CUELUXPRO

MANUAL

CueluxPro Manual

Written for CueluxPro 1.03.44

October 2013

Thank you for choosing CueluxPro. We started developing lighting control software at Visual Productions in 1999. CueluxPro is our latest generation software for controlling lighting fixtures and it is the most advanced system we have ever built. It represents all our experience that we have gained and techniques we have developed over the past 15 years. We hope you will enjoy using CueluxPro as much as we enjoyed developing it. Be sure to keep checking for the latest software releases as CueluxPro will continue to evolve over the next years.

Welcome to the CueluxPro user's manual, this document describes the CueluxPro software and the basics of lighting programming.

Table of Contents

If, after consulting this manual, you still have questions then you can obtain additional information and help through the on-line support forum. CueluxPro users and employees of Visual Productions share their experiences and tips on this forum. You can find the forum at http://www.visualproductions.nl/forum.

1 OVERVIEW

CueluxPro is an advanced and scalable lighting control application. The software is designed to control medium to large lighting installations, for both architectural and live-entertainment situations.

FEATURES

- Cross-platform (Windows, Mac, Linux)
- 20 Universes (10,240 DMX channels)
- Industry-standard Cuelist system
- FX Generator
- Pixel Mapping
- DMX in
- MIDI in & out
- OSC in & out
- UDP in & out
- Art-Net in & out
- Timecode (SMPTE, MTC)
- Astronomical Clock (sunrise, sunset)
- Scheduling (date, time, weekday)
- 2,500+ personality files
- Optimized for Touch Screen

SUPPORTED HARDWARE

CueluxPro works in combination with the CueCore and IoCore as its DMX and IO interfaces, the B-Station is supported as a remote control unit. All devices are connected by Ethernet.

CueCore   IoCore   B-Station

LICENSING

The CueluxPro software is available for download. The licence is included in the CueCore, i.e. each CueCore unlocks 2 universes in the CueluxPro software. The maximum number of CueCores of

supported CueCores is 10.

SYSTEM REQUIREMENTS

Please make sure your system has at least the following specifications.

- 32 or 64 bit
- Intel i5 processor of equivalent
- 1GB RAM
- minimal screen resolution of 1280 x 800.

The following operating systems are supported:

- Windows XP
- Windows Vista
- Windows 7
- Windows 8
- OSX 10.5
- OSX 10.6
- OSX 10.7
- OSX 10.8
- Ubuntu 12.04

2 USER-INTERFACE

The main user-interface of CueluxPro consists of the following sections:

Fixtures

Palettes

Groups

Programmer

Playback
Faders

Playback
Buttons

Command
Line
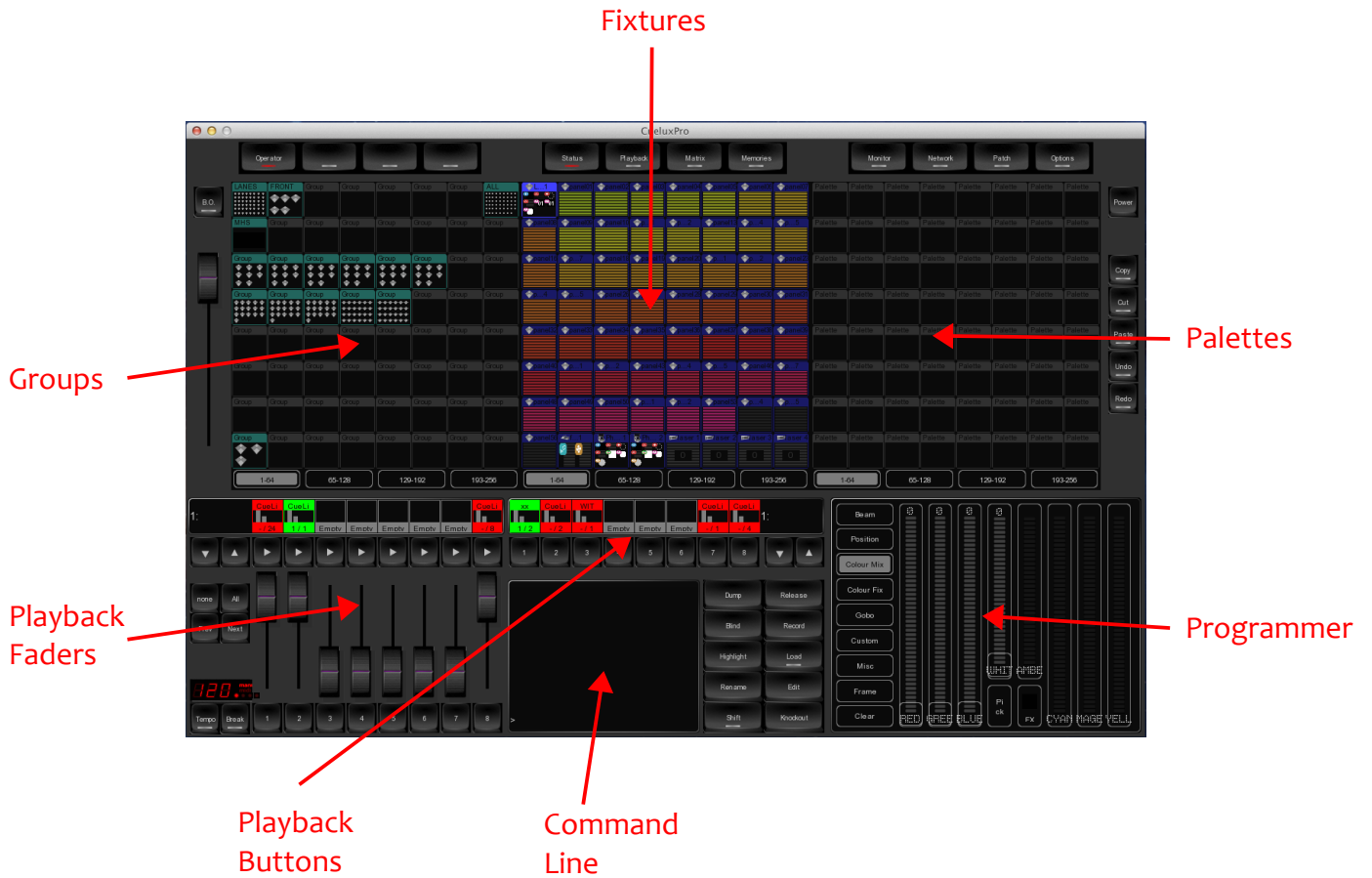
3 Patch

The PATCH menu allows you to setup the DMX fixtures which are connected to CueluxPro.

Universe

In the Universes tab you can set up the number of DMX universes that you will be using. You can add, remove and rename universes. The maximum number universes is 20. Each universe needs to be linked to a DMX port on a CueCore. Each DMX port on a CueCore can only be linked to one universe. When one DMX port becomes linked to a universe then CueluxPro will become the 'master' of this CueCore. The CueCore will then suspend any standalone operation and become solely a input/output interface for CueluxPro. When the DMX port is unlinked from the universe or the CueluxPro software is closed, then the CueCore will automatically resume its standalone operation.

The CueCore can also manually be unlinked from CueluxPro by disabling the 'Master' setting in the universes table.

When connected to a CueCore, each universe's DMX data can also be send out via Art-Net. CueluxPro supports both broad-cast and uni-cast for transmitting Art-Net.

Fixture

The Fixture tab allows you to add, remove and change the fixtures in your patch.

Add

Click ADD to open the Add Fixture dialog. Browse the manufacturers list, and choose the MANUFACTURER of the first fixture you would like to add.

To quickly find a manufacturer, start typing the name of the manufacturer you're looking for on your keyboard. While typing, the list will jump to the correct manufacturer in the list. Browse the MODELs for the selected manufacturer and choose one by clicking it. To quickly find a model in a long list, click on

the "model" list and start typing the name of the model you're looking for.

If you would like to choose a fixture that is not present in these lists then please refer to page 38 to see how to obtain new personality files.
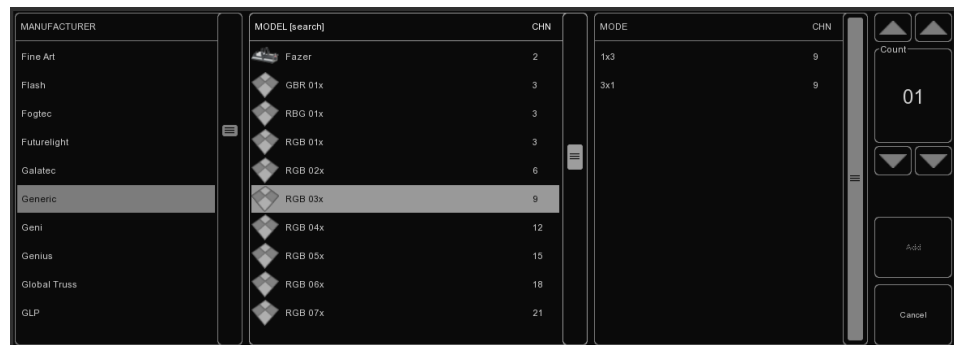
Remove

To remove one or more fixtures from the patch, select them in the Patch view by clicking or dragging and click REMOVE. To remove all fixtures, click REMOVE and keep the button pressed for at least 1 second.

Replace

If you have pre-programmed a show with your fixtures, and find out these fixtures are running in a different mode or are even a completely different fixture when on location, then you can 'replace' these fixtures. Select the 'manufacturer's' field of fixtures you would like to replace by clicking or dragging in the Patch view and click CHANGE. This will open the CHANGE FIXTURE dialog, which is similar to the ADD FIXTURE dialog. Choose another mode for the same model, or choose even another model.

