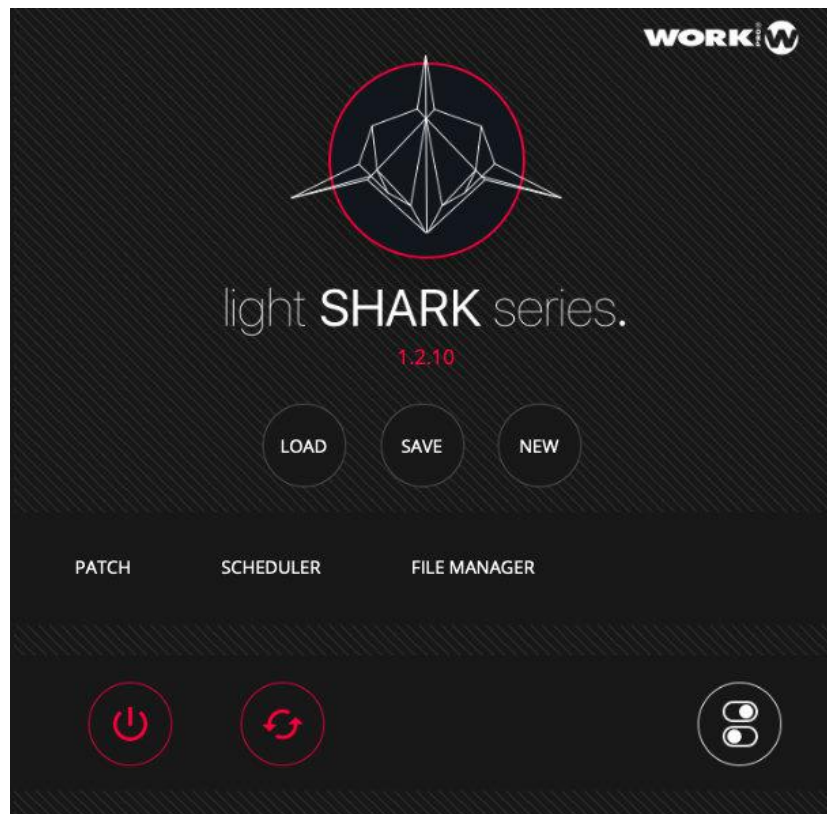


1 Access to the Options Menu/Main Menu.

2 Access to the different views of the interface.

MAIN MENU

The lightShark Options Menu can be accessed from the icon in the upper left corner.

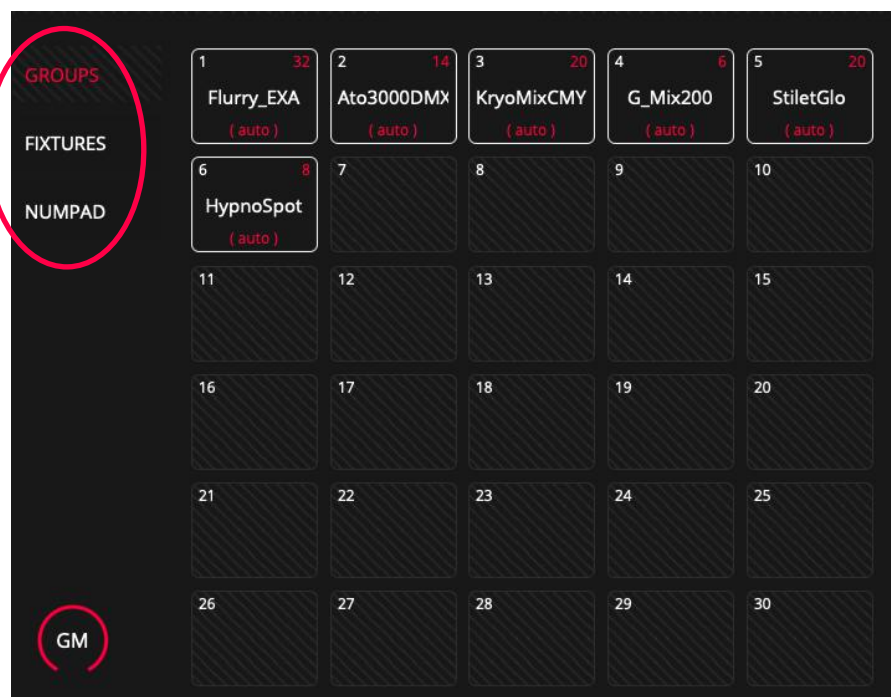


PALLETES WINDOW

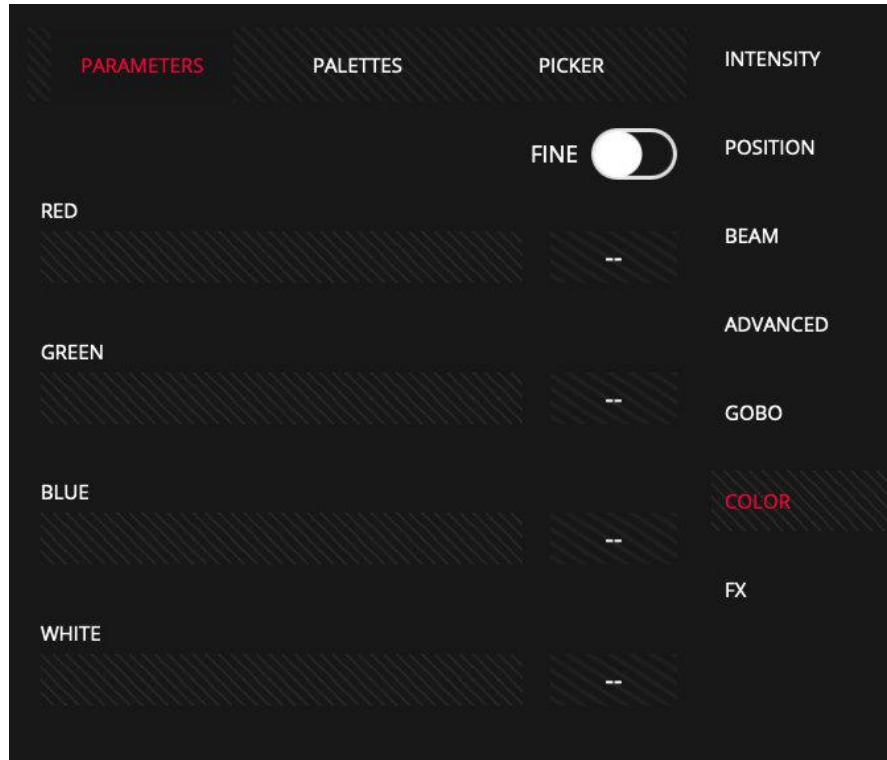
This is the main view of LightShark. From this window the user can select and control the fixtures, as well as record scenes or edit elements. The Palettes window is divided into 4 sections:



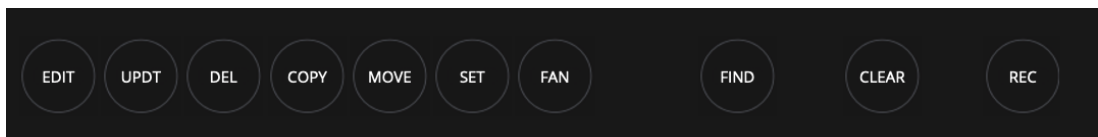
1 Fixture selection area: You can select the fixtures through groups, individually or through the numeric keypad.



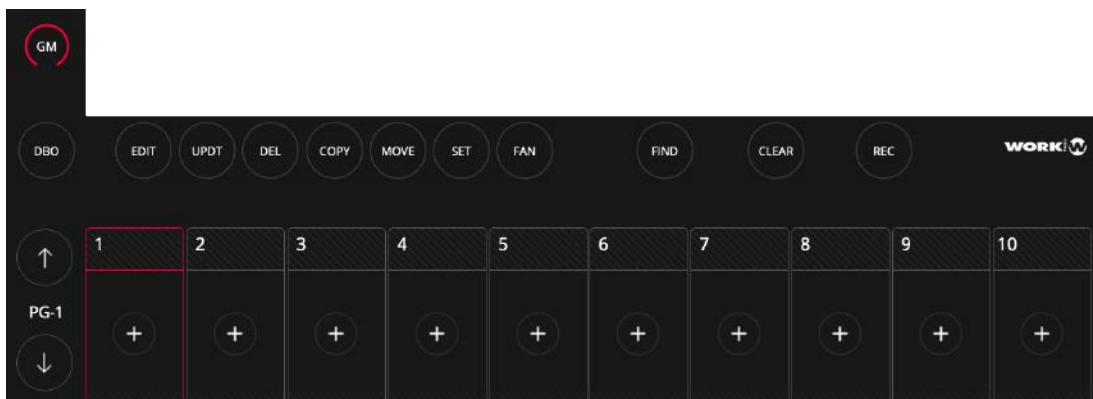
2 Parameter control area: This is where you can modify selected fixture's attributes. Depending on the type of parameter and selected fixtures, you may see different information.



3 Editing Zone, allows the user to perform the functions related to editing and recording.

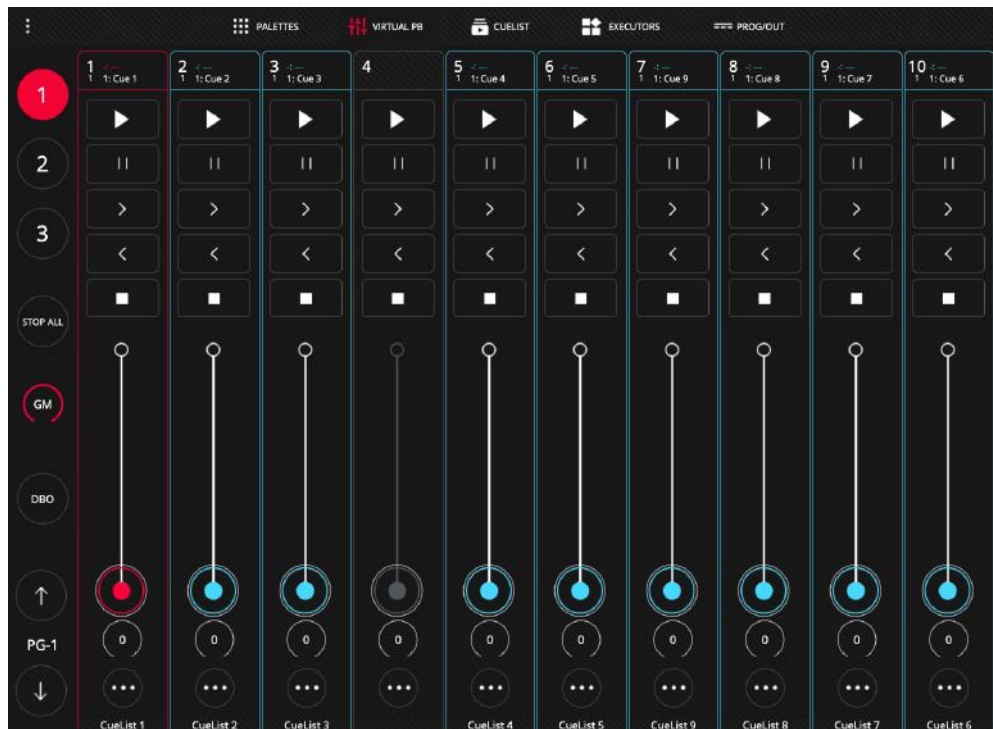


4 Playbacks Zone, allows the user to control the playback of the show, trigger the Cuelist and control the output level.

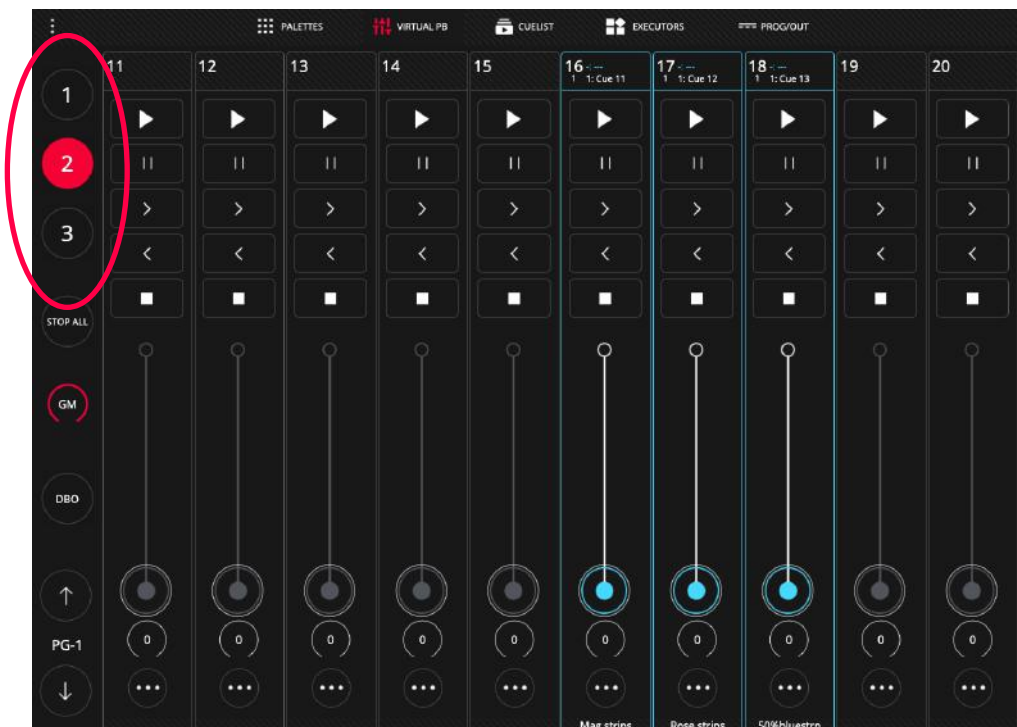


VIRTUAL WINDOW PLAYBACKS

From the "Virtual PlayBacks" view the user has access to the Playbacks. This is very useful when using a LS-Core or when no physical control surface is available.

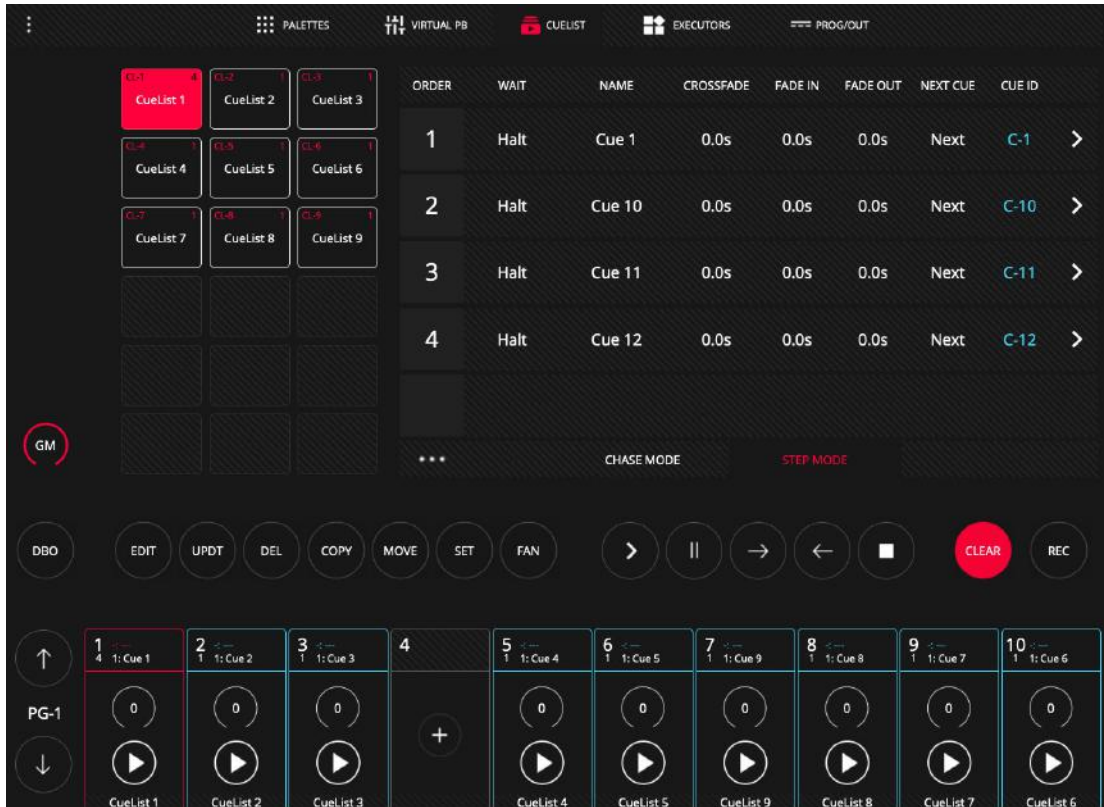


LightShark's interface is multi-touch, so you can operate multiple Playbacks simultaneously from one tablet or device. From the side buttons 1, 2, and 3 the user can directly access the desired Wing without scrolling.

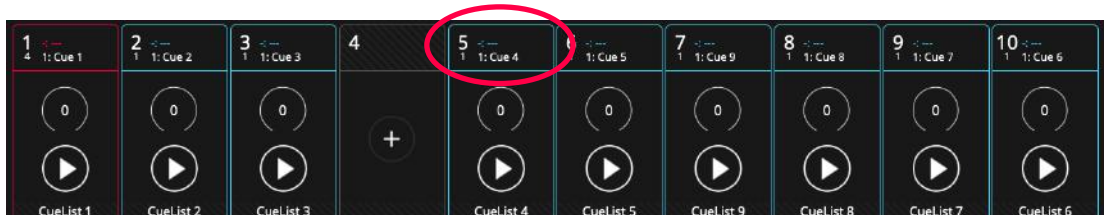


WINDOW CUELIST

LightShark has a Cuelist manager where you can navigate between all stored Cuelist and Cues:

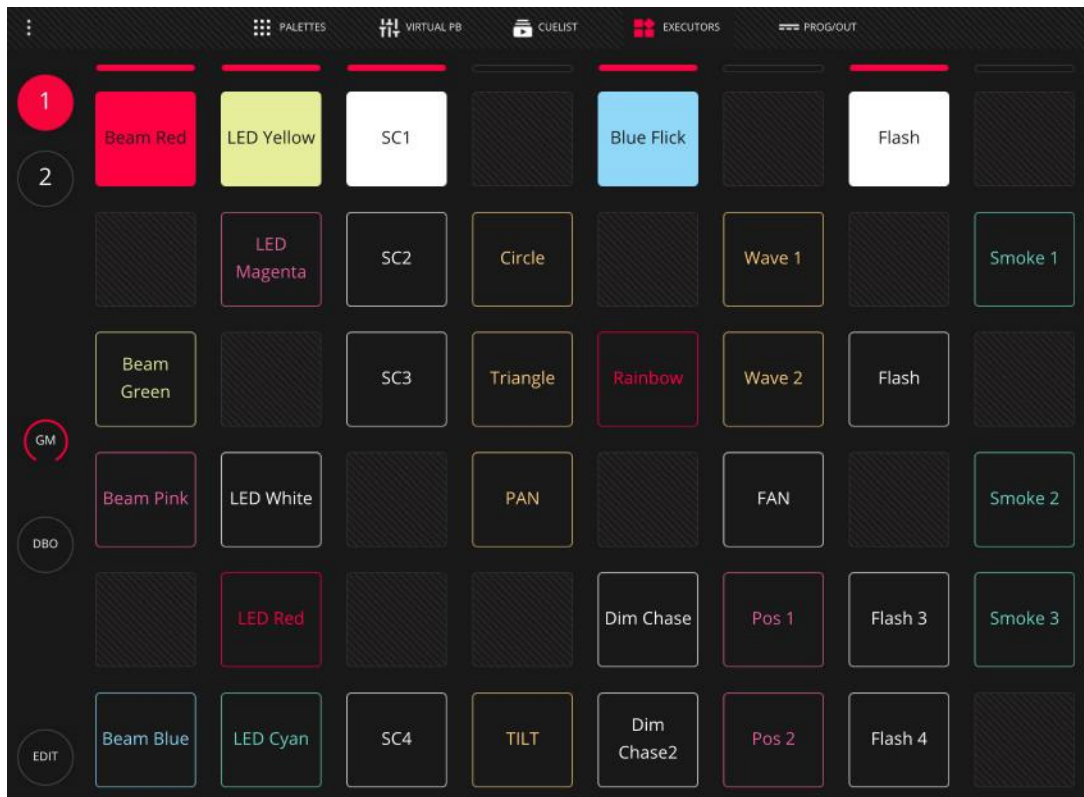


From the playbacks it is possible to directly access the cuelist on that playback via a "double click" on the top of the Playback.

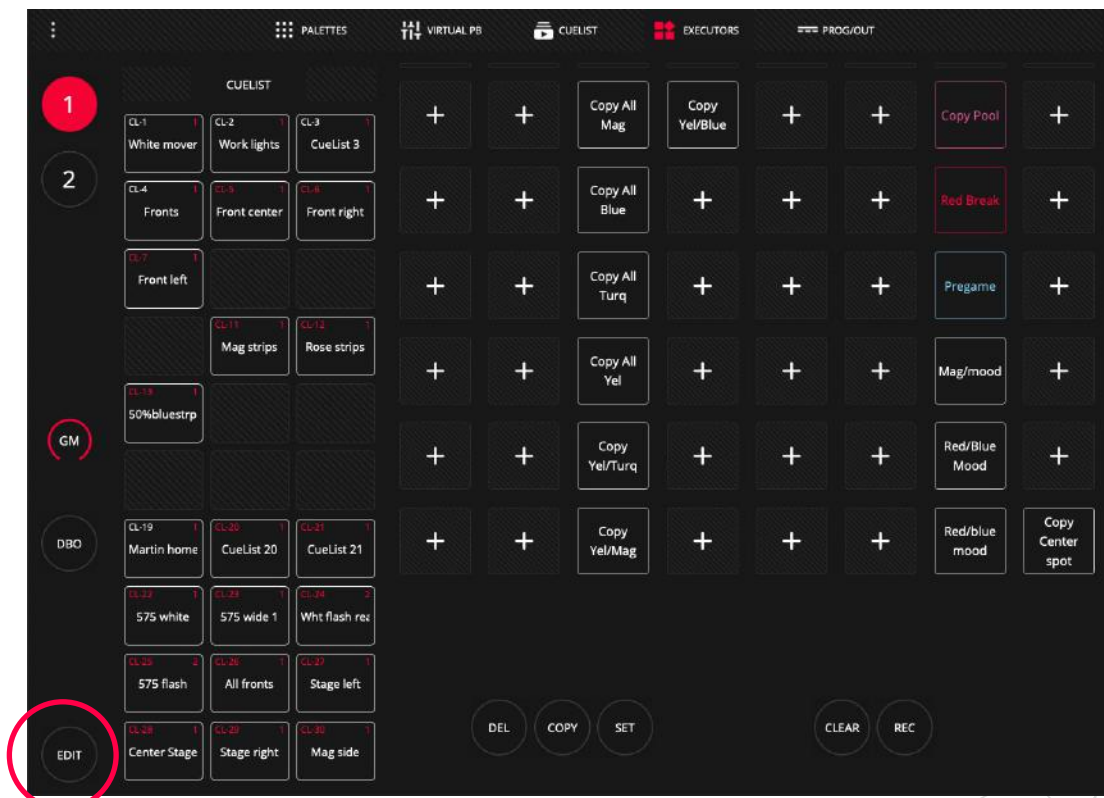


EXECUTORS WINDOW

The "Executor" Window is a special user configurable window where you can add Cuelists and configure their behavior.



To configure the window of executors press the "EDIT" button.



PROGRAMMER WINDOW

From this window it is possible to see the information in the programmer.

The screenshot shows a software interface for programming lighting cues. At the top, there are navigation icons for PAlettes, VIRTUAL PB, CUELIST, EXECUTORS, and PROG/OUT. The main area is a table with columns for PROGRAM, INTENSITY, PAN, TILT, COLOR, SHUTTER, GOBO, PRISM, PRISMROT, and FX. The table lists 13 rows of fixture data, sorted by selection order. A circular button labeled 'ALL TO ZERO' is visible on the left side of the table.

PROGRAM	INTENSITY	PAN	TILT	COLOR	SHUTTER	GOBO	PRISM	PRISMROT	FX
1 Side rt	255	--	--	--	0	--	--	--	--
2 Side rt	255	--	--	--	0	--	--	--	--
3 Side rt	255	--	--	--	0	--	--	--	--
4 Side left	255	--	--	--	0	--	--	--	--
5 Side left	255	--	--	--	0	--	--	--	--
6 Side left	255	--	--	--	0	--	--	--	--
7 Rear stage	255	--	--	--	0	--	--	--	--
8 Rear stage	255	--	--	--	0	--	--	--	--
9 Rear stage	255	--	--	--	0	--	--	--	--
10 Rear stage	255	--	--	--	0	--	--	--	--
11 Rear stage	255	--	--	--	0	--	--	--	--
12 Rear stage	255	--	--	--	0	--	--	--	--
13 Rear stage	255	--	--	--	0	--	--	--	--

Fixtures are sorted according to the order of selection. The information shown in this window is the information that will be saved in the Cue if recorded at that moment.

2.5 Common Actions

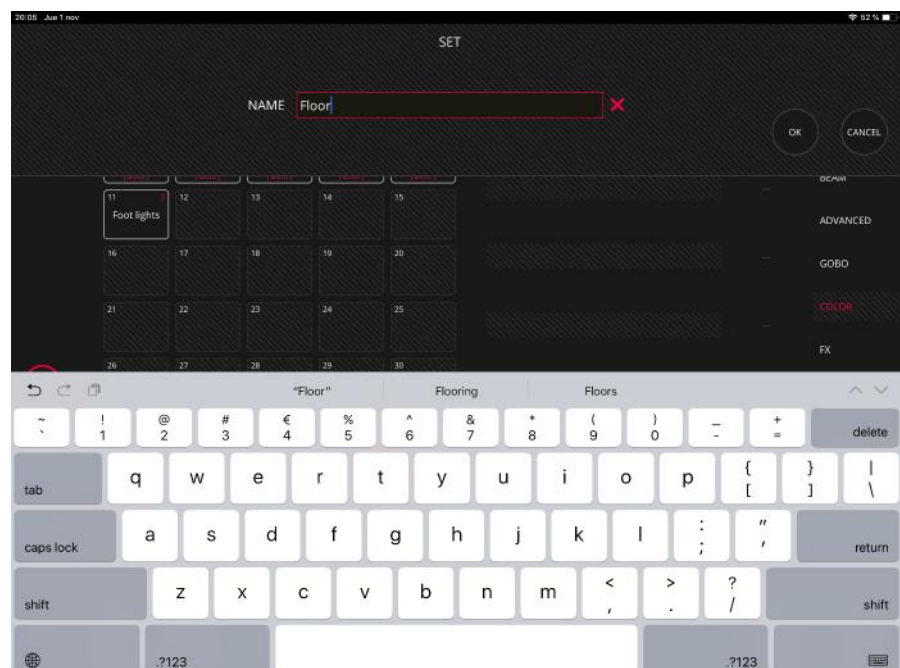
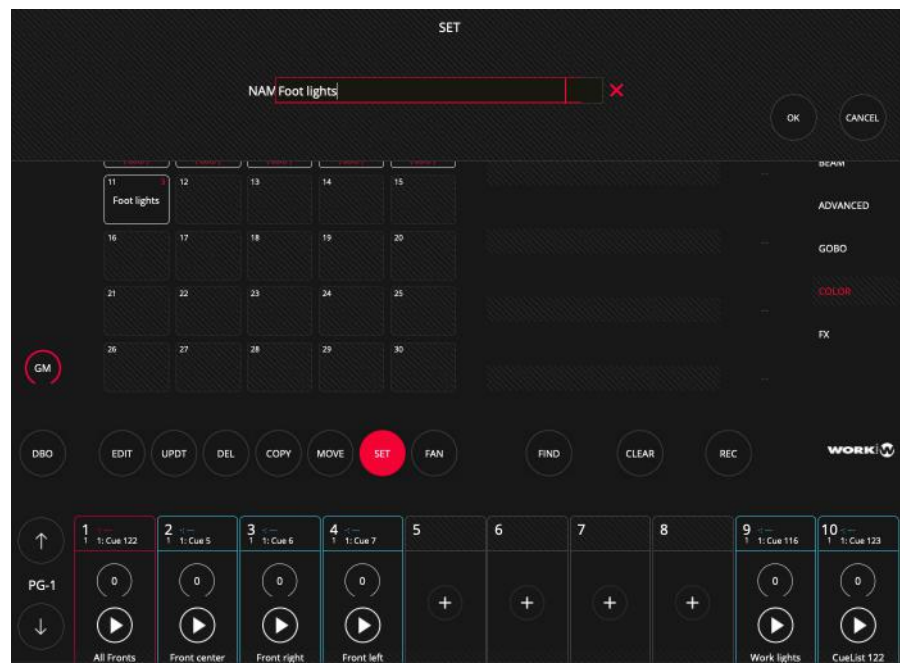
LightShark has a number of common actions that can be used throughout the entire interface.

Naming Elements, it is possible to change the name of groups, fixtures, Cues, etc. This can be done in two different ways:

1 Using the "SET" key:

Press "SET".

Select the item to be renamed



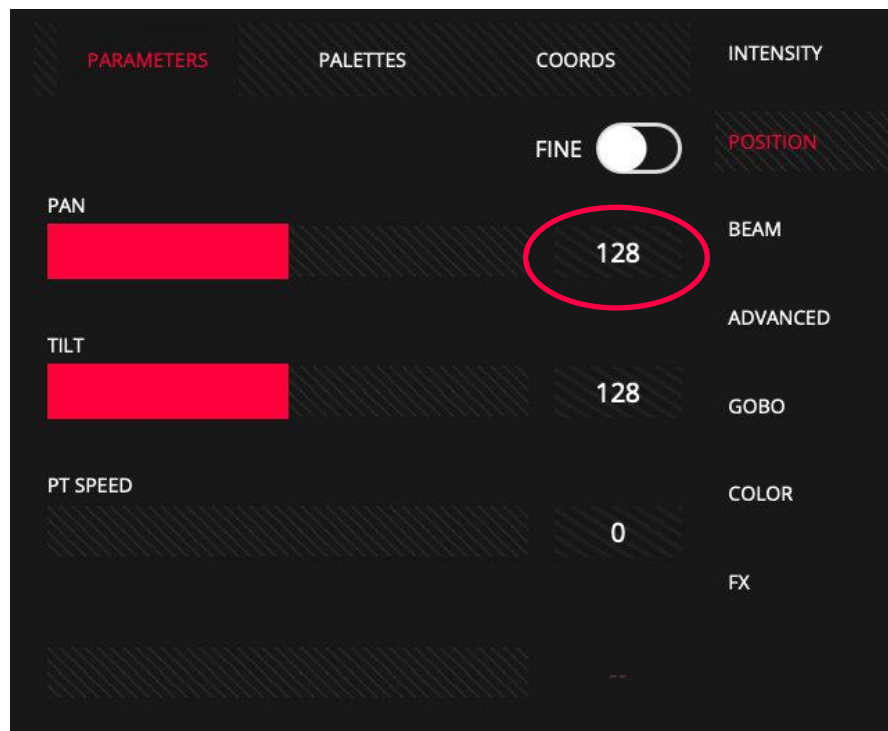
2 Press and hold down for 2 seconds on the name to rename the element.

Adjusting levels. It is possible to adjust levels or to adjust the values of the numerical fields ... This can be done in two different ways:

1 Using the "SET" key:

Press "SET".

Select the item to be adjusted.



2 Press and hold on the value you wish to change for 2 seconds to rename the element.

Moving Elements: it is possible to move elements between different positions:

Select the element you want to move

Press "MOVE."

Select where you want to move.

Coping Items: you can create a copy of an item:

Select the item you want to copy

Press "COPY."

Selects where to leave the copied item.

Deleting Elements: it is possible to delete different elements (Groups, Cues, Executors...):

Press "DEL".

Select the item you want to delete.

Quick selection of elements: it is possible to select multiple elements at once:

Selects the first element

Click twice in a row on the last element.

This will automatically select all items between the first and last selected item.

Recording: It is possible to save elements inside the box type buttons (Groups, Cues, Palettes...):

Once you are ready to save, press "REC".

Click on the destination button.

2.6 Programmer

All show information storage is carried out by the programmer and lightShark uses this information when recording Playbacks, palettes, and groups. The programmer has priority over all PlayBacks, Cues, Cuelist and channels. A fixture is included in the programmer when any attribute is modified.

The CLEAR button illuminates when there is information inside the programmer. Press the "CLEAR" button to erase the information inside the programmer and all channels will be removed from the programmer. The HTP channels will be reset. It is possible to change the behavior of "CLEAR" from the main menu by choosing to return all channels to 0 or to the default value defined in the library.

If, after selecting a fixture (or group of fixtures), the "FIND" button is pressed, all the attributes of the fixture will be included in the programmer with the levels defined in the fixture profile.

The programmer window allows the user to see what is in the programmer and how it is configured. The programmer window can be accessed from the upper window bar.

HTP and LTP channels

To understand how lightShark works it is necessary to know the different types of channels there are:

HTP stands for "Highest Takes Precedence". This means that whatever fader has a particular light at the highest intensity, wins.

The limitation of this, however, is that you can't just "grab" a light's fader and bring it down to get it to zero. If that light is recorded anywhere else in the console, and that fader or cue is up, you can't bring the light down!

It's all about "priority" Priority is necessary because modern lighting console can bring up a particular light or parameter in multiple places within the console. It is then up to priority to decide which place in the console wins- and what you see on stage from the console's output.

HTP and LTP are the 2 main "systems" for determining priority.

HTP is great for conventional lighting because you don't really have a need control any other parameter besides intensity- which has a definite higher and lower.

When you move into the world of moving lights and LED's, however, you need to control parameters such as color wheels, gobo spin, and frost. These parameters don't have a higher or lower setting- green is not greater than orange, nor is orange greater than green! That brings us to LTP.

LTP stands for latest takes precedence.

This means that the most recent fader, cue or button touch wins- no matter which light is higher. This means, that when you touch that play button, the exact cue you played, will play exactly as it is recorded.

However, it is important to note that if a cue has no information recorded for a specific light or parameter, it will not alter that light or parameter if it is live. This is a concept called "Tracking".

Because the cue you've now played has taken precedence, you need to re-assert, or playback the first cue if you want to see it again on stage, because LTP is more concerned about playing new looks than going back into old looks when you bring the fader down.

If a look is completely over-ridden, your console may force release it to help you when you choose to bring down your faders!

So next time you're on that show, captaining that new professional-grade console, remember to always hit clear to release the programmer and to be careful what you record into cues with a "0"- the latest will always take precedence, whether you like it or not!

Be sure to think carefully and work intentionally, especially the first few times you program a show in LTP if you come from the HTP world. It's a lot different, but when working with moving lights, it's a whole lot better and easier.

David Henry

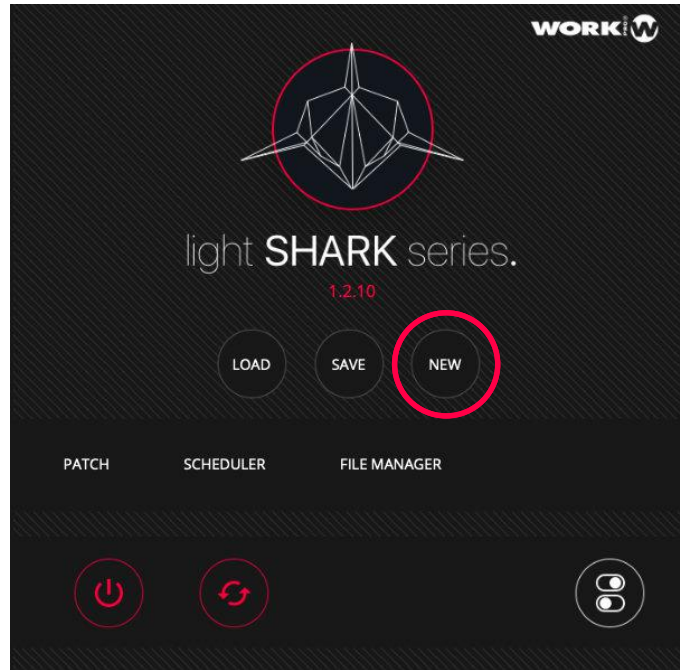
Learn Stage Lighting

<https://www.learnstagelighting.com/what-is-htp-what-is-ltp-why-should-i-care/>

Section 3: LightShark Basics

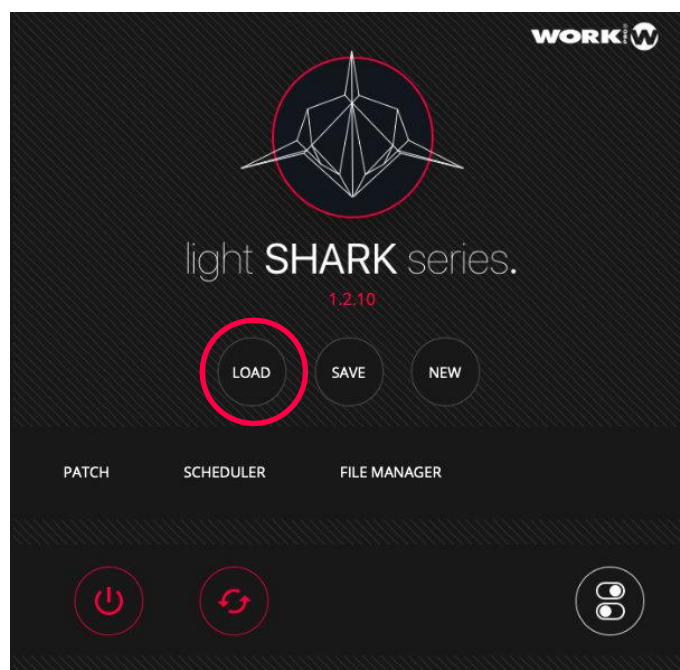
3.1 Management of Show Files

To create a new show from scratch, access the LightShark menu through the icon located in the upper right corner and press the "NEW" button.

