

dmXLAN software

Version 3.1.x
by ELC lighting

The dmXLAN system is built-up from DMX/Ethernet nodes / DMX/ethernet recorders and intelligent network switches. All of these units can be configured using the free dmXLAN software. The software is available on these platforms:

- Windows (XP and Vista)
- Apple Mac OS X (10.4 and up as universal binary)
- Windows Pocket PC 2003 and Windows mobile 5 and up

The software can be used to configure and monitoring the dmXLAN network, and can also be used to control/test lighting fixtures connected to the dmXLAN network. All of this is independent of the brand of consoles and lighting fixtures used.

Software Setup

Windows

Download the dmXLAN software for windows from the website (www.elclighting.com) and unzip the file. Next start the setup.exe program and follow the instructions.

Apple Mac OS X

Download the dmXLAN software for mac from the website (www.elclighting.com) and unzip the file. Next copy the dmXLAN folder to the Applications directory.

Windows Pocket PC 2003

Download the dmXLAN software for poack pc from the website (www.elclighting.com) and unzip the file. Next copy the .cab file to the pocket pc. On the pocket pc run the .cab file and follow the instructions on the screen.

Network settings on you computer

The IP address of the computer need to be set to the artnet range:

IP address 2.0.x.x (where x is a value between 1 and 254)

Each computer must have a different address.

Netmask 255.0.0.0

Windows

Apple Mac OS X

Windows Pocket PC 2003

Device Connections

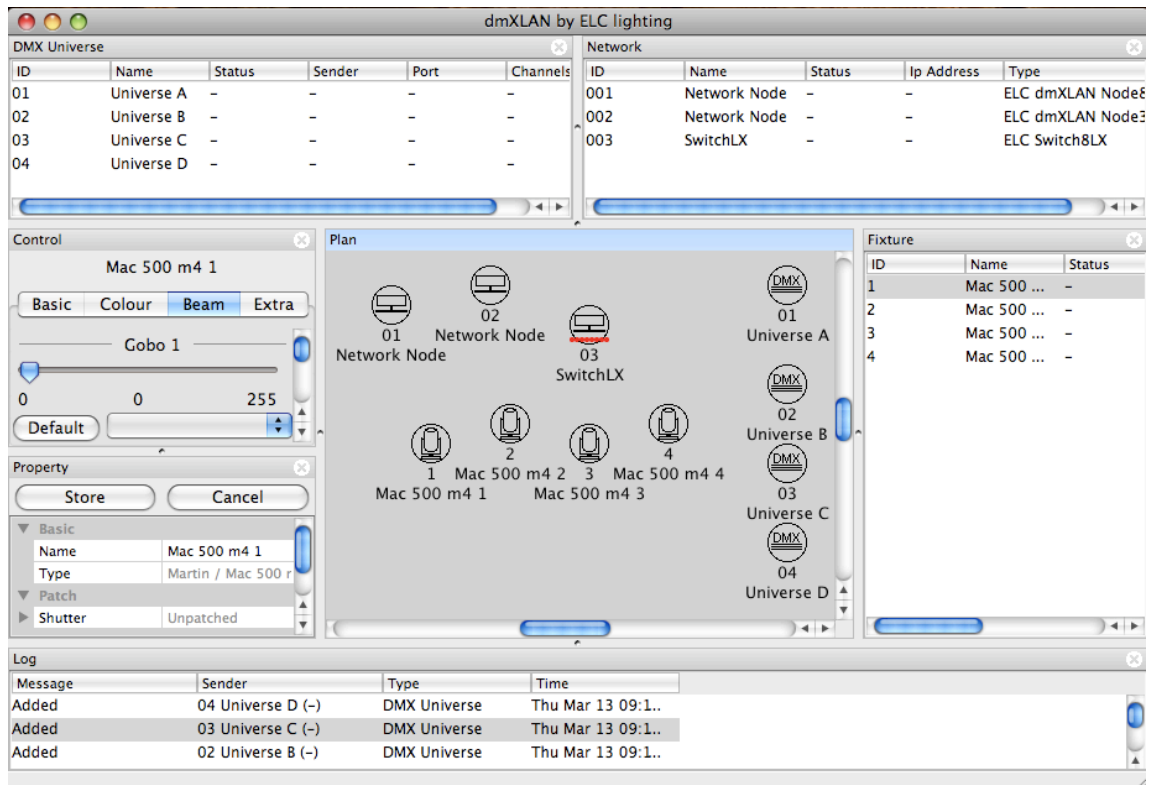
Each network node and switches is connected by standard network topology.