Rename

To give your fixtures a more clear name, select the 'label' cells of 1 or multiple fixtures and press CHANGE. Type a new name for the fixture and click OK or press <ENTER.>. If you've renamed multiple fixtures, CueluxPro will automatically add 01, 02, 03 etc. to the name you have entered.

Address

CueluxPro automatically sets the DMX address when adding fixtures to the patch, by finding the first available DMX channel in your configuration. However, if you want to change the address, select the 'addresss' cell of 1 or multiple fixtures and click CHANGE. Enter the new address and click OK.

If you had multiple fixtures selected, CueluxPro will set the entered address for the first selected fixture and will automatically have the next selected
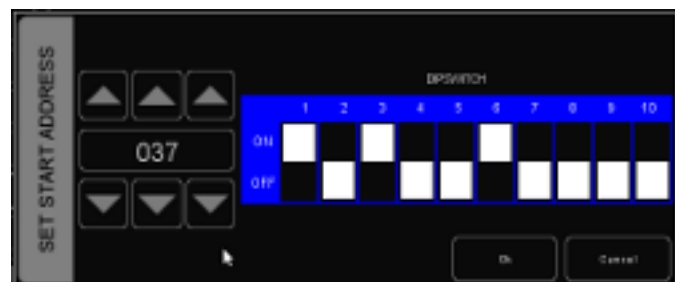
fixtures follow the previous ones. For example, if you select 4 8-channel dimmers in the patch, click ADDRESS and enter "101". This will result in addresses 101, 109, 117 and 125 for the selected dimmers.

Properties

Selecting the 'properties' field of a fixture and clicking on the CHANGE button will pop up the Fixture Properties window.

This window allows you to enable INVERT PAN, INVERT TILT and SWAP PAN TILT in case the fixture is a moving light.

If the fixture has RGB colour mixing but no DMX channel for intensity, you can enable VIRTUAL DIMMER. This option will give the fixture dimmer capability separate from the RGB control.
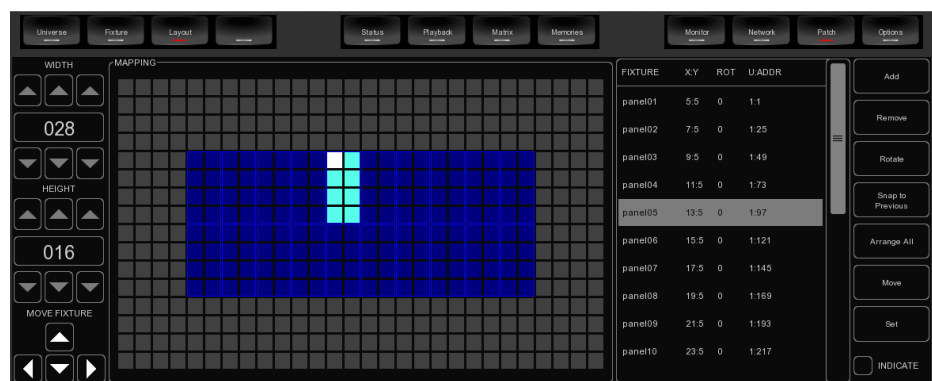
4 MATRIX

CueluxPro contains a 2-dimensional matrix controller for pixel mapping on arrays of lighting fixtures. These lighting fixtures are typically LED fixtures, however, the matrix control can also be applied to any other DMX fixture.

LAYOUT

To control a matrix you first patch the fixtures as usual in the Patch menu. The next step is to add the only the fixtures that are part of the matrix to the members list in the Matrix->Layout menu. In this tab you can also set the width and height of the matrix.

Next you should arrange them to reflect the physical location of the fixtures. In the Layout tab you can select a matrix-member and them move it around using the arrow-keys. Alternatively, you could use ARRANGE ALL button to have all the members automatically positioned according some typical patterns.

Tos assist you in establishing the layout you can enable the INDICATE check-box, this will make the lighting fixture to display the same colour as used in the layout diagram. This will speed up the process because it helps you with recognizing which fixture is selected and how it is orientated.

LAYER

Once the layout is created you should add at least one layer in the Layer tab. Typically this layer has the same dimensions as the matrix; this is quickly achieved by pressing the FULL SIZE button.

Each layer can playback a graphical effect. When you add more layers then this will allow you overlay multiple effects and cross-fade or blend layers into each other.

By reducing the size of the layer you can create picture-in-picture effects. Also, when two separate matrices are patches next to each other in the layout then both could be covered by a separate layer; thus allowing independent control of multiple matrices within CueluxPro.
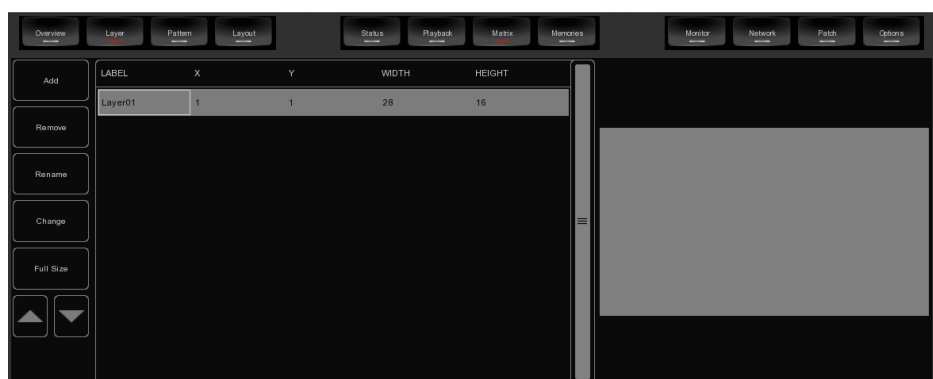
PATTERN

The Pattern tab shows the effects that are available to be played back on the layers. When starting a new show-file the patterns are loaded by default, however, you are free to add or remove any pattern. Some patterns have properties that can be modified by using the EDIT button.

OVERVIEW

The overview tab renders the output of the matrix control.
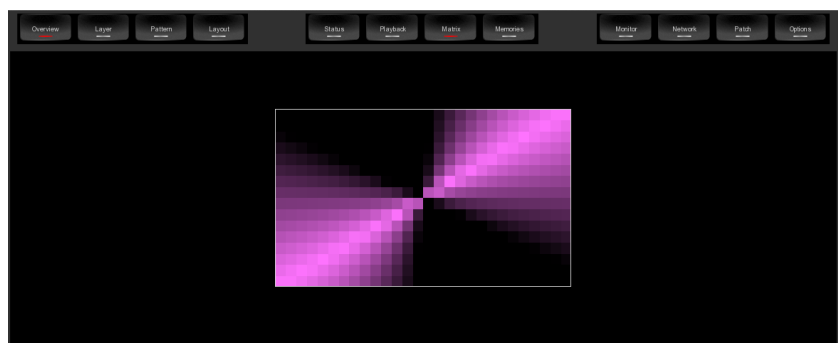
USING THE MATRIX CONTROL

For each layer that you have added a 'virtual' fixture will appear in the status menu. This virtual fixture represents the layer. You turn on the layer by selecting it and then creating a scene in the programmer window, just like you would be with 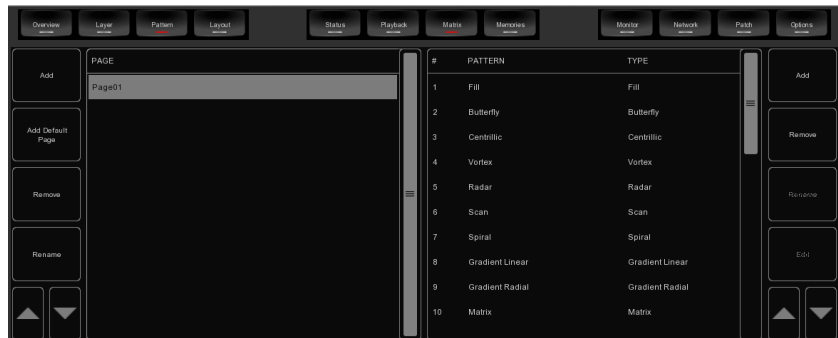moving light for example. The layer would need its intensity to be brought up and a colour-mix to be set (typically open white), then by using the gobo wheel you can select the pattern-page (gobo wheel 1) and the pattern (gobo wheel 2). Some pattern benefit from the gobo scroll to be enabled, others require the speed parameter that can is located on the MISC tab. When you like the scene you have created for the layer then you can record it into a palette or cue, just like you would do for a moving light for example.

5 GROUPS

You to create groups with fixtures and/or sub-fixtures. This makes selection of multiple (sub) fixtures easy and quick.

To create a group you go to the Status menu and follow the steps:

1. Make sure the programmer is cleared (press CLEAR twice)

2. Select fixtures

3. Press RECORD

4. Click on an empty the group cells

You can also edit an existing group by enabling the EDIT button and then click on a group cell. This will bring up the group dialog where you can add or remove individual fixtures.
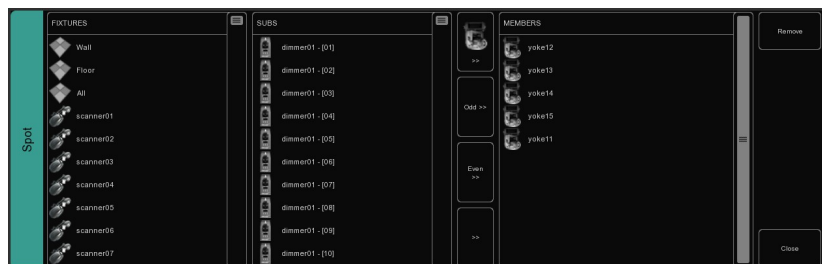
To rename a group you first enable the RENAME button and click on a cell.