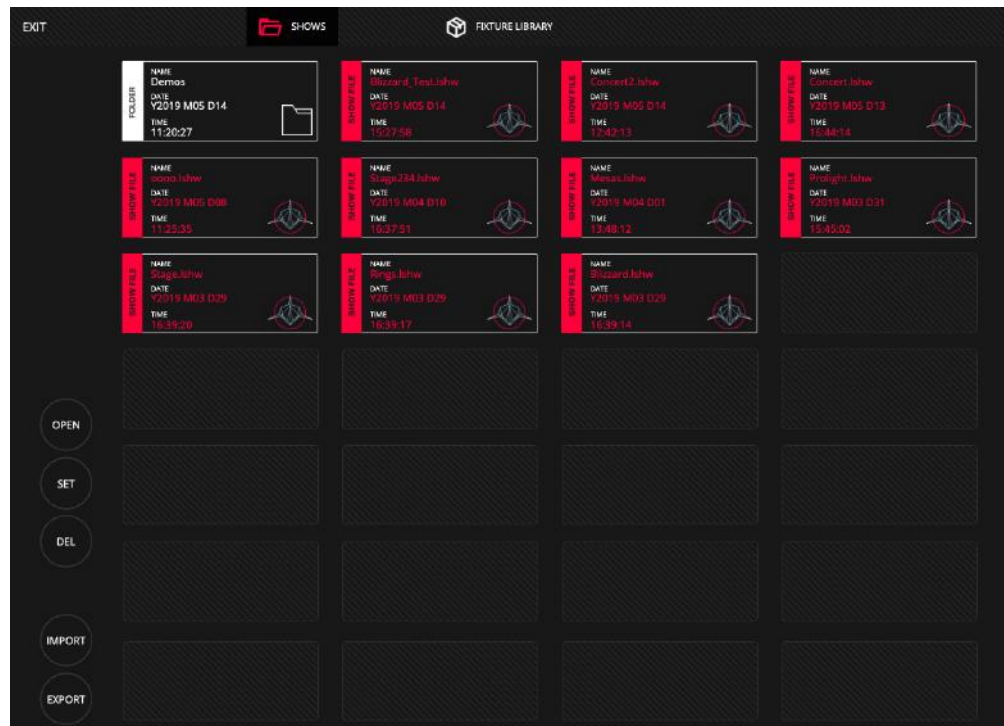


LightShark incorporates a file manager from which it is possible to load, copy, save, delete and rename files. To load an existing show:

- 1 Access the LightShark menu through the icon located in the upper right corner and press the "LOAD" button.



2 LightShark will open the file manager where you can find all the files stored in the console. “Double click” on the show you want to run.



In each of the show file icons you can find information about the name of the show, creation date and time.

To save a show at any time:

1 Access the LightShark menu through the icon in the upper right corner and press the "SAVE" button.

2 LightShark will display an on-screen keyboard where you can enter the name of the show. If you want to overwrite the file simply press "OK".

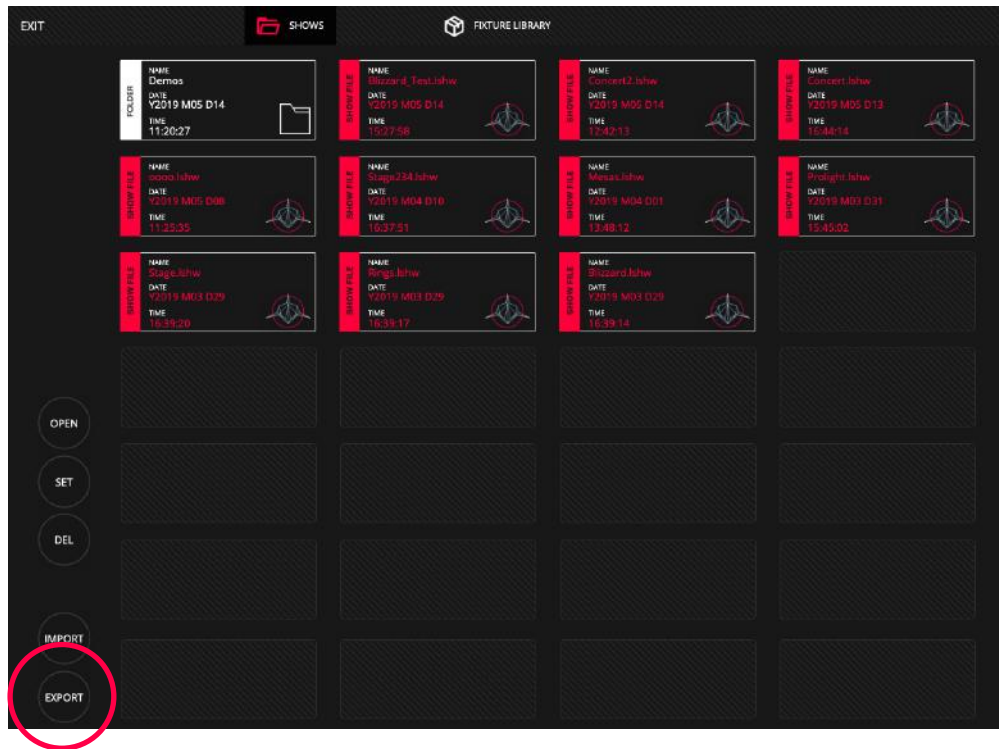
Note

The current version (R1) does not incorporate an auto-save function, it is recommended that the user save the changes from time to time. The auto save function will be implemented in next software updates.

It is possible to share LightShark show files between consoles or LS-Core:

1 Access the LightShark menu through the icon located in the upper left corner, press the "File Manager" button and select the upper "Shows" tab.

2 Select the show you want to export and press the "Export" button. LightShark will copy the show file to the external USB memory.



You can delete any show as follows:

- 1 Access the LightShark menu through the icon located in the upper left corner, press the "File Manager" button and select the upper "Shows" tab.
- 2 Press the "DEL" button and then select the show file you want to delete.

You can import a show file that was created from another lightShark device:

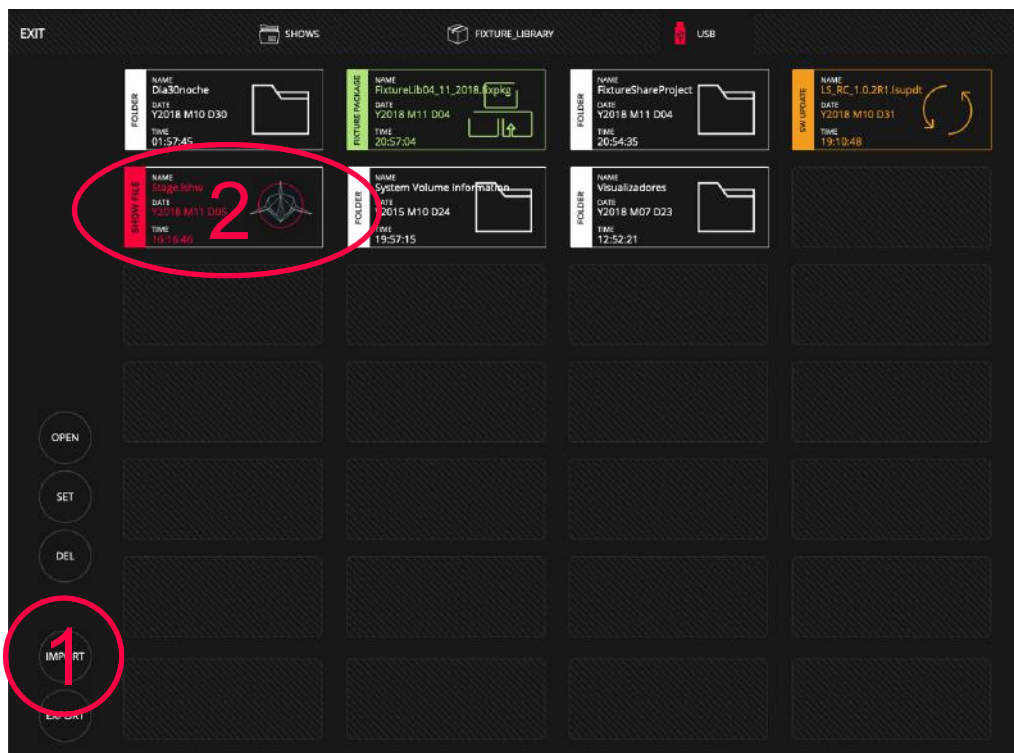
- 1 Connect the USB stick containing the show file you want to import to the USB port labeled "Data" (on the LS-1) or to the front USB port labeled "Host" (on the LS-Core).



2 Access the lightShark menu through the icon located in the upper left corner, press the "File Manager" button and select the upper "USB" tab. Note that this tab is only displayed if a USB stick has been connected.



3 Press the "IMPORT" button and then select the show file you want to import.



3.2 DMX OUTPUT

LightShark offers a maximum of 8 DMX universes. Both LS-Core and LS-1 have 2 physical DMX output universes.

The LS-1 console offers support for XLR-3 and XLR-5 connectors, however, please only use 1 of each output's connectors at a time.



The LS-Core device has 2 XLR-5 connectors.



The other DMX universes are emitted using different network protocols through the ethernet connection. LightShark does not emit DMX signal over WiFi.

LS-1



LS-Core



The network protocols supported by lightShark are:

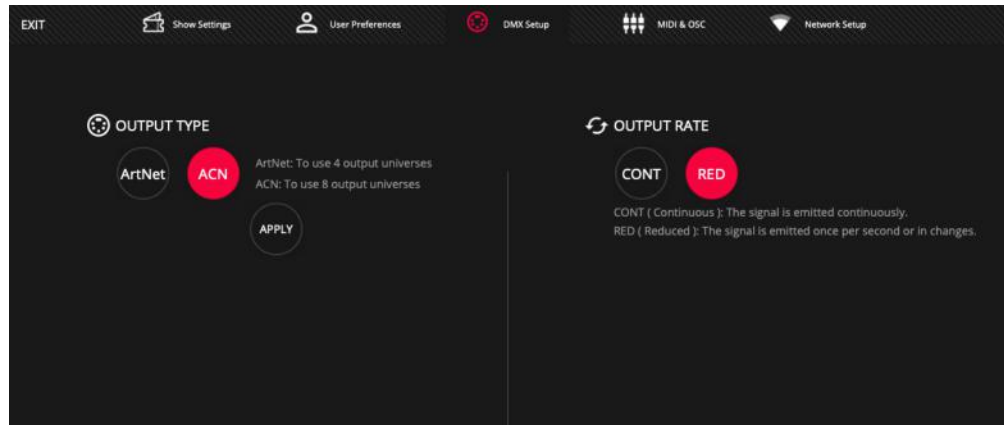
Art-Net is a free communications protocol for the transmission of the DMX512-A lighting control protocol via UDP. It is used for communication between "nodes" and a "server".

sACN is a set of network protocols for the control of entertainment technology equipment, especially when used in live performances or large-scale installations.

ACN was initially designed to be placed over UDP/IP and will therefore work over most IP networks.

You can adjust the output type through lightShark's DMX configuration menu:

- 1 Access the lightShark menu through the icon located in the upper left corner, press the "Settings" button and select the upper "DMX Setup" tab.



2 In the "OUTPUT TYPE" section, select one of the 2 protocols:

Art-Net: Allows the use of up to 4 DMX output universes.

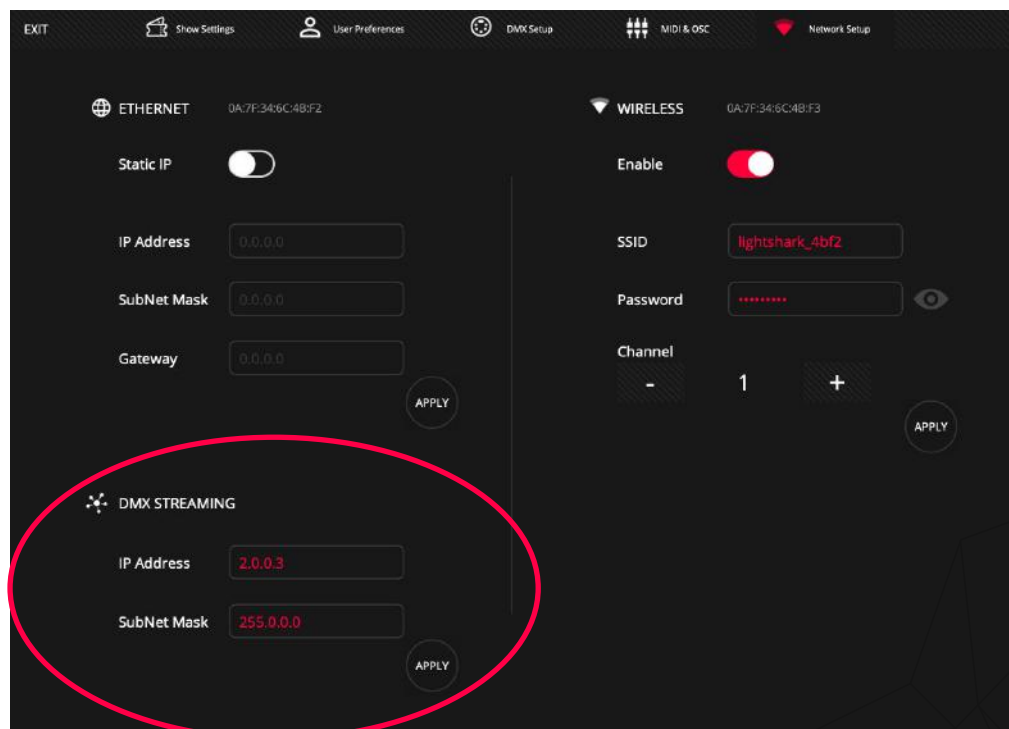
ACN: Allows the use of up to 8 DMX output universes.

By default lightShark is configured in Art-Net.

Through the "OUTPUT RATE" section you can configure the output frame rate, to improve compatibility with other devices.

You can adjust the network settings for DMX transmission via network from the "Network Setup" tab:

In the "DMX STREAMING" section, you can adjust the IP address and subnet mask so that lightShark can be configured in the same network as the other nodes and so that they can communicate with each other.



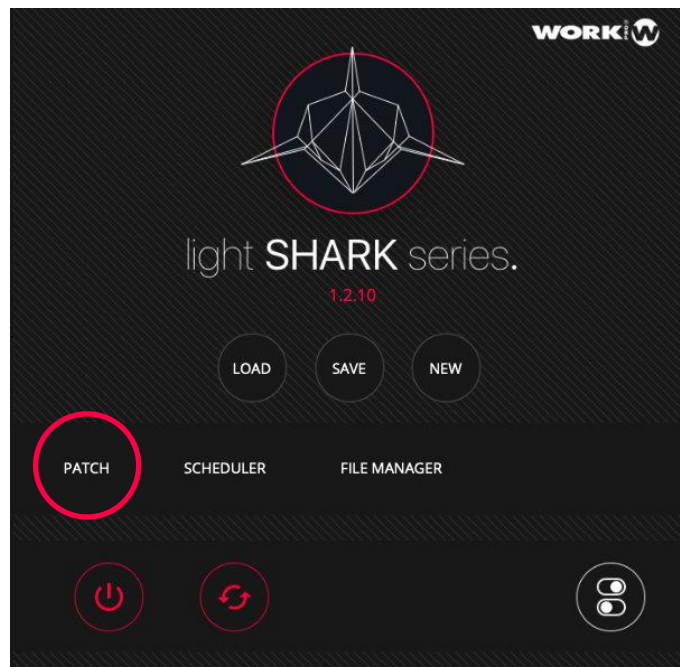
Once the necessary changes have been made, press the "APPLY" button to save the changes. LightShark will restart, loading the new settings at startup.

3.3 Adding fixtures to a show

LightShark assigns an ID to each of the fixtures added to the show, this way the fixtures can be selected through the keyboard, it is also possible to rename them to be identified quickly.

LightShark includes its own library of devices as well as a selection of generic profiles for those devices in common use (Dimmers, fog/haze machines, ParLed, etc), you can find them in the folder "Generic". The profiles created by the user are stored in the "User" folder.

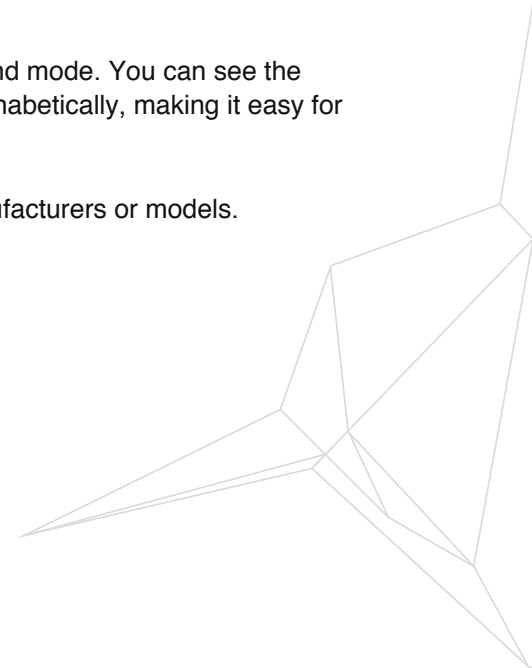
- 1 Access the lightShark menu through the icon located in the upper left corner, press the "Patch" button.



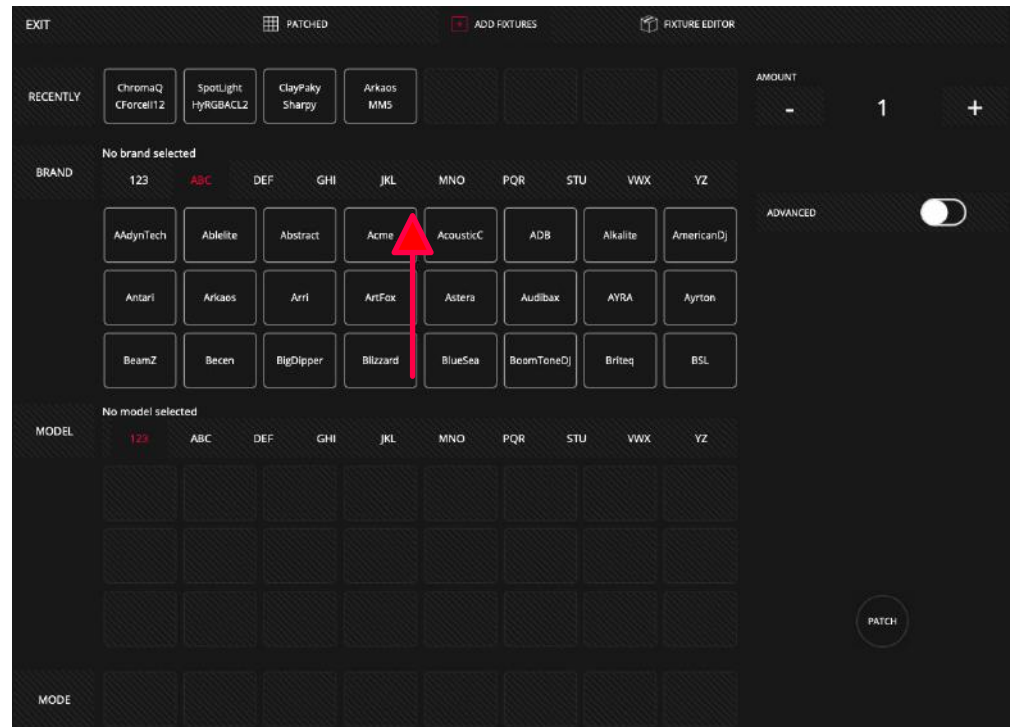
- 2 Select the top tab "ADD FIXTURES".

- 3 Select a manufacturer and then a fixture model and mode. You can see the manufacturers and models of fixtures are sorted alphabetically, making it easy for you to access and search.

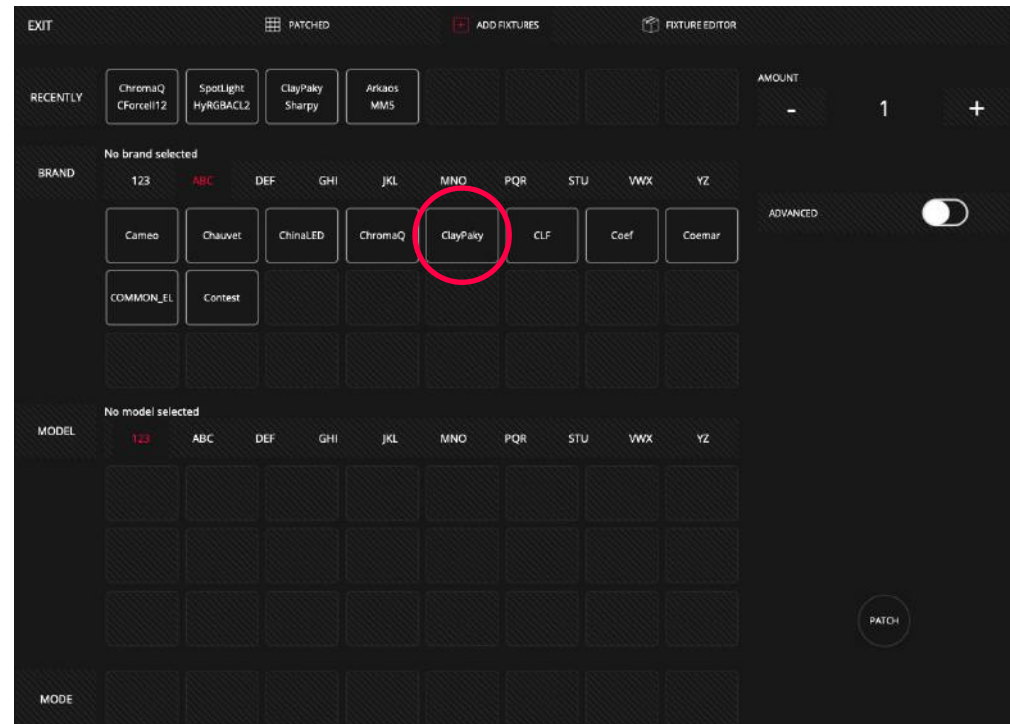
It is possible to scroll vertically between fixture manufacturers or models.



Scroll vertically:

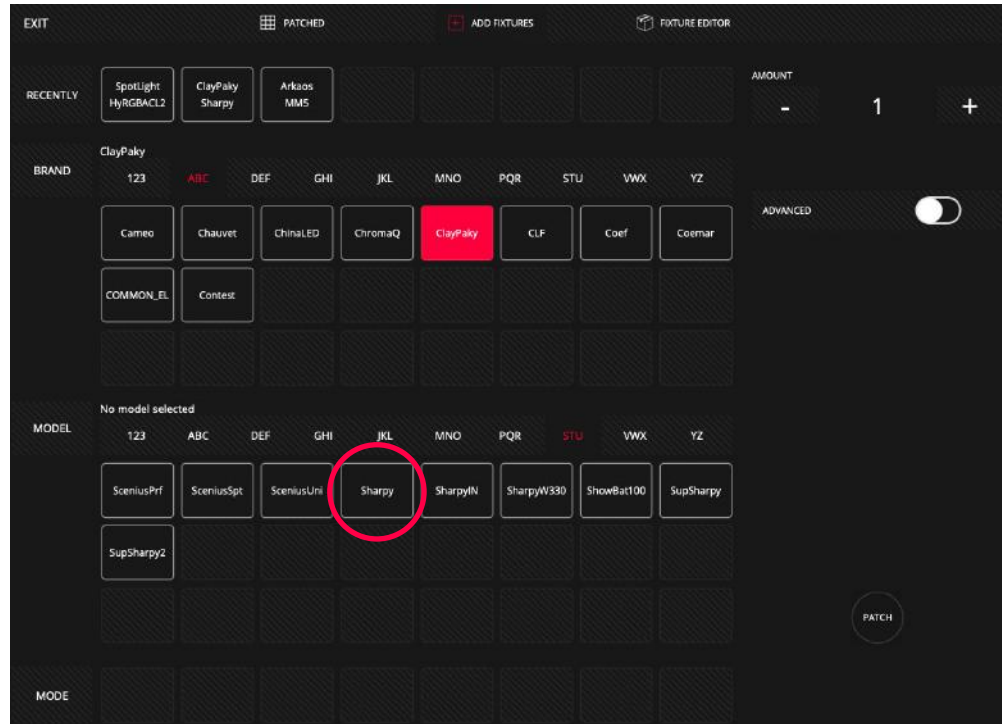


Select a manufacturer:

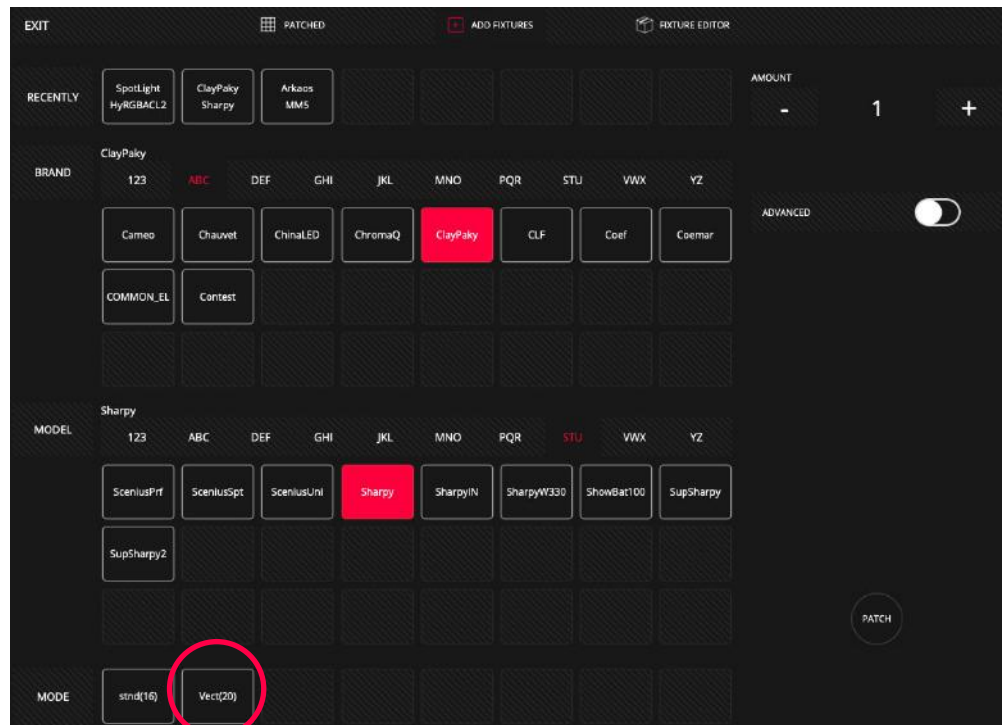


Selecting a manufacturer in the "MODEL" section will display that manufacturer's alphabetically filtered fixtures.

Select a fixture model:

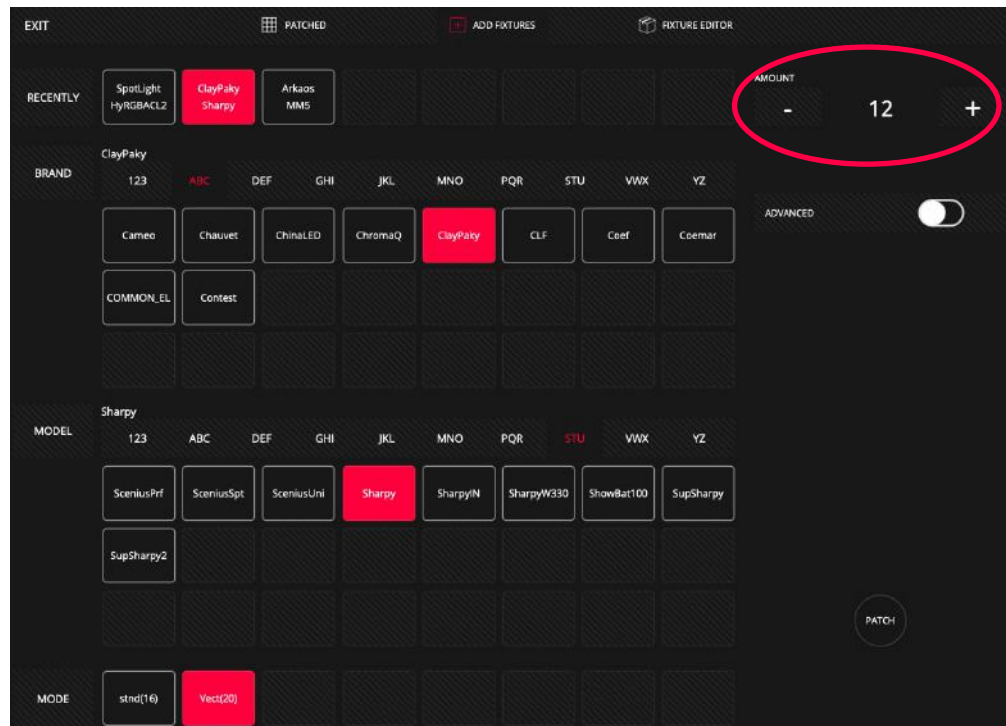


Select the operating mode of the fixture:

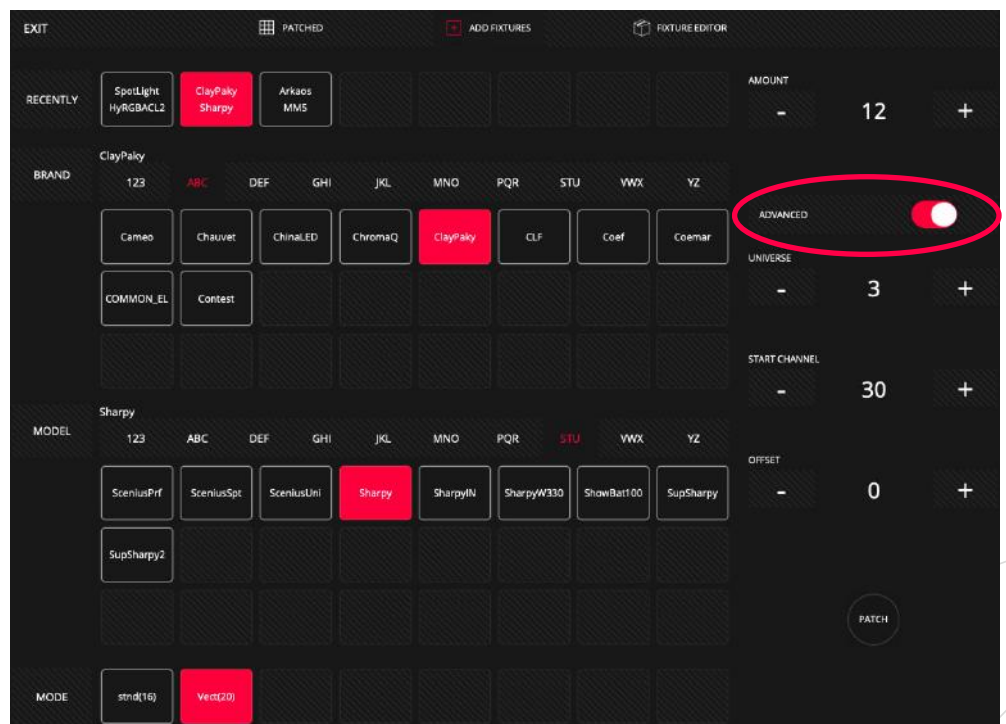


If the fixture has more than 8 operating modes you can scroll to the left to access more modes.

- 4 Enter the number of fixtures you want to add and press the "Patch" button. The fixture will be added starting with the first available DMX channel.



It is possible to add the fixtures to the show by specifying a DMX address or a specific universe. To do this, enter the number of fixtures you want to add and activate the "Advanced" option.



In the "Universe" field lightShark shows the number of the currently selected universe. If you want to add the fixtures in a different universe, use the + and - buttons to select the appropriate universe. If you hold down the numeric field, the on-screen keyboard will be displayed where you can directly enter the universe number.

Through the "Start Channel" field you can set the number of the starting DMX channel where the fixture (or group of fixtures) will be added. Remember that you can adjust the channel with the + and - buttons or with the keyboard with a long press on the numeric field.

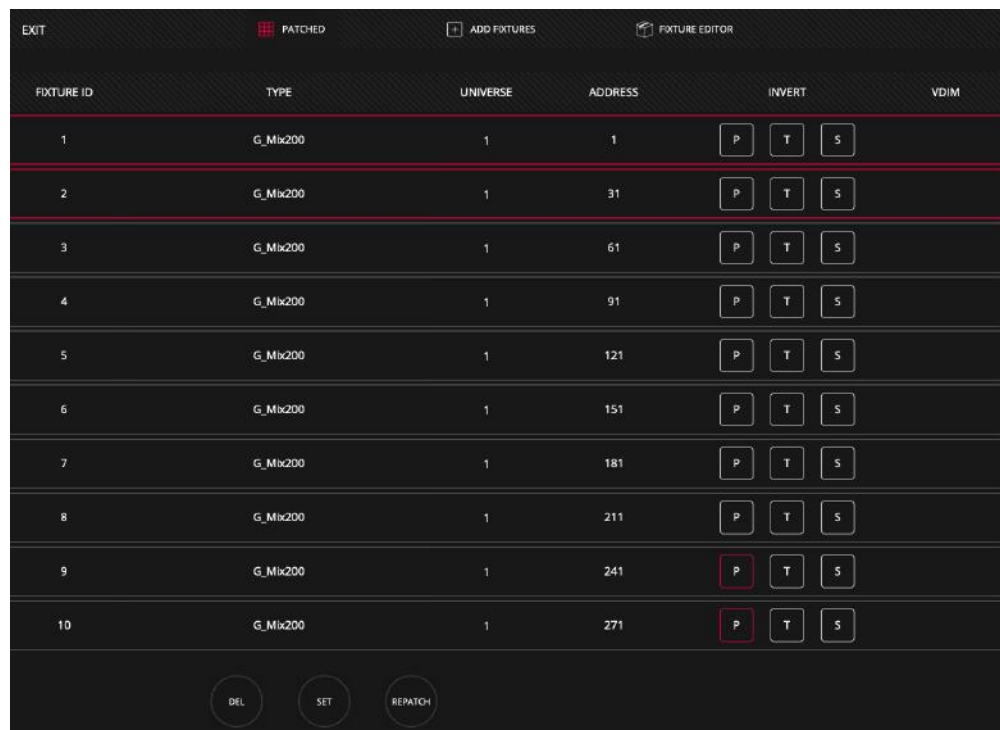
In the "Offset" field the user can define how many channels to leave empty between each of the fixtures. Remember that you can adjust the channel using the + and - buttons, or using the keyboard with a long press on the numeric field.

If it is not possible to repatch the fixture on the selected channel Lightshark will show the selected channel in red color.

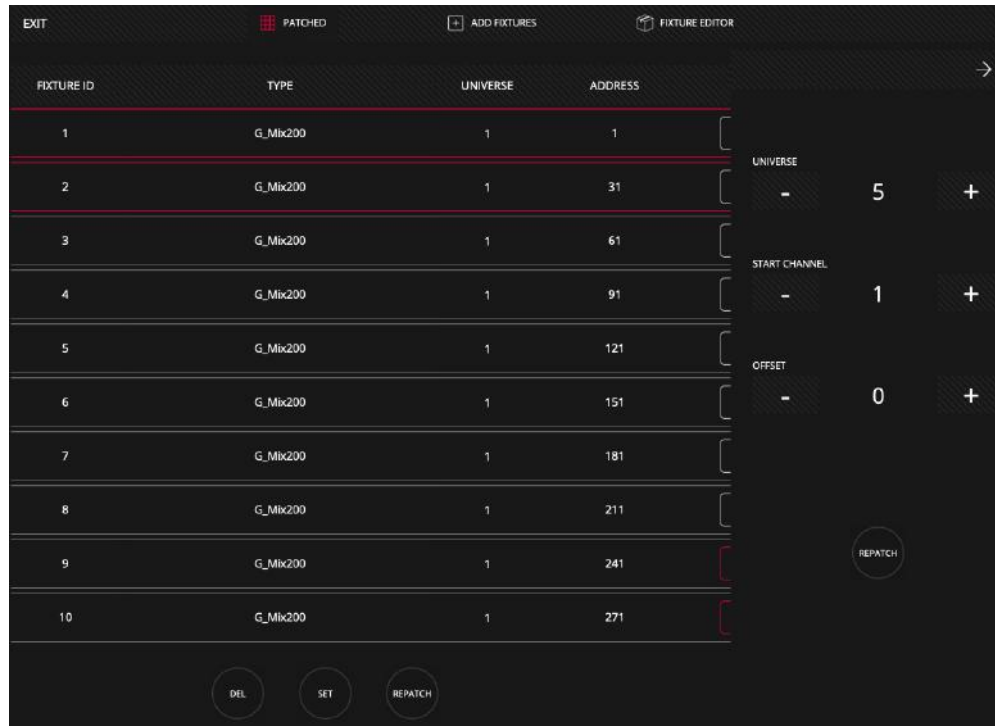
Repatch

Once the fixtures have been added to the patch, it is possible to change their addresses:

- 1 Access the lightShark menu through the icon located in the upper left corner, press the patch button and select the upper "Patched" tab.
- 2 Select the fixture that you want to change the address for.