Software description

The software on all platforms work the same. One exception is the pocket pc version, as this software uses a different layout and does not support the following functions:

- Plan overview
- Multiple layouts

Note: Mac OS X screen shots are used, but all versions work the same.



Screen layout (Windows and Mac OS X)

The main window has 7 areas:

Plan

This area is always visible and contains an icon for all network nodes, network switches, DMX universes and lighting fixtures.

DMX Universe

This area contains a list of all DMX universes. The universes can be automatically detected or manually added.

Network

The network area has a list of all network nodes and switches detected on the network. Network nodes can also be added manually for configuration in advance.

Fixture

The fixture area is a list of lighting fixtures in the system. These fixture can be manually added. From this list you can select one or more fixtures to be controlled.

Log

The log area keeps a list of most event. Each event is marked by a time stamp.

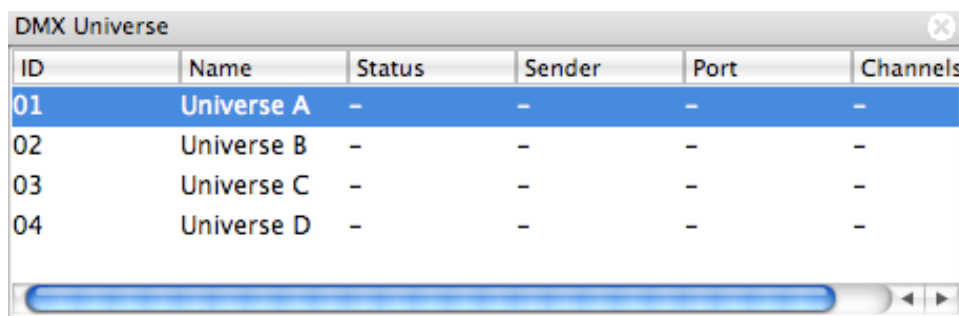
Property

The property area is dynamic. The properties of the selected item (node/universe/ fixture/...) will be displayed here and can be changed. Each change (marked by **bold** characters) must be stored using the "Store" button.

Control

The control area is also dynamic, depending on the selected item. Functions are explained further on.

DMX Universe area



ID	Name	Status	Sender	Port	Channels
01	Universe A	-	-	-	-
02	Universe B	-	-	-	-
03	Universe C	-	-	-	-
04	Universe D	-	-	-	-

DMX universes on the network are like virtual DMX cables. Each node receives all of these cables and can then locally decide to use it or not. The computer also receives the DMX data and will display these in the DMX universe list. Each universe in the list shows some information about it self:

ID - The is the identifier (or universe address). For artnet, 2 hexadecimal digits are used. Hexadecimal means that each digit has 16 possibilities 0-9, A-F (unlike normally used decimal that has 10 possibilities 0-9). With these two digits you can have a maximum of 256 (16 x 16) different DMX universes on the network. If more then one node or console on the network sends out a DMX universe with the same ID, then there will be a message in the log window. The nodes will always only one so it does not switch continually between different DMX sources.

Name - The name can be given by the user, by using the property area.

Status - Indicating the actual status of the DMX universe on the network. This can be "online" then the universe is active. "Failed" the universe has dissapeared, this might be a failed connection or different error. "-" status indicates that the universe has been manually added (or loaded from a file) and has not been detected.

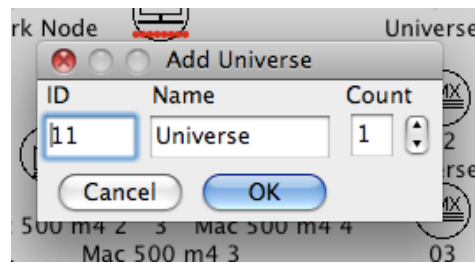
Sender - indicates the IP address or node name of the source device.

Port - indicates the port on the sender the universe originates from.

Channels - channel count in the universe.