SUB-FIXTURES

CueluxPro uses the concept of sub-fixtures. This means that some fixtures consist of multiple sub-fixtures, like a 10-channel dimmer rack is - in our terms - just one fixtures with 10 sub-fixtures. This also works for LED fixtures with multiple segments/pixels. The reason behind the concept of sub-fixtures is that it makes patching easier; you only add the physical fixtures to your patch and you don't have to worry about setting starting addresses per dimmer channel, or worse, per LED segment.

6 PALETTES

Palettes are memories that can contain a single lighting scene for one or more fixtures. This scene can contain just a single attribute (e.g. only intensity) or contain multiple attributes. When you activate a palette then the scene is loaded into the programmer.

The palettes are useful for live controlling your lights as you can make quick changes just clicking on different palette cells. Also, the palettes can be used to store scenes into cuelists. In that case no actual values are stored into the cues, in stead a reference to the palette is saved. This allows you to later on change the palette and have the change reflected in each cue that is referring to this particular palette.

To create a palette go to the Status menu and simply build a scene in the programmer window, enable the RECORD button and then click on an empty palette cell. You can also edit an existing palette by enabling the EDIT button and clicking on a palette cell. Similarly, renaming a palette is done via the RENAME button and then choosing a palette cell.
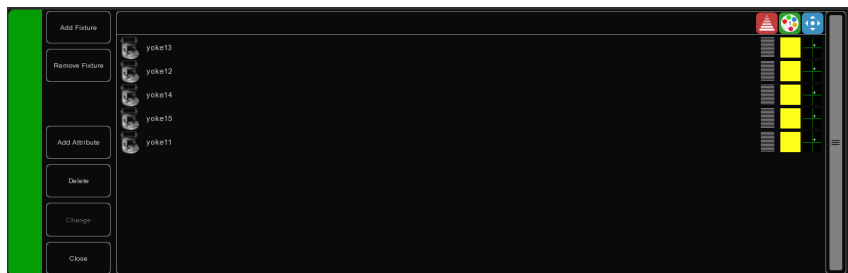
When you activate a palette then the behavior depends on the fixture selection. When no fixture is selected then clicking on a palette cell will first select the fixture programmed in this palette. Clicking the cell again will activate transfer the values to the programmer. If there are already fixtures selected then clicking on the palette cell will apply the palette only of the fixture selection. When there are fixtures selected that do not appear in the palette then the values inside the palette will still be applied on these fixtures using a "let's make the best of it" policy.

7 CUELISTS

A lighting scene is stored in a 'Cue' and cues are stored in 'Cuelists'. Each cuelist can contain one or more cues. You can create multiple cuelists that each control a part of your show, or you can create one single cuelist that addresses all your lights.

You can either create and change cues in the Status menu or use the Memories->Cue menu. This chapter discusses both approaches.

8.1 TRACKING

Cuelist based lighting controllers can be either tracking or non-tracking. CueluxPro is a tracking console. Tracking means that in a cuelist, only changes need recording. If a light has the same value in two consecutive cues you don't need to store the second value, instead you make sure the second contains 'no' value so the first value remains unchanged through those cues.

8.2 CREATING CUELISTS IN THE STATUS MENU

The fastest way to create cuelists is to do it in the Status menu. Special buttons like RECORD, LOAD and KNOCKOUT are provided to make this process intuitive.

Programmer

When recording cues, you first have to create a lighting scene which will be then stored in the cue. The Programming window is the place where you create the scene. First you select a fixture, the programming window will update to show you the capabilities of that fixtures and enables you to set the different parameters, e.g. set a dimmer level, pick a colour or gobo. You can now also deselect the fixture and select a new one; the values will be kept in the programming window's memory.
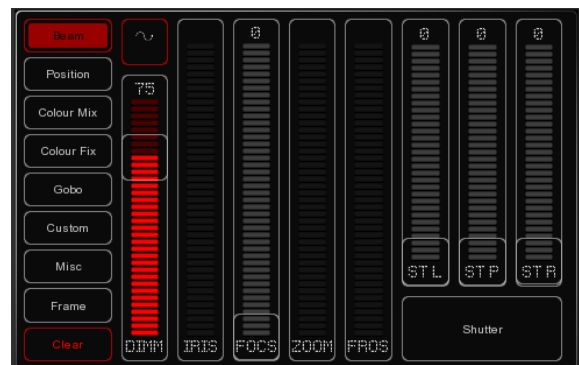
FX
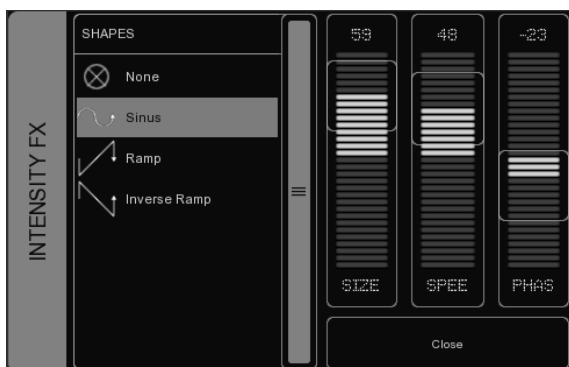
CueluxPro has an inbuilt FX generator for dynamic effects on the Intensity, Position and ColourMix attribute. To enable a FX click on the FX-button close to the attribute and choose an algorithm for the FX dialog. You also need to set the size, speed and phase levels.

Clear
Any values that reside in the programming windows' memory have priority. For example you might have a cuelist running that sets a certain dimmer to 50% but if the programming window contains a

dimmer level of 10% for that particular fixture, then this dimmer will be set 10%. Therefor it is important to clear the programmer once you're finished recording cues.

Press the CLEAR button once for clearing all values for the currently selected fixtures and press it twice for clearing all values, even for fixtures currently not selected.

Remove attributes
To remove an attribute from the Programmer-memory to make sure that it will not be recorded in a Cue, press the KNOCKOUT button and click the Attribute or Attribute-page in the Programmer to knock it out.

Fine Adjustments
Some fixtures support 16-bit values for controlling their attributes. To make small changes to a value in order to take use of very fine 16-bit control, you can use the CTRL key in combination with the mouse wheel to fine tune a fader's value.

Flip
A moving light of the yoke type – not a scanner – is, by using its fork and head, able to reach a certain position through two different pan/tilt configurations. When the programmer is containing position values for one or more fixtures you can use the FLIP button to reach exactly the same position by using the opposite pan/tilt values.

Record a cue

Once you've built up a scene in the programming window you can transfer the values to a new cue by following the next steps.

– Press the RECORD button

– Press the GO button of an empty playback

This will create a new cuelist with one cue that contains the scene from the programmer. The cuelist is automatically assigned to the playback. You can repeat this process to add new cues to the cuelist.

Edit a Cue

To edit the cue, first make sure the cue is outputted by activating the cuelist and stepping to the cue you want to edit using the PLAY button. Select the fixtures you want to change and change the attributes in the Programmer. You can also add other attributes by changing the attributes for the selected fixtures. Other fixtures can also be added: Select them and change the values you would like to store in the cue.

Press RECORD and click on the PLAY button of the cuelist where the cue you want to edit is active. A window will pop-up, asking you what to do. Choose MERGE to merge the active information in the Programmer with the cue.
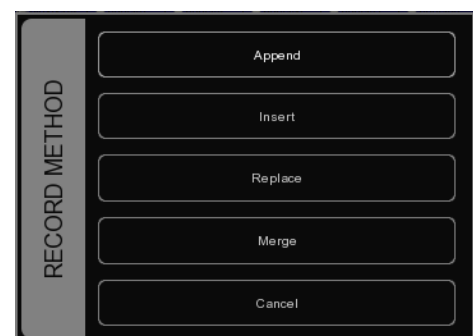
Remove values or fixtures from a cue

To remove values or fixtures from a cue, we're going to load the complete cue into the programmer, make the changes, and store the programmer back into the cue by replacing the old information.

Make sure the cue is active by activating the cuelist and stepping to the cue you want to edit using the PLAY button.

Load the cue into the Programmer by pressing LOAD and clicking on the PLAY button of the cuelist. All information in the current cue is now loaded into the Programmer.

To remove a fixture from the Programmer, select the fixture and press CLEAR in the Programmer once. To remove one or more attributes, select the fixtures, press DELETE and click on the attribute or the attribute-page; this action will delete the attribute or the complete attribute page from the programmer.

To store the Programmer back into the cue, press RECORD and click the PLAY button of the cuelist where the cue you want to edit is active. In the pop-up window, choose REPLACE to replace the cue with the information in the Programmer.

8.3 MODIFYING A CUELIST VIA THE MENU

Next to working in the Status menu, you can also edit cuelists via the Memories->Cuelist menu. Although you can create a new cuelist in the CUE menu, the menu is more setup for modifying cuelists once created in the Status menu.

To change an existing cuelist, open the Cuelist menu. Select a Cuelist and click EDIT to open the Cuelist editor. Here you can edit the properties of the CUELIST and the individual cues.

The following properties can be set for the cuelist:

Chase

When CHASE is enabled, the cuelist will no longer follow the cues' timings and conditions. The cuelist will be played back as a chase. The cross-fade can be changed using the ATTAK slider in the playback settnigs. The speed of the chase is linked to the main Chase tempo, which can be found at the bottom left of the CueluxPro window. All cuelists set to CHASE will run synchronous to this tempo.