- 3 Press the "REPATCH" button, on the right side and a panel will be displayed where you can enter the new DMX address or universe.



4 Set the new fixture address and press the "PATCH" button.

UnPatch

Once the fixtures have been added to the patch, it is possible to remove them:

- 1** Access the lightShark menu through the icon located in the upper left corner, press the patch button and select the upper tab "Patched".
- 2** Press the "DELETE" button
- 3** Select the fixture you want to delete.

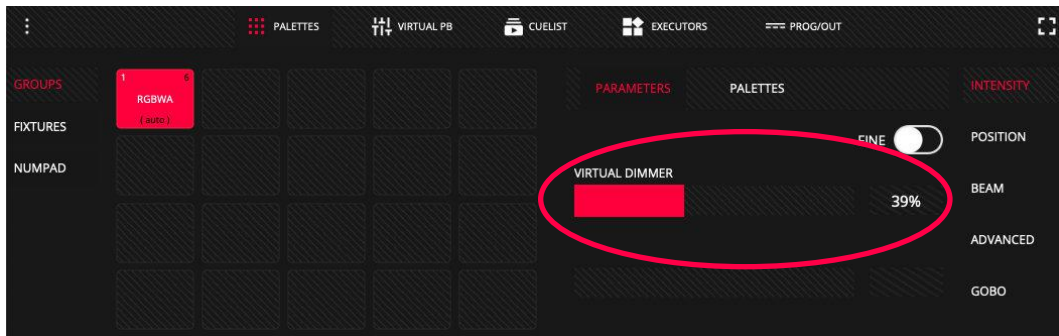
To avoid possible errors, if a fixture is used in a Cue LightShark will ask for confirmation of deleting.

Virtual Dimmers

Virtual Dimmers are mainly used with devices that do not have an Intensity channel. With RGB, RGBW, RGBWA color mixing devices..... we do not have an easy way to control the total intensity and we have to settle for adjusting the individual color channels to alter the brightness, with the risk of changing the desired color.

Not only that, but without a dedicated intensity channel, our lighting console has nothing to apply the Dimmer FX to.

When patching any color mixing fixture that does not contain the Intensity parameter, LightShark will automatically add a Virtual Dimmer.



This is where Virtual Dimmer comes in. Having patched our example of a 5-channel RGBWA LED PAR, we can also assign a Virtual Dimmer. This is not another DMX channel, in fact no additional DMX channels are sent from LightShark. Instead, the Virtual Dimmer is a concept that allows fixtures to behave as if they had their own intensity channel that controls the overall brightness and can make use of the Dimmer effect.

It is possible to deactivate the Vdim function of each of the patched devices independently. In the PATCHED window you can activate or deactivate this option.

The screenshot shows the 'PATCHED' window in LightShark. It features a table with columns for 'FIXTURE ID', 'TYPE', 'UNIVERSE', 'ADDRESS', 'INVERT', and 'VDIM'. The 'VDIM' column is circled in red. The table contains six rows of fixture data.

FIXTURE ID	TYPE	UNIVERSE	ADDRESS	INVERT	VDIM
1	RGBWA	1	1	P T S	VD
2	RGBWA	1	6	P T S	VD
3	RGBWA	1	11	P T S	VD
4	RGBWA	1	16	P T S	VD
5	RGBWA	1	21	P T S	VD
6	RGBWA	1	26	P T S	VD

Reverse PAN / TILT

It is possible to reverse the movement of PAN and TILT:

- 1 Access the lightShark menu through the icon located in the upper left corner, press the patch button and select the upper tab "Patched".
- 2 Click on the "P" button or the "T" button if you want to invert the Pan or Tilt. The user will use this option depending on the direction in which he has physically mounted the fixture. Press the "S" button to "Swap", or switch the Pan and Tilt.

FIXTURE ID	TYPE	UNIVERSE	ADDRESS	INVERT	VDIM
11	G_Mix200	1	301	<input checked="" type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
12	G_Mix200	1	331	<input checked="" type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
13	G_Mix200	1	361	<input checked="" type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
14	G_Mix200	1	391	<input checked="" type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
15	G_Mix200	1	421	<input checked="" type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
16	G_Mix200	1	451	<input checked="" type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
59	Resolume 5-6	1	500	<input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
60	Mover_1	1	510	<input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
61	Mover_2	1	511	<input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	
62	Mover_3	1	512	<input type="checkbox"/> P <input type="checkbox"/> T <input type="checkbox"/> S	

3.4 Fixture Selection

LightShark assigns an ID to each patched fixture, so it can be selected in 3 different ways:

- 1 Group View:** By default LightShark creates Auto Groups for each of the fixtures added to the patch. Thanks to this functionality, you will find groups of the different types of fixtures according to the model. Auto-groups can be moved, but not deleted. The user can also create custom groups.
- 2 Fixtures View:** All fixtures added to the show are displayed in this window. Each checkbox has 3 fields:

GROUPS	1 1-1 G_Mix200	2 1-31 G_Mix200	3 1-61 G_Mix200	4 1-91 G_Mix200	5 1-121 G_Mix200
FIXTURES	6 1-151 G_Mix200	7 1-181 G_Mix200	8 1-211 G_Mix200	9 1-241 G_Mix200	10 1-271 G_Mix200
NUMPAD	11 1-301 G_Mix200	12 1-331 G_Mix200	13 1-361 G_Mix200	14 1-391 G_Mix200	15 1-421 G_Mix200
	16 2-100 G_Max150	17 2-1 G_Max150	18 2-25 G_Max150	19 2-49 G_Max150	20 2-73 G_Max150
	21 2-97 G_Max150	22 2-121 G_Max150	23 2-145 G_Max150	24 2-169 G_Max150	25 2-193 G_Max150
	26 2-217 G_Max150	27 2-241 G_Max150	28 2-265 G_Max150	29 2-289 G_Max150	30 2-313 G_Max150

1-Description/label of the fixture

2-DMX Address

3- Fixture ID

3 Numeric Keypad: The fixtures can be selected using the numeric keypad. The syntax is as follows:

Select the fixtures from 1 to 8:

1THRU8OK

Select fixtures 1 and 8:

1+8OK

Select fixtures 1 to 5 and 8:

1THRU5+8OK

Select the fixtures from 1 to 5, but not 3:

1THRU5-3OK

Select the fixtures from 1 to 3, and from 6 to 8:

1THRU3+6THRU8OK

Creating Fixture Groups

LightShark allows the creation of groups of fixtures:

- 1** In the Fixtures window, select the fixtures you want to group.
- 2** Once selected, click on the "REC" button and select an empty box above the Groups window.

Renaming a fixture group

LightShark allows you to name the groups of fixtures, so you can identify the groups more easily. You can rename the groups in 2 different ways:

- A** Press the "SET" button and then select the fixture group you want to rename, LightShark will display the on-screen keyboard.
- B** Select the fixture group you want to rename and hold down the box for 2 seconds. LightShark will display the on-screen keyboard.

Moving a group of Fixtures

LightShark allows you to move the position of the fixture groups within the window:

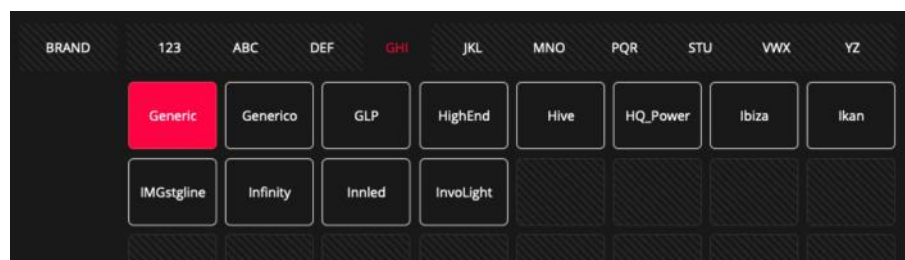
- 1 In the Groups window, select the fixture group you want to move.
- 2 Once selected, click on the "MOVE" button and select an empty box above the Groups window.

3.5 Dimmer channel control

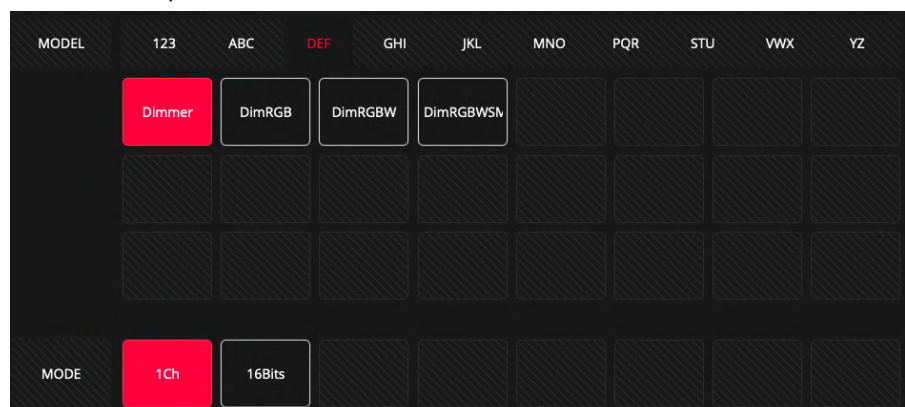
As explained above each lighting fixture is listed under its respective manufacturer, while "conventional" fixture such as dimmer channels, fog machines and scrollers are listed under the manufacturer "GENERIC".

Example: Control of 24 dimmer channels:

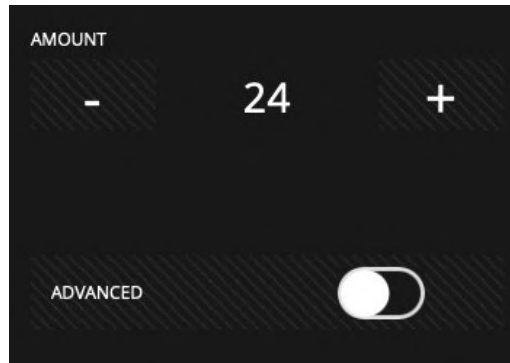
- 1 Access the lightShark menu through the icon located in the upper left corner, press the "PATCH" button and select the upper tab "ADD FIXTURES".
- 2 Select the "GHI" tab and then select "Generic".



- 3 In the section "MODEL" select the tab "DEF" and then select "Dimmer". In the lower part select "1Ch" mode.

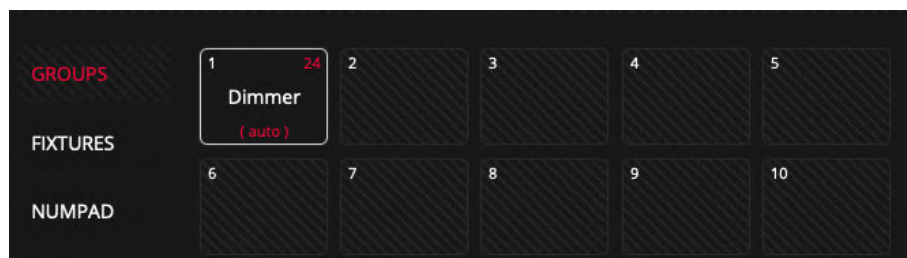


- 4 In the "AMOUNT" field enter "24" and press "PATCH".

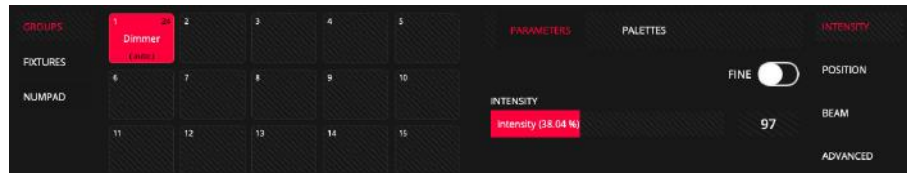


5 Once the fixtures have been added to the Patch, return to the palletes window by pressing the "EXIT" button in the upper left corner

6 In the group view you will find an Auto-Group containing the 24 added dimmer channels.



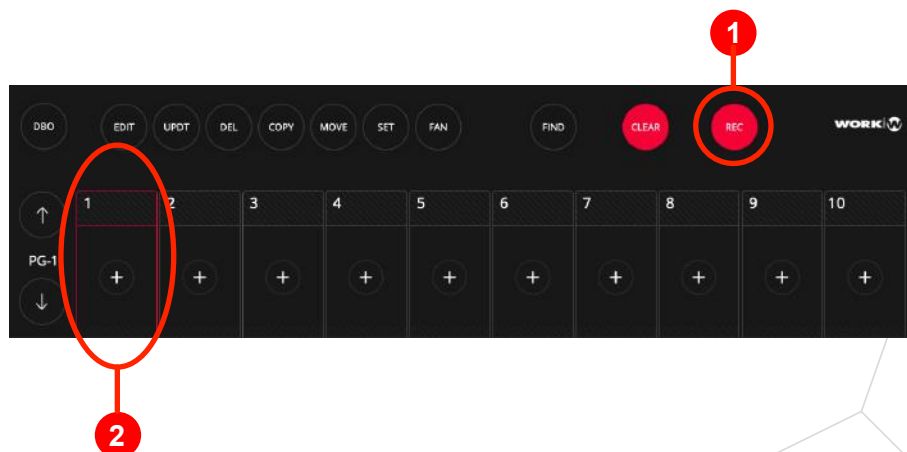
7 Select the fixture group (or individually in the "FIXTURES" view) and select "INTENSITY" in the parameter area:



8 You can adjust the level via the graphical interface or with encoder A if you are using an LS-1.

You can adjust the level to the maximum by pressing the "FIND" button.

9 Once the desired level has been set, press the "REC" button and then select a Playback.



10 Press the "CLEAR" button to clear the programmer information. You can now adjust the level through the PB-1 Fader.

3.6 Fixture Control

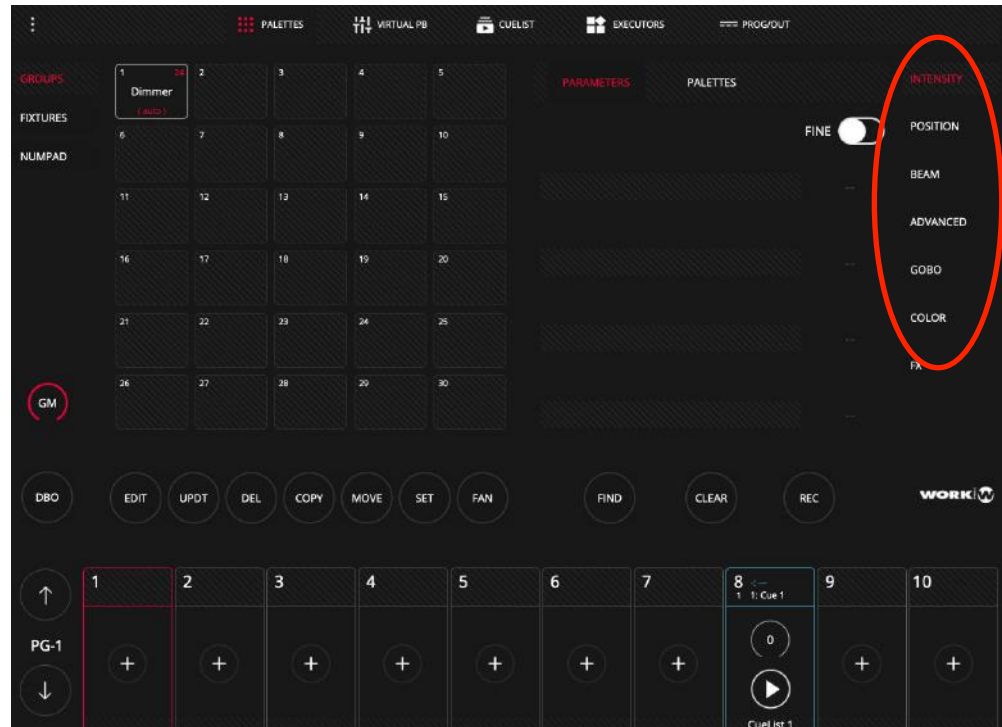
Intelligent lighting fixtures have different types of attributes, among which are Pan, Tilt, Spot, Color, etc. LightShark groups all these parameter types into 6 groups:

Parameter Type	Parameter
	Intensity
	BackGround Intensity
	Pattern Intensity
INTENSITY	Shutter
	Strobe
	BackGround Strobe
	Pattern Strobe
	Bright
	Pan
	Pan Conitnuous
	Tilt
POSITION	Tilt Continuous
	Pan/Tilt Speed
	Position
	Aspect Ratio
	Image Size
	XYZ Rotation
	Keystone
	Red
	Green
	Blue
	Amber
COLOR	White
	Cyan
	Magenta
	Yellow
	CTO

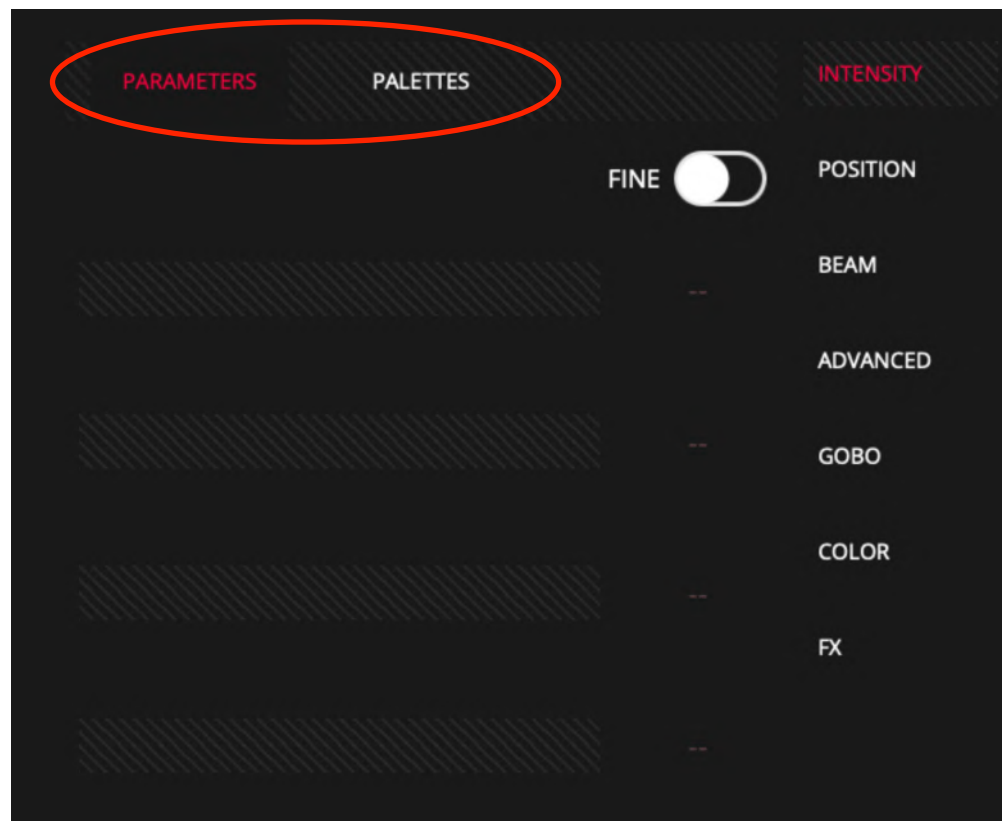
	CTB
	CTC
	Color
	Hue
	Saturation
	Color Mix
COLOR	UV
	Mint
	Lime
	Add
	Multiply
	Contrast
	Sharp
	Tint
	Focus
	Zoom
	Iris
	Frost
BEAM	Prism
	Prism Rotation
	Framing
	Framing Rotation
	Beam Effect
	Beam Shapper
	Gobo
	Gobo Rotate
	Media Folder
GOBO	Media File
	Media Transition
	Media Speed
	Media IN
	Media OUT

	Pattern
	Pattern Rotate
GOBO	Media Folder
	Media File
	PlayMode
	Media Transition
	FX
	Function
	Macro
ADVANCED	Custom
	Unknown
	Reserved
	Generic
	Empty

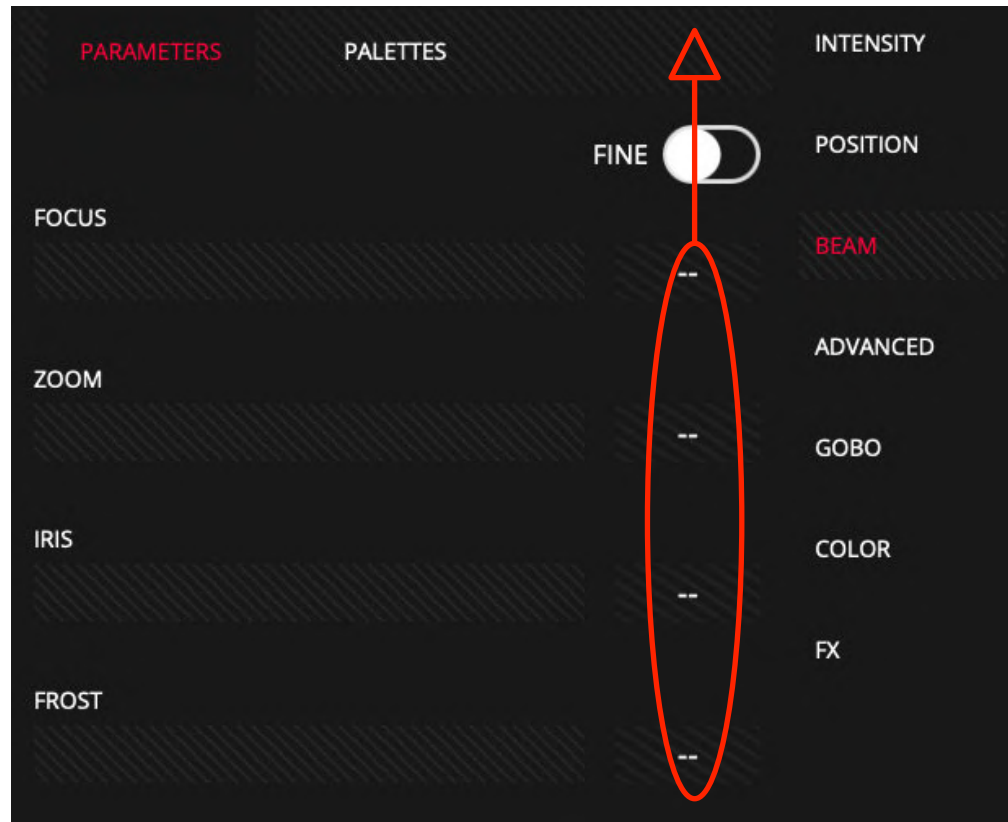
You can find the access to these parameter types on the right side of the palletes window



By default each section has a parameter view and a palletes view:



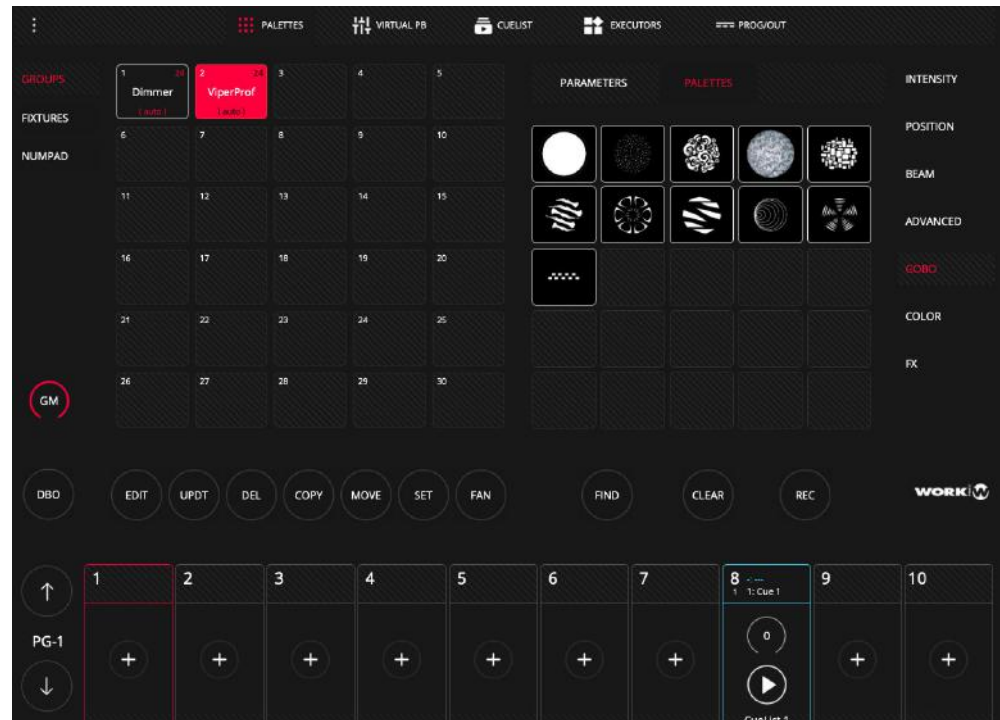
In the parameter view the user will find all parameters of the selected type. By default the parameters are always shown in blocks of 4, if the selected device has for example 7 channels of type "BEAM" it is possible to access the next 3 by scrolling vertically with your finger. Or by clicking again on the parameter button on the LS-1.



Users with an LS-1 can interact with the interface using the encoders and buttons, so that each LS-1 encoder controls each of the currently visible interface parameters (the upper parameter is controlled by the first encoder starting from the left, and so on).

The information shown in this area is also shown on the LCD screen that integrates the LS-1. It is possible to switch between parameters using the console's physical parameter buttons, as well as scrolling over the interface.

Each type of parameter has its corresponding palettes, in some of the boxes the palettes defined by the fixture profile will be shown, in the rest of the boxes the user can record his own palettes.



LightShark displays up to 25 pallets simultaneously, it is possible to perform vertical scrolling as in the parameter window to access more pallets.

In the case of the Position and Color parameters it is possible to see a third view in addition to "PARAMETERS" and "PALETTES".

3.7 Recording Scenes

All show information storage is carried out by the programmer and lightShark uses this information when recording Playbacks, palettes, groups... The programmer has priority over all PlayBacks, Cues, Cuelist and channels. A fixture is included in the programmer when any attribute is modified.

The CLEAR button illuminates when there is information inside the programmer. Press the "CLEAR" button to erase the information inside the programmer and all channels will be removed from the programmer and the HTP channels will be reset. It is possible to change the behavior of the "CLEAR" from the main menu by choosing to return all channels to the default value defined in the library.

When the "FIND" button is pressed and there is a selected fixture then we are activating the parameters that have been defined in the library for "FIND".

The programmer window allows the user to see what is in the programmer and how it is configured. It is possible to access the programmer window from the top navigation bar.

The Cuelist

CueLists are used to manage sequences of Cues. They keep track of the order of Cues and the options of how they are reproduced. A CueList can have a single Cue associated with it or the entire list of Cues.

When a Cue is recorded in a Playback a Cuelist is automatically generated. LightShark adds that created Cuelist to the list of Cuelists that are stored in the Cues window.

If the playback already has a Cuelist stored in it, then the new Cue will be added to the end of that Cuelist.

The CueList stores a Cue ID and a text field for each of the Cues so that all steps can be tagged. The Cue ID and text field are displayed on the Playback screen when the list is played, this allows the user to keep track of the current Cue during the show.

Recording a Cuelist

Below is the process for recording a Cuelist over an empty Playback:

- 1 Select a fixture (or fixture group)
- 2 Modify at least one of the parameters (or press FIND to activate all parameters)
- 3 Press the RECORD key (illuminated)
- 4 Select the Playback where you want to store the Cue. Doing this will create a new Cuelist and assign you a Cuelist ID with the next available Cuelist ID to the general list of Cuelists.

In addition a new Cue is created that is added to the beginning of the Cuelist and it is assigned a Cue ID with the following available Cue ID with respect to the general listing of Cues.

- 5 Press CLEAR to empty the programmer.
- 6 Activate the Playback to check that everything has been recorded correctly.

Recording on a Playback that already contains information

Here is the process for recording a Cue on a Playback that already contains information:

- 1 Select a fixture (or fixture group)
- 2 Modify at least one of the parameters (or press FIND to activate all parameters)
- 3 Press the RECORD key (illuminated)

4 Select the Playback where you want to store it. Doing so will add the Cue to the end of the CueList and assign it a Cue ID with the next available Cue ID from the general Cues list.

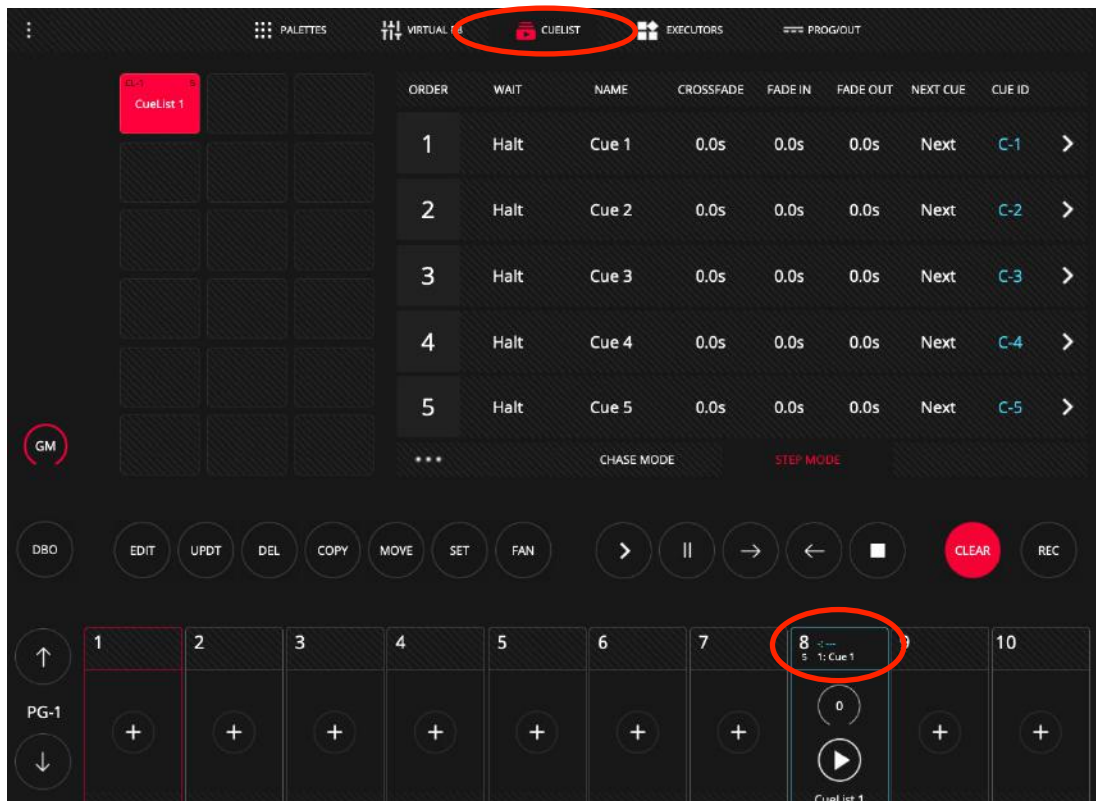
5 Repeat steps 1-4 as necessary.

6 Press CLEAR to empty the programmer.

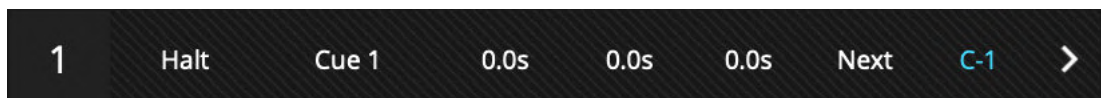
7 Activate the Playback to check that everything has been recorded correctly.

Assigning Times to a CueList

It is possible to assign different waiting and fade times to each of the Cues. You can access a CueList's information from the CueList view or by quickly pressing twice on the Playback number.



Each Cue has a Crossfade time where you can define a Fade In time and a Fade Out time.



1 Access a CueList

2 Hold down the "HALT" field to assign the Cue a wait time.

3 Hold down the "CROSSFADE" field to assign a transition time between one Cue and the next.

4 Hold down the "FADE IN" field to assign an input fade time.

5 Hold down the "FADE OUT" field to assign a Fade Out (if necessary)

Set a CueList as Chase

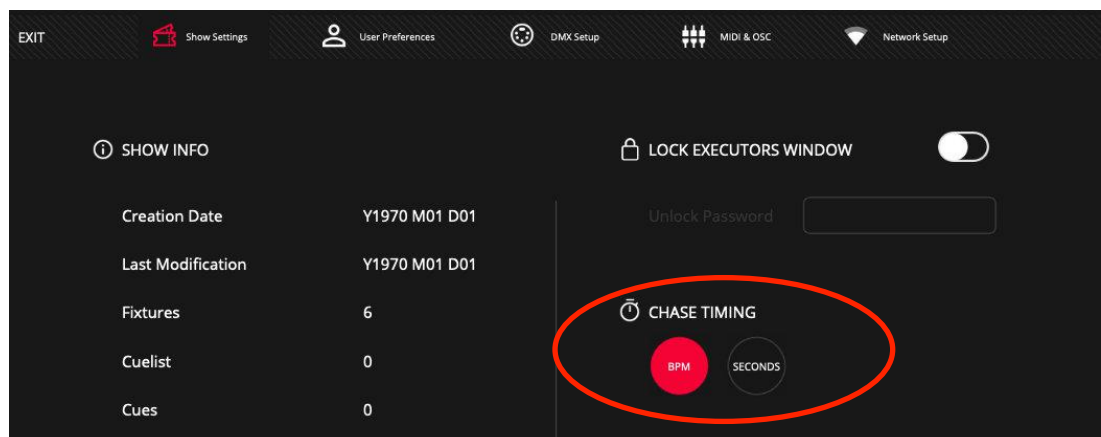
It is possible to use a CueList to make a Chase. Thus any wait time is ignored and each cue becomes a Chase step, where there is a global "Xfade" and "Rate" time for all Cues that make up the CueList.

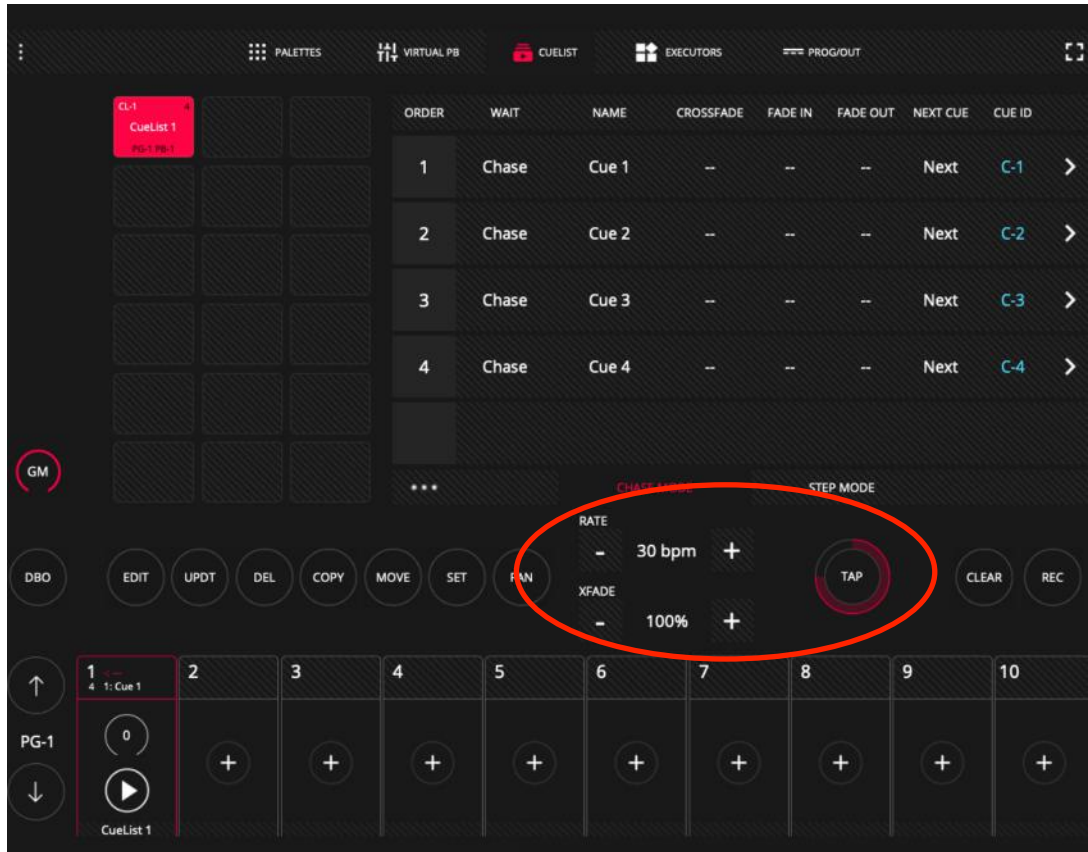
You can switch from one mode to another using the "Chase Mode" or "Step Mode" buttons.