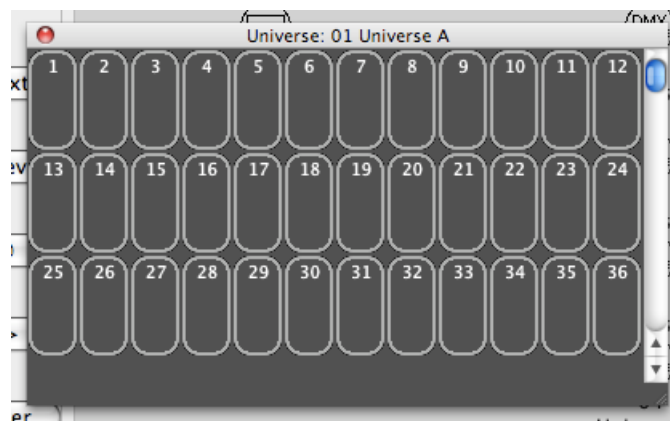
Manually adding of universes

To manually add a single or multiple universes, select "Edit > Add DMX Universe" from the menu bar.



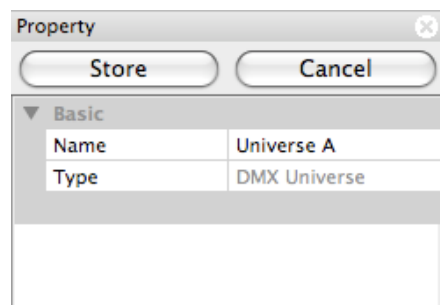
Next you can set the universe ID, name and number of universes to be added. If you add more than 1 universe, then the extension “A”, “B”, etc. is added to the name. Click OK to confirm.

View DMX values



To view the channel values of the selected DMX universe select “View > View DMX”. Blue bars indicate the value received. Red bars indicate overwritten values. Values can be overwritten by the dmXLAN software by using the Universe Control area or Fixture Control area.

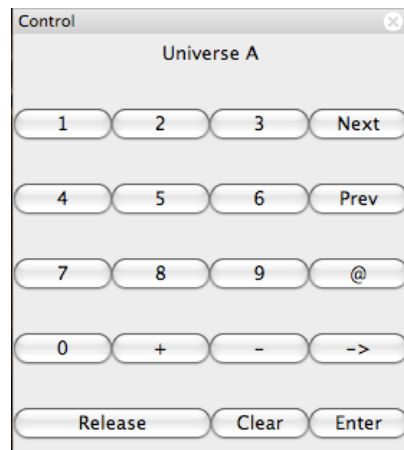
Universe Properties



By selecting a universe you can change the properties.

Note: When changing the name, you’ll need first to press Enter before pressing store.

Universe Control



With the universe control you can overwrite DMX channels on the universes. Use “-> Release” to undo the overwriting of channels.

Note: Universe overwrite only works when the final DMX is outputted from a ELC dmXLAN node.

Network area

ID	Name	Status	Ip Address	Type
001	Network Node	-	-	ELC dmXLAN Node8
002	Network Node	-	-	ELC dmXLAN Node3
003	SwitchLX	-	-	ELC Switch8LX

Network nodes and switches can be automatically or manually added. The list shows the following information about the device:

ID - For configuration of the system in advance, you’ll need to use separate ID’s for each device. The ID can then be set in the device and then it will automatically be loaded with its new configuration.

Name - The nodes can be given a meaningful name.

Status - This indicates the status of the device, this can be

“Online” all is OK

“Failed” connection to the device is lost

“Program” new configuration is being loaded into the device

“Read” the current configuration is begin read

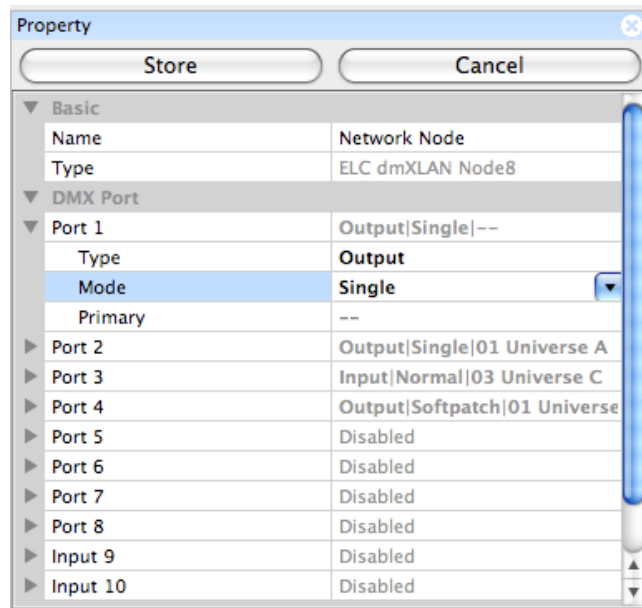
“Verify” the configuration in the device and the software is being compared, done after changing a setting