In the Cuelist Editor, you can also specify a tempo divider for the chase.

1/1: Chase will step further on every beat of the main chase tempo.

1/2: Chase will step further once in every 2 beats of the main chase tempo.

1/4: Chase will step further once in every 4 beats of the main chase tempo

Etc.

Loop / Bounce / Random

These check-boxes allow you to change the behaviour of the cuelist. Setting it to Loop will make the cuelist repeat itself. Bounce will make it run forwards and backwards. Random will make it jump to random cues.

8.4 MODIFYING A CUE VIA THE MENU

The following properties can be set per cue:

Label

The label is the name of the cue for your reference.

Condition

The condition specifies when the cue will be triggered. There are 3 possible Conditions:

Halt	The cue will be triggered when you press the GO button.
Follow	The cue will be triggered as soon as the previous cue has finished fading.
Wait	The cue will be triggered autocratically after the previous cue has been triggered.

Cue Timing

To explain the different timings in combination with the Cue Condition, see the following diagram:
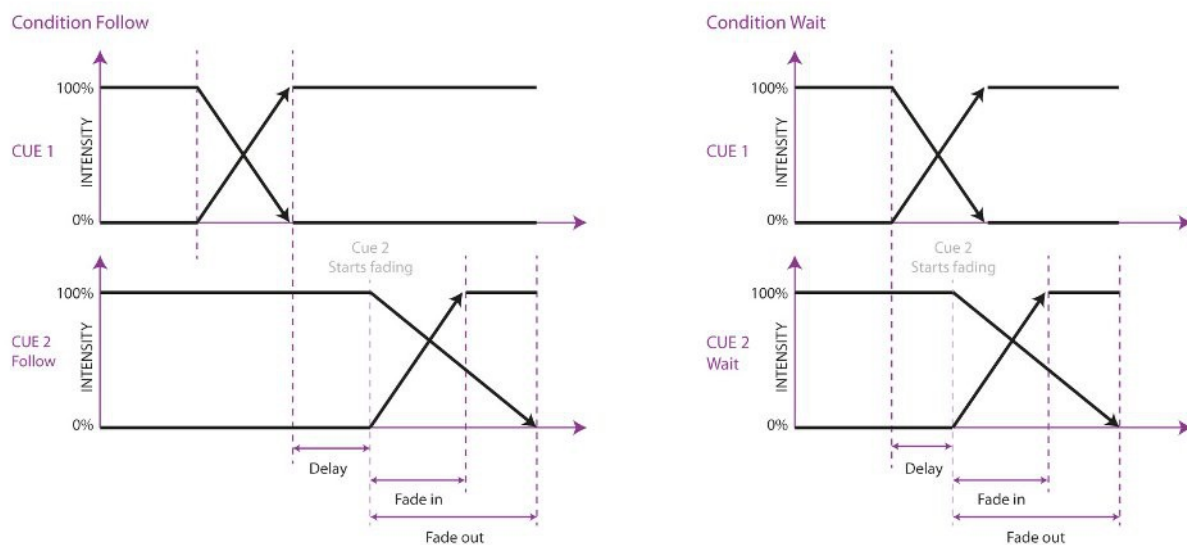
Delay
The delay time (in seconds) is the time between the cue being triggered, and the cue actually starting to fade.

Fade In
The Fade In time (in seconds) is the fade time for all dimmers fading in (dimmer values going UP) in the cue and all other fading attributes (e.g. colour mix, position).

Fade Out
The Fade Out time (in seconds) is the fade time for all dimmers fading out (dimmer values going DOWN) in the cue.

Click and drag to select multiple properties for multiple cues, e.g. fade in for multiple cues or delay & fade in for multiple cues

Edit

The values in a cue can also be edited in the Cue Editor. Select a Cue and click EDIT.

Insert
Use Insert to add an attribute to the cue.

Delete
Use Delete to remove an attribute from the cue. The attribute's column will still show until it is removed from every cue.
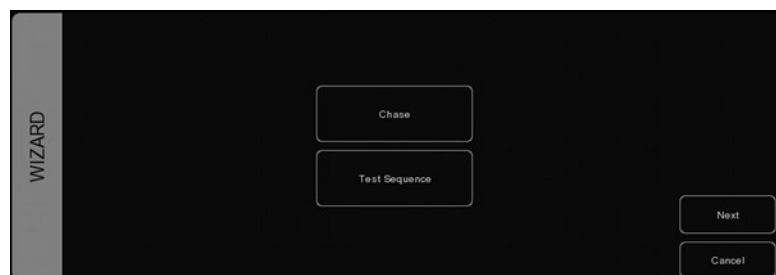
Change
Select one or multiple values and click Change to change the value.

8.5 WIZARD

The wizard can automatically create typical cuelists that might have taken quite a while to program if done by hand.

To use the generated cuelist, it still has to be assigned to a playback fader or button. See page 9 for instructions.

Chase

The wizard can create a chase over multiple fixtures. You can select any of the attributes that is supported by the fixtures you have selected. The wizard also offers different orders in which the chase can run e.g. Forward, Reverse, Zig Zag, Synchronous or Random.
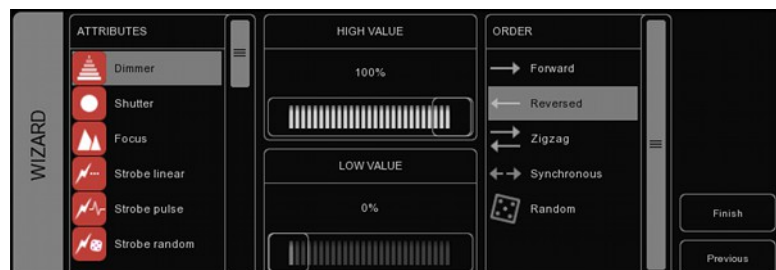
Test Sequence

The wizard can make you a cuelist that contains a sequence of steps for testing fixtures. Based on the personality file of the selected fixture it will generate cues for each attribute the fixture features. It is advised to create one test sequence per type of fixture.

8 PLAYBACKS

Playbacks are an important element in a cuelist based lighting controller like CueluxPro. Cuelists are not activated directly, instead they are assigned to a playback. The playback allows the user to start (give the playback a 'Go') and stop ('release' the playback) the cuelist, as well as controlling other parameters like intensity, speed, attack, etc.
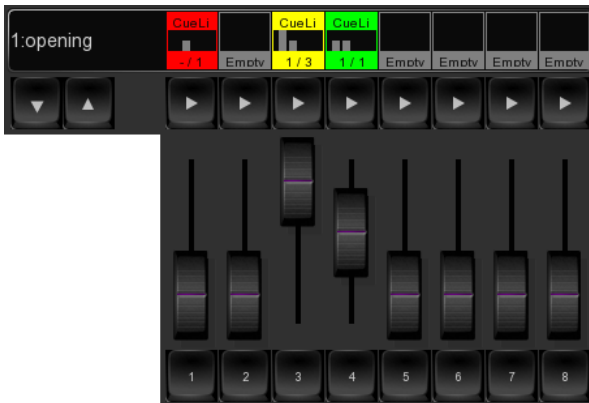

Illustration 1: Playback Faders

Illustration 2: Playback Buttons

There are two types of playbacks, playback faders and playback buttons. They work in a similar way, the difference is that a playback button does not feature the intensity fader and the flash button. Therefor the playback button takes up less space in the CueluxPro user-interface. Playback buttons are more suitable for controlling cuelists that have fixed-value attributes like fixed colours, gobo, prism and shutter. On the other hand, playback faders are better suited for controlling cuelists containing level-value attributes like dimmer, RGB colour, iris, strobe, etc.

Assignment

You can assign a playback in two ways.

Firstly, you can double-click on the 'indicator' just above a playback to bring up the Playback Settings view. Pressing the ASSIGN button in this dialog will bring up the assignment dialog.

Alternatively, you can also assign by creating a new cuelist in Status menu, this implicitly assigns the new cuelist to a playback. Please refer to the Cuelist chapter for an explanation on how this is done.

Indicator

The small rectangle above the playbacks are called 'indicators', they provide some basic feedback on the contents of the playback.
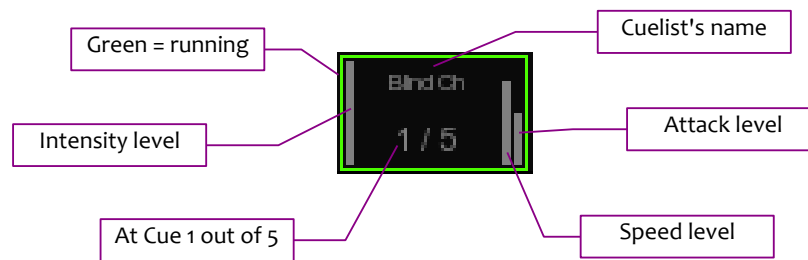
Speed

The speed fader will control the overall speed of the playback. When set in the middle the speed will be neutral; it will not effect the programmed speed of the cues and fades.

If the cuelist is set as a chase then the cuelist will no longer follow the cues' timings and conditions. The speed of the chase is linked to the main Chase tempo, which can be found at the bottom left of the CueluxPro window. All cuelists set to CHASE will run synchronous to this tempo. In this case the Speed slider will specify a tempo divider/multiplier for the chase. For example:

4/1: Chase will make four steps within every beat of the main chase tempo.

2/1: Chase will make two steps within every beat of the main chase tempo.

1/1: Chase will step further on every beat of the main chase tempo.

1/2: Chase will step further once in every two beats of the main chase tempo.