ORDER	WAIT	NAME	CROSSFADE	FADE IN	FADE OUT	NEXT CUE	CUE ID
1	Halt	Cue 1	0.0s	0.0s	0.0s	Next	C-1
2	Halt	Cue 2	0.0s	0.0s	0.0s	Next	C-2
3	Halt	Cue 3	0.0s	0.0s	0.0s	Next	C-3
4	Halt	Cue 4	0.0s	0.0s	0.0s	Next	C-4
5	Halt	Cue 5	0.0s	0.0s	0.0s	Next	C-5

CHASE MODE STEP MODE

In the SHOW SETTINGS main menu it is possible to select the Chase workind mode, being able to choose between BPM and Seconds.



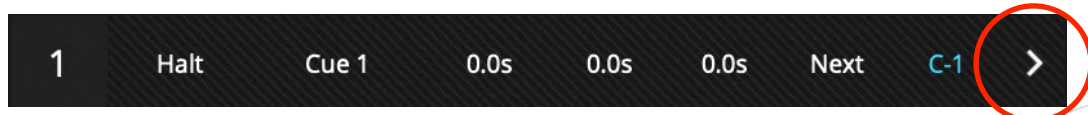


To adjust the BPM, press the TAP button repeatedly until the ring is complete,.

If you are using an LS-1 you can adjust the BPMs by holding down the Playback selection button and entering the pulses with the Flash button.

View information contained in a Cue

It is possible to see the information contained in a Cue:



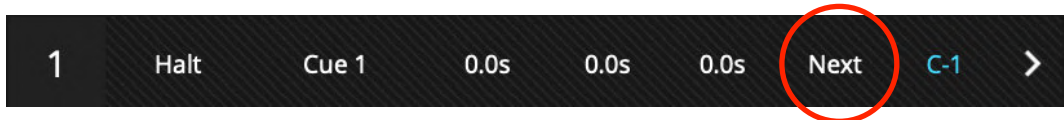
Clicking on the arrow icon will show all the information stored inside:

C-3	INTENSITY	INTENSITYF	PAN	PANF	TILT	TILTF	SHUTTER	CYAN	MAGENTA	→
25 ViperProf	255	0	128	0	128	0	25	0	0	
26 ViperProf	255	0	128	0	128	0	25	0	0	
27 ViperProf	255	0	128	0	128	0	25	0	0	
28 ViperProf	255	0	128	0	128	0	25	0	0	
29 ViperProf	255	0	128	0	128	0	25	0	0	
30 ViperProf	255	0	128	0	128	0	25	0	0	
31 ViperProf	255	0	128	0	128	0	25	0	0	

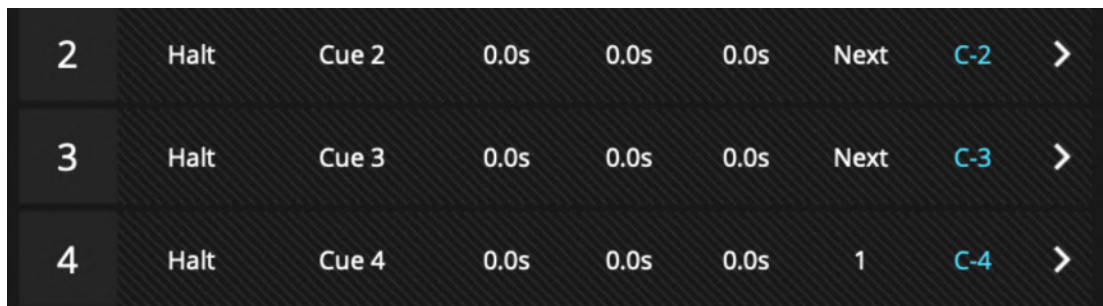
You can modify the Cue information by changing values, deleting parameters, deleting devices...

Change the playback order of the CueList

By default the Cues are reproduced consecutively. It is possible to alter the order of reproduction by modifying the "NEXT CUE" field. The default value is "NEXT".



Hold down the "Next" field for two seconds and enter the ID of the Cue you want to go next.



Move an order Cue within a CueList

It is possible to change the order of a Cue within a CueList:

- 1 Select the Cue you want to move.

ORDER	WAIT	NAME	CROSSFADE	FADE IN	FADE OUT	NEXT CUE	CUE ID	
1	Halt	Cue 1	0.0s	0.0s	0.0s	Next	C-1	>
2	Halt	Cue 2	0.0s	0.0s	0.0s	Next	C-2	>
3	Halt	Cue 3	0.0s	0.0s	0.0s	Next	C-3	>
4	Halt	Cue 4	0.0s	0.0s	0.0s	Next	C-4	>
5	Halt	Cue 5	0.0s	0.0s	0.0s	Next	C-5	>

... CHASE MODE STEP MODE

2 Press "MOVE".

3 Select the Cue on which you want to move the selected Cue.

Removing a Cue from a CueList

It is possible to remove a Cue from a CueList:

1 Press "DEL".

2 Select the Cue you want to delete.

Copying a Cue

It is possible to copy a Cue from one CueList to another:

1 Open the Cuelist window and select the Cuelist containing the Cue you want to copy. Then select the Cue.

2 Press "COPY" and select the destination CueList.

Deleting a CueList

By default lightShark does not allow you to delete a CueList that contains information inside. It is necessary to remove all the Cues it contains in order to remove it.

You can change this behavior from the preferences:

1 Access the LightShark menu through the icon located in the upper left corner, press the "Settings" button and select the upper "User Preferences" tab.

2 Activate the "CUELIST REMOVE" option.

Editing a Cue

It is possible to edit a Cue from a CueList .

- 1** Open the Cuelist window and select the Cuelist containing the Cue you want to edit. Then click "EDIT".
- 2** Select the Cue you want to edit.
- 3** The Cue will be loaded into the programmer, so from the Palette window you can make the necessary changes.
- 4** Once the changes have been made, press "UPDATE". The Cue information will be updated with the changes made.
- 5** Click "CLEAR" to clean the programmer.

Note that once a Cue's information has been uploaded to the programmer it is also possible to use that information to record a new Cue.

3.8 Adding FX

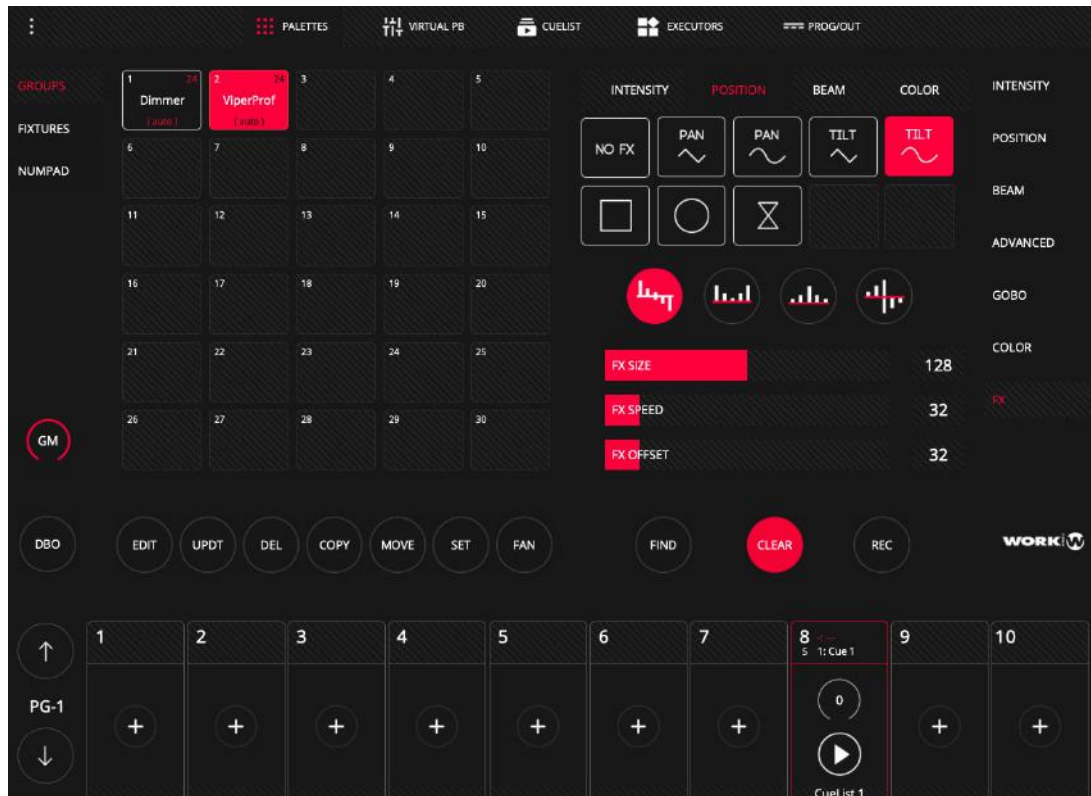
LightShark includes an internal effects generator. FX's can be applied to a fixture or group of fixtures directly without having to create multiple Cues to create an effect. FXs can be modified live, allowing you to adjust the speed and the FX amplitude according to the rhythm of the show.

LightShark has an extensive internal FX library (e.g. circles, squares, pan, tilt, zigzag...), in addition to Position effects, there are also Beam, Color and Intensity effects.

The use of FX allows the complete recording of shows in just a few minutes.

It is possible to add an effect to one or several fixtures, or to a group or several groups of fixtures. To add an FX the user must first select one or more fixtures and then from the "FX" window select one of the effects that incorporates lightShark.

Once you've selected an FX it is possible to modify its parameters (speed, size, offset...) through the virtual sliders that appear on the screen (or from the encoders in the LS-1).



It is possible to add several effects to a fixture (or groups of fixtures) that make use of different attributes, for example, the user can add a Pan effect and also add an effect of Intensity and an effect of change-color.

LightShark groups effects into 4 categories: Intensity, Position, Beam, and Color. Each category can have up to 9 effects.

FX SIZE: Defined as the range in which the parameter value varies. This is described in terms appropriate for that particular parameter.

It can be modified through on-screen sliders. By default, when adding an effect the Size value is set to 50%.

FX SPEED: Can be modified through on-screen sliders. To maintain synchronization between the characteristics of an effect, the speed of the effect is controllable.

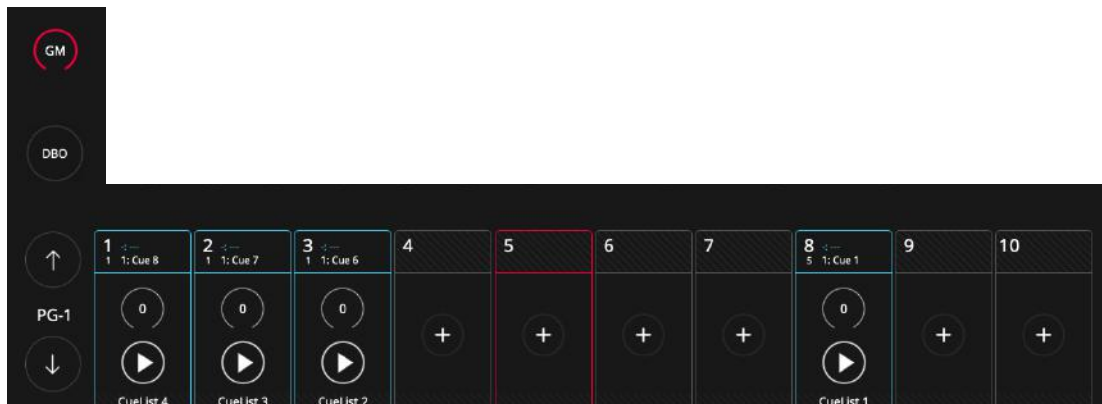
Adjusting the speed of an effect increases or decreases the number of cycles completed per minute.

OFFSET: The Offset defines the start and end point for each effect, so that individual fixtures can run the effect at the same time, or with a “fanned” look.

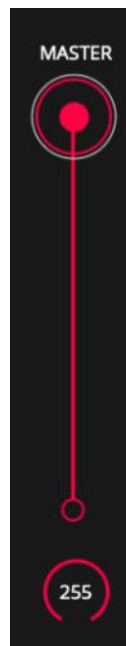
With the shortcut buttons it is possible to have 4 different "types" of offset shapes (or sets of shapes).

3.9 Scene Playback

It is possible to control the playback of the show, to trigger the Cuelist and to control the release of the Playbacks from the Playback Zone.



By default the GrandMaster is minimized. Click on the button to enlarge it and show the fader. Pressing it again will minimize it.



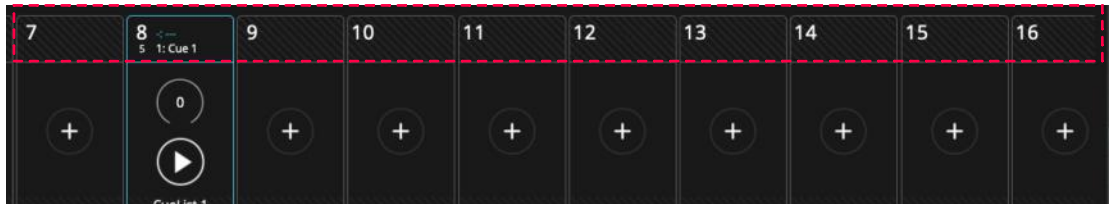
It is possible to enter a specific level into the GrandMaster by holding down the value field for 2 seconds.

LightShark allows the reproduction of all the information stored in the show through the Playbacks. LightShark supports up to 30 Playbacks per page, distributed in 10 main Playbacks located next to the UI of the software and in other 20 accessible making horizontal scrolling with your finger on the Playbacks area.

These 20 playbacks, accessible by sliding (or from the "Virtual Playbacks" View) behave like Wings.



As you slide your finger toward on the left you can access the rest of Playbacks.



Slide finger horizontally to navigate between the 30 Playbacks.

LightShark allows you to control the Playbacks using:

Keyboard: A Playback can be mapped to a key on the computer keyboard.

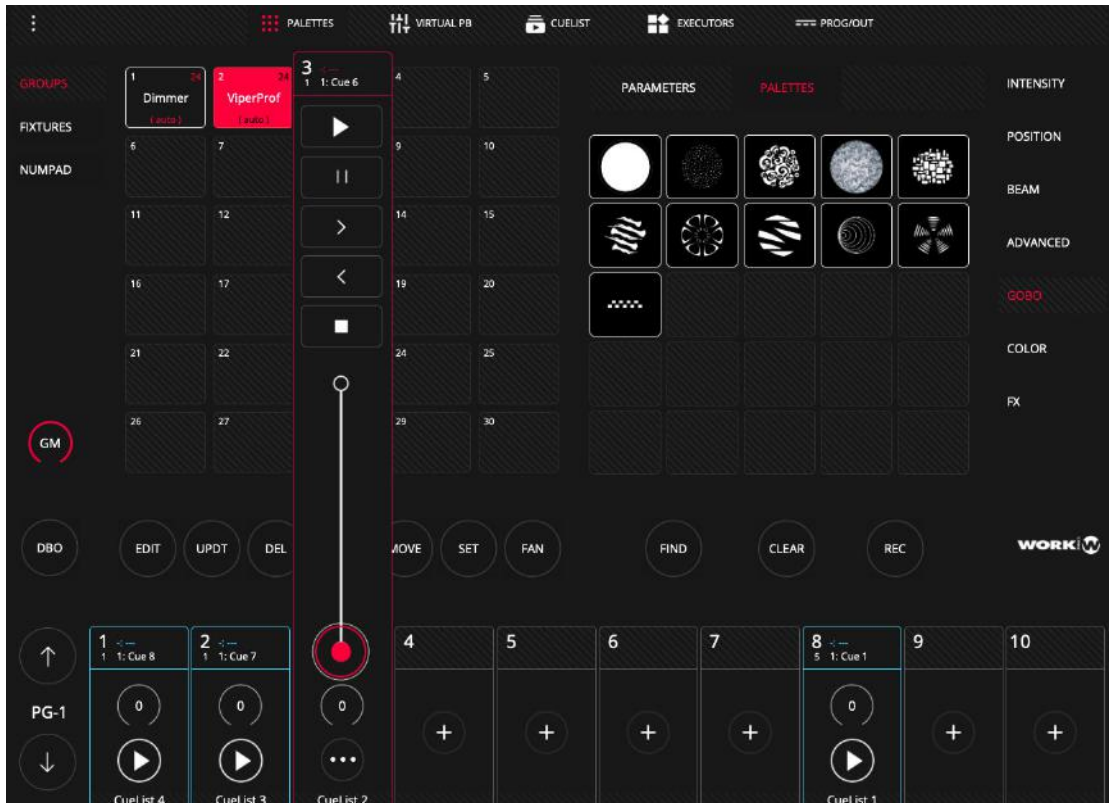
MIDI: Any component (Fader, Encoder, Button) from a MIDI controller can be mapped to a Playback so that it can be triggered or the level adjusted.

The control surface is set to always control the first 10 Playbacks regardless of the 3 selected Playbacks blocks. This means that when you slide your finger to access Playbacks 11-20 the control surface will continue to operate over the first 10 Playbacks.

The Playbacks are always minimized, in case you want to have access to all the control functions of the Playback, you must click on the intensity level indicator of the fader to maximize it.



When Playback is maximized, only the buttons on that playback will work. To access the rest of the user interface again, you must minimize the Playback.



It is possible to enter a specific level into a PlayBack by holding down the value field for 2 seconds.

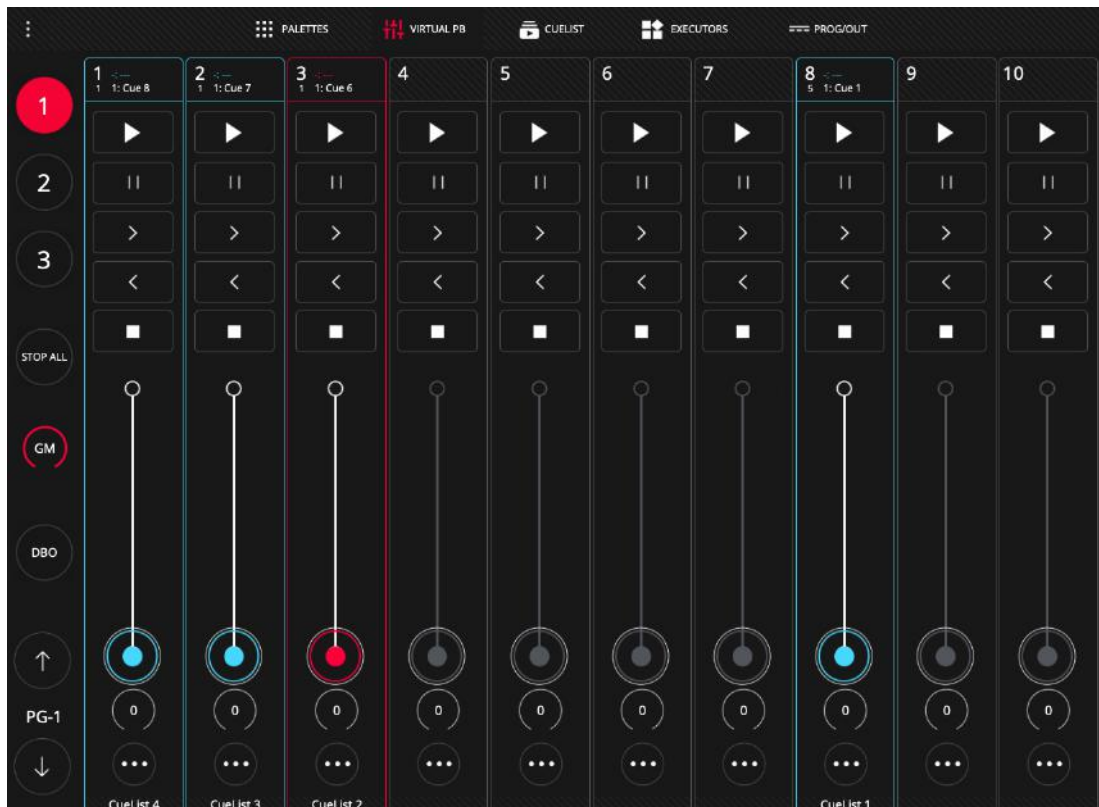
It is possible to configure several options that determine how the Playback and the elements that compose it work. It is possible to determine the priority of the Playback, the way in which it is reproduced, and the control functions of FX.

You can enter the playback options via the "3 dot" icon that appears when the playback is maximized. These options are discussed in detail in Section 4 of this manual.



Virtual Playback

From the "Virtual PlayBacks" view you can have access to the Playbacks, it is very useful when using a LS-Core or when no physical control surface is available.



LightShark's interface is multi-touch, so you can operate multiple Playbacks simultaneously from one tablet or any device with this technology. From the buttons the user can directly access the desired Wing without scrolling.

Playbacks can have 3 states:

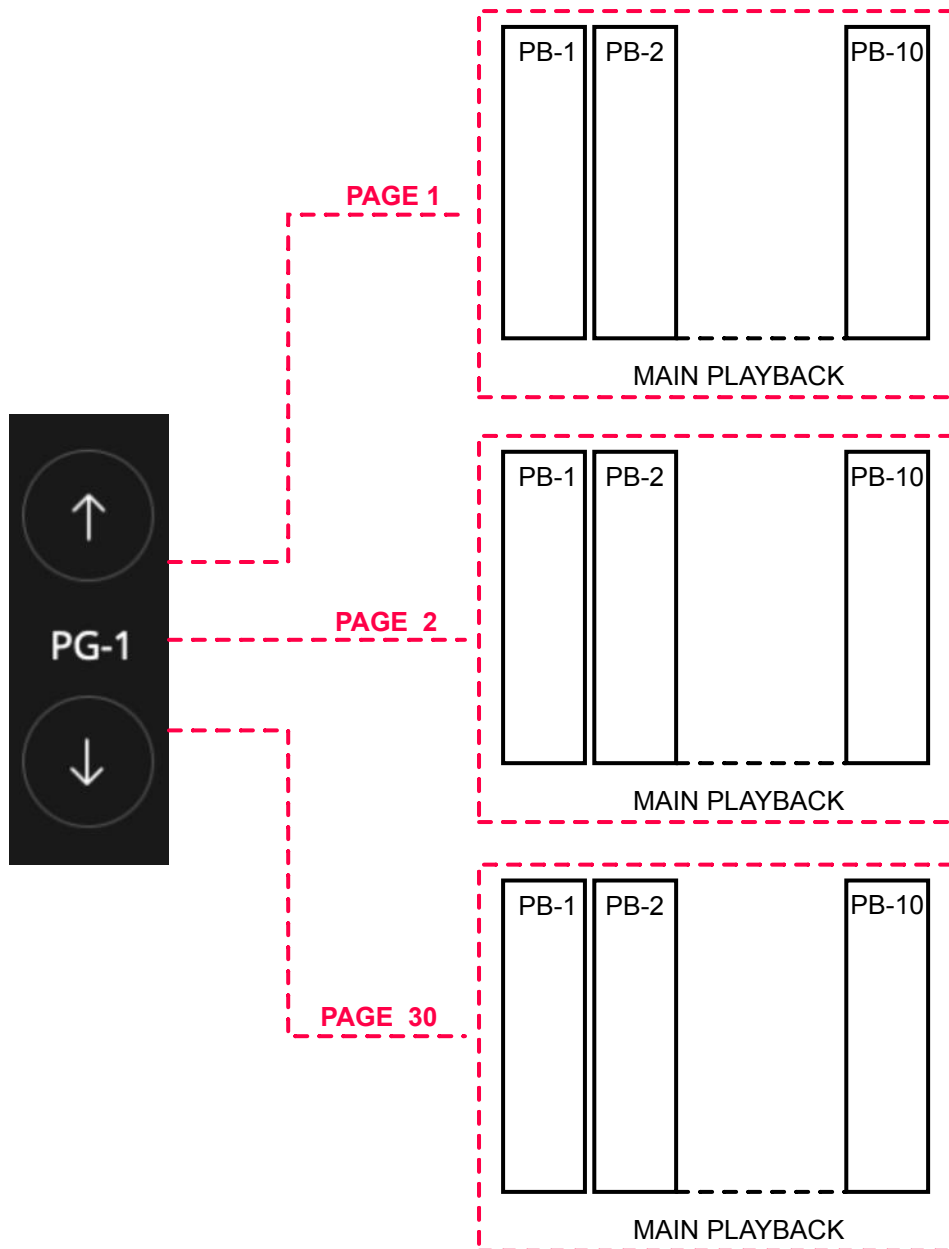
Empty: When no Cuelist is assigned they are shown in grey. It is the default state, when starting a show from 0 all Playbacks are empty.

Used: When a Cuelist is assigned it is shown in Blue.

Selected: When selected, it is shown in Red.

The pages allow the user to predefine some presets of Cuelist through the playbacks, so they can be loaded quickly at any time.

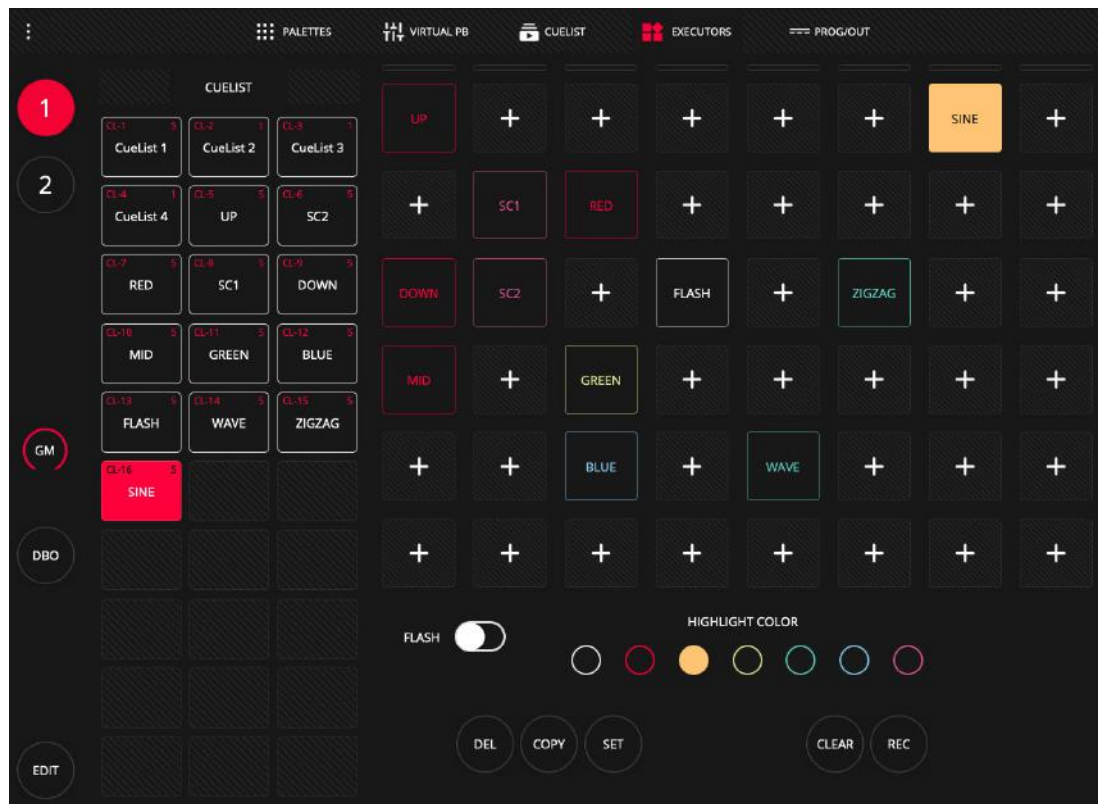
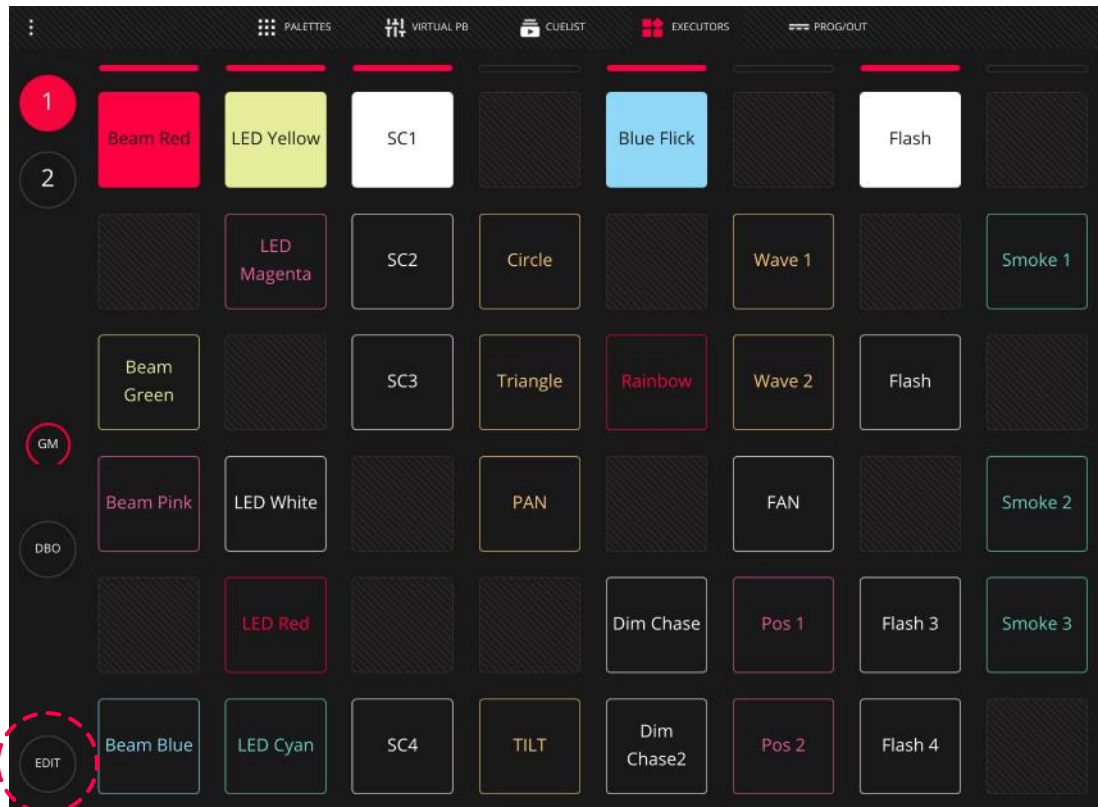
LightShark supports up to 30 Playback pages, allowing physical and virtual faders to have different functions and behaviors depending on which page they are on. As a general rule, one page per song is used.



With the UP and DOWN buttons you can navigate between the pages. Between the two buttons is the label indicating the current page.

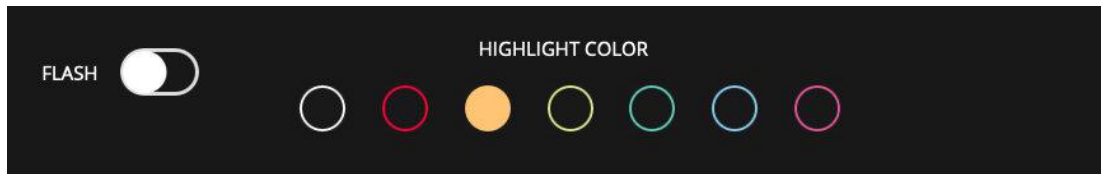
3.10 Use of Executors

From the executor window the user can configure a custom Layout to trigger the Cuelist. To add or remove Cuelists from the executors window press the "Edit" button.



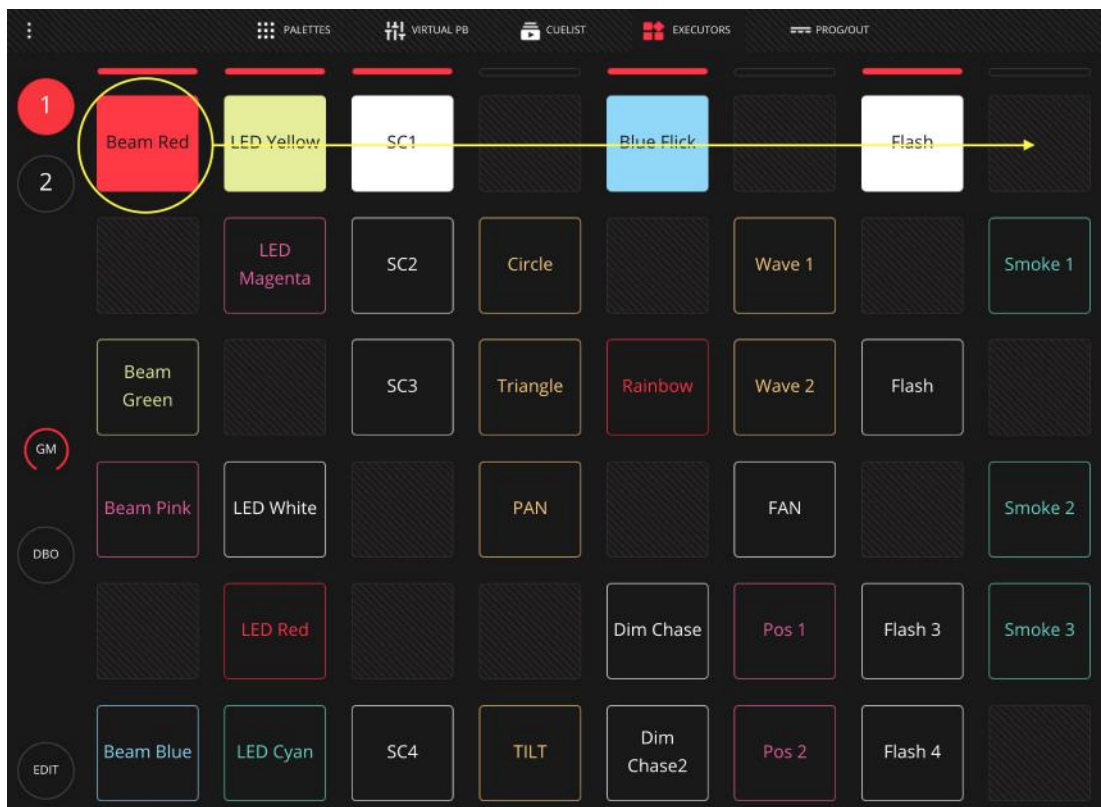
The executor window is composed by an 8x6 button matrix. Each of the 8 vertical columns can play 1 single Cuelist at the same time, so selecting a Cuelist from the same column deselects the previous one.

The user can modify the color of each of the buttons in the matrix, this way it is possible to visually distinguish each of the buttons and assign a color depending on their characteristics.



It is possible to configure each button as "Flash" or as "Toggle", with Flash creating a momentary button, and Toggle creating a latching button.

When sliding the finger horizontally on a row of executors all the Executors of that row are launched, deactivating the rest.



Add Cuelist

Cuelists can be copied to the Executors window as follows:

- 1 In the Executors window click on the "Edit" button.
- 2 On the left side select the Cuelist you want to add and press the "COPY" button and then select an empty box.
- 3 Click the "Set" button and then select the box you just created to rename it.

Removing a Cuelist from the Executors Window.

Cuelists can be removed from the Executors window as follows:

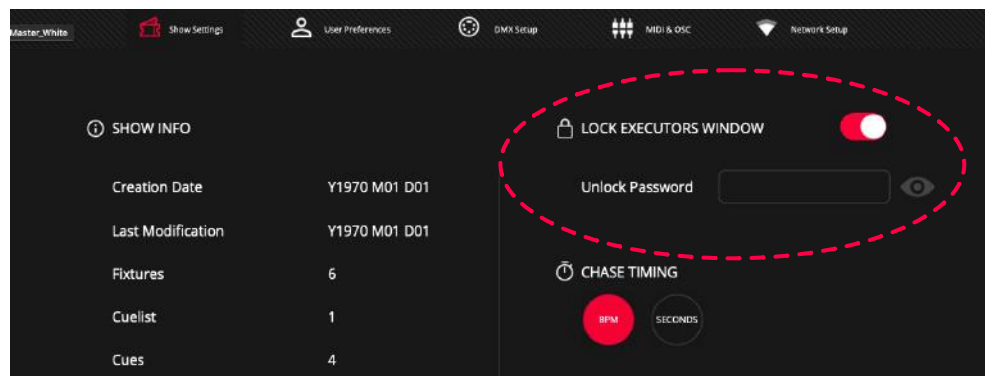
- 1 In the Executors window press the "Edit" button.
- 2 Press the "DEL" button and then select the box you want to empty.

Locking the Executors Window

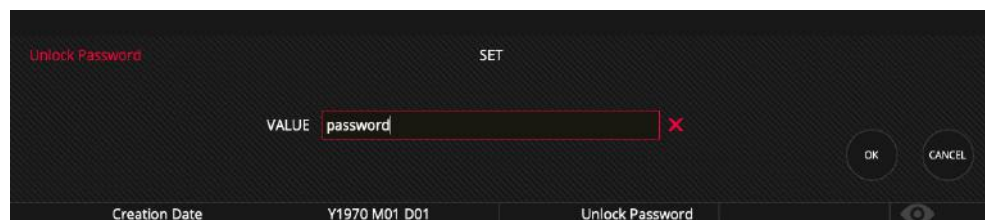
LightShark allows the blocking through password, of the window of executors, this way the user can block a show so that when connecting a new user can only have access to the executors. This function can be very interesting in those fixed installations or places where there is not a technician constantly.

To activate this function the steps are as follows:

- 1 Open the LightShark main menu
- 2 In the SHOW SETTINGS window, activate the option "LOCK EXECUTORS WINDOW".