Ip Address - network address of the device

Type - Brand and Type of the device

Network Properties

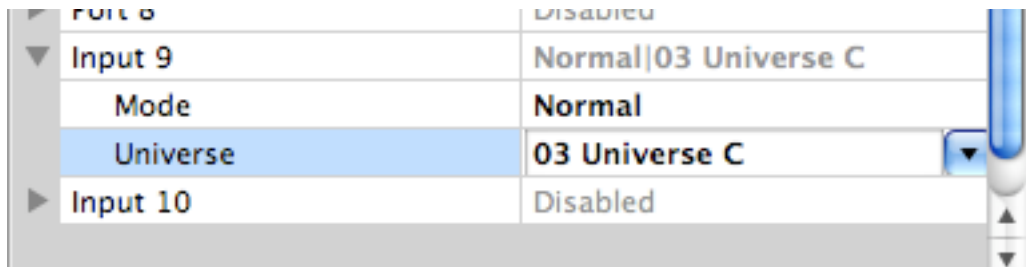
The properties of each type of node can differ.



The DMX ports of the nodes have 3 types:

- Input
- Output
- Port (omni, can be input or output)

DMX input options



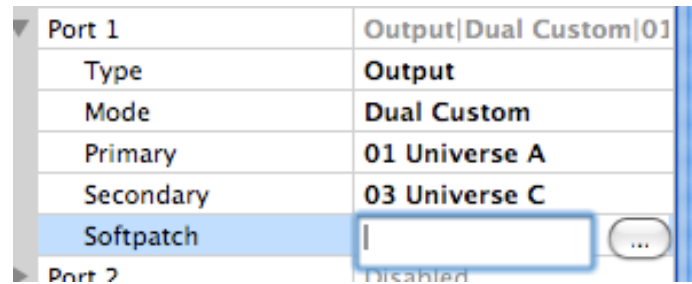
Each DMX input port can be setup as

Disabled - The port does nothing

Normal - When the DMX port receives valid DMX, then it will send the DMX data as a universe with the specified ID.

Backup - The input will monitor the network and look out for the specified DMX universe. if this universe is not on the network or has failed, then it will send its own DMX data onto the network (only if it receives valid DMX data on its input port). If the same DMX universe from a different source (can be the same node, but other input port) is then detected on the network, it will stop sending the DMX data. This acts as an automatic switchover.

DMX output options



The output modes are

Disabled - The DMX output is silent, no DMX signal is outputed

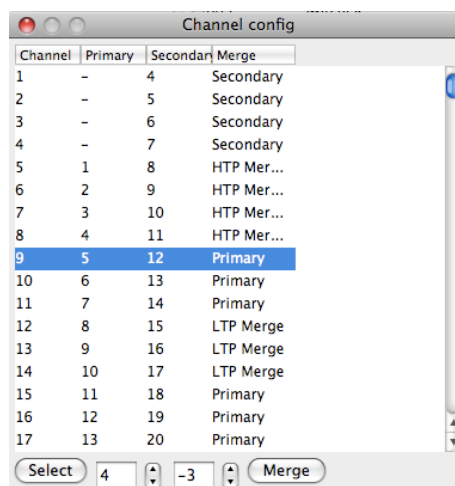
Out Zero - Send a valid DMX signal with all values at 0 (useful as test signal)

Single - The DMX output will output the selected (primary) DMX universe.

Dual HTP - The DMX output will merge 2 universes onto the output with "Highest takes Precedence"

Dual LTP - The DMX output will merge 2 universes onto the output with "Latest takes Precedence".