1/4: Chase will step further once in every four beats of the main chase tempo

Attak

When the cuelist is set as a Chase, then the cross-fade can be changed using the ATTAK slider.

FXRate

The FXRate will modify the programmed speed for all FX in the cuelists. Keeping this slider in the middle will not change the programmed FX speed.

Background

If a playback is set to 'background' then it will start running automatically at the software's startup. Also, it will not be released by the 'release all' command (a 'release all' is performed when the RELEASE button is pressed for over one second).

The background feature is useful for cuelists controlling fixtures that should not be turned off during a show, e.g. 'work' lights backstage.

Fader Start

With Fader start enabled, the playback will automatically be triggered when the corresponding fader is being moved up or the flash button is pressed. The playback will also be released as soon as the fader is back at the bottom or when the flash button is released.

Bundle

You bundle playbacks together so they work mutually exclusive; i.e. only one playback is active at the same time. Whenever you start a playback it will automatically release any other playback in the same bundle. You can set up up to 20 different bundles.

Bundles come in handy if you have a couple of playbacks controlling cuelists for the same fixtures, especially if those cuelists contain HTP attributes like dimmer.

Button Primary/Secondary

These properties allow you change the function of the flash button (Primary) and the go+ button (Secondary).

Banksafe

Some cuelists you will need to change so frequently, that you would like to access them from each bank. In the PLAY menu, you can achieve this quickly by selecting the playback's cell in the table and clicking BANKSAFE.

9 ACTIONS

CueluxPro needs to respond to the outside world. With today's ever more demanding lighting projects, chances are it needs to respond to various different signals or protocols. The CueluxPro software supports a variety of protocols. In the Memories->Action menu you determine how your CueCore will respond to which signal and what tasks it will perform when triggered.

This structure consists of action-lists and actions. All the different kind of signals CueluxPro can receive are categorized as 'sources'. Each action-list relates to one source and can contain multiple actions. Each action details to which specific signal it is listening and contains a list of tasks it will perform when triggered. Action-lists and actions are further discussed on page 22.

Templates

The Memories->Action menu provides ready-made Templates for several typical action arrangements. Templates can be easily copied to the Source list and modified in necessary.

The following table describes the functionality of the templates.

GPI → Dashboard Playback Buttons	Control the playback buttons via the GPI port of a CueCore or IoCore or through the push-buttons of the B-Station.
GPI → Playback Fader + Dimmer	Control the playback faders via the analog GPI ports of a IoCore.

VisualTouch

Creating a VisualTouch layout is done by creating a 'Touch Screen' action-list and adding actions. For each action you can choose between various controls like buttons and sliders. The order of the actions will control the arrangement in VisualTouch.

ACTIONS

Programming the show controller involves adding action-list and specifying actions.

Action-lists

In the Action-lists table you can include the sources you will be using in your project. You can choose from input sources like: DMX, Art-Net, MIDI, GPI, Time-code, Scheduler & OSC. Each Action-list can be enabled and disabled.

The available sources are:

Touch Screen	Triggers from the VisualTouch software tool.
Art-Net	Trigger on reception of Art-Net or convert Art-Net universes to DMX.
DMX In	Convert to complete universe to Art-Net or trigger by individual DMX channels.
MIDI	Trigger by or convert from incoming MIDI messages like Notes, Control Changes or Program Changes.
Timecode	Trigger by exact time-code frames. You specify the time-code protocol in the settings page.
Scheduler	The inbuilt RTC allows triggering on time, day, weekday and sunrise/sunset.
System	Miscellaneous triggers like 'OnStartup'
OSC	Incoming OSC messages
GPI	State changes on the CueCore's or IoCore's GPI port.
GPO	State changes on the IoCore's relays.
UDP	Incoming UDP messages

Actions

Within each Action-list you can create multiple Actions. For each Action you specify when it will be triggered and which Tasks it will perform when that trigger occurs.

To change the details of an action, select it and press the EDIT button. This will open the Action page.
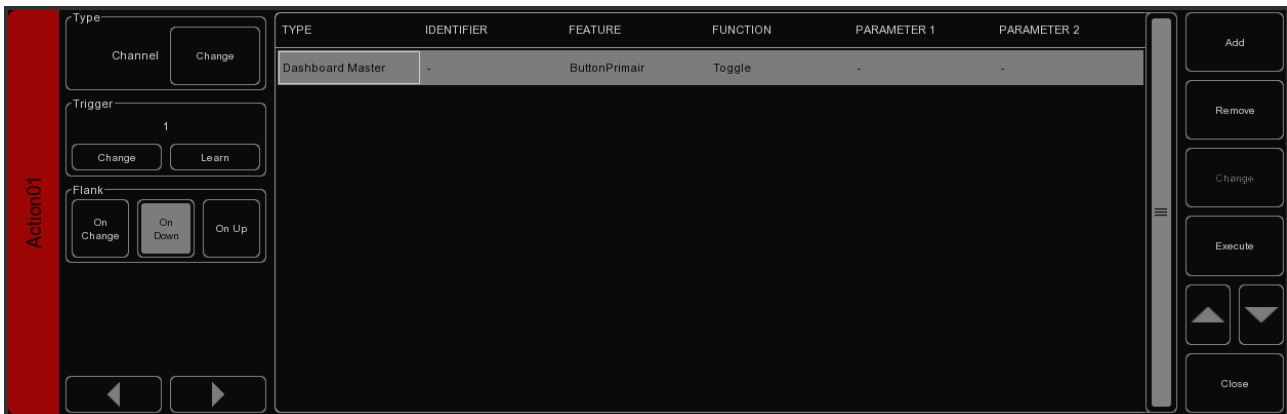
Flank

For most types of actions you can set the flank. For example when editing a GPI action, it will be triggered only on closing the contact (also known as 'normally open') when the specifier is set to DOWN. When set to UP, the action will be only trigger on opening the contact (a.k.a. 'normally closed'). Finally, when the specifier is set to CHANGE, the action will be triggered on both closing and opening of the contact.

Trigger

Specify the exact trigger on which to execute the tasks. In the case of a GPI action, the trigger denotes the trigger port number (there are 4 ports on the CueCore and 8 ports on a IoCore).

Tasks

You can specify up to 64 Tasks per action. When triggered, the Tasks are performed in the same order as they are listed in the Action. Tasks can control various elements and protocols in CueluxPro, such as playbacks, MIDI, OSC or fixture selection. Tasks can also be used to trigger other Actions, enable or disable action-lists and start/stop the internal time-code.

Some tasks manipulate the software entities in the engine and other tasks control the user-interface of CueluxPro; the latter are called 'Dashboard' tasks. For example there is a 'Playback Fader' task and a 'Dashboard Playback Fader' task. The 'Playback Fader' task has features like 'Go+' and 'Release', directly changing the state of the playback. The 'Dashboard Playback Fader' task does, however, only control the buttons and faders in CueluxPro that belong to that particular playback. This task allows you to press and release the 'flash' and 'go' button.

Because a Task can do a wide variety of things they are organized in different Task 'Types'. When adding a task a pop-up window will allow you to choose from the following types:

UDP	Send a UDP message.
DMX	Control the DMX channels in the 'Show Control buffer'. This data can be send out via the DMX ports and/or Art-Net. Please set the 'Output Routing' in the Settings page

UDP	Send a UDP message.
	accordingly.
MIDI	Send a MIDI message.
OSC	Send an OSC message.
Timecode	Control the time-code properties like selecting the input source or start/stop the internal time-code generator.
Selection	Control the fixture selection
Special	Special tasks like 'run program' to start an external application.
Pattern	Change the properties of a pattern.
Action	Trigger another action.
Action List	Control the properties of an Action-list (e.g. Enable check-box).
Playback Fader	Control a playback fader. Use the identifier field to denote which playback.
Playback Button	Control a playback button. Use the identifier field to denote which playback.
Dashboard Playback Fader	Control the GUI that belongs to a playback fader. Use the identifier field to denote which playback.
Dashboard Playback Fader Grid	Control the playback faders via an 8x8 grid in the GUI.
Dashboard Playback Button	Control the GUI that belongs to a playback button. Use the identifier field to denote which playback.
Dashboard Playback Button Grid	Control the playback buttons via an 8x8 grid in the GUI.
Dashboard Bank Fader	Control the bank selection GUI for the playback faders.
Dashboard Bank Button	Control the bank selection GUI for the playback buttons.
Dashboard Master	Control the master GUI.
Dashboard Tempo	Control the tempo GUI.
Dashboard Selection	Control the fixtures selection GUI.
Dashboard Programmer	Control the progammer GUI.
Dashboard Command	Control the command-line GUI
Serial	Send out RS-232 messages.
Led	Control the LEDs on a B-Station.
Palette	Control the palettes
Dashboard Palette Grid	Control the 8x8 palette grid in the GUI.
Universe	Set the properties of a universe in the patch view.

Feature

For each task you can select a Feature. The choice in Features differs for each Type.

DMX features:

Set Value	Set a channel
Bump Channel	Momentary set a channel to certain value

MIDI features:

Send	Send a MIDI message.

OSC features:

Send	Send a message with a float type parameter (legacy).
Send Float	Send a message with a float type parameter (preferred).
Send Unsigned	Send a message with a unsgined type parameter.
Send Bool	Send a message with a bool type parameter.
Send String	Send a message with a string type parameter.
Send Colour	Send a message with a colour type parameter.