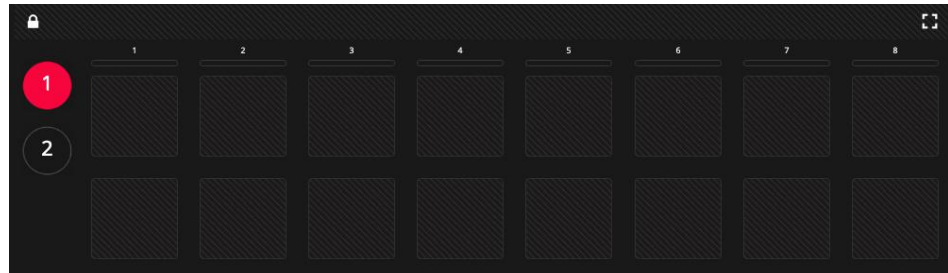


- 3 Enter a login password.

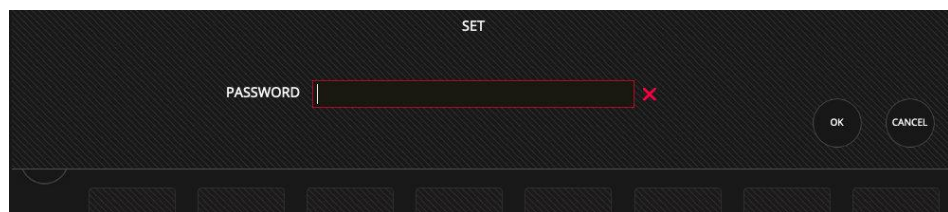


NOTE Don't forget that password, otherwise you won't be able to unlock the show file.

4 Reload the web page. Each time a device connects it will be redirected to the executors window.



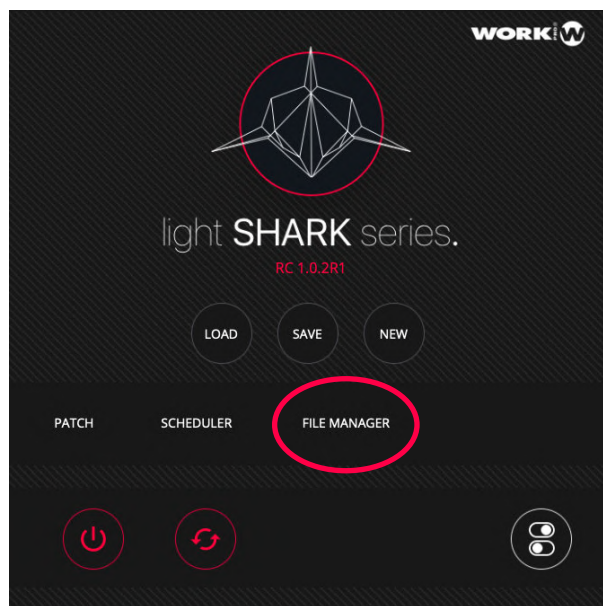
5 To exit the lock mode, click on the padlock icon at the top left. Then enter the password you have previously set.



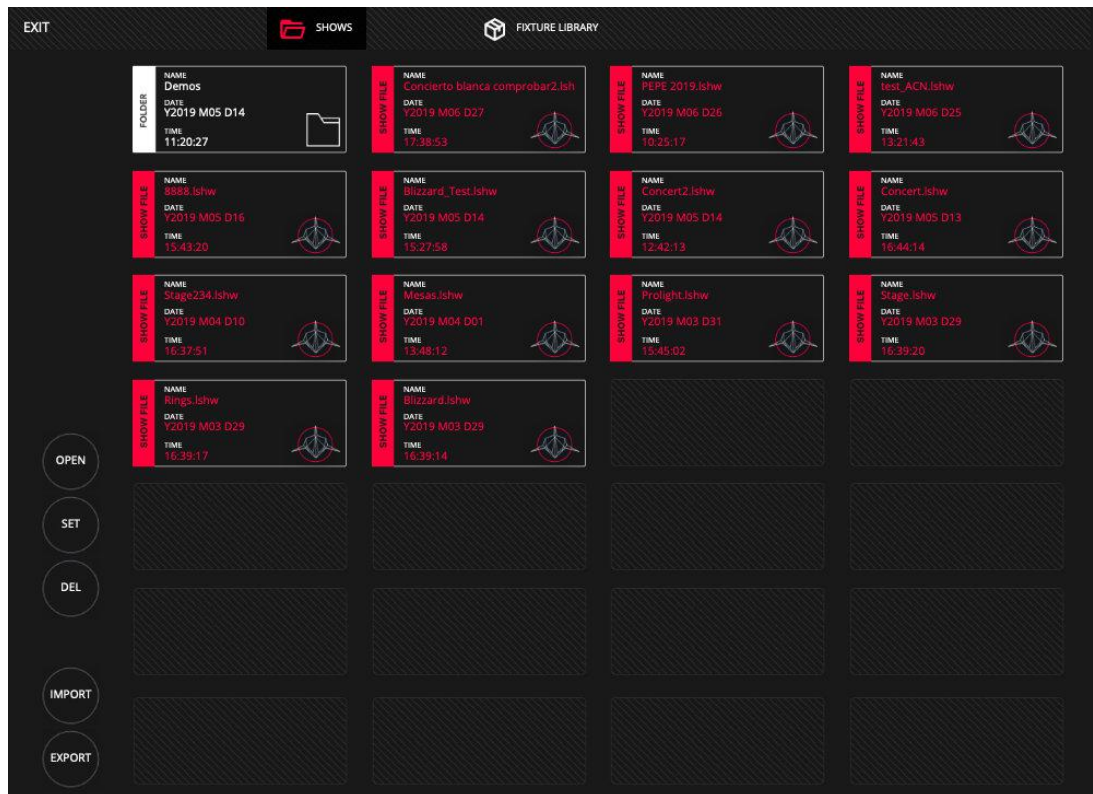
3.11 File Manager

LightShark includes a File Manager with which the user can manage the files contained in the console. In this way it is possible to import, export, and/or delete different types of files.

To access the File Manager access the lightShark menu through the icon in the upper left corner.



When you access the File Manager, the shows tab is always displayed, from this window you can see all the show files that are in the console.



On the left side are the buttons needed to manage any type of file.

OPEN: To open software update files.

SET: To rename files.

DEL: To delete files.

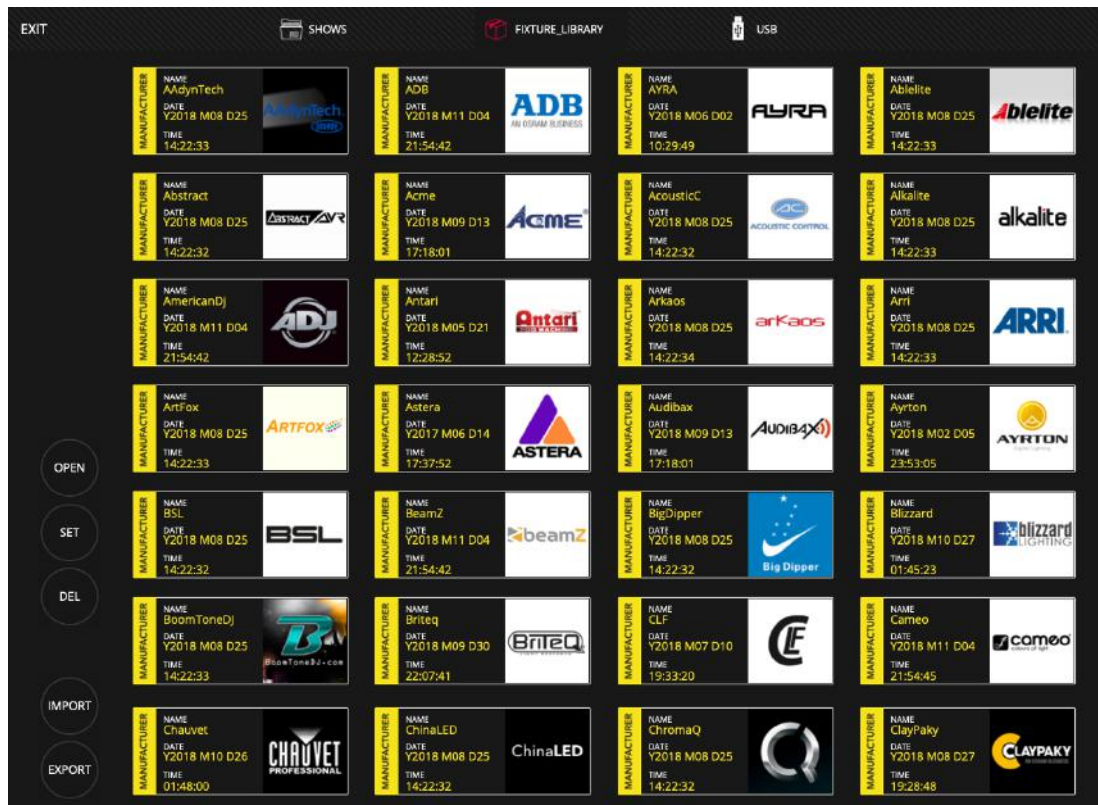
IMPORT: To import files from a USB memory stick to the console.

EXPORT: To export files from the console to a USB memory stick.

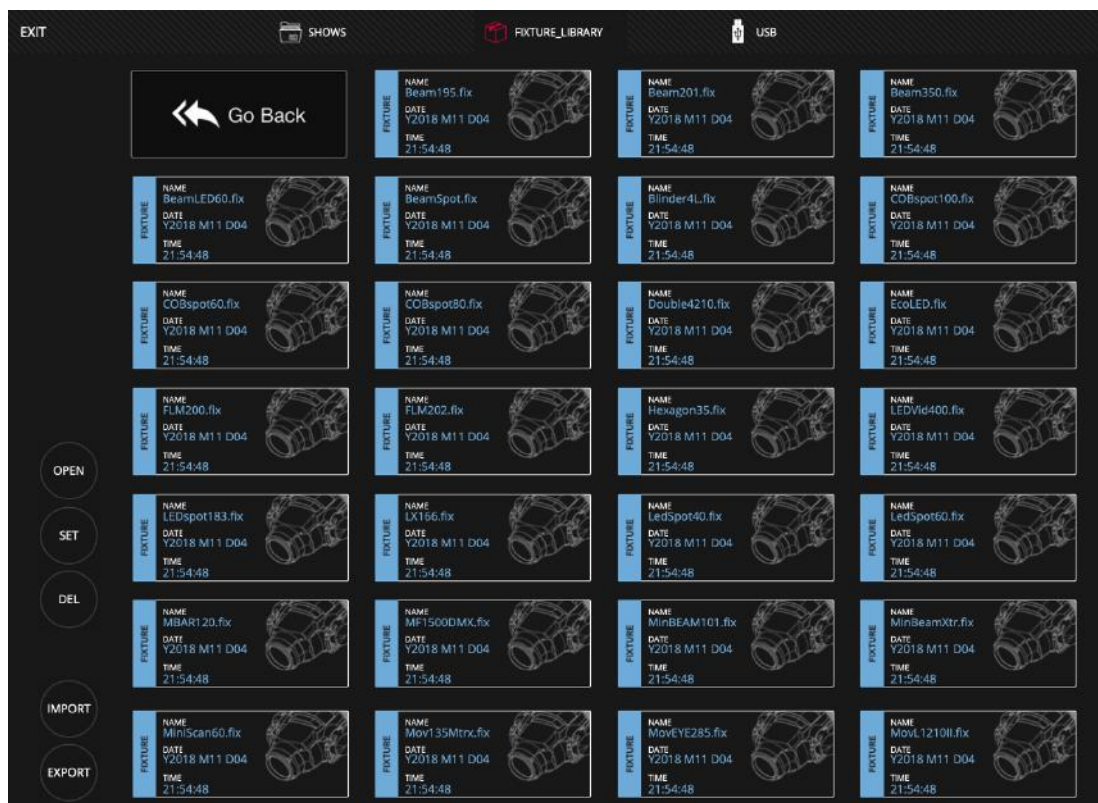
The "USB" tab is only displayed when an external USB memory stick is connected. This memory must be FAT16 or FAT32 formatted.

If lightshark does not detect the USB memory, make sure it is correctly formatted.

From the "FIXTURE_LIBRARY" tab you can access the fixture libraries loaded in the console.



To navigate between the different manufacturers you must scroll up. To see the fixtures that a manufacturer contains “double click” on the icon of the manufacturer.



Double click on the "GO BACK" icon to return to the list of manufacturers.

Export a library package from a manufacturer

It is possible to export a complete pack of profiles from a specific manufacturer. For example, if you want to export all the fixtures created by the user:

- 1** Connect a USB memory stick to the Data port
- 2** Go to the File Manager and select the "FIXTURE_LIBRARY" tab.
- 3** Scroll to the manufacturer "USER".
- 4** Press "EXPORT" and then select "USER".
- 5** LightShark will display a message confirming that the fixture package has been successfully exported.

Exporting a Fixture Profile

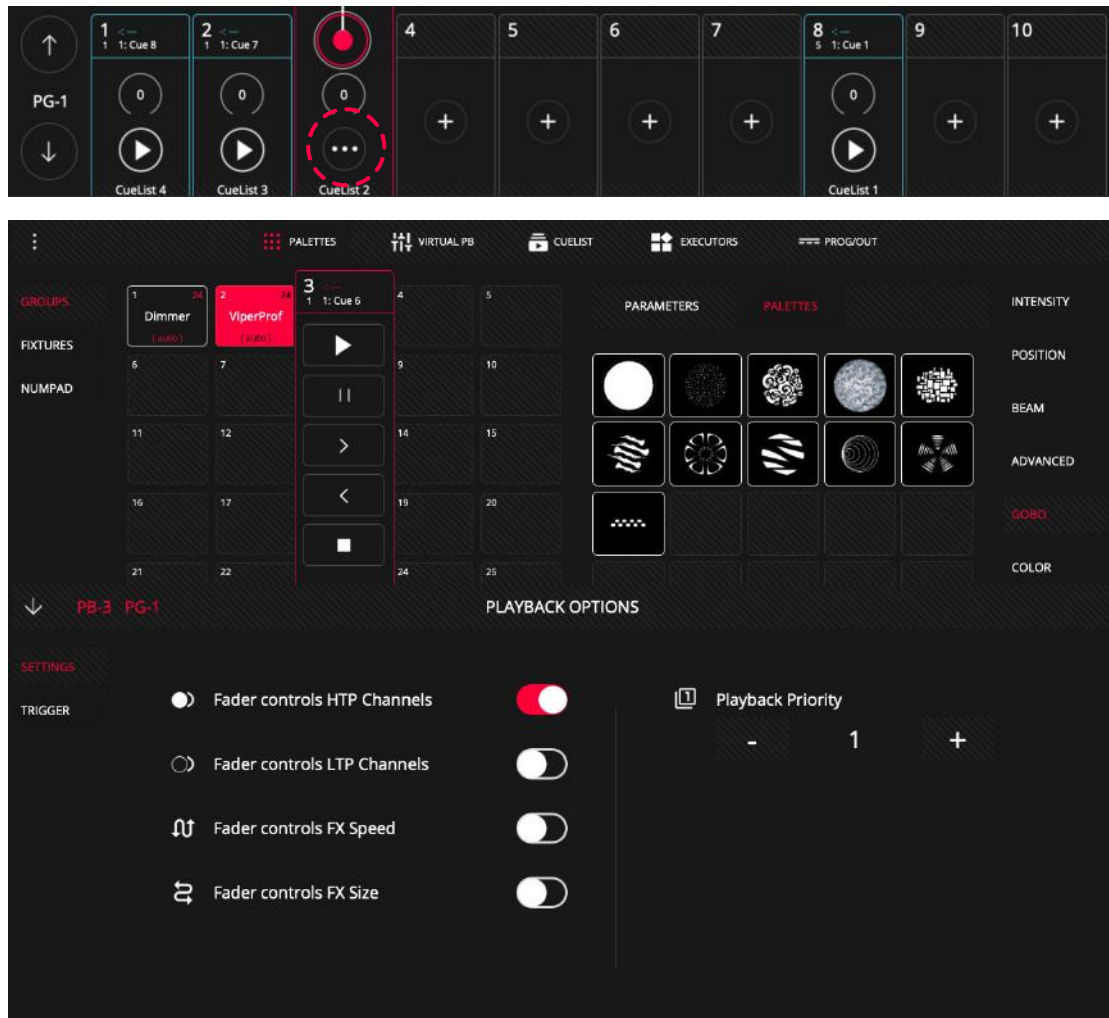
It is possible to export only one fixture:

- 1** Connect a USB memory stick to the Data port
- 2** Go to the File Manager and select the "FIXTURE_LIBRARY" tab.
- 3** Scroll to the manufacturer "USER" and double click on the icon.
- 4** Click "EXPORT" and then select the fixture you want to export.
- 5** LightShark will show a warning confirming that the fixture file has been exported correctly.

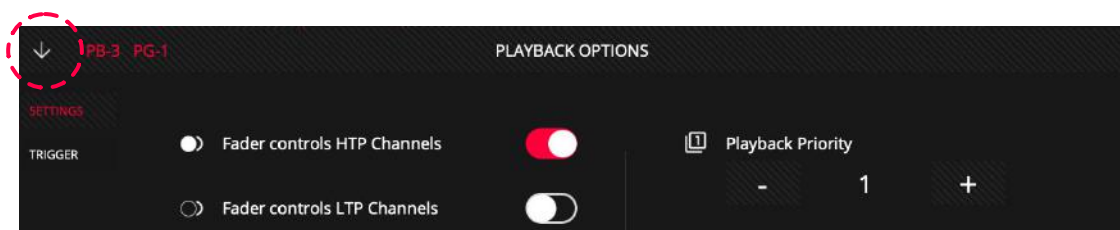
Section 4: Playback Options

4.1 Playback Options

It is possible to configure several options that determine how the Playback and the elements that compose it work. It is possible to determine the priority of the Playback, the way in which it is reproduced, and the control functions of FX:



To hide the Playback options menu you should press the upper left arrow on the panel.

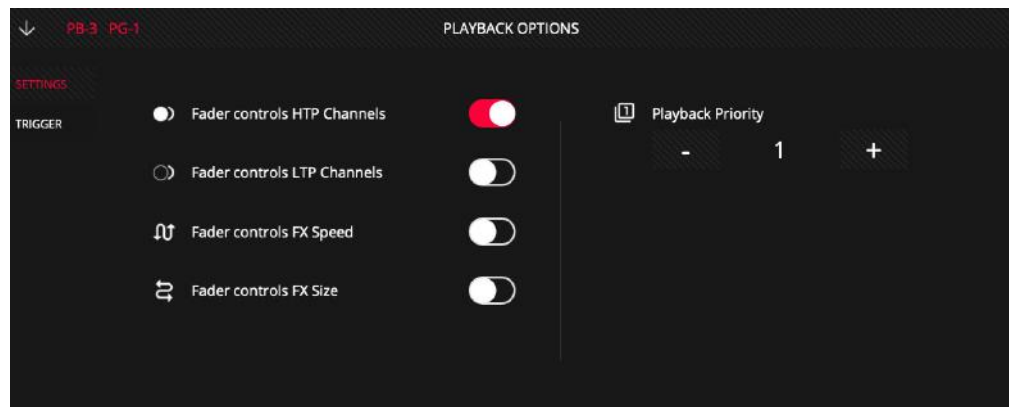


Fader Controls HTP Channels: When this function is activated the playback fader proportionally controls the level of all HTP channels of the current Cue from 0% to 100%. This option is activated by default.

Fader Controls FX Speed: When this function is activated, the playback fader can be used to scale the FX speed. When the fader is at 100% then the Fx speed has the same value as when the Cue was recorded, lowering the fader reduces the speed until the speed is equal to 0 when the fader is completely down.

Fader Controls FX Size: When this function is activated the playback fader can be used to scale the FX size. When the fader is at 100% then the FX Size has the same value as when the Cue was recorded, lowering the fader reduces the size of the FX until the size equals 0 when the fader is fully down.

Playback Priority: Playbacks are played based on the most recent action determining the value of a parameter in a device. By using different priority levels the user can modify this behavior.



4.2 Trigger Options

Fader UP+GO: When the fader passes the limit defined in the "trigger level" field, the playback is activated and the associated Cuelist is played. When this function is deactivated the fader does not activate the Cuelist automatically.

Fader at Zero + Release: When the fader has a value lower than the limit defined in the "trigger level" field the playback is deactivated. When this function is deactivated the fader does not deactivate the Cuelist automatically.

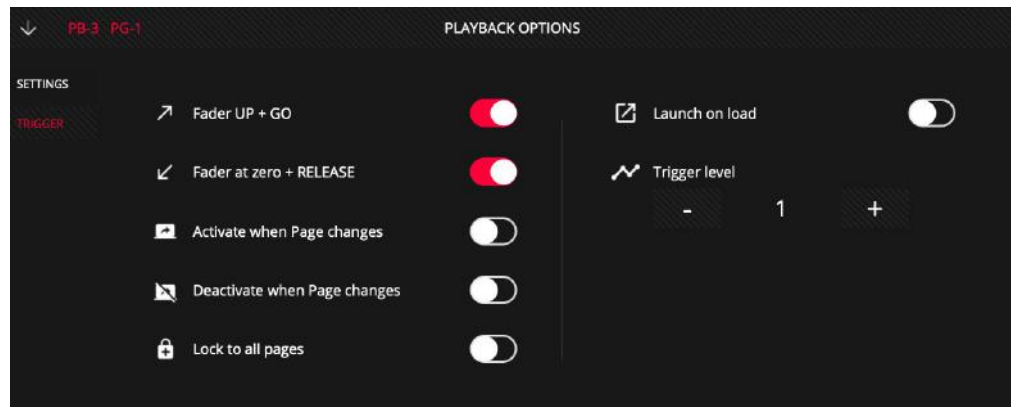
Activate when Page Changes: If this option is set, the Playback is activated when the page is changed to the one that the cuelist is assigned. If there was a Cuelist already active on that playback, then changing the page to the one where the cuelist is set to "Activate When Page Changes", will NOT activate the cuelist, unless the option "Deactivate when page changes" was activated in the previous Playback.

Deactivate when Page Changes: If this option is activated the Playback is deactivated if you change to any other page.

Lock to all Pages: If this option is enabled then the selected Playback will be present on all 30 Playback pages.

Trigger Level: This field defines the exact value of the fader at which Playback is activated or deactivated.

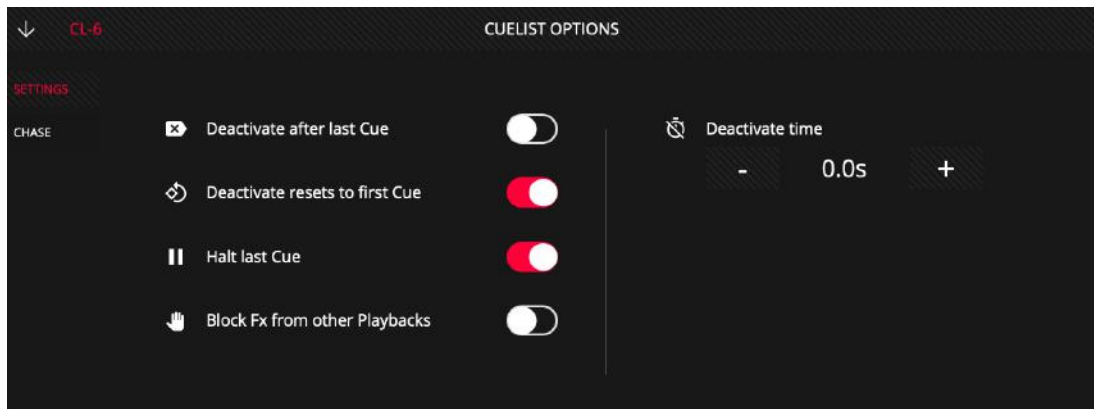
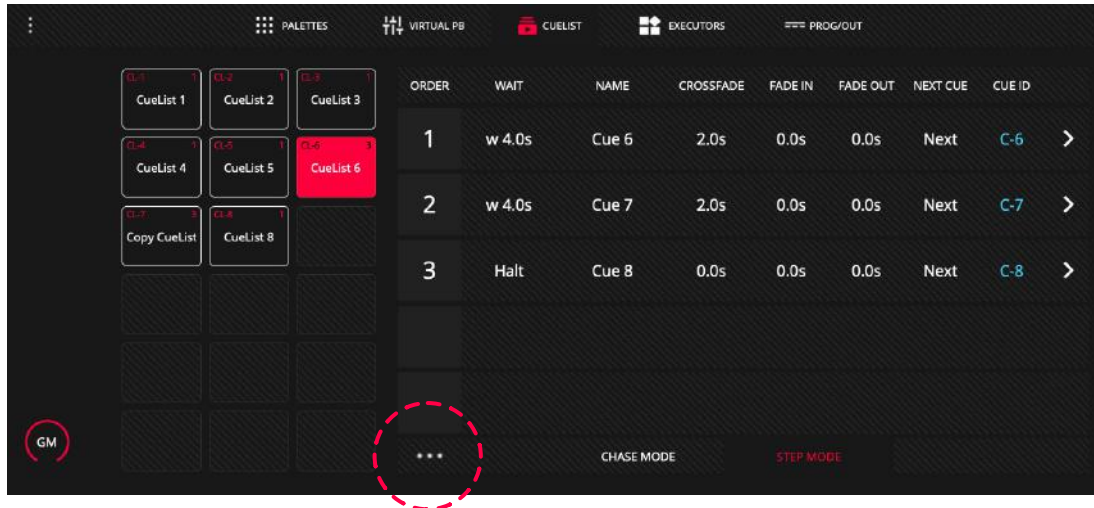
Launch on Load: If this option is enabled, the Playback will be executed immediately after the show is loaded.



Section 5: Cuelist Options

5.1 Playback Options

It is possible to configure the way a Cuelist works from the Cuelist options menu. To access the options menu you must select the Cuelist first, then access the options menu through the icon at the bottom left:



Deactivate after last Cue: When this option is activated the Cuelist is automatically deactivated after the last step in the Cuelist.

Deactivate resets to first Cue: When this function is activated the Cuelist always starts from the first step when the Cuelist associated to the playback is activated. When this function is deactivated and the user activates the Cuelist it will start from the step it was the last time it was deactivated.

Halt last Cue: When this option is activated the Cuelist stops at the last step. If the function is disabled the Cuelist will return to the first step after executing the last one.

Block FX from other Playbacks: When this option is active then any channel controlled by this playback blocks the FX for that channel in the other playbacks.

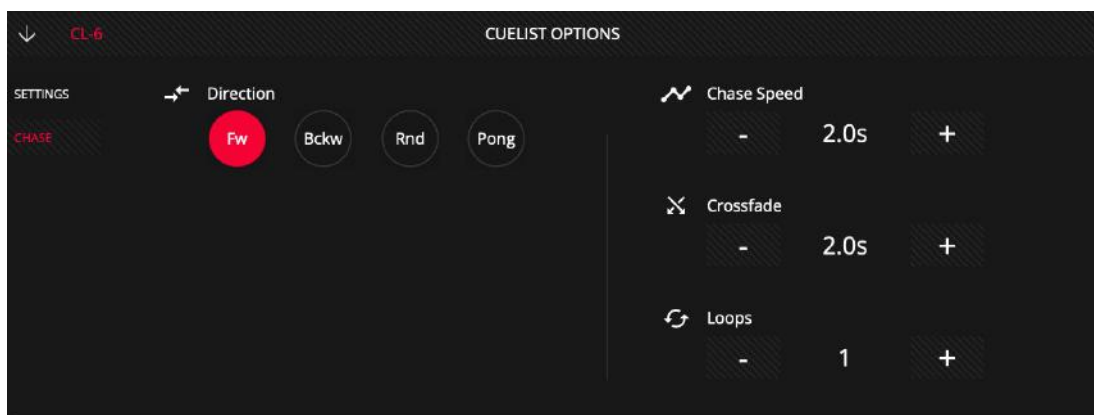
Direction: It is possible to choose between 4 options:

Up: moving from the first Cue to the last one in order.

Down: moving from the last Cue to the first one in order.

Random: scrolling all Cues randomly.

Pong: Moving from the first Cue to the last one in order, then continuing to play the cues backwards until it reaches the first. This pattern then continues until you stop the chase.



Chase Speed: It is possible to set the default Chase time for that particular Cuelist.

CrossFade: You can set the default CrossFade for that particular Cuelist.

Loops: It is possible to configure how many times the Chase execution has to be repeated before deactivating. The default setting is 0, which indicates that it will play infinitely.

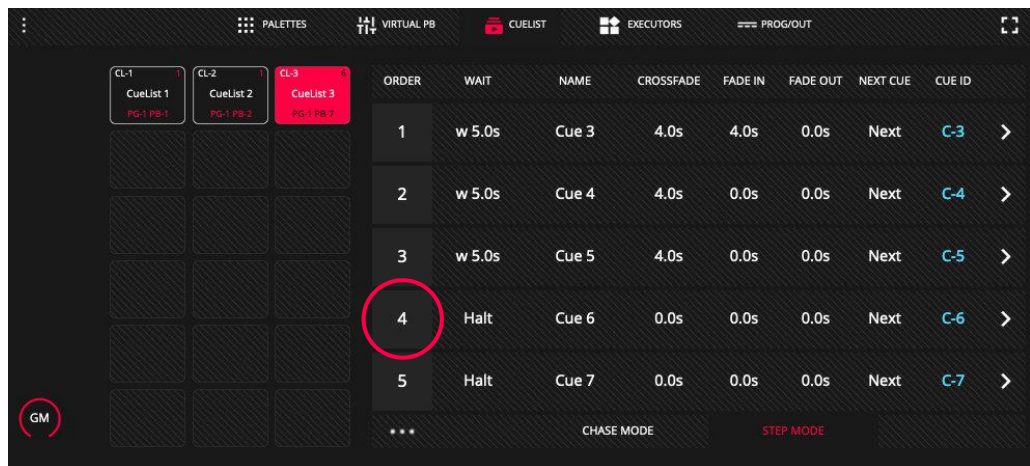
5.2 Organization of the Cues

It is possible to rearrange the Cues into a Cuelist:

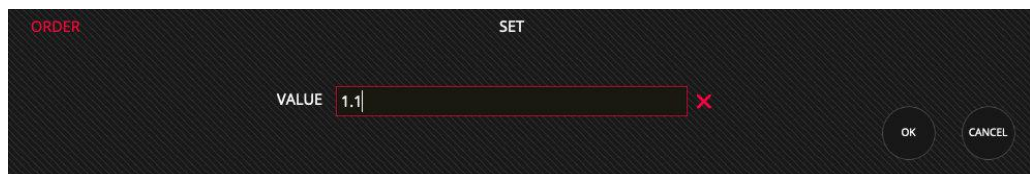
- 1 Select the Cue you want to move
- 2 Press MOVE
- 3 Select the Cue that occupies the space to which you want to move the selected Cue.

It is possible to create sub cues between 2 cues:

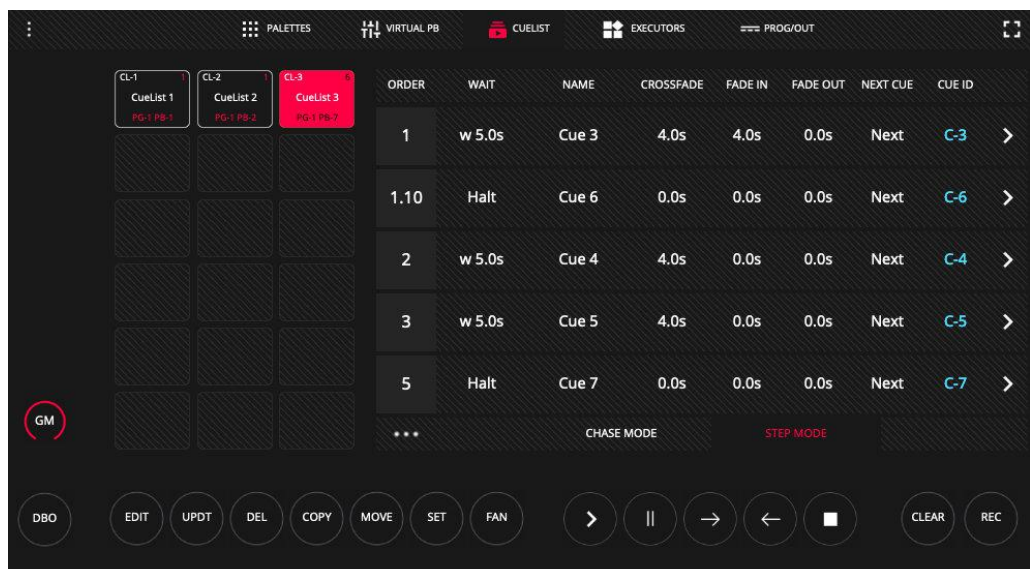
- 1 Press for 1 second on the Cue you want to move:



- 2 Enter the new position, indicating first the Cue number where you want to move the Cue followed by a point and the subcue order:



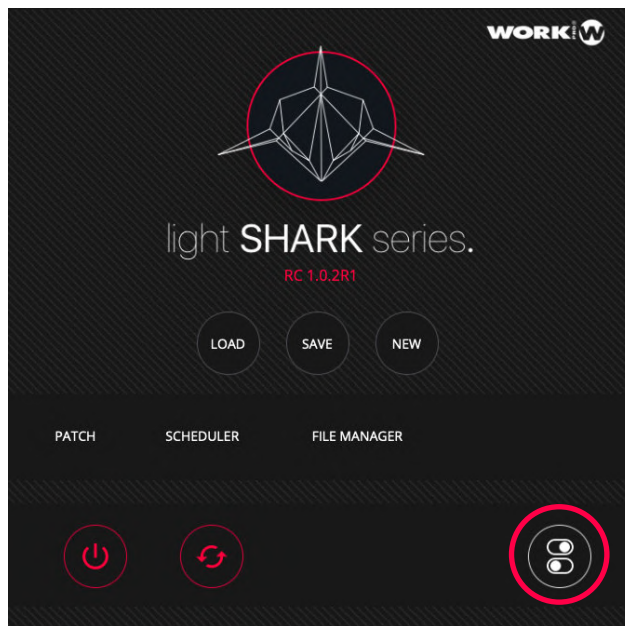
- 3 Press Ok.



Section 6: System Options

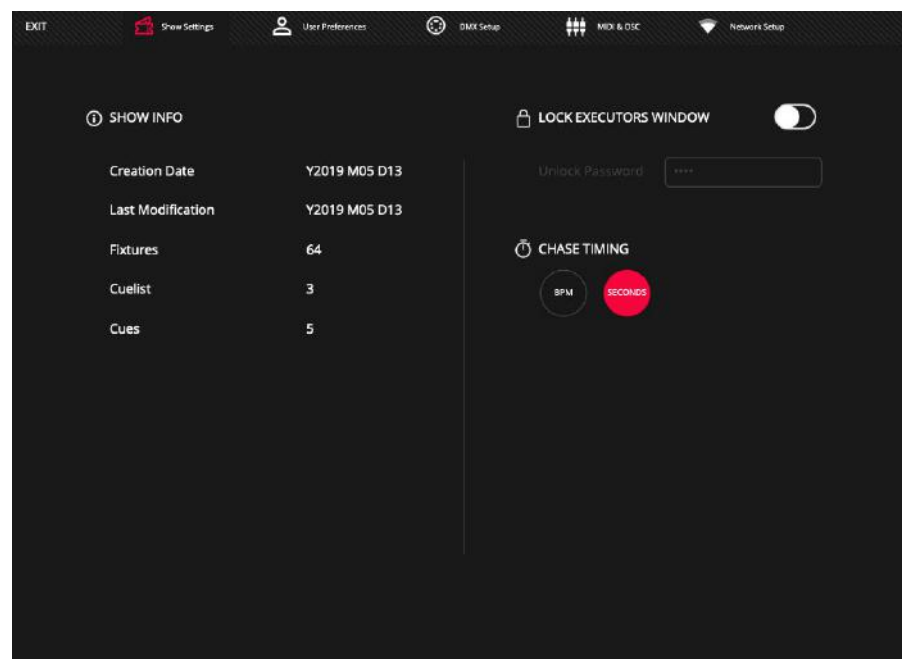
6.1 System Preferences

It is possible to configure certain lightShark settings or behaviors from the System Preferences.



The system preferences are divided into 5 sections:

Show Settings: From this window it is possible to configure the following options:



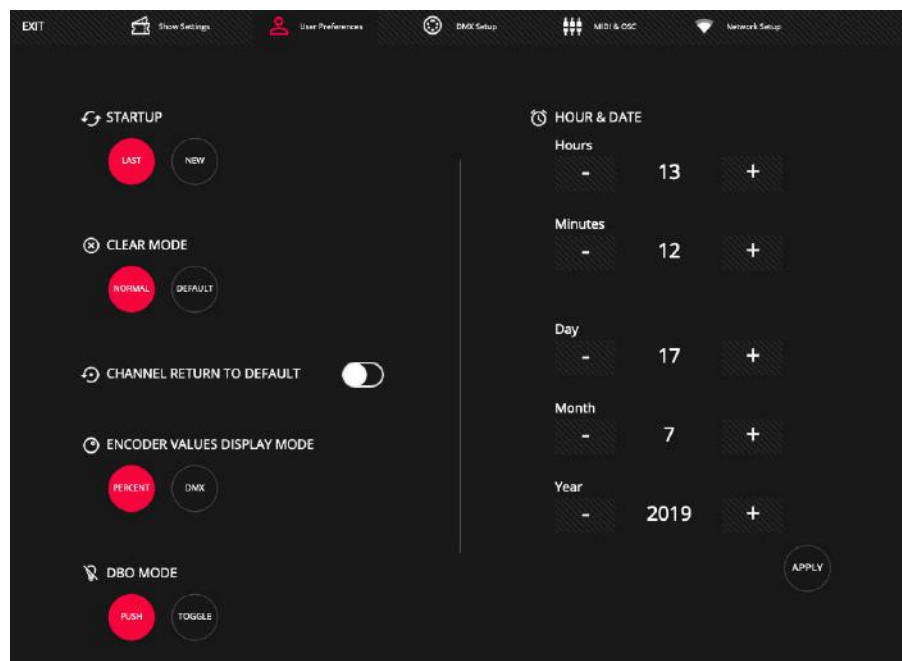
Show Info: It is possible to visualize the properties of the show file:

- Date of creation of the show file.
- Date of the last modification made.
- Number of Fixtures contained in the show.
- Quantity of Cuelist that there is inside the show.
- Quantity of Cues recorded.