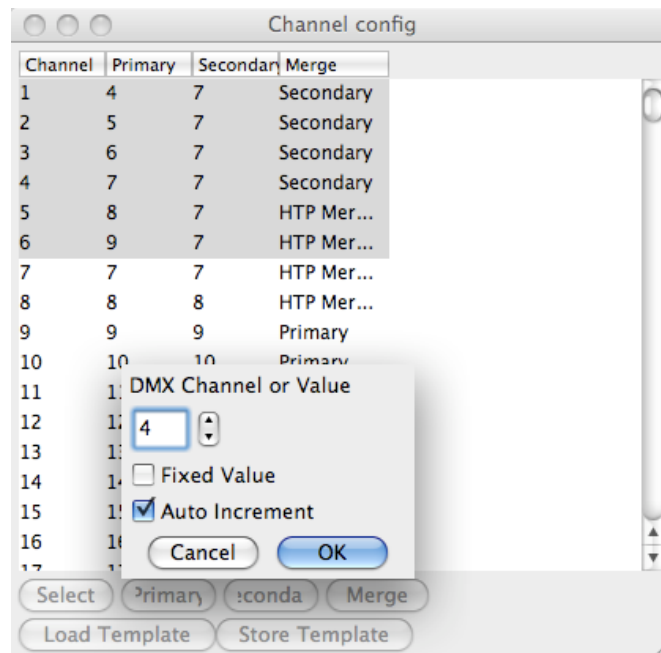
Dual Custom - The DMX output is a merge of 2 universes. The merging setup is customizable. To customize click on the button (...) in the softpatch field. This will open the "channel config" window.



In the config window you can select a number of channels and set the merge for these channel (Primary / Secondary / HTP / LTP). The starting addresses of the two universes (Primary and Secondary) can be adjusted.

Priority - Define 2 universes for the output. As long as the primary universe is active, then this one will be on the output. If the primary fails, then the output will switch to the secondary universe. If the primary is back, it will switch back.

Softpatch - This mode is like the "Dual Custom", except that the "Channel Config" window has changed.



You can now not only change the starting address of the universe, but softpatch all the channels within the universe, or put fixed values instead.

The “Load Template” and “Store Template” buttons can be used for loading and storing the patches for use in different nodes.

Note: The DMX output will start sending DMX after it has detected 1 of the 2 universes on the network. The output also features a “DMX hold”.

Fixture Area

ID	Name	Status	Patch	Type
1	Mac 500 ...	-	1 (00 Sho ...	Mac 500 m
2	Mac 500 ...	-	17 (00 Sh ...	Mac 500 m
3	Mac 500 ...	-	33 (00 Sh ...	Mac 500 m
4	Mac 500 ...	-	49 (00 Sh ...	Mac 500 m

Lighting fixtures can be added manually via the menu “Edit>Add Fixture”. With the fixtures added and patched, will give the dmXLAN operator/rig-tech the ability to control any fixture in the rig without having access to the console. so the console operator can work independent from the techs. Even if there is no console, the tech can startup and test the rig.

The Fixture Area contains the info of the fixtures:

ID - This is a given number, normally try to match it to the console fixture ID's

Name - Given name

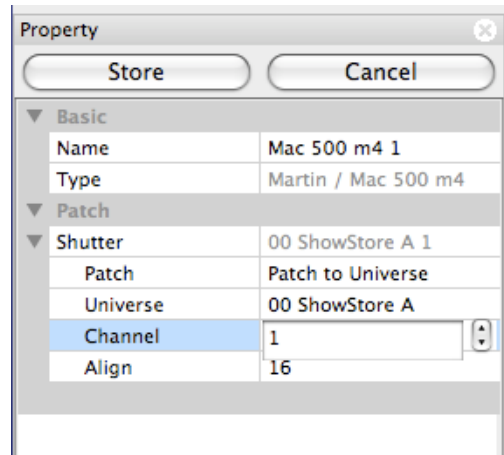
Status - the control status (- / controlled / locked) or current macro that is running (lamp on / reset)

Patch - DMX and selected universe (or network node) the fixture is patched to

Type - Manufacturer name and type of the fixture

In the with Select>Highlight it is possible to enable/disable highlight function. This function enable stepping thru fixtures

Fixture Properties



The properties of the fixture include name and patch. To patch the fixture, first select 1 or multiple fixtures and edit the Patch property. There can be multiple patch properties, for fixture types that have splitted DMX areas, like for example the VL5 with external dimmer. The patch property indicates the name of the first channel (example the above picture "Shutter" is the first channel of the Mac500).