Function

Each Task also has a Function field. The choice of Functions depends on the Task-Type and the selected Feature. For example, when you add a Task with the 'Playback Fader' Type and set its Feature to 'Intensity' then you can select of the following Functions:
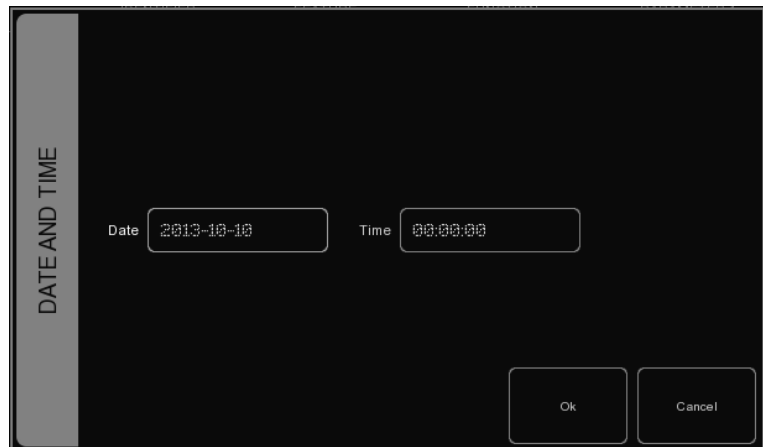
Set	Specify an intensity level
Control	Set the intensity to the level that is provided as an argument from the source that triggered this task. For example, if this task was triggered by the DMX input then the level of the DMX channel will be used for the intensity level.

Scheduling

An important input Source is the Scheduler. The Scheduler uses the computers system time. There are several ways to specify a trigger.
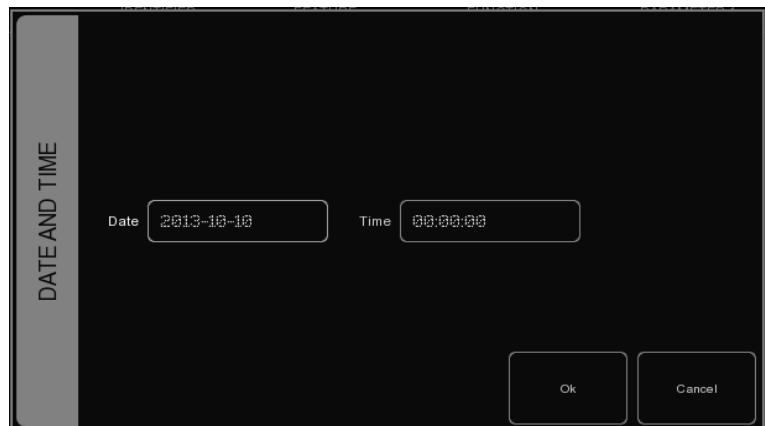
Date and Time

You can use the Scheduler to trigger actions on certain dates and times. When specifying a date and time it is possible to choose 'Don't Care' for each value by entering 'X'. E.g. if you set a date and specify 'Don't Care' for the year field, this Action will be triggered each year.

Weekday and Time

Sometimes you would like to define a trigger based on a day in the week, rather then a specific date. CueluxPro supports this, it allows to choose any combination of weekdays and time.

Astronomical Clock

CueluxPro keeps an astronomical clock that based on the day of the year and position on the globe (as configured in the settings page) calculates the sunrise and sunset times. This allows you to trigger events on sunrise or sunset.

10 HARDWARE

The CueluxPro software works together with the CueCore, IoCore and B-Station hardware. To unlock the software you need at least one CueCore. You can add more CueCores to unlock more DMX universes. IoCores can be added provide GPI triggers or switch external equipment with the GPO relays. B-Stations provide a physical user-interface to select for example cues, palettes or other effects.

Dumping content into the CueCore

Once the CueCore is connected to the CueluxPro software it becomes 'mastered' and will act as input/output interface; capturing incoming DMX, MIDI, timecode and GPI triggers in real-time as well outputting the CueluxPro's data via the DMX outputs.

The CueCore also has many features for standalone usage, making it a powerful and compact solid-state lighting controller. The lighting scenes can programmed via the CueCore's web-interface or captured via DMX or Art-Net input. Alternatively, you can use the CueluxPro software to program the standalone memory of the CueCore.

The CueCore has two type of memory: Cues in the 'console' page and Recordings in the 'Recorder' page; both can be uploaded by CueluxPro. To program the cues simply create a lighting scene and dump this 'DMX snapshot' into one of the 255 available cues by pressing the DUMP button and entering the cue number followed by ENTER. The command-line would show for example:

> DUMP 3

You can also store a cuelist into the recording memory of the CueCore. First you create a cuelist and assign it to playback. Then press the DUMP button, then press the playback's GO button, enter the recording number followed by enter. In the command-line it would show like:

> DUMP PB2 12

When the cuelist has multiple cues and their conditions are set to follow, then the complete cuelist will be stored taking into account the programmed delay and fade times.

When the current cue in the cuelist has a condition set to halt, then only that cue is stored. If this cue contains any matrix patterns or intensity FX, colour FX or other FX then the duration of the FX will be used for the recording. In this case, CueluxPro will automatically make sure the pattern of FX will make one complete cycle in order to record a seam-less loop.
When your patch is spread out over multiple CueCores, CueluxPro will distribute the generated DMX data over the recording in the various CueCores.

11 TEMPO CONTROL

All cuelists with property CHASE enabled, are synced to the Tempo. You can find the controls for the Tempo on the bottom left of the CueluxPro window .

Using the TEMPO button below the tempo display, you can tap to the music to change the tempo in CueluxPro. You can also click the tempo display and drag up (tempo UP) or to the right (tempo DOWN).

Break
Click the BREAK button below the tempo display to pause all chases. Click again to continue all chases.

MIDI Clock
When the MIDI Input device you've selected in the MIDI Options (see chapter "MIDI Controllers") sends out MIDI Clock messages, the Tempo will be automatically locked to the MIDI Clock tempo. This allows exact tempo matching when controlling CueluxPro from sequencer software for example at a concert.

In order for the tempo to be controlled by the MIDI Clock, the display should be set to 'midi' mode. Press the TEMPO button for more than one second to switch to 'midi' mode. Press the TEMPO again to switch back to 'manual' mode.

12 MIDI CONTROLLERS MAPPINGS

CueluxPro supports various MIDI control surfaces. The buttons and faders on those controllers are assigned to features in the CueluxPro User-interface in a pre-defined midi-map. The following diagrams illustrate those assignments.

Generic Midi-map

Next to the hardware specific midi-maps, CueluxPro also offers a generic midi-map in which all the software functions that can be controlled through MIDI are assigned to Note or Control Change message. This midi-map is intended for use with external MIDI software like sequencers or DAWs.

Elation MIDIcon

The Elation MIDIcon is supported Plug & Play.

Behringer BCF-2000

The Behringer BCF-2000 is supported Plug & Play: However, for optimal use we've included a Sysex-file that can either be found in the "Program Files/Visual Productions/CueluxPro/Sysex/" folder on Windows systems, or it can be obtained at the forum (http://forum.visualproductions.nl).

The Sysex file can be uploaded to the BCF-2000 using one of the following (free) tools:
– Midi-OX for Windows: http://www.midiox.com
– SyEx Librarian for Mac OS X: http://www.snoize.com/SysExLibrarian/

After sending the Sysex file to the BCF-2000, please notice that the received preset is in a "temporary memory". If you switch off the BCF-2000, the preset will be lost. When you've received the preset on the BCF-2000, press STORE, use the PRESET buttons to choose a preset number for storing the preset, and press STORE again. The preset will be saved in the BCF-2000.