Lock Executors Window: Used to activate or deactivate the lock mode of the executors window.

Chase Timing: It allows to visualize the times of the Playbacks configured as Chase in Seconds or in BPMs.

User Preferences: From this window it is possible to configure the following options:



StartUp: It is possible to decide whether at the beginning of lightShark the last used show will be loaded, or a new show will always be started.

Clear Mode: It is possible to change the behavior of "CLEAR" from the main menu by choosing between 2 modes:

Normal: The LTP channels stay "in the air" and the HTP are set to 0.

Default: The LTP and HTP channels return to the default values defined in the fixture library.

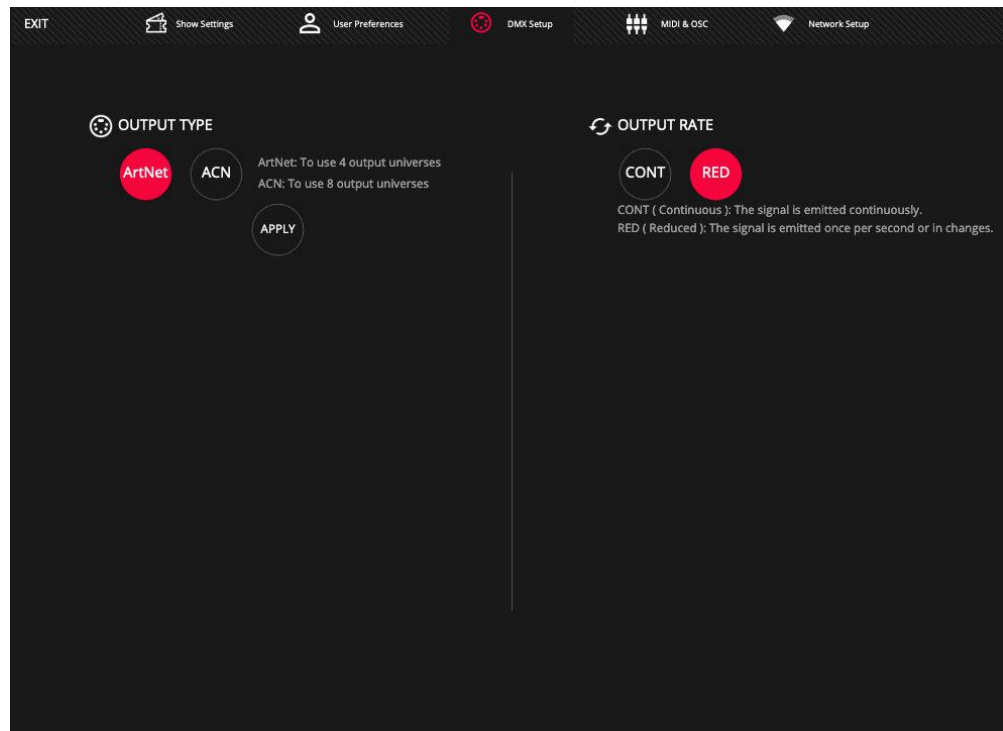
Channel Return to Default: When this option is activated, the channels that are not being used in the programmed or in some Playback or Executor return to the default values defined in the fixture library.

Encoder values display mode: It is possible to configure the type of values displayed.

DBO Mode: It allows to change the behaviour of the DBO button, choosing between push-button or toggle.

Time and Date: Allows you to set the date and time of the system.

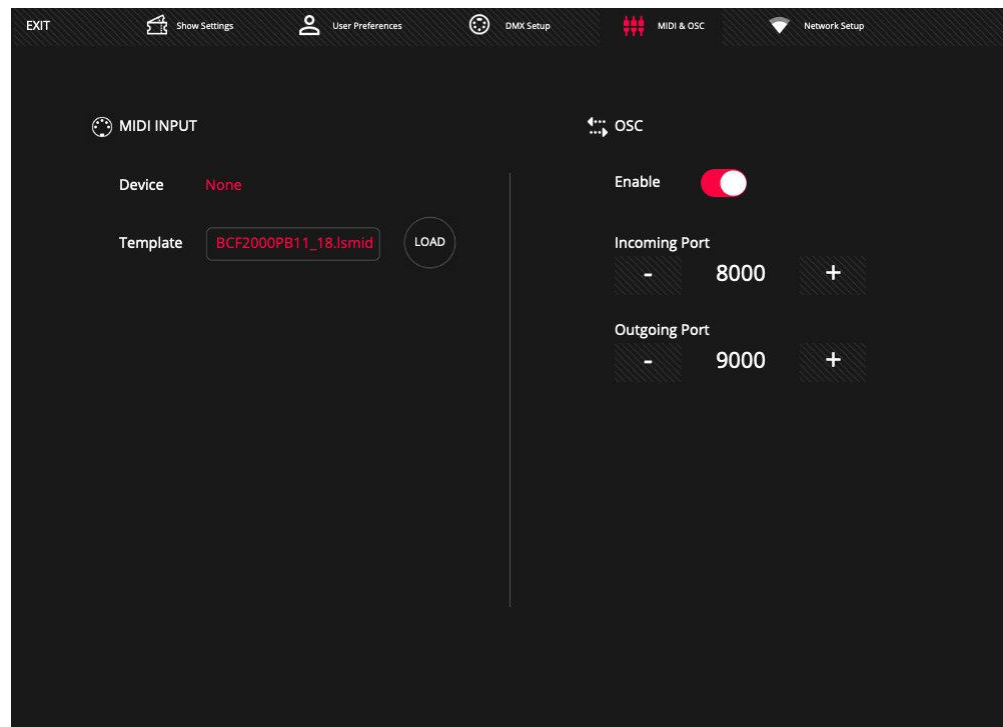
DMX Setup: From this window it is possible to configure the DMX output settings.



Output Type: Allows you to adjust the DMX output network protocol. Art-Net allows the use of up to 4 DMX output universes while ACN (sACN) allows the use of up to 8 DMX output universes.

Output Rate: Configure the output frame rate to improve compatibility with other devices.

MIDI & OSC: From this window you can configure the MIDI and OSC connectivity settings.



MIDI Input: Select the configuration file for the MIDI controller you want to control.

OSC: You can enable or disable OSC control. In addition, the user can define the input & output port.

6.2 Network Settings

The ethernet port has 2 different IP addresses, so it is possible to connect lightShark devices to multiple networks using the same physical connection:

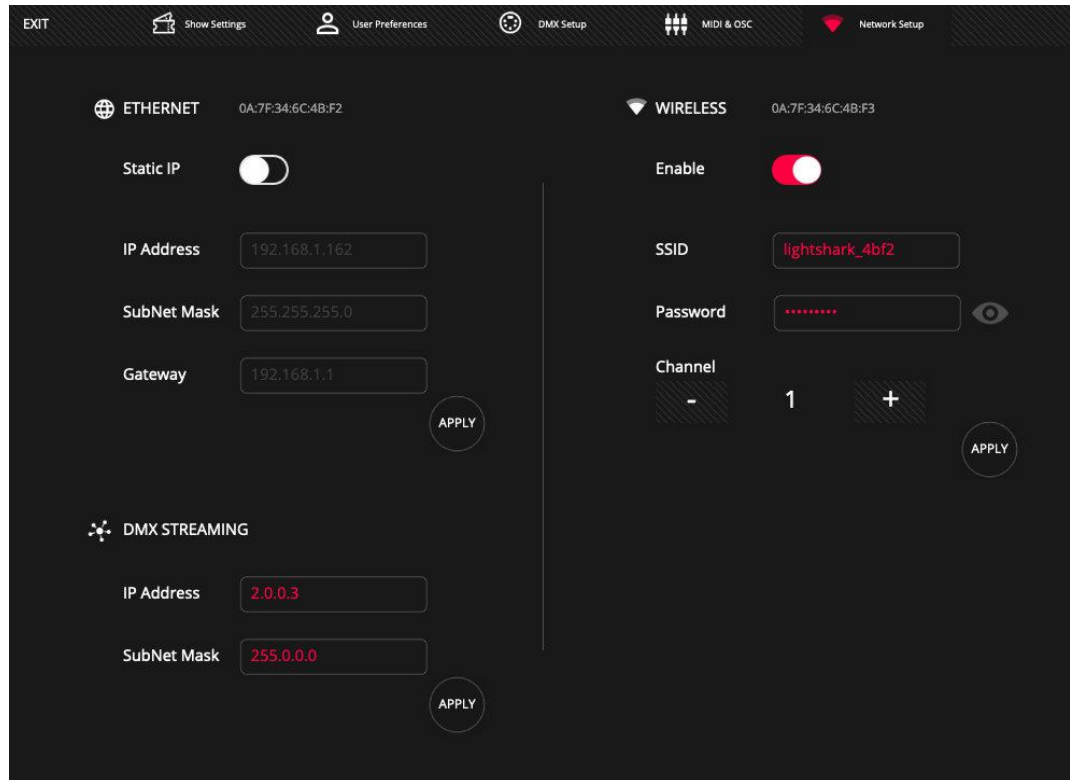
Ethernet: Allows connection to the local area network shared with other devices. It can be configured in either manual or automatic (DHCP) mode. By default it is configured with a static IP.

DMX Streaming: Allows the transmission of DMX through Art-Net or sACN. By default it is configured to be able to communicate to a Class A IP address scheme in the 2.x.y.z range.

The default address for lightShark devices is 2.0.0.1 and the subnet mask 255.0.0.0 . This allows Art-Net devices to communicate directly to lightShark without the need for a DHCP server connected to the network.

This allows you to control lightShark from the same network where there are other devices (sound consoles, control software. etc) and at the same time emit DMX to the Nodes that require a specific network configuration according to the protocol used.

To connect to lightShark through ethernet you must configure the IP address of your device in the same subnet.



Wireless: Enables configuration of the integrated access point in lightShark devices. By default the network name is lightshark_XXXX, where XXXX refers to the last 4 digits of the MAC Address of the lightShark wireless interface.

The default password for all lightShark devices is "**sharkjaws**". For security reasons it is recommended that you change the default password through this menu.

The password length should be between 8 and 63 ASCII characters and no spaces should be used.

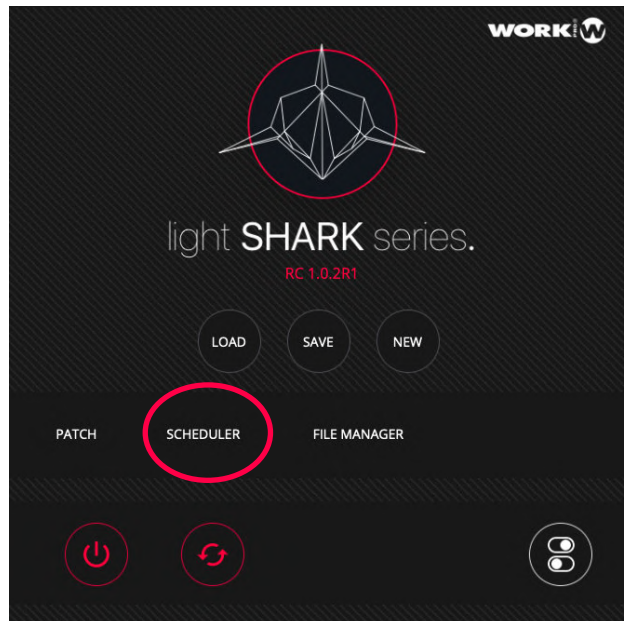
Through the channel selector the user can select different frequencies (channels) of the WiFi network to avoid problems like: Low speed, unstable signal, loss of signal and disconnections.

The use of a wireless network analyzer program is recommended before deciding on the appropriate channel.

6.3 Event Scheduler

In situations where lightShark is managing a space (a meeting room, a small auditorium, attractions, party halls, clubs. etc) it is possible to control the lighting of these spaces according to the calendar, to automatically trigger actions to specific dates and times.


To access the event scheduler, access the lightShark menu and select "SCHEDULER".



The screenshot shows the Event Scheduler interface. At the top left is "EXIT" and at the top right is "EVENTS". Below is a table with the following columns: EVENT ID, ACTIVE, EVENT NAME, START TIME, STOP TIME, FROM, TO, and DAYS. The first row contains the following data: 1, a red and white toggle switch, Garden_Blue, 20:00, 00:00, 07/11/2018, 09/11/2019, and FR/SA. Below the table are four circular buttons: DEL, EDIT, CLEAR, and NEW.

EVENT ID	ACTIVE	EVENT NAME	START TIME	STOP TIME	FROM	TO	DAYS
1	<input checked="" type="checkbox"/>	Garden_Blue	20:00	00:00	07/11/2018	09/11/2019	FR/SA

The "EVENTS" window displays a summary of scheduled calendar events.

	STATUS	ENABLED	EVENT NAME	START TIME	STOP TIME	FROM	TO	DAYS
1	RUNNING		Main	08:00	22:00	19/12/2018	19/12/2019	MO/TU/WE/TH/FR

Status: LightShark assigns an identifier to each event.

Active: If you want to cancel the execution of an event during a period of time, you can deactivate the event without having to delete it.

Event Name: You can assign a name to quickly identify each of the events in the list.

Start Time: Indicates the moment in which the event is activated.

Stop Time: Indicates the moment when the event is deactivated.

From: Indicates the start date from which the event will be executed.

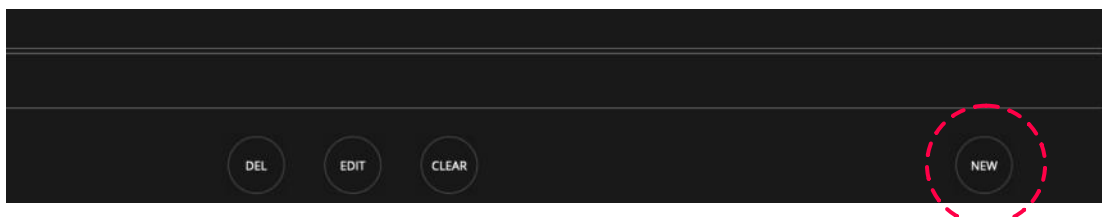
To: Indicates the end date from which the event will stop being executed.

Days: It is possible to filter or select certain days within the selected time period.

Create a new event

The process for adding a new event to the calendar is as follows:

- 1 At the bottom press the "NEW" button to add a new event to the list.



- 2 LightShark will display a configuration panel where the user can define the behavior of the event. Hold down the "NAME" field for two seconds to add a description of the event.

EVENT ID 2

NAME
New event

TYPE
+

THESE DAYS
MO TU WE TH FR SA SU

TRIGGER PERIOD
From 07/11/2018
To 07/11/2019

TIME
Start 08:00
Stop 22:00

SAVE

3 Under "TYPE" click on the empty box and then select the action you want to perform.

SELECT EVENT TYPE

PB-1 PB-2 PB-3 PB-4 PB-5 PB-6 PB-7 PB-8 PB-9 PB-10 RELEASE ALL

REBOOT POWER OFF

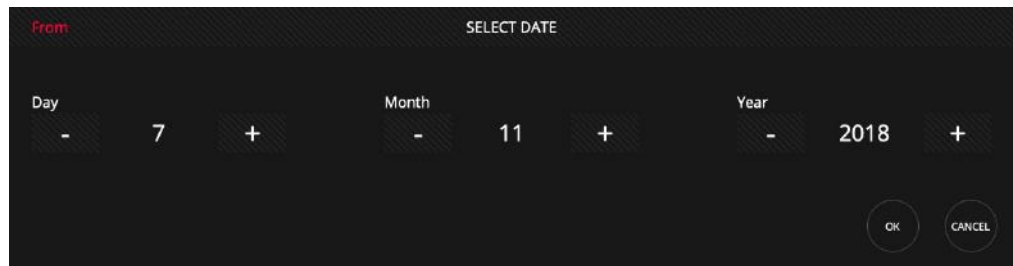
OK CANCEL

4 Then select which days of the week the event will run.

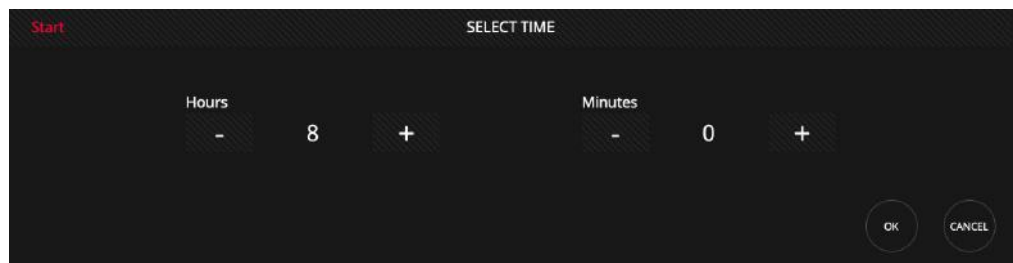
THESE DAYS

MO TU WE TH FR SA SU

5 Define the start and end date of the event by holding down the date field for two seconds.



6 Define the start and stop time by holding down the date field for two seconds.



7 Press "SAVE" to save the changes.

It is possible to delete or edit an existing event by using the "DEL" or "EDIT" buttons respectively.

Section 7: Connectivity

7.1 MIDI

LightShark supports plug and play of MIDI devices via USB. These devices can be connected and put into operation while the lightShark is running.

If you use a MIDI interface connected to lightShark, you can use a template to setup the configuration of MIDI devices. There are a number of default templates created for different controllers, but you can also create MIDI templates as needed.

There are included templates for the following devices:

Akai APC-20

Akai APC-Mini

Elation MidiCon

Behringer BCF2000

Korg Nano Kontrol2

Novation LaunchKey

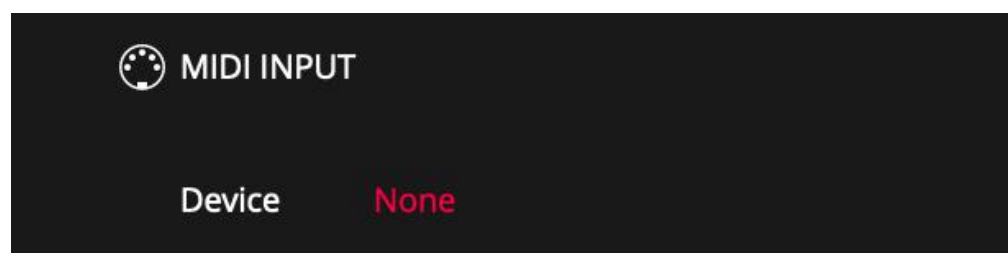
Novation LaunchPad

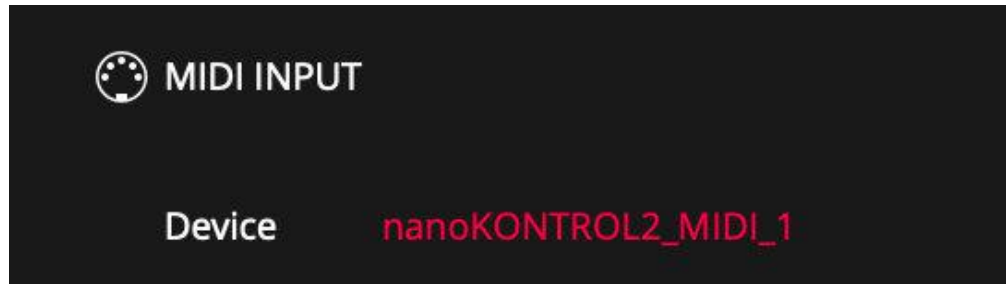
You can use this configuration information to use apps or MIDI sending devices, such as video servers or audio consoles, to control lightShark.

To use your MIDI controller you must connect it via USB to the USB Host port (on the LS-Core) or the USB "Data" port (on the LS-1).

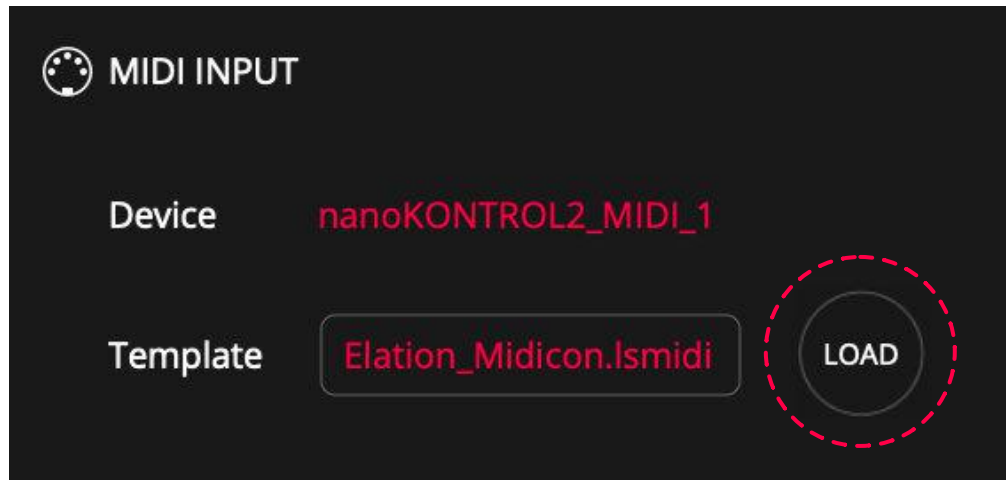
1 Once the MIDI controller is connected, open the MIDI & OSC Setup window.

2 When the MIDI device is connected, wait 5 seconds and lightShark will display the device information in the "DEVICE" field. If the field says "None" check the device connection and if the connected MIDI controller is USB compliant.





3 Then select the configuration template for the connected MIDI controller. Press the "LOAD" button



4 Pressing "LOAD" will display the file browser, in which you can select the template you want to use.



All functionalities of lightShark can be assigned to a MIDI note:

Function	Command
Page Up	BUTTON_PAGEUP
Page Down	BUTTON_PAGEDOWN
DBO	BUTTON_DBO
Delete	BUTTON_DEL
Copy	BUTTON_COPY
Fan	BUTTON_FAN
Move	BUTTON_MOVE
Set	BUTTON_SET
Update	BUTTON_UPDT
Edit	BUTTON_EDIT
Playback Selection Button for PB1	BUTTON_SELECT1
Playback Selection Button for PB30	BUTTON_SELECT30
Playback "Go" Button for PB1	BUTTON_GO1
Playback "Go" Button for PB30	BUTTON_GO30
Playback "Flash" Button for PB1	BUTTON_FLASH1
Playback "Flash" Button for PB30	BUTTON_FLASH30
Playback "Pause" Button for PB1	BUTTON_PAUSE1
Playback "Pause" Button for PB30	BUTTON_PAUSE30
Playback "Next" Button for PB1	BUTTON_NEXT1
Playback "Next" Button for PB30	BUTTON_NEXT30
Playback "Previous" Button for PB1	BUTTON_PREV1
Playback "Previous" Button for PB30	BUTTON_PREV30
Playback "Release" Button for PB1	BUTTON_REL1
Playback "Release" Button for PB30	BUTTON_REL30
Master Go	BUTTON_GOMASTER
Master Pause	BUTTON_PAUSEMASTER
Master Next	BUTTON_NEXTMASTER
Master Previous	BUTTON_PREVMMASTER
Master Release	BUTTON_RELMMASTER
Find	BUTTON_FIND
Clear	BUTTON_CLEAR
Record	BUTTON_REC

Function	Command
Executor X1 Y1	BUTTON_EXECUTOR_01_01
Executor X1 Y6	BUTTON_EXECUTOR_01_06
Executor X16 Y1	BUTTON_EXECUTOR_16_1
Executor X16 Y6	BUTTON_EXECUTOR_16_6
Executor Page Up	EXECUTOR_PAGEUP
Executor Page Down	EXECUTOR_PAGEDOWN
Master Fader Level	master="true"
Playback 1 Level	playback_number="1"
Playback 30 Level	playback_number="30"
Intensity Parameter Control	BUTTON_DIM
Position Parameter Control	BUTTON_POS
Color Parameter Control	BUTTON_COL
Advanced Parameter Control	BUTTON_ADVANCED
Beam Parameter Control	BUTTON_BEAM
Gobo Parameter Control	BUTTON_GOBO
FX Parameter Control	BUTTON_FX

Templates for MIDI controllers are XML files that can be modified by the user according to their needs. Examples are shown below (the blue values are the MIDI notes sent by the controller). Examples:

Assigning a MIDI Note to the Go Button on PB3

```
<BUTTON octave="0" note="29" on_press="true" on_release="true" mode_value='True'
action="BUTTON_GO3" />
```

Assign a MIDI note to the PB7 Flash button

```
<BUTTON octave="0" note="35" on_press="true" on_release="true" mode_value='True'
action="BUTTON_FLASH7" />
```

Assigning a MIDI Note to the Flash Button

```
<BUTTON octave="0" note="12" on_press="true" on_release="true" mode_value='True'
action="BUTTON_FLASH7" />
```

Assigning a MIDI Note to the Color Settings Button

```
<BUTTON octave="1" note="10" on_press="true" on_release="true" mode_value='True'  
action="BUTON_COL" />
```

Assigning a MIDI note to Encoder 1

```
<ENCODER octave="0" note="13" up_only="True" down_only="False"  
action="ENCODER1" />
```

```
<ENCODER octave="0" note="14" up_only="false" down_only="True"  
action="ENCODER1"/>
```

Assign a MIDI note to the Master

```
<FADER octave="0" note="9" master="true" action="FADER_MASTER"/>
```

Assign a MIDI note to the PB-3 fader

```
<FADER octave="0" note="8" playback_number="3" />
```

7.2 OSC

Open Sound Control (OSC) is a protocol for communication between computers, music synthesizers and other multimedia devices, inspired by modern network technology.

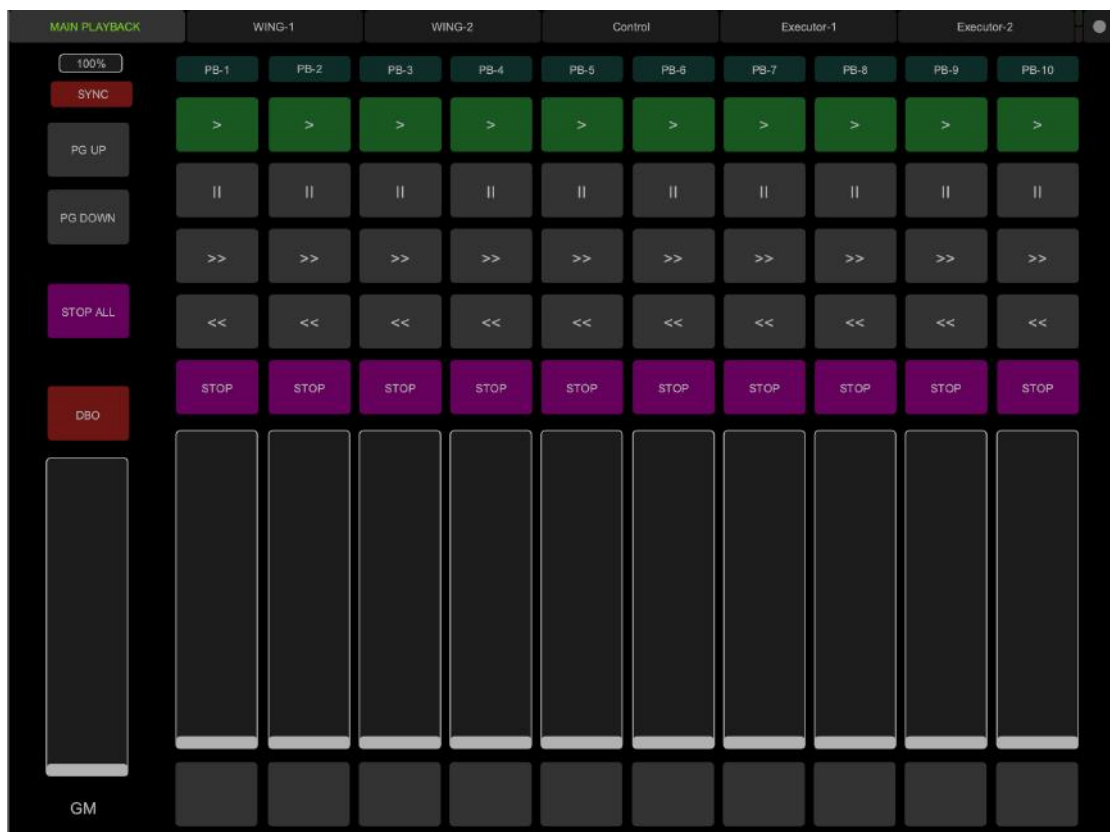
The protocol has some advantages such as the independence of the transmission medium and the flexibility to transport any type of data.

OSC can be transported by various protocols, but UDP is commonly used.

LightShark can receive OSC commands from the wired network interface and from the wireless network interface.

From the LightShark website you can download a sample layout for TouchOSC.

TouchOSC is a modular OSC control surface for Android and iOS. It supports sending and receiving Open Sound Control messages via Wi-Fi.



Control	Cmd	Element	Parameter	Example
Page Up	/LS/Page/Up	-	0 = Released 1 = Pressed	-
Page Down	/LS/Page/Down	-	0 = Released 1 = Pressed	-
DBO	/LS/DBO	-	0 = Released 1 = Pressed	-
Edit	/LS/Edit	-	0 = Released 1 = Pressed	-
Update	/LS/Update	-	0 = Released 1 = Pressed	-
Delete	/LS/Delete	-	0 = Released 1 = Pressed	-
Copy	/LS/Copy	-	0 = Released 1 = Pressed	-
Move	/LS/Move	-	0 = Released 1 = Pressed	-
Set	/LS/Set	-	0 = Released 1 = Pressed	-
Fan	/LS/Fan	-	0 = Released 1 = Pressed	-
Find	/LS/Find	-	0 = Released 1 = Pressed	-
Clear	/LS/Clear	-	0 = Released 1 = Pressed	-
Rec	/LS/Rec	-	0 = Released 1 = Pressed	-
Playback Selection	/LS/Select/PB/[x]	[x]= Playback Number From=1 To=30	0 = Released 1 = Pressed	To select the Playback number 9: /LS/Select/PB/9
Playback Go	/LS/Go/PB/[x]	[x]= Playback Number From=1 To=30	0 = Released 1 = Pressed	To press Go on Playback number 9: /LS/Go/PB/9
Playback Flash	/LS/Flash/PB/[x]	[x]= Playback Number From=1 To=30	0 = Released 1 = Pressed	To press Flash on Playback 9: /LS/Flash/PB/9
Playback Stop	/LS/Stop/PB/[x]	[x]= Playback Number From=1 To=30	0 = Released 1 = Pressed	To press Stop on Playback 9: /LS/Stop/PB/9
Playback Prev	/LS/Prev/PB/[x]	[x]= Playback Number From=1 To=30	0 = Released 1 = Pressed	To press Prev on Playback 9: /LS/Prev/PB/9
Playback Next	/LS/Next/PB/[x]	[x]= Playback Number From=1 To=30	0 = Released 1 = Pressed	To press Next on Playback 3: /LS/Next/PB/3
Playback Pause	/LS/Pause/PB/[x]	[x]= Playback Number From=1 To=30	0 = Released 1 = Pressed	To press Pause on Playback 1: /LS/Pause/PB/1
Playback Fader Level	/LS/Level/PB/[x]	[x]= Playback Number From=1 To=30	From = 0 To = 255	To Adjust Fader Level on PB 17: /LS/Level/PB/17
Main Playback Go	/LS/Go/Main	-	0 = Released 1 = Pressed	-
Main Playback Stop	/LS/Stop/Main	-	0 = Released 1 = Pressed	-
Main Playback Prev	/LS/Prev/Main	-	0 = Released 1 = Pressed	-
Main Playback Next	/LS/Next/Main	-	0 = Released 1 = Pressed	-
Main Playback Pause	/LS/Pause/Main	-	0 = Released 1 = Pressed	-
Set GM Level	/LS/Level/GM	-	From = 0 To = 255	-
Encoders	/LS/Encoder/[x]	[x]= Encoder Selected From=1 To=4	From = -1 To = 1	To Adjust parameters using Encoder B: /LS/Encoder/2
Select Fixture	/LS/SelectFixture	-	0 = Released 1 = Pressed	-
Select Group	/LS/SelectGroup	-	0 = Released 1 = Pressed	-
Selection Next	/LS/SelectionNext	-	0 = Released 1 = Pressed	-
Selection Prev	/LS/SelectionPrevious	-	0 = Released 1 = Pressed	-

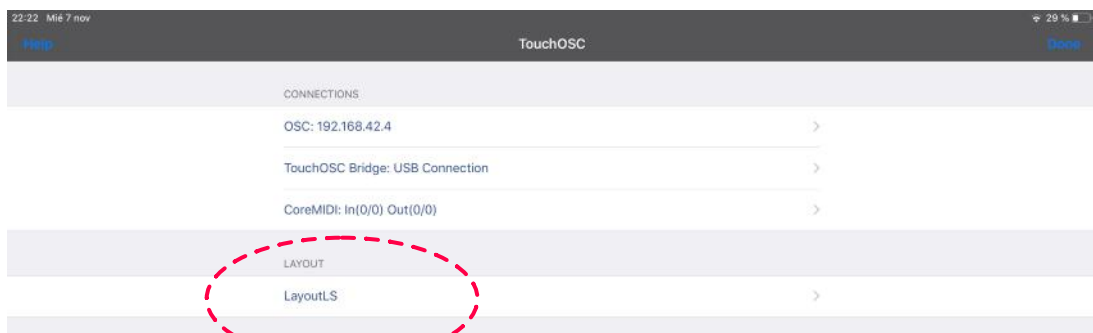
Control	Cmd	Element	Parameter	Example
Intensity	/LS/Intensity	-	0 = Released 1 = Pressed	-
Position	/LS/Position	-	0 = Released 1 = Pressed	-
Colour	/LS/Color	-	0 = Released 1 = Pressed	-
Beam	/LS/Beam	-	0 = Released 1 = Pressed	-
Advanced	/LS/Advance	-	0 = Released 1 = Pressed	-
Gobo	/LS/Gobo	-	0 = Released 1 = Pressed	-
Fx	/LS/Gobo	-	0 = Released 1 = Pressed	-
Executor Push Mode	/LS/Executor/[x]/[y]/[z]	[x]= Executor Page From=1 To=2 [y]= Select X position From=1 To=8 [z]= Select Y position From=1 To=6	0 = Released 1 = Pressed	To Trigger Executor Position 2-2 /LS/Executor/1/2/2
Executor Toggle Mode	/LS/Executor/[x]/[y]/[z]	/LS/Executor/[x]/[y]/[z] [x]= Executor Page From=1 To=2 [y]= Select X position From=1 To=8 [z]= Select Y position From=1 To=6	0 = Released 0 = Pressed	-
Trigger Executor Row	/LS/ExecutorLine/[x]	[x]= Row Number From=1 To=6	0 = Released 1 = Pressed	-
Sync All	/LS/Sync	-	0 = Released 1 = Pressed	-
Sync Only Parameters	/LS/Sync/Playbacks	-	0 = Released 1 = Pressed	-
Sync Only Executors	/LS/Sync/Executors	-	0 = Released 1 = Pressed	-

The commands in this table only need one parameter, floating type. If you need more information about this protocol you can visit:

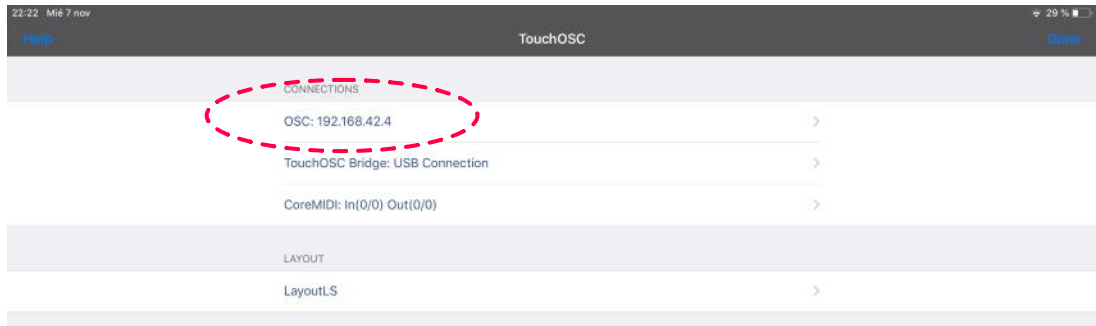
<http://opensoundcontrol.org/introduction-osc>

How to control lightShark using TouchOSC

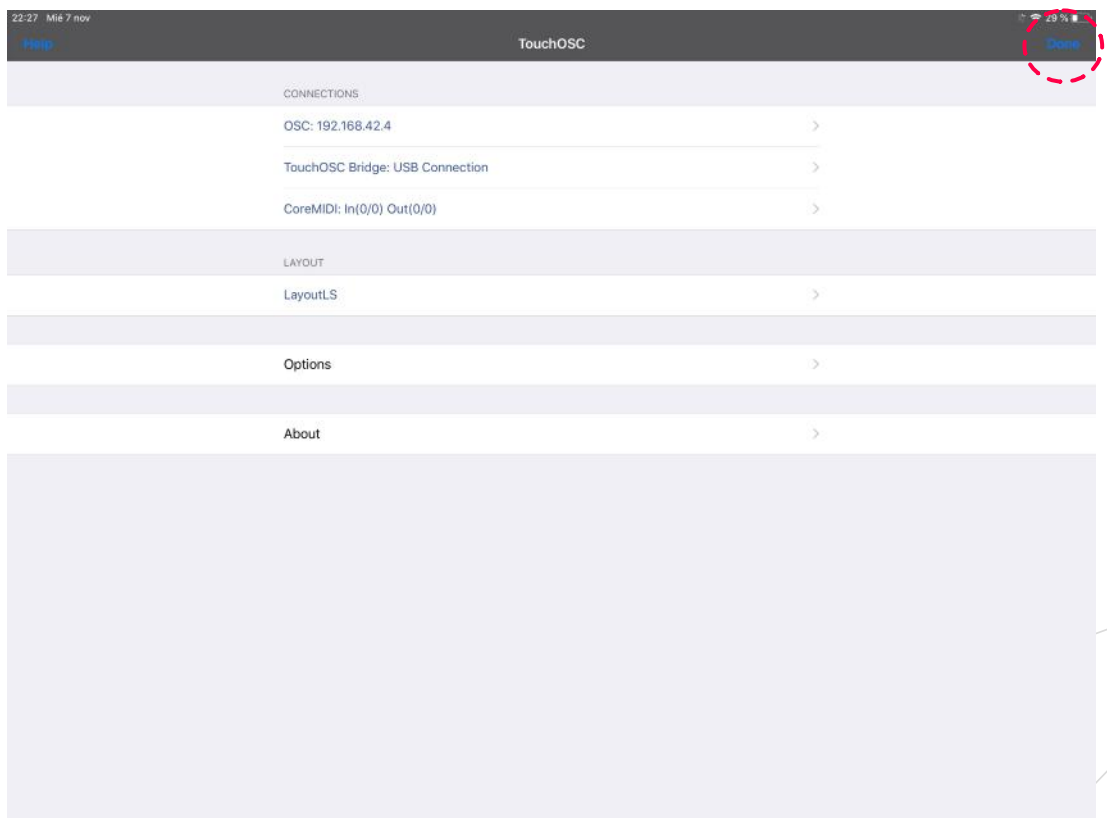
- 1 Connect the iPad to the WiFi network generated by lightShark .
- 2 Start the TouchOSC App and select the Layout for lightShark.