There are 3 possible patch types:

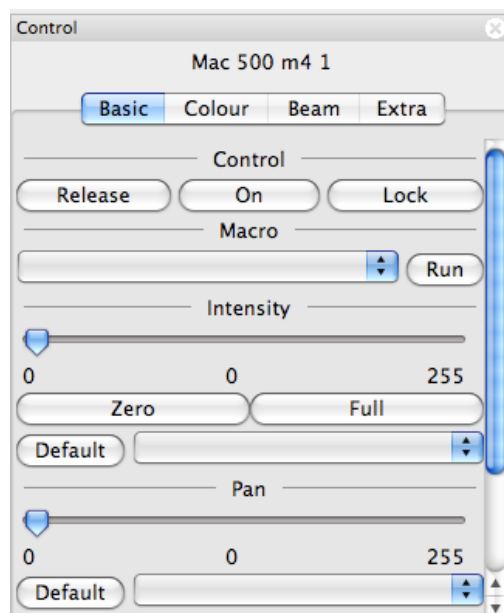
"Unpatched" - The fixture is not patched, so can not be controlled.

"Patch to Universe" - The fixture is patched to a universe number. The dmxlan software will calculate thru all softpatching and merging to control the fixture.

"Patch to Node" - This patch indicates exactly where the fixture is connected and what its dmx address is.

The align property is only used when patching more than 1 fixture. By default the align is set to the channel count of the fixture, but it is possible to change this.

Fixture Control



With the fixture control window, all channels and macro's can be accessed. The window has 4 main tabs: Basic / Colour / Beam / Extra each containing the related channels.

The basic tab also has Control buttons:

Release - release the fixture back to to the main console

On - set the fixture to a default "on" state (intensity full, shutter open and pan/tilt to 50%)

Lock - remove the fixture from the show (intensity 0%, shutter close and pan/tilt to 50%)

The macro area can be used to run macro's like lamp on / lamp off or reset. When running a macro onto multiple fixtures, each macro will be time delayed, this to prevent a power surge.

Fixture type library files

The library file is made up from a basic file 'fixture.lib', this is a text file which can include sub text files. All files are found in the "Program Files\EIclighting\dmXLAN 3.x.x\Fixture Library" directory.

Example of the main fixture.lib file

```
fixture = Profile  
image = profile  
parameter = Intensity
```

```
fixture = Par  
image = par  
parameter = Intensity
```

```
fixture = Dimmer 12ch  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity  
parameter = Intensity
```

```
#include = "martin.lib"  
#include = "claypaky.lib"  
#include = "highend.lib"
```

To define a fixture first set its manufacturer, followed by the fixture type name and the image item sets the name of the icon type.

Example of the high end file, only one fixture shown (studio spot 250)

```
manufacturer = High End
```

```
fixture = Studio Spot 250  
head = yoke  
image = yoke
```

```
parameter = Pan
```

default = 128
parameter = Pan, fine
parameter = Tilt
default = 128
parameter = Tilt, fine

parameter = Colour 1 Mode
parameter = Colour 1
parameter = Gobo 1 Mode
parameter = Gobo 1
parameter = Gobo 1 <>
parameter = Prism
parameter = Prism <>
parameter = Focus
parameter = Iris
parameter = Shutter
highlight = 255
default = 255
parameter = Intensity
highlight = 255
parameter = Speed 1
parameter = Macro
parameter = Control

macro = Reset
step = set, Shutter, 0
step = set, Control, 64
step = delay, 2
step = release, all
macro = Lamp On
step = set, Shutter, 0
step = set, Control, 84
step = delay, 2
step = release, all
macro = Lamp Off
step = set, Shutter, 0
step = set, Control, 94
step = delay, 2
step = release, all
macro = Display Off
step = set, Shutter, 0
step = set, Control, 24
step = delay, 2
step = release, all
macro = Display Dim
step = set, Shutter, 0
step = set, Control, 34
step = delay, 2
step = release, all
macro = Display On
step = set, Shutter, 0
step = set, Control, 44
step = delay, 2
step = release, all
macro = Shutdown
step = set, Shutter, 0
step = set, Control, 124
step = delay, 4
step = release, all

Parameters are added in the DMX channel order. Fine means that is the fine channel of the parameter. Add break if the fixture has more than one DMX range, for example a VL5 has a separate dimmer.

parameter = name [, fine] [, break]

A default can be added (if the value is not 0), this value is used when disabling the fixture

default = value

A value can be given to be used when highlighting the fixture

highlight = value

after all parameters are done, macros can be added to the fixture

macro = name

and then macro steps

step = set, name_of_parameter, value

set a channel to the value

step = delay, seconds

delay for number of seconds

step = release, name_of_parameter or all

release a single parameter or all