speed or attack

select speed

select attack

go / release

flash

bank select

tempo tap

global fog

intensity
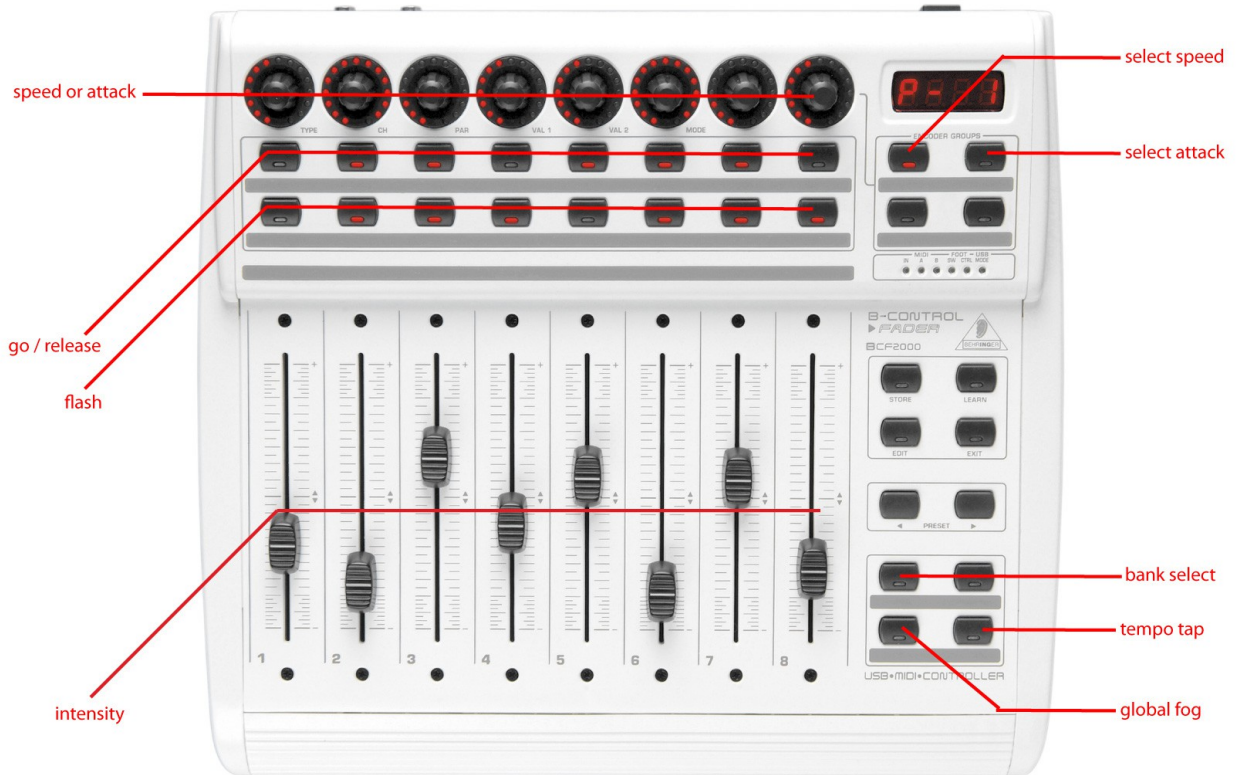
Livid Instruments Ohm64

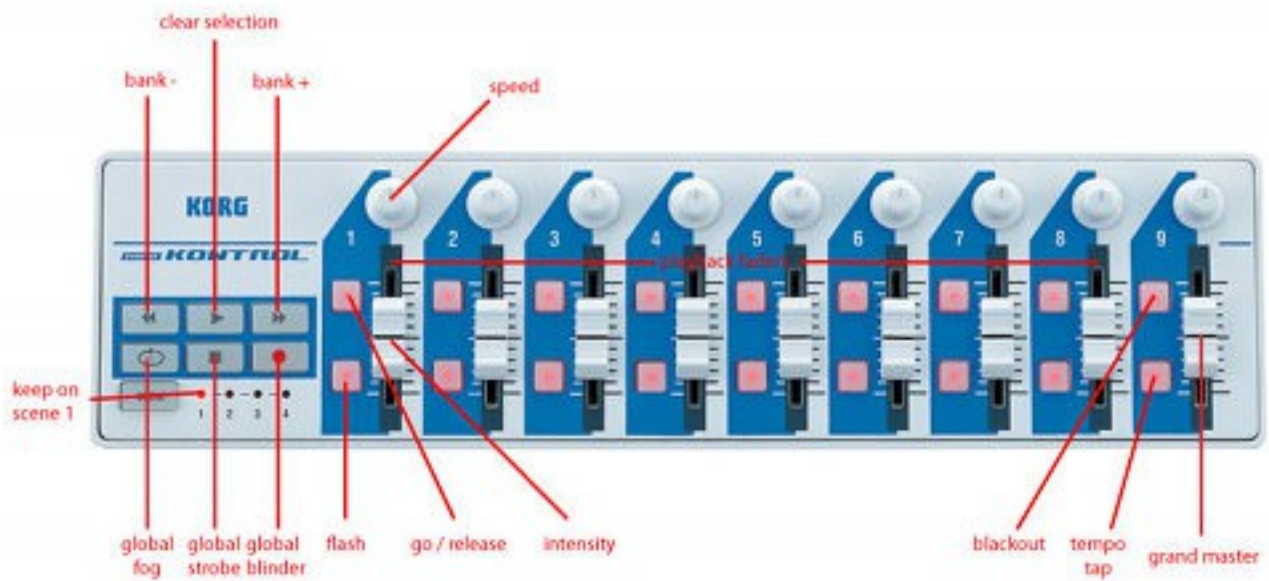The Livid Instruments Ohm64 is supported Plug & Play.
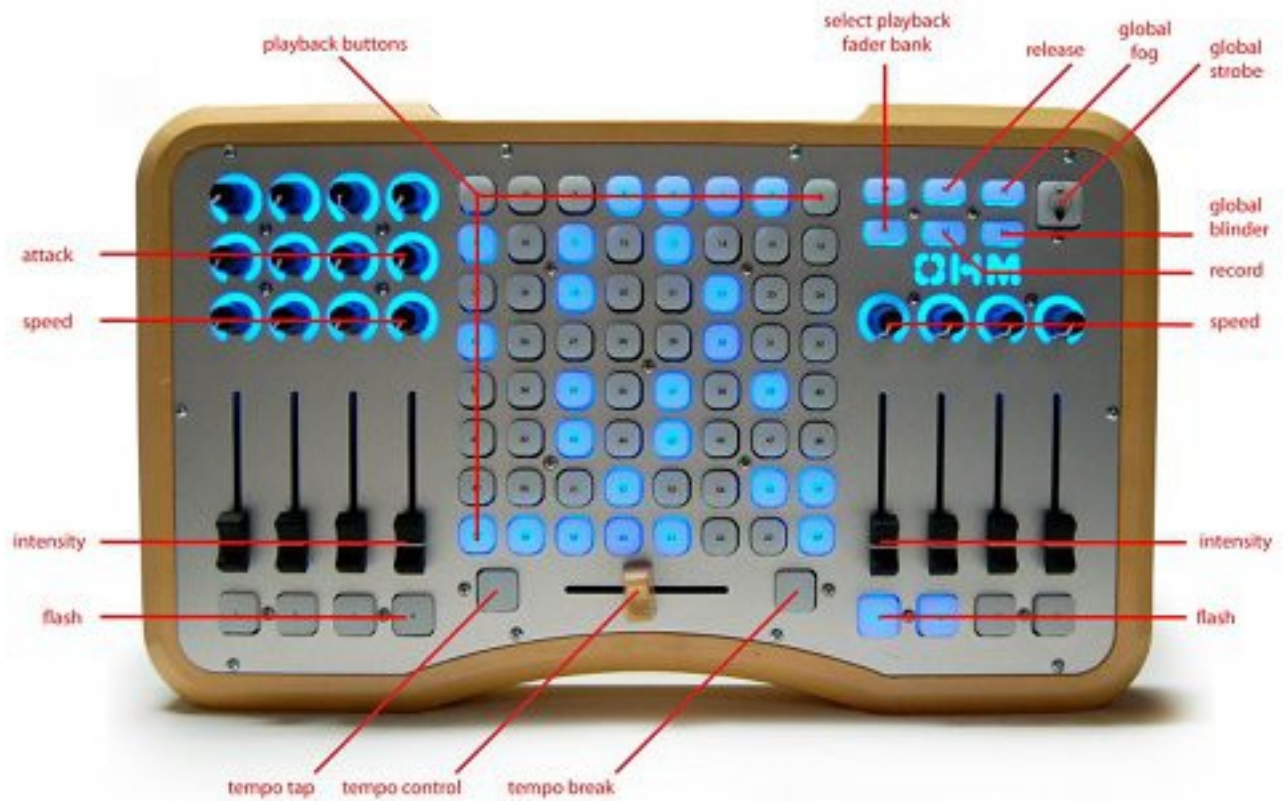
Novation Launchpad

The Novation Launchpad is supported Plug & Play.

## Korg nanoKontrol

The Korg nanoKontrol is supported Plug & Play.

13 OSC

Open Sound Control (OSC) is a protocol for communicating between computers, software and various multi-media type devices. OSC uses the network to send and receive messages, it can contain MIDI, time-code and custom information.

There are apps available for creating custom-made user interfaces on IOS (iPod, iPhone, iPad) and Android. These tools allow you to program fool- proof user-interfaces for controlling the device. E.g. TouchOSC from http://hexler.net/software/touchosc .

Remote Control

CueluxPro has an inbuilt implementation for remote controlling the software by OSC. There is a TouchOSC layout available from http://www.visualproductions.nl/products/cueluxpro.html that is configured to mimic the user-interface of CueluxPro. You can use this OSC layout as a 'rigger's remote' for controlling CueluxPro by iPad or Android tablet.
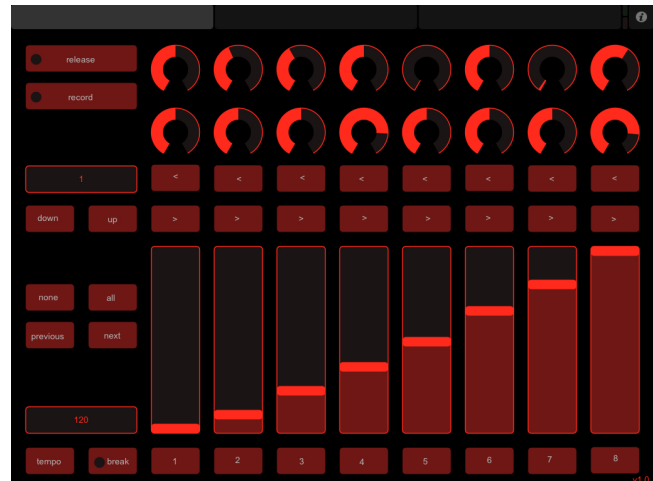
Actions

You can also trigger to incoming OSC messages and define the actions that need to be performed your self. You just add a OSC source to the action-list in the Memories->Action menu and specify the actions, triggers and tasks. More information about programming actions can be found on page 21.

Forwarding

The TouchOSC app can only send its OSC messages to one IP address, however, sometimes you need to send it to multiple IP addresses. In that case you can use the OUTPUT IP OSC table in the Options->Communication->OSC & UDP menu. Simply add IP addresses to this table and enable the FORWARD check-box.

14 OPTIONS

The Options menu enables you to change preferences and view various settings.

GENERAL

This tab enables you to choose a language and a screen resolution.

The astronomical clock in the CueluxPro calculates the sunrise and sunset times based on day of the year, latitude, longitude and UTC values.

The latitude and longitude values define your position in the world and should be entered in degrees. The latitude value should be positive for North and negative for South, the longitude should positive for East and negative for West. The website http://www.findlatitudeandlongitude.com/ can help you find the latitude and longitude values for your location.