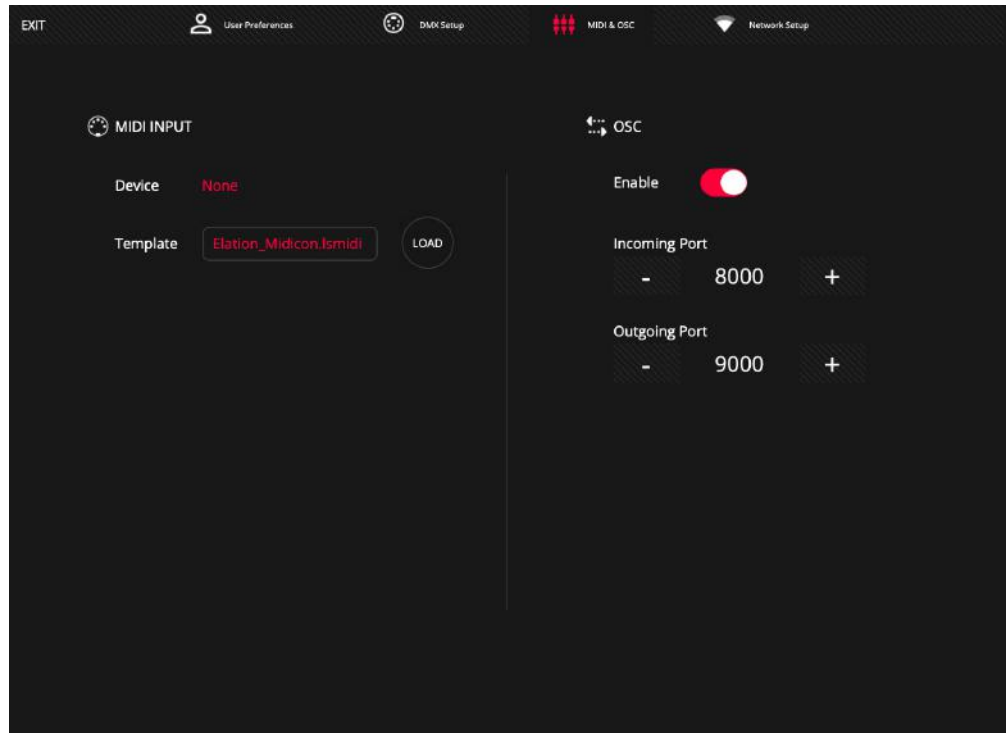
3 Configure the connection settings as follows.



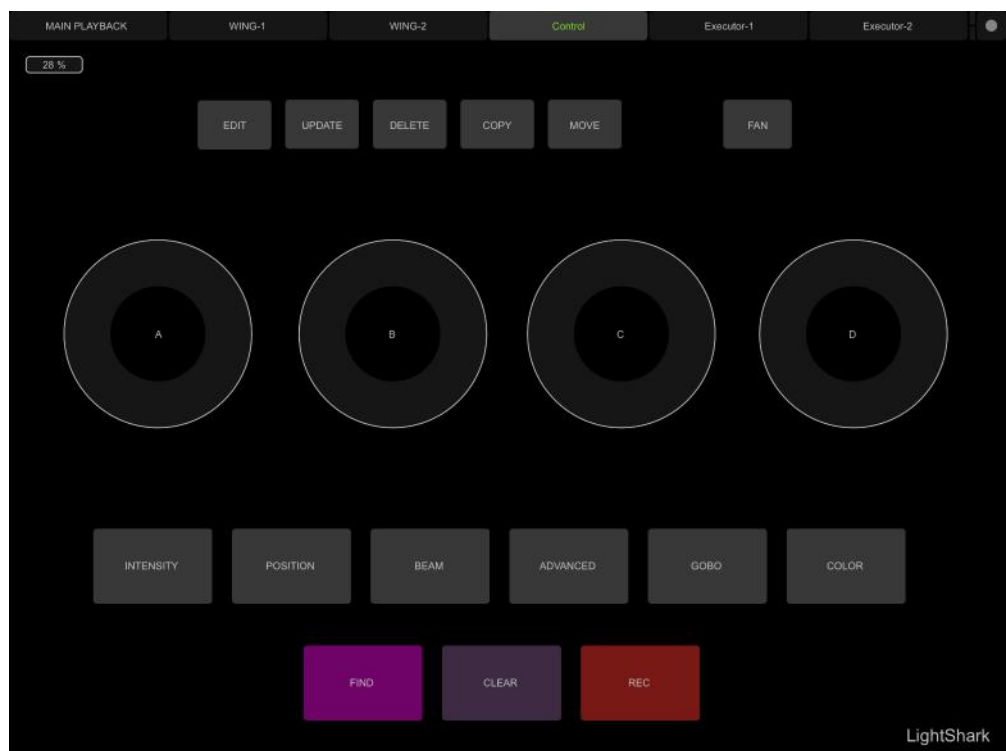
4 Go back and press "DONE".



5 In the lightShark Preferences, in the MIDI&OSC tab, make sure that OSC is enabled and that the input and output ports are correctly configured.



6 Now from TouchOSC you can control the lightShark.

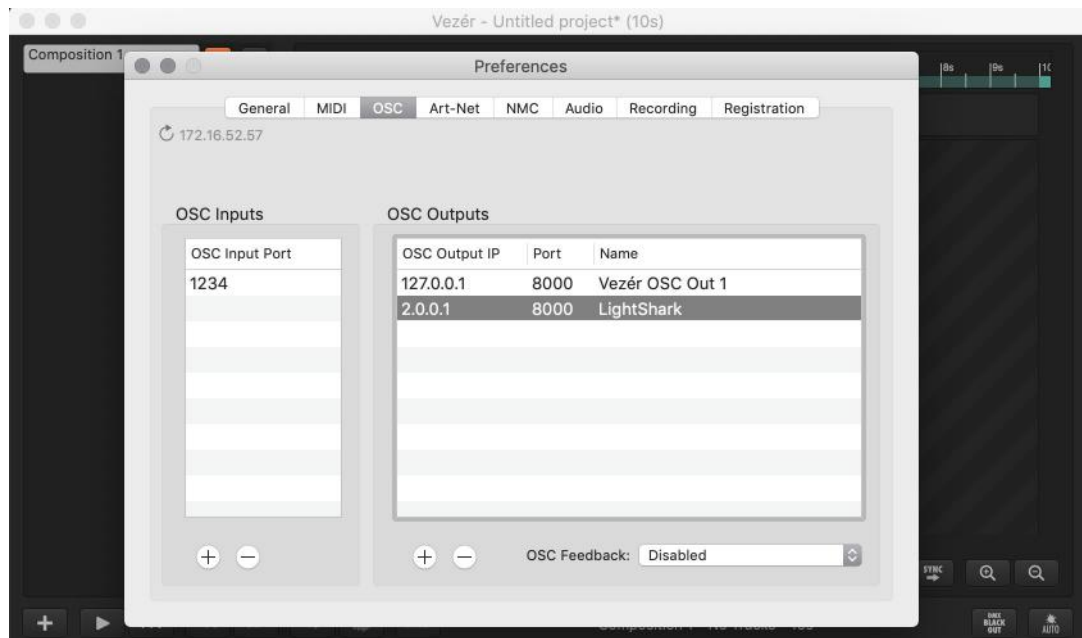


Controlling lightShark from Vezér

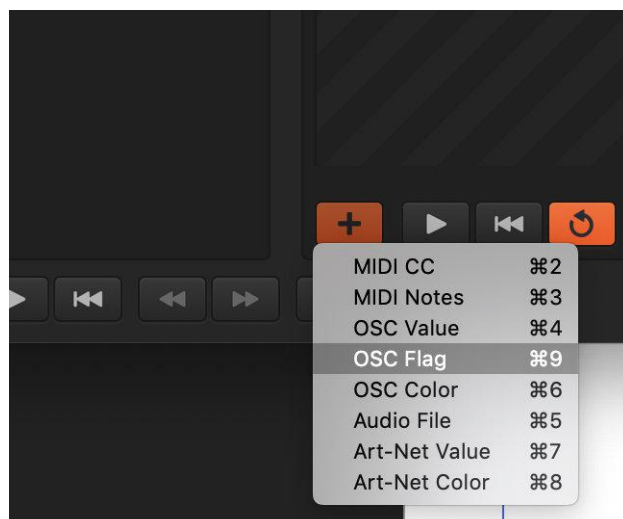
Vezér is a timeline-based MIDI/OSC/DMX sequencer for audiovisual artists. Thanks to OSC tracks it allows to send different OSC commands to different devices simultaneously:

<https://imimot.com/vezér/>

- 1 Connect the computer with Vezér to the same network as your LightShark device.
- 2 In lightShark within the preferences, in the MIDI&OSC tab make sure that OSC command reception is enabled and that the input and output ports are correctly configured.
- 3 In the Vezér preferences, add an OSC output by specifying the IP address and the LightShark input port,



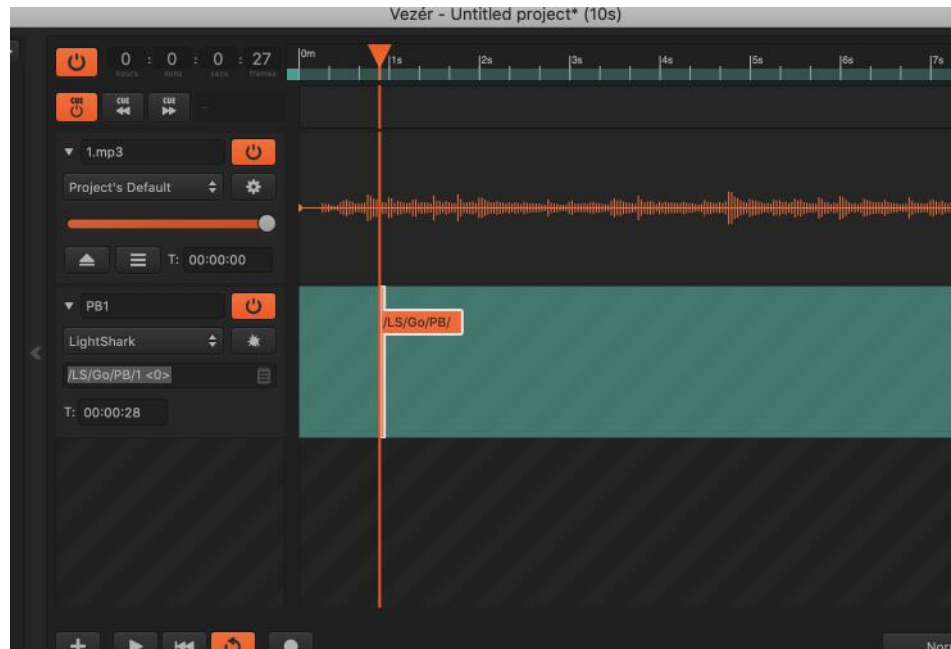
- 4 Add a "OSC Flag" track .



5 Add a Keyframe and enter the command with the action you want to perform.

Below is an example of how to send the "GO" command to Playback 1:

`/LS/Go/PB/1 <0>`



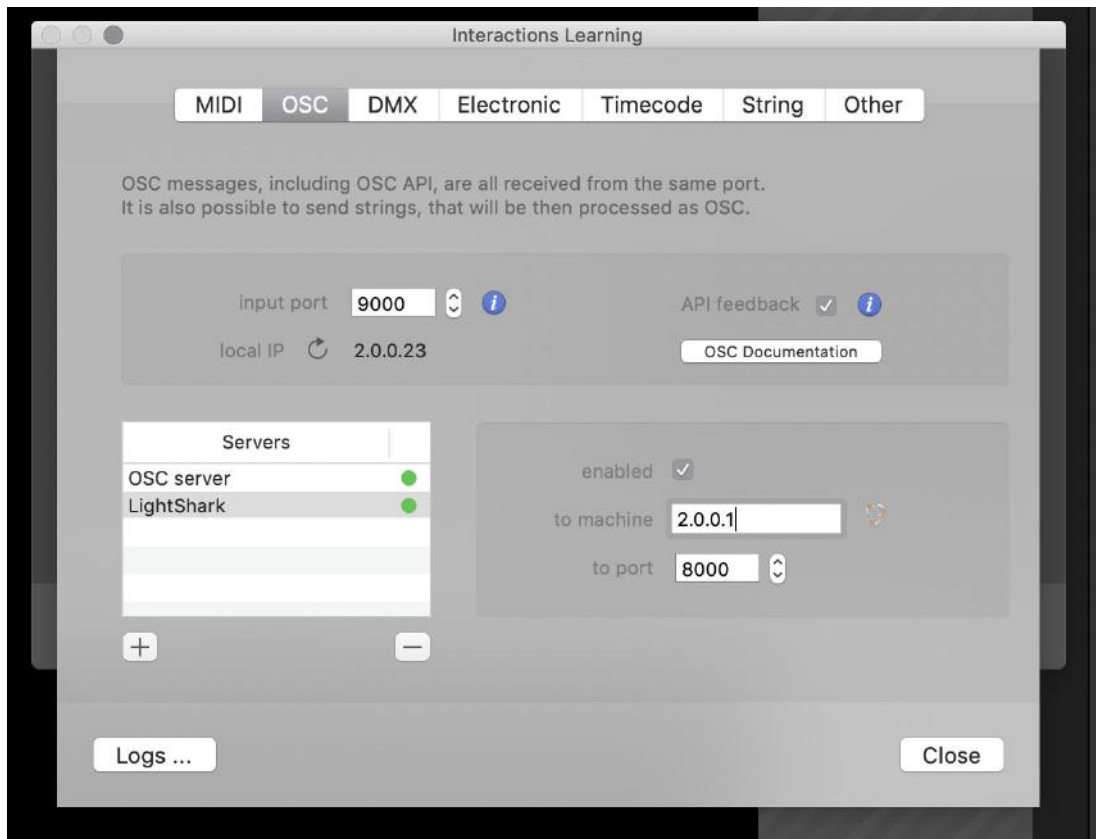
Note that actions in LightShark are performed by releasing the button, so the message is sent on <0> value instead of <1>.

Controlling lightShark from Millumin

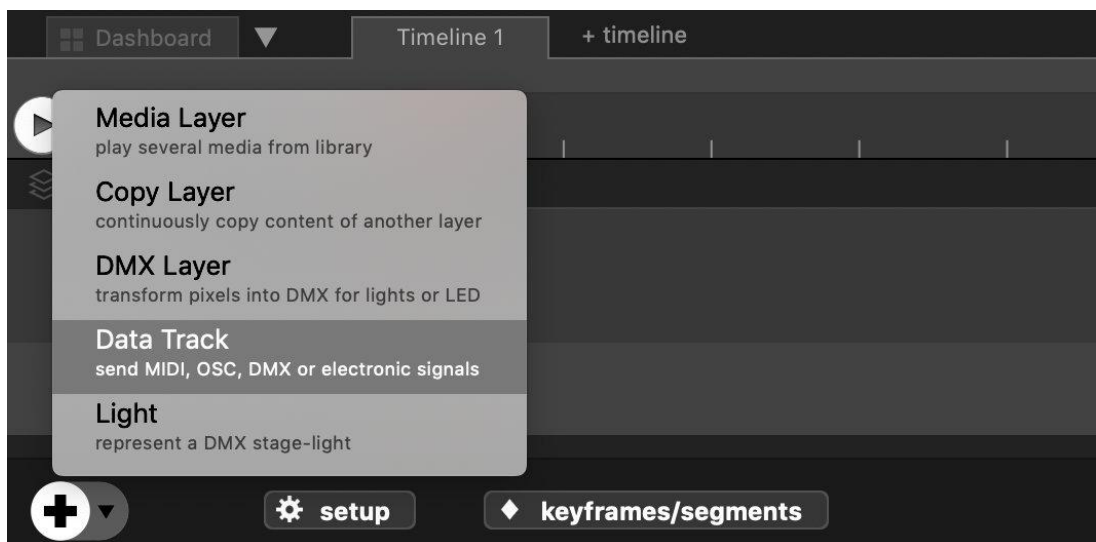
Millumin is a multimedia software for live event management:

<https://www.millumin.com/v3/index.php#features>

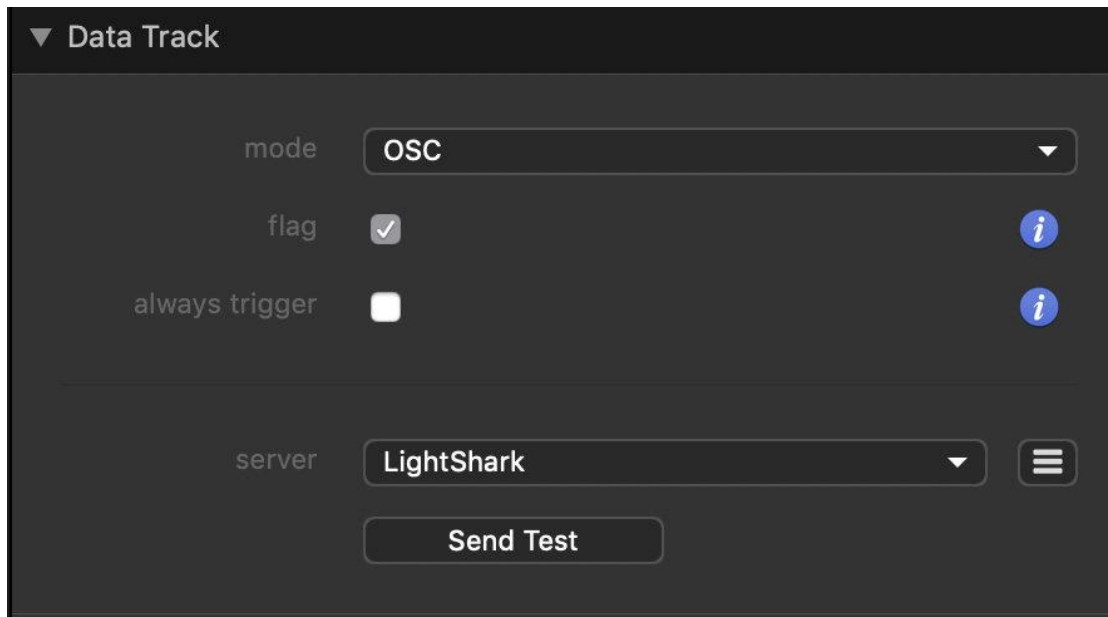
- 1** Connect the computer with Millumin to the same network as your LightShark device.
- 2** In lightShark within the preferences, in the MIDI&OSC tab make sure that OSC command reception is enabled and that the input and output ports are correctly configured.
- 3** In the Millumin interactions window, add an OSC output by specifying the IP address and the LightShark input port,



4 Add a Data track.



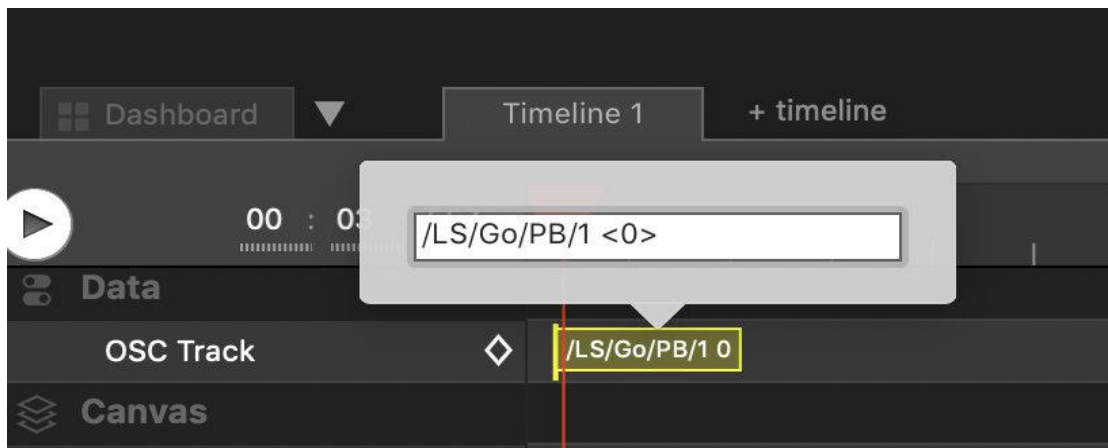
5 Set the track mode to OSC and check the "Flag" box.



6 Add a Keyframe and enter the command with the action you want to perform.

Below is an example of how to send the "GO" command to Playback 1:

`/LS/Go/PB/1 <0>`



Note that actions in LightShark are performed by releasing the button, so the message is sent on <0> value instead of <1>.

The following table contains the correspondence of OSC commands to Hexadecimal for use on UDP controllers that do not support OSC protocol.

Control	HEX
Page Up	2f4c532f506167652f5570002c66000000000000
Page Down	2f4c532f506167652f446f776e0000002c66000000000000
DBO	DBO push = 2f4c532f44424f002c6600003f800000. DBO release = 2f4c532f44424f002c66000000000000
Edit	2f4c532f45646974000000002c66000000000000
Update	2f4c532f55706461746500002c66000000000000
Delete	2f4c532f44656c65746500002c66000000000000
Copy	2f4c532f436f7079000000002c66000000000000
Move	2f4c532f4d6f7665000000002c66000000000000
Set	-
Fan	2f4c532f46616e002c66000000000000
Find	2f4c532f46696e64000000002c66000000000000
Clear	2f4c532f436c6561720000002c66000000000000
Rec	2f4c532f526563002c66000000000000
Playback Selection	PB1 = 2f4c532f53656c6563742f50422f31002c66000000000000 PB2 = 2f4c532f53656c6563742f50422f32002c66000000000000 PB30 = 2f4c532f53656c6563742f50422f3330000000002c66000000000000
Playback Go	PB1 = 2f4c532f476f2f50422f31002c66000000000000 PB2 = 2f4c532f476f2f50422f32002c66000000000000 PB30 = 2f4c532f476f2f50422f3330000000002c66000000000000
Playback Flash	PB1 push = 2f4c532f466c6173682f50422f3100002c6600003f800000 PB1 release = 2f4c532f466c6173682f50422f3100002c66000000000000 PB2 push = 2f4c532f466c6173682f50422f3200002c6600003f800000 PB2 release = 2f4c532f466c6173682f50422f3200002c66000000000000 PB30 push = 2f4c532f466c6173682f50422f3330002c6600003f800000 PB30 release = 2f4c532f466c6173682f50422f3330002c66000000000000
Playback Stop	PB1 = 2f4c532f53746f702f50422f310000002c66000000000000 PB2 = 2f4c532f53746f702f50422f320000002c66000000000000 PB30 = 2f4c532f53746f702f50422f333000002c66000000000000
Playback Prev	PB1 = 2f4c532f507265762f50422f310000002c66000000000000 PB2 = 2f4c532f507265762f50422f320000002c66000000000000 PB30 = 2f4c532f507265762f50422f333000002c66000000000000
Playback Next	PB1 = 2f4c532f4e6578742f50422f310000002c66000000000000 PB2 = 2f4c532f4e6578742f50422f320000002c66000000000000 PB30 = 2f4c532f4e6578742f50422f333000002c66000000000000
Playback Pause	PB1 = 2f4c532f50617573652f50422f3100002c66000000000000 PB2 = 2f4c532f50617573652f50422f3200002c66000000000000 PB30 = 2f4c532f50617573652f50422f3330002c66000000000000
Playback Fader Level	PB1 = 2f4c532f4c6576656c2f50422f3100002c660000430b563f PB2 = 2f4c532f4c6576656c2f50422f3200002c660000430d0723 PB30 = 2f4c532f4c6576656c2f50422f3330002c660000430d5db5
Main Playback Go	-
Main Playback Stop	-
Main Playback Prev	-
Main Playback Next	-
Main Playback Pause	-
Set GM Level	2f4c532f4c6576656c2f474d000000002c660000432fdbc3
Encoders	-

Control	HEX
Select Fixture	-
Select Group	-
Selection Next	-
Selection Prev	-
Intensity	-
Position	-
Colour	-
Beam	-
Advanced	-
Gobo	-
Fx	-
Executor Push Mode	Push = 2f4c532f4578656375746f722f312f372f3100002c6600003f800000 Release = 2f4c532f4578656375746f722f312f372f3100002c66000000000000
Executor Toggle Mode	2f4c532f4578656375746f722f312f312f3100002c66000000000000
Trigger Executor Row	Push = 2f4c532f4578656375746f724c696e652f3100002c6600003f800000 Release = 2f4c532f4578656375746f724c696e652f3100002c66000000000000
Sync All	2f4c532f53796e63000000002c66000000000000
Sync Only Playbacks	
Sync Only Executors	

7.3 Network File Transmission

Lightshark has an active Samba server that allows us to create a File Server and Shared Resources. In this way we will be able to share files and directories from Linux computers to Windows computers, macOS and with GNU/Linux computers.

The shared files are:

The shows folder.

The folder of device libraries.

Connection from macOS

- 1 From the toolbar go to Go > Connect to Server...



- 2 Enter smb:// x.x.x.x ,where x.x.x.x is the IP address of lightShark.



3 Enter your username and password:

Usser: **equipson**
Password: **sharkjaws**

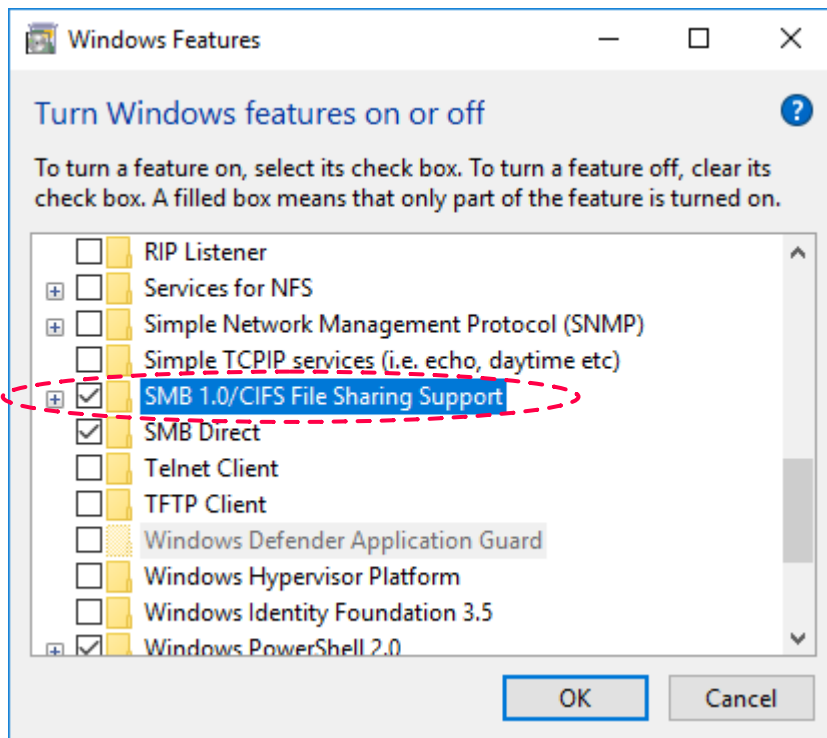
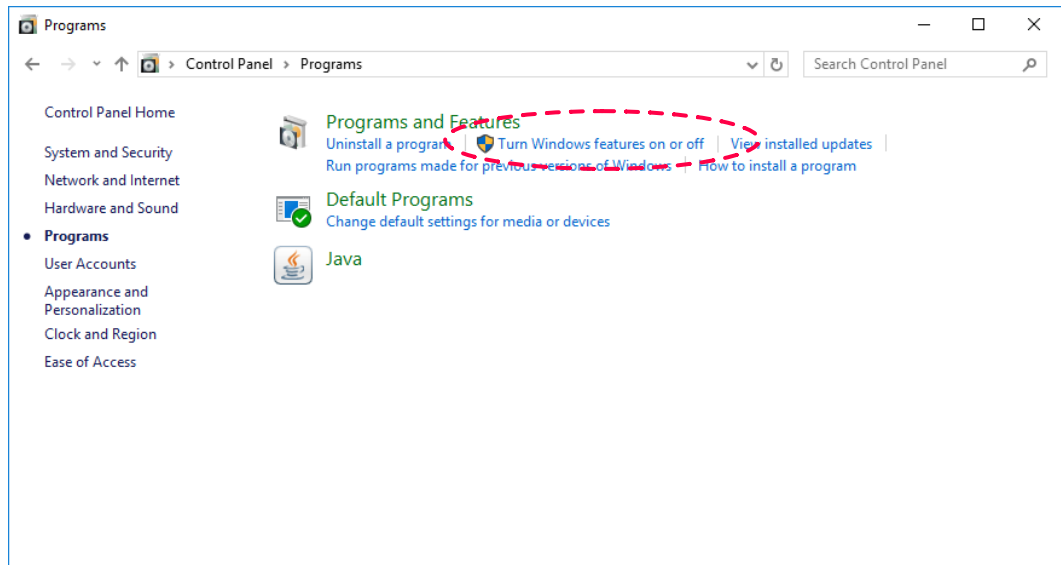
4 Select the share resource you want to access.



Connection from Windows 10

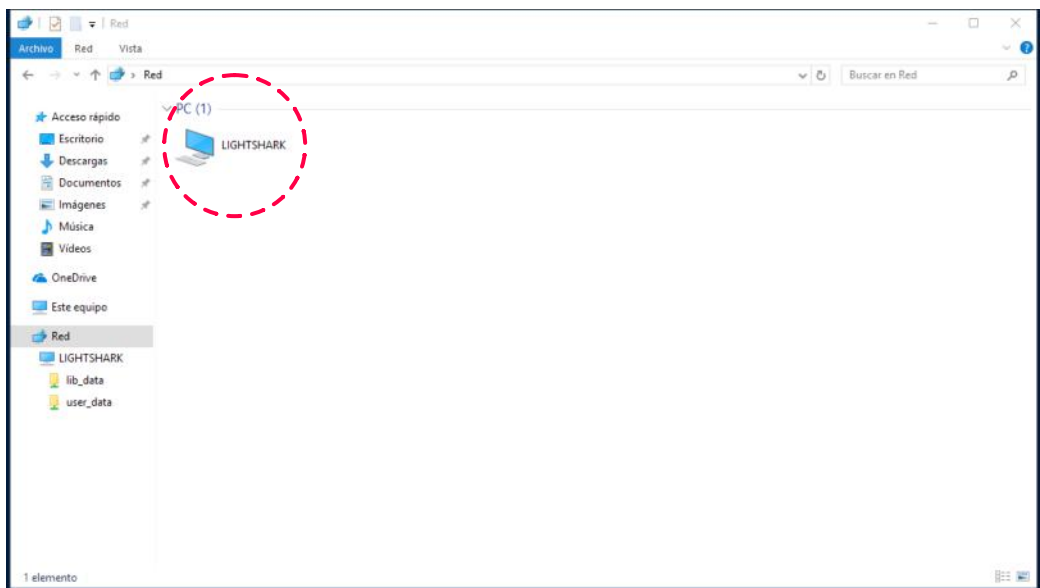
With the arrival of Windows 10 April 2018 Update Microsoft disabled by default the SMB/CIFS 1.0 protocol.

In order to install this protocol manually in the latest version of Windows 10, what we must do is open the Control Panel of the operating system (searching from Cortana "Control Panel" and, from it, we enter the "Programs" section. From here, click on "Turn Windows features on or off" to go to this section.

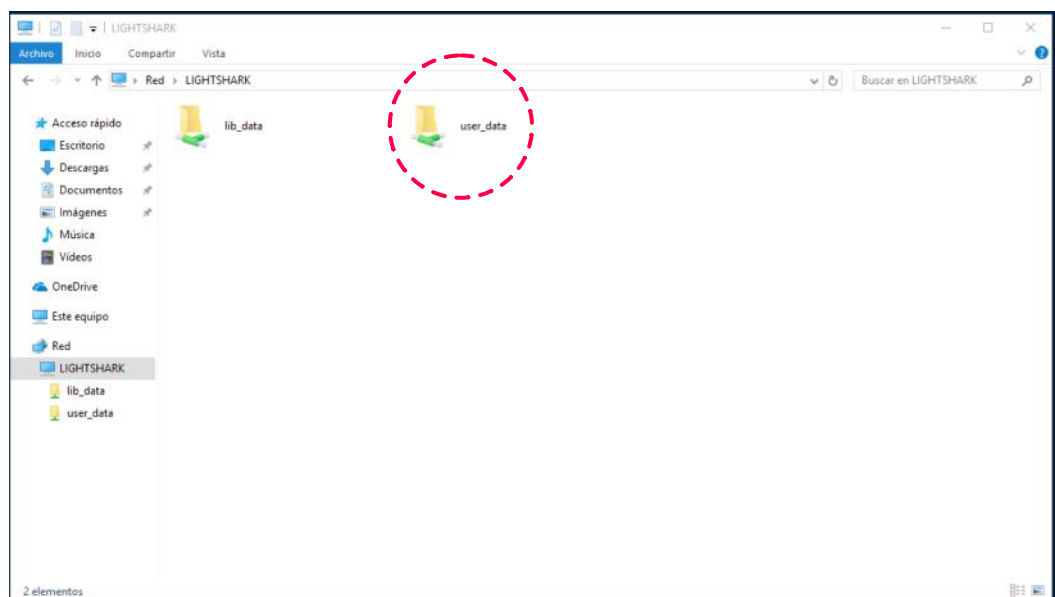


Once activated, we accept the changes and restart the computer. When it turns on again we will have SMB 1.0 working, and all the applications that depended on this protocol should work without problems equally in the last version of this operating system.

1 Access the network center and select access to lightShark.



2 Select the share resource you want to access.

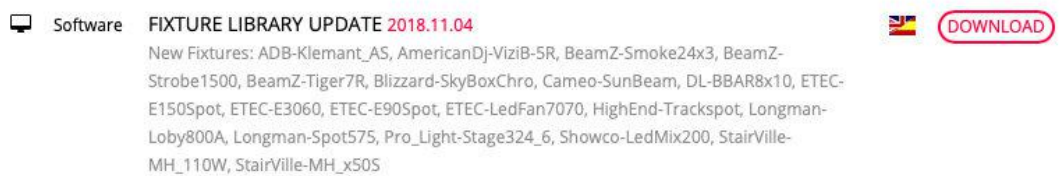


Section 8: Fixture Editor

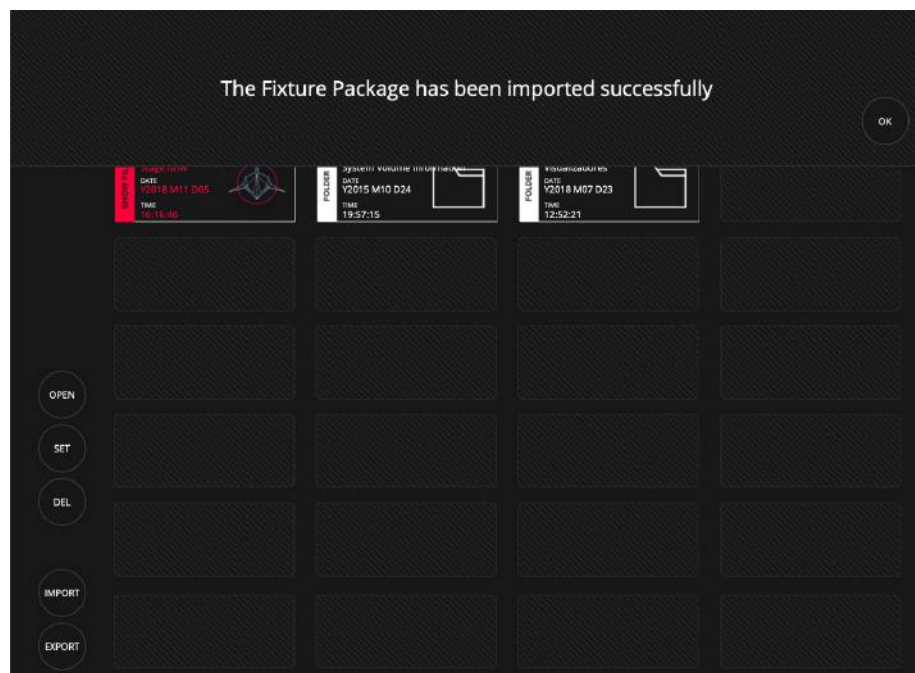
8.1 Importing Fixture Packages

The lightShark development team regularly publishes fixture packages including new profiles. Fixture packages can be downloaded from the lightShark website:

<https://www.workpro.es/lightshark>

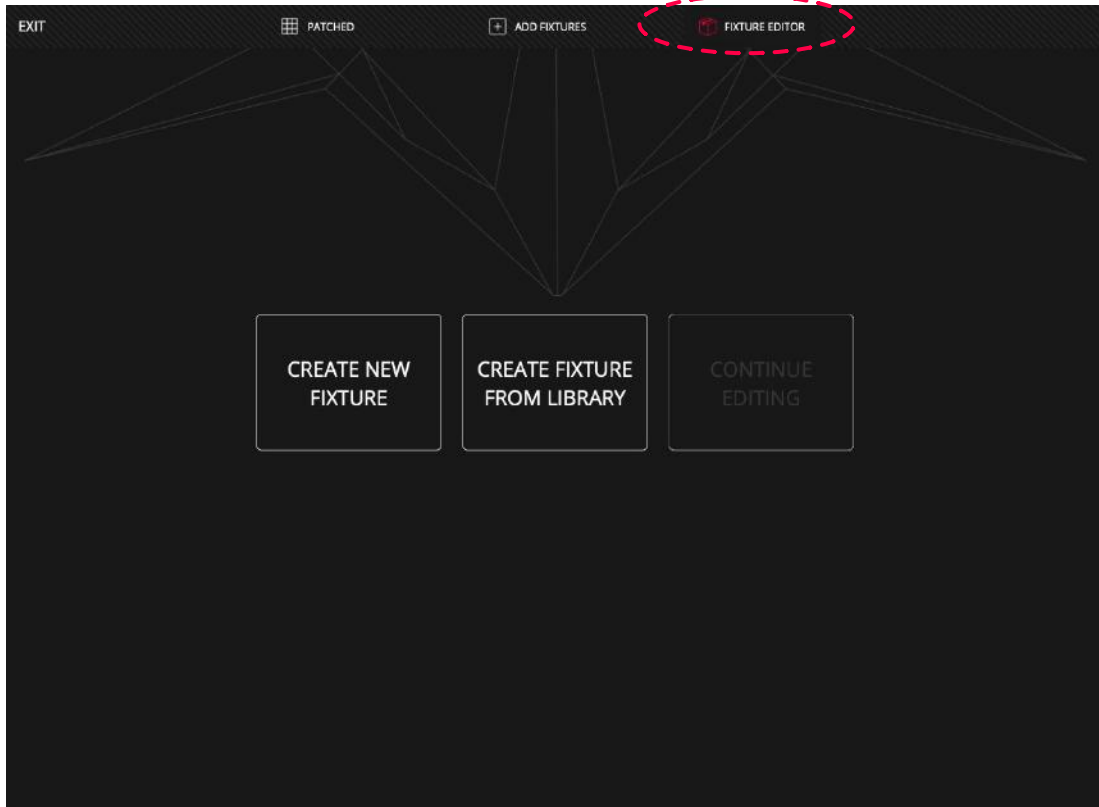


- 1 After downloading the latest fixture package, copy it to a USB memory stick and connect it to the USB Host port (on the LS_Core) or USB Data port (on the LS-1).
- 2 Connect to lightShark, open the File Manager and select the "USB" tab.
- 3 Click "IMPORT" and select the fixture package file.
- 4 Wait for the copy to finish



8.2 Create a new Fixture

LightShark has an integrated fixture editor, with which the user can create their own profiles for new fixtures. You can access the editor from the Patch > Fixture Editor window.

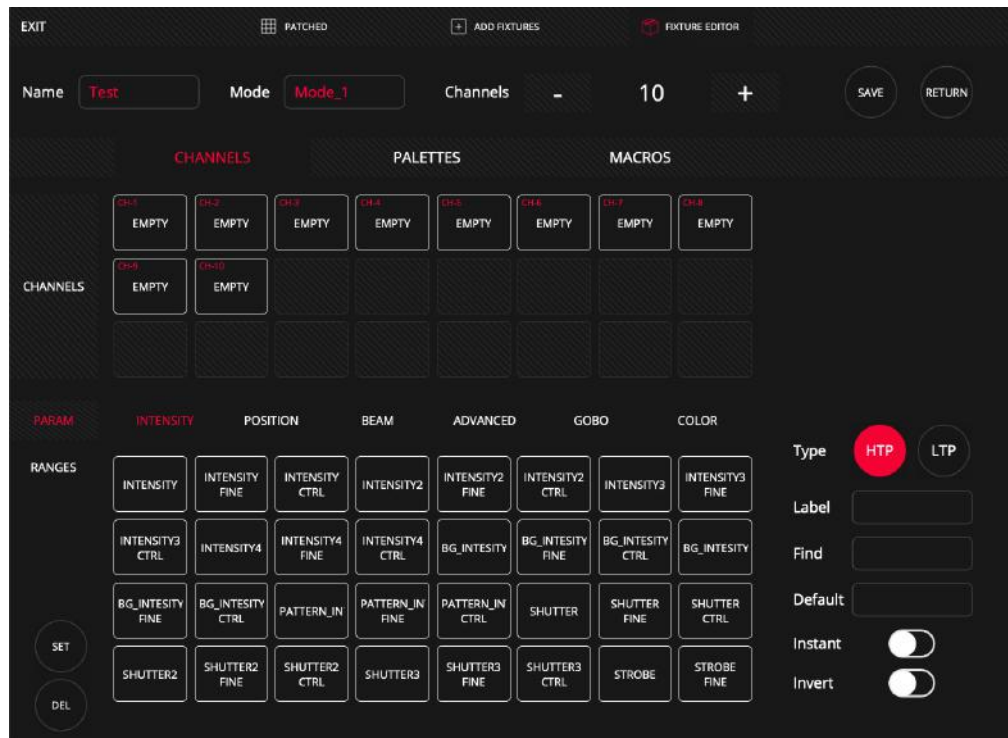


1 Selecting the "CREATE NEW FIXTURE" option will display the editor window.

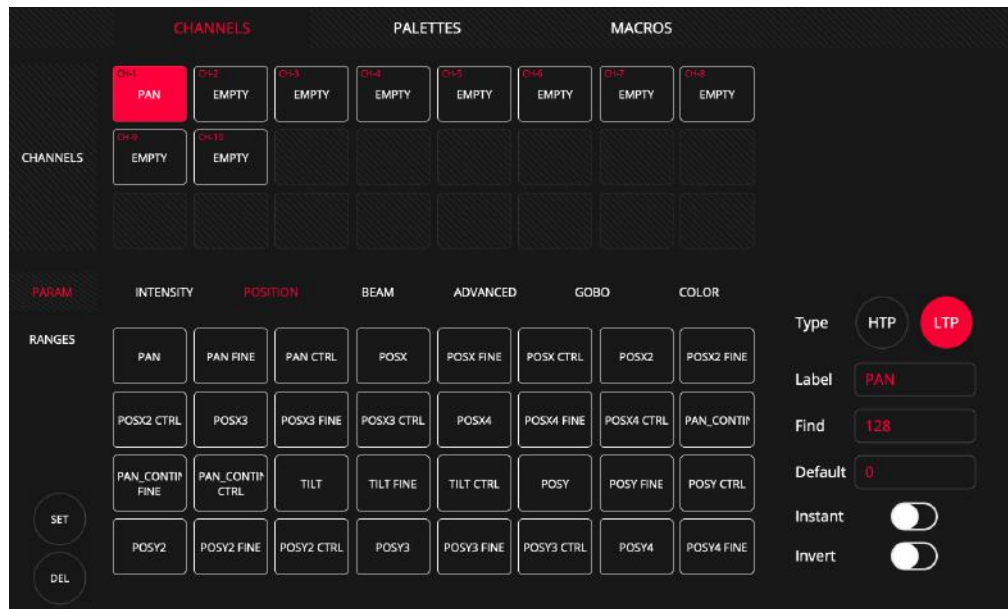
2 Enter the fixture name and mode. Press and hold the text fields for two seconds. They should not have more than 10 characters and should not use white spaces.

3 Enter the amount of channels the fixture has.

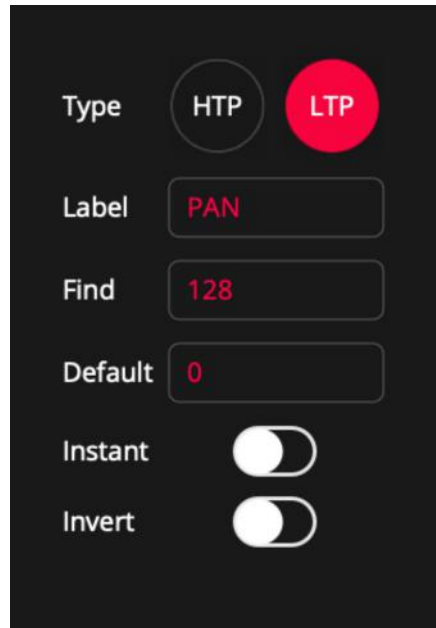
4 After entering the number of channels, lightShark will create as many boxes as channels. .



5 Select one of the empty boxes and then select one of the parameters at the bottom. These are divided into 6 different types (Section 3.6 has already explained each of the types and their parameters).



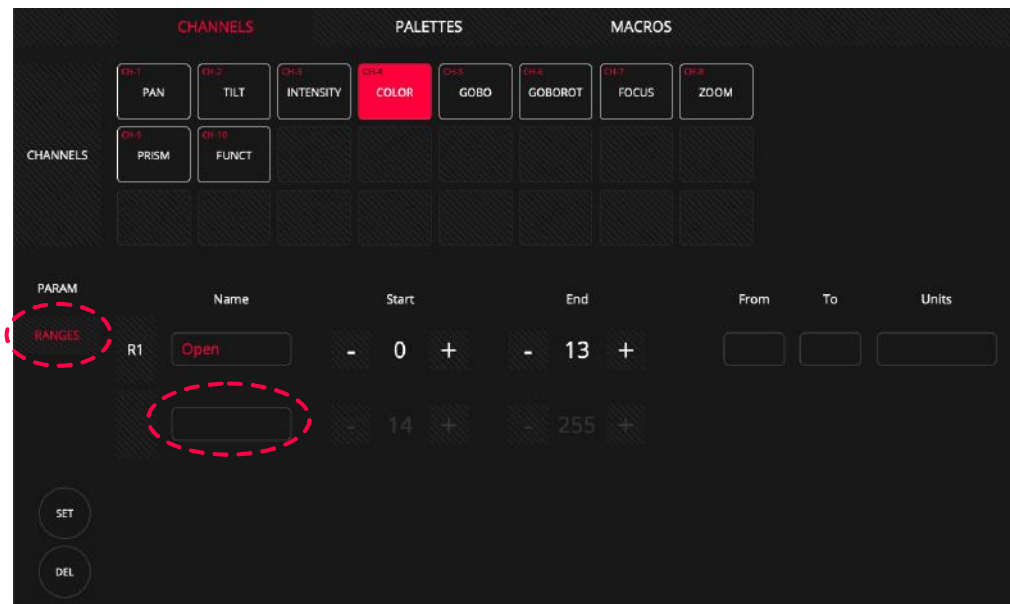
Selecting a lightShark parameter will autocomplete the Channel Type (HTP or LTP), Label, Find value and Default value. It is possible to configure the channel as "INVERT" or "INSTANT".



Enabling the "INSTANT" option will ignore the fade and transition times. Enabling the "INVERT" option will cause lightShark to invert the output values for that channel.

You can scroll between the different parameters.

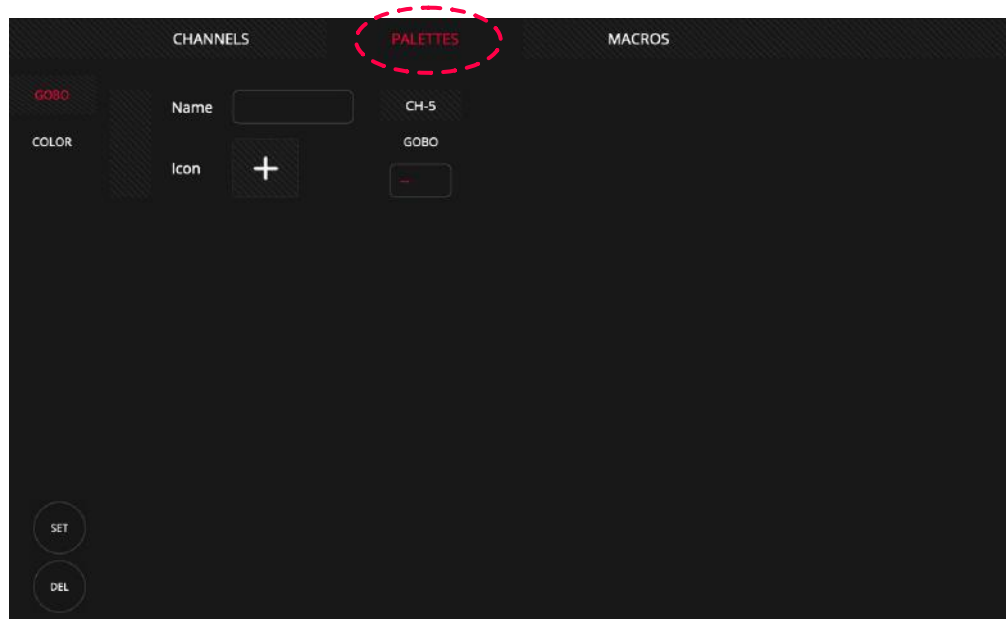
6 Once the parameters have been assigned to all the channels, the ranges for each channel must be defined.



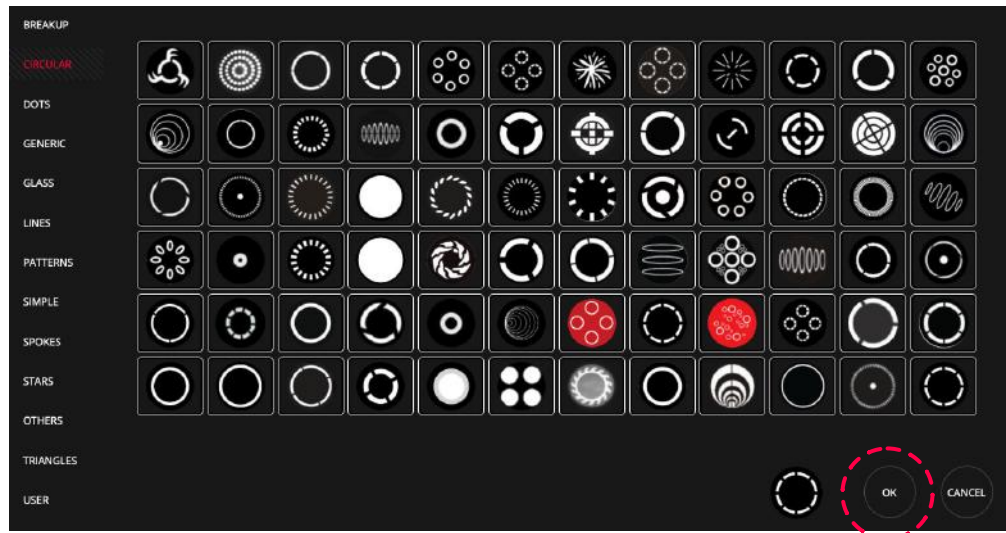
Hold down the "Name" field for two seconds to add a new segment, through the spinners set the minimum and maximum value of that range.

Repeat the process as many times as necessary to create the necessary ranges.

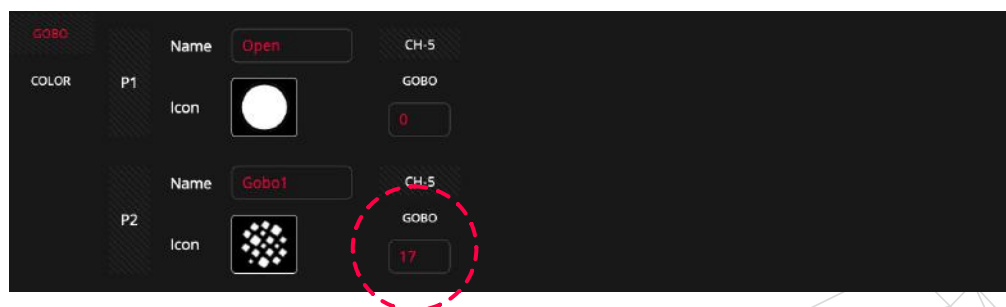
7 You can define the color and Gobo palettes of the fixture, can access the palette window from the "PALETES" tab.



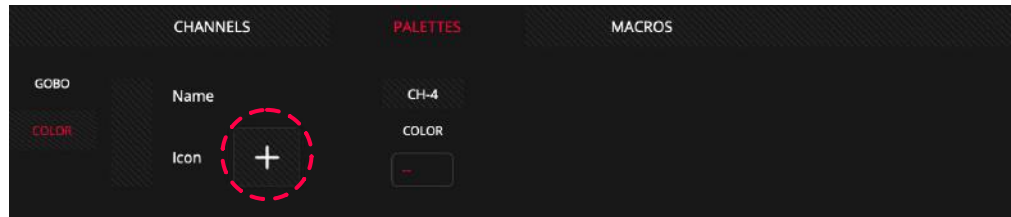
To add a gobo palette, enter a name to the palette and then add an icon. These are sorted by type.



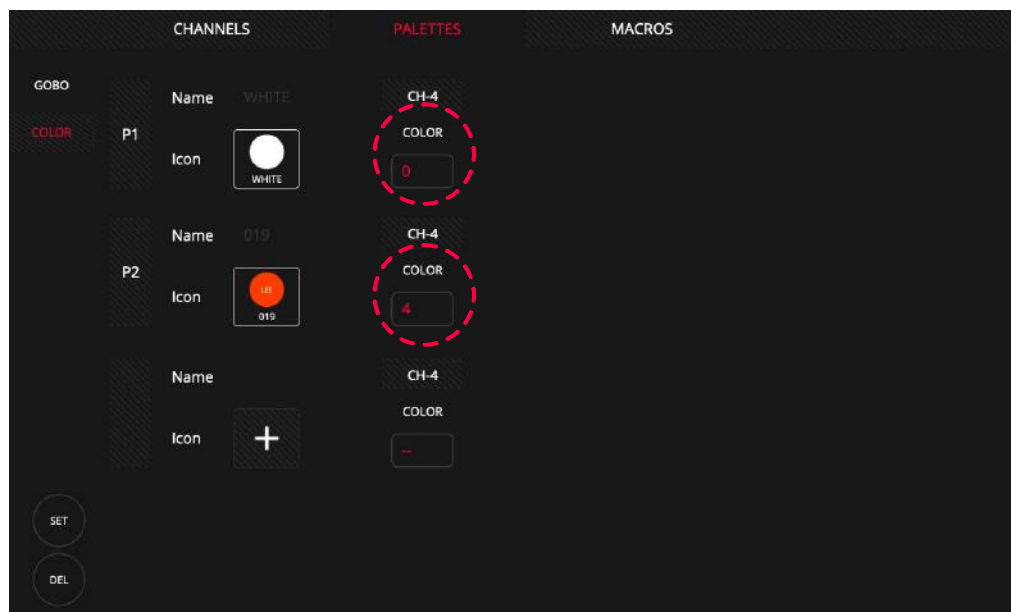
Once the gobo has been selected, press "OK" and set the channel value for that particular palette.



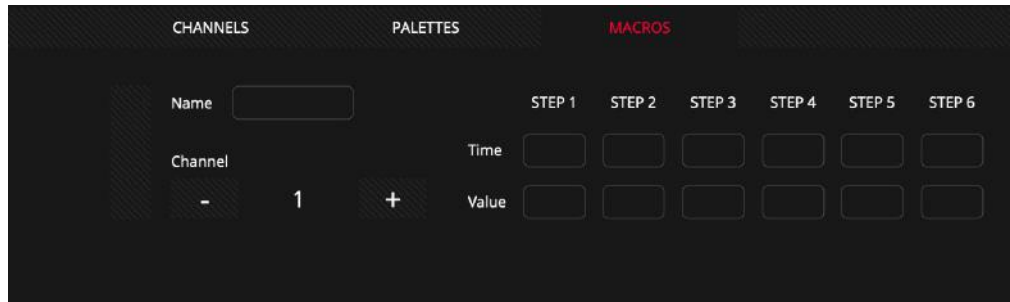
8 LightShark includes the Rosco and Lee color libraries, to create a color palette you must first select a color from the library.



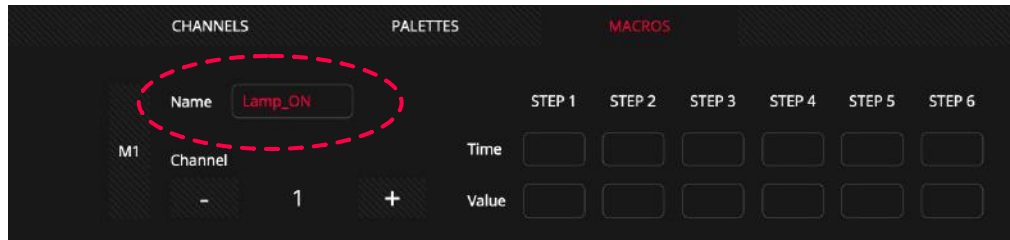
Once the color has been selected, you must enter the value of the channel for that color.



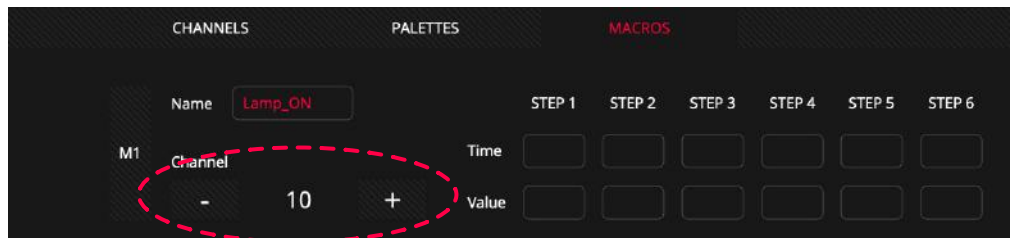
9 From the "MACROS" tab the user can define the functions of "LAMP ON", "LAMP OFF". "RESET", etc.



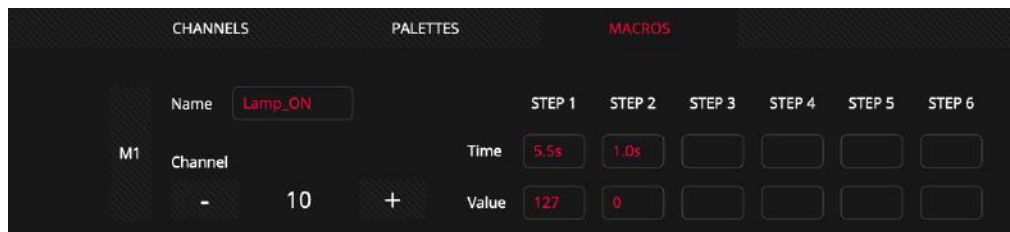
Press and hold the name field for two seconds to add a label to the Macro.



10 Select the channel that controls the Lamp_On, Lamp_Off , Reset...

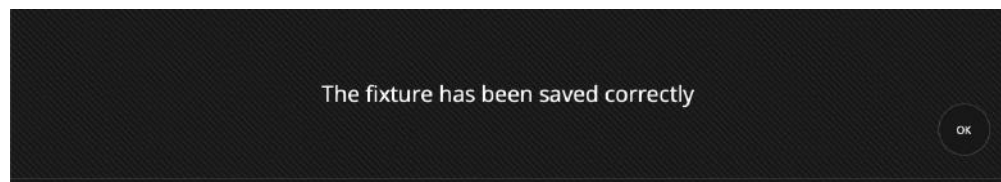
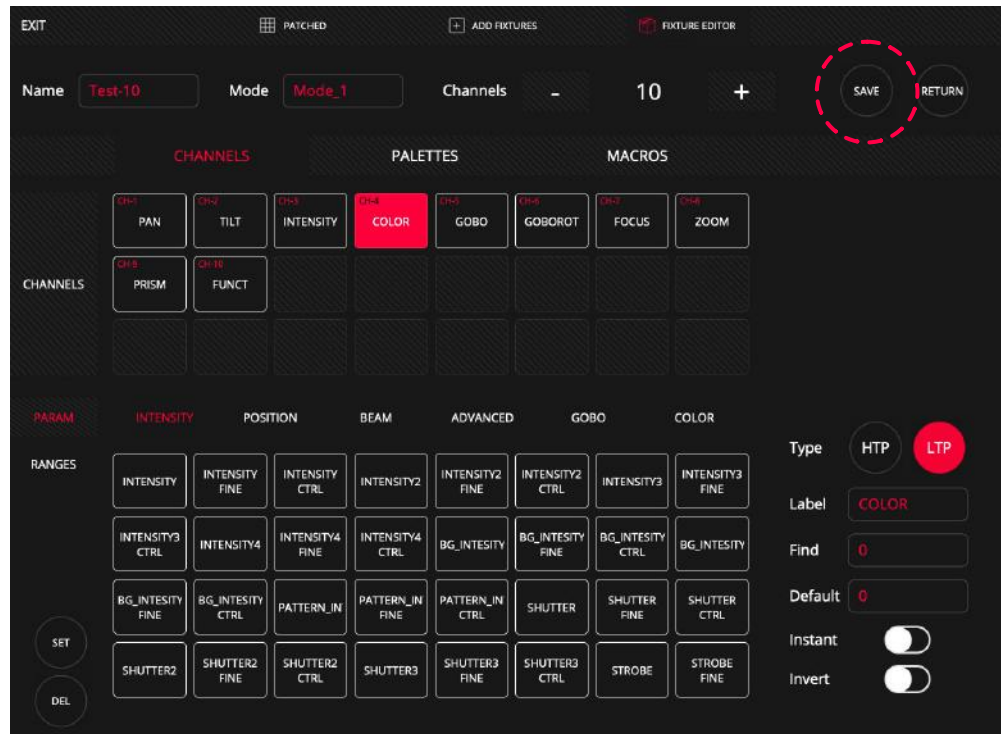


11 Define the values that the channel must have along the time period for the macro to be executed correctly.

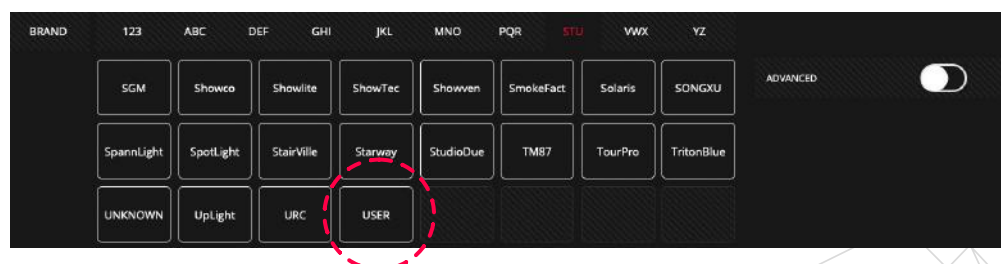


In this example the macro will send a value of 127 to the device for 5.5 seconds and then reset the channel to 0.

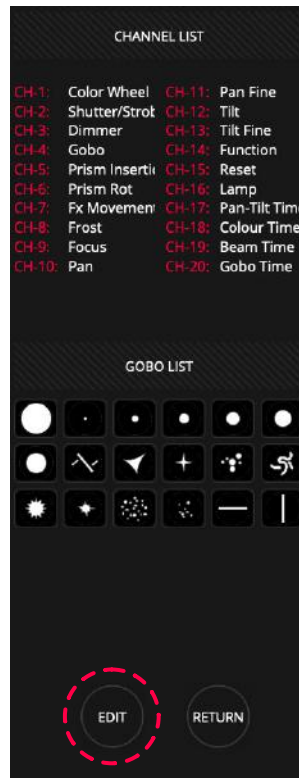
12 Save the changes so that lightShark adds the new device to the internal library.



The fixtures created by the user are added to the internal library within the manufacturer "USER".

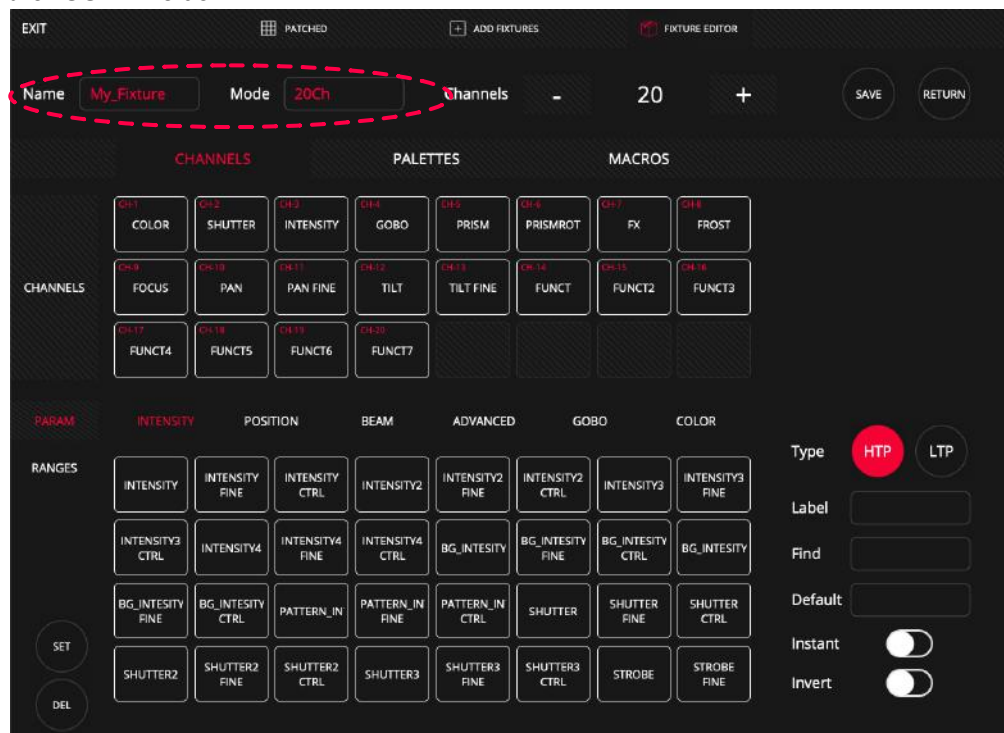


On the right side you can find the basic information of the fixture indicating the number of channels and their function. This allows you to check and see if the fixture meets your needs.



2 By pressing "EDIT" lightShark will load this fixture into the library editor, where you can make the relevant changes.

Once you have finished editing the fixture, press "SAVE" to add the new fixture to the "USER" folder.



Section 9: Hardware & Software

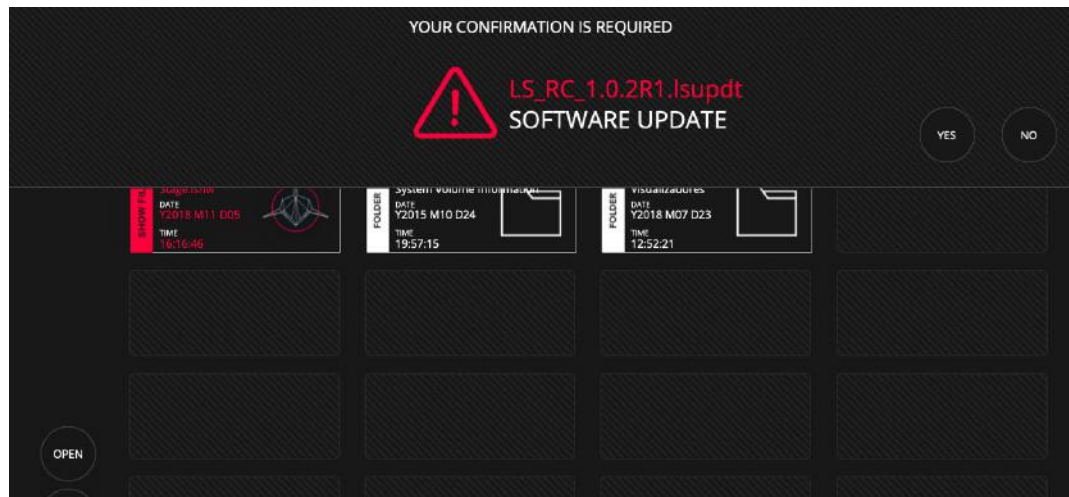
9.1 Software Update

The lightShark development team regularly publishes software update packages including new features and bug fixes. The update packages can be downloaded from the lightShark website:

<https://www.workpro.es/lightshark>



- 1** After downloading the latest update package, copy it to a USB stick and connect it to the USB Host port (on the LS_Core) or USB Data port (on the LS-1).
- 2** Connect to lightShark, open the File Manager and select the "USB" tab.
- 3** Click "OPEN" and select the update file.
- 4** Wait for the update to finish. The process usually takes about 3 minutes and if the update includes a new firmware, 2 restarts are necessary.

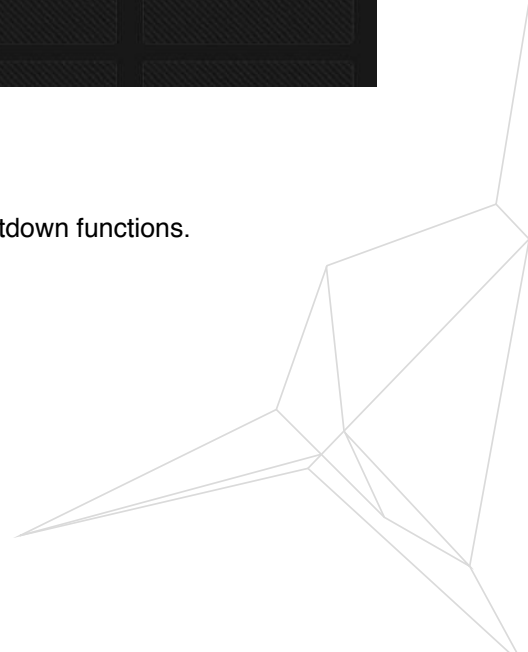


9.2 Reset

LightShark includes a series of key shortcuts for reset or shutdown functions.

Software Reset to LS-1.

- 1** Turn off the console
- 2** Press the keys NEXT+PREV+1



- 3 With the keys pressed, switch on the console and wait 4 seconds.
- 4 After 4 seconds, release the keys. LightShark will restart and at the next boot the console will load software version 1.0.

Software restart in LS-Core.

- 1 Turn off the device
- 2 Press the keys SET+NEXT+RESET
- 3 With the keys pressed, switch on the device and wait 4 seconds.
- 4 After 4 seconds, release the keys. LightShark will restart and at the next boot the console will load software version 1.0.

Reset Network settings in LS-1.

- 1 Turn off the console
- 2 Press the keys NEXT+PREV+2
- 3 With the keys pressed, switch on the console and wait 4 seconds.
- 4 After 4 seconds, release the keys. LightShark will restart and at the next start the network settings will be reset to factory settings.

Reset Network settings in LS-Core.

- 1 Turn off the device
- 2 Press the keys NEXT+RESET
- 3 With the keys pressed, switch on the device and wait 4 seconds.
- 4 After 4 seconds, release the keys. LightShark will restart and at the next start the network settings will be reset to factory settings.

Show firmware version in LS-1.

- 1 Turn off the console
- 2 Press the keys NEXT+PREV+DBO
- 3 With the keys pressed, switch on the console and wait 4 seconds.
- 4 After 4 seconds, release the keys. The LCD will display the firmware version.

Hardware Test in LS-1.

- 1** Turn off the console
- 2** Press the keys NEXT+PREV+10
- 3** With the keys pressed, switch on the console and wait 4 seconds.
- 4** After 4 seconds, release the keys. LightShark will show on the LCD a small utility to check the Hardware.

Turning off LS-1 by keystroke.

It is possible to turn off the LS-1 console from the control surface by holding down the DBO+CLEAR keys for 3 seconds.

Section 10: Licenses

10.1 Software Licenses

Python License (Python-2.0)

Python License, Version 2 (Python-2.0) PYTHON SOFTWARE FOUNDATION LICENSE
VERSION 2 -----

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