The time-zone and perhaps daylight saving time of your location is expressed in the UTC (Coordinated Universal Time) value. UTC is – in this context – equivalent to GMT (Greenwich Mean Time).

For example, Visual Productions' HQ is based in the city of Haarlem, the Netherlands. During the winter we are UTC +1 and in the summer during day light saving time we are UTC +2. So, our settings are:
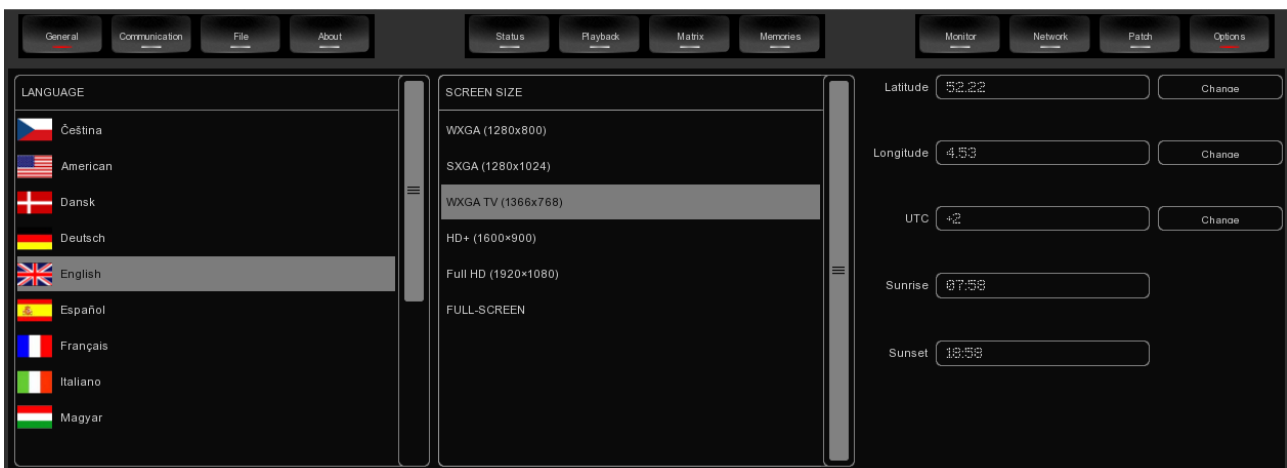

COMMUNICATION

In this tab you can select the midi-maps for the attached MIDI control surfaces. You can specify two MIDI devices.

CueluxPro supports various MIDI control surfaces; it allows you to control CueluxPro' user interface (UI) through the buttons and faders on the MIDI controller. The software ships with a list of predefined Midi-maps. A midi-map file describes the MIDI controller and how its features (buttons, faders, etc) are mapped to the CueluxPro UI.

To set up CueluxPro for use with your MIDI controller, select the appropriate INPUT DEVICE and optionally an OUTPUT DEVICE. The output device is used by CueluxPro to provide feedback to MIDI controller's LEDs and motorized faders. Then select the MAP that corresponds to your MIDI controller.
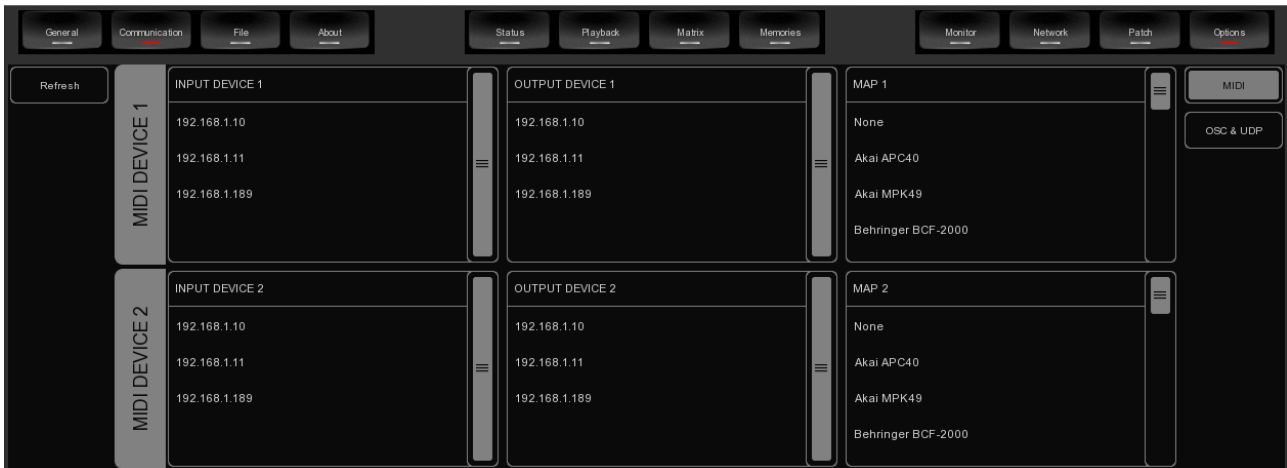
Please take into account that the MIDI controller needs to be connected to the computer before CueluxPro starts up; CueluxPro only scans for MIDI devices at start up. After that you would need to use the REFRESH button to scan again.

Please refer to page 29 for diagrams describing the layout of various Midi-maps.

This tab also allows you to change the settings for OSC and UDP communication. You can change the default network ports used for listening to incoming OSC and UDP messages. Also, you can have incoming OSC or UDP messages forwarded to other IP addresses. For this you add the ipaddress:port information to the OUTPUT IP OSC and OUTPUT IP UDP tables.

Furthermore, you can specify the incoming time-code protocol used by CueluxPro.

FILE

The File tab allows you to load and save show-files. A show-file contains all information about the patch, playback assignments, cuelists, etc. You don't need to save your show-file as CueluxPro will check for changes every few seconds and automatically save the file if needed.

By saving manually and choosing a name for the show-file you can manage different lighting projects or create backup versions. The show-files are stored in XML format at the following locations:
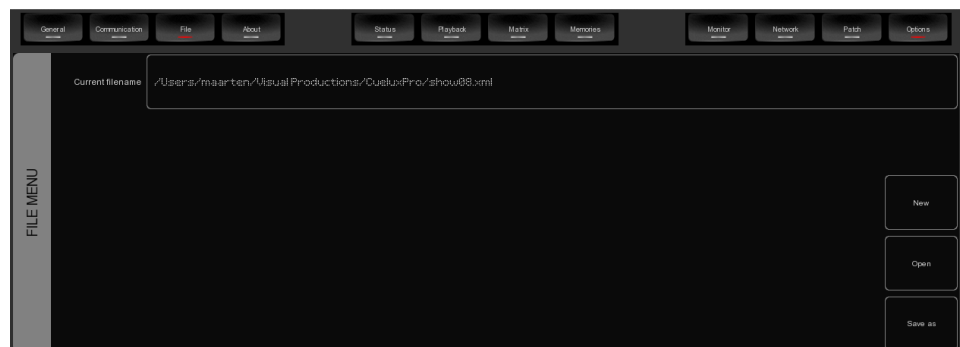
Windows XP	C:\Documents and Settings\[username]\My Documents\Visual Productions\CueluxPro
Windows Vista	C:\Users\[username]\Documents\Visual Productions\CueluxPro
Windows 7 / 8	C:\Users\[username]\Documents\Visual Productions\CueluxPro
Mac OS X	/Users/[username]/Visual Productions/CueluxPro
Ubuntu Linux	/home/[username]/Visual Productions/CueluxPro

By copying the show-file you can easily transfer your show between different computers or even Operating Systems.

About

This tab displays the software's version number.

15 PERSONALITY FILES

Most fixtures differ in the way how they are controlled by DMX. CueluxPro reads 'personality files' (sometimes referred to as 'profiles') to determine a fixture's DMX traits. When you patch a fixture you need to choose your fixture from a list of supported personalities (as described on page 7). This chapter describes how to obtain additional personality files in case your fixture is not yet present in our list.

16.1 GENERIC

Some types of fixtures typical have identical DMX traits. These common fixtures (e.g. Dimmers, fog generators, RGB LED fixtures) are represented in the 'Generic' collection in our library.

16.2 REQUEST NEW PERSONALITIES

Visual Productions provides a free-of-charge service for creating personality files on request. Please make the request on the Visual Productions Forum (http://forum.visualproductions.nl) and include a link to the user-manual or DMX- chart of your fixture.

When you receive the file from Visual Productions it needs to be copied into the following location, before starting up CueluxPro:

Windows XP	C:\Documents and Settings\[username]\My Documents\Visual Productions\Common\Personalities\Factory
Windows Vista	C:\Users\[username]\Documents\Visual Productions\Common\Personalities\Factory
Windows 7 / 8	C:\Users\[username]\Documents\Visual Productions\Common\Personalities\Factory
Mac OS X	/Users/[username]/Visual Productions/Common/Personalities/Factory
Ubuntu Linux	/home/[username]/Visual Productions/Common/Personalities/Factory

16.3 CREATE YOUR OWN

Sometimes it is better to create your own personality file, maybe you need it urgently and you're outside office hours. Or perhaps you don't have a manual available so you would need to create a file through trial-and-error, testing it on the physical fixture.

For any of these cases we supply an editor for creating the personalities yourself; the Personality Builder. It is an external tool for creating and modifying the personality files used by CueluxPro. The Builder is supplied free-of-charge for all CueluxPro users and can be downloaded from http://www.visualproductions.nl/downloads.

For a detailed description of this editor please read its user manual.

16 NOTES

17 INDEX