

emulation

MANUAL



Emulation Manual
Written for Emulation 1.03.24
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Welcome to the Emulation user’s manual, this document describes the Emulation software and the basics of lighting programming.

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If, after consulting this manual, you still have questions then you can obtain additional information and help through the on-line support forum. Emulation users and employees of Elation share their experiences and tips on this forum. You can find the forum at <http://forums.elationlighting.com>

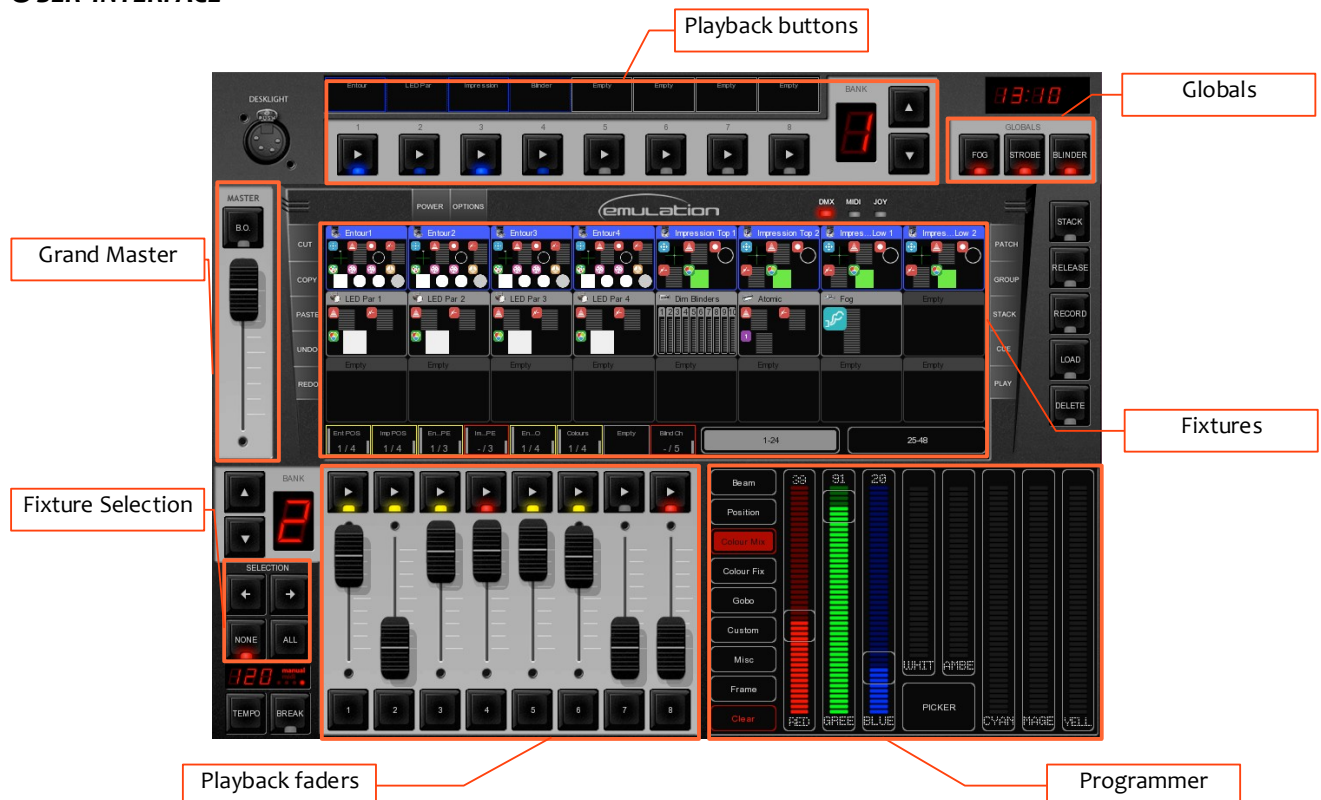
1 OVERVIEW

Emulation is a DMX-512 lighting controller for intelligent lights, LED, dimmers, lasers and various other effects. The program is platform-independent and available on Mac OS X, Microsoft Windows and Ubuntu Linux. The software is shipped with a USB-to-DMX adapter cable. Key to the design of Emulation is its intuitive graphical user-interface; it is specially designed to reduce the amount of time required to learn how to operate the software.

FEATURES

- Mac OS X, Windows 7, Vista, XP & Ubuntu
- Industry standard cuelist system
- Plug & Play MIDI controller mapping
- 100% touch screen compatible
- 512 channels DMX512 + Art-Net
- 48 Fixtures (10 sub-fixtures per fixture)
- Unlimited cuelists and groups
- 64 playback faders + 64 buttons
- Shape generator
- iPhone remote
- Multi language
- 2100+ Personality files
- 32-bit and 64-bit hardware drivers
- Editor for Personality-files

USER-INTERFACE



2 INSTALLING DRIVERS

This chapter provides step-by-step instructions for installing the USB driver for the CueCable interface.



Illustration 1: CueCable

2.2 EMULATION ON MAC OS OR LINUX

Just connect the CueCable to a free USB port on your Apple or Linux computer; Mac OS and Linux do not require a specific driver for the CueCable.

2.1 EMULATION ON WINDOWS

Emulation comes with drivers for both 64-bit and 32-bit versions of Windows XP, Vista and 7. The drivers are bundled with the application and copied to your computer by our installer tool. Please use this tool for installing the drivers and ignore any 'New Hardware Found' popup dialogs from Windows.

The installer will automatically detect whether your Windows system is 64-bit or 32-bit and select the appropriate drivers.

If you have already installed the driver before and you would just like to install an update for the Emulation application then you can skip installing the drivers again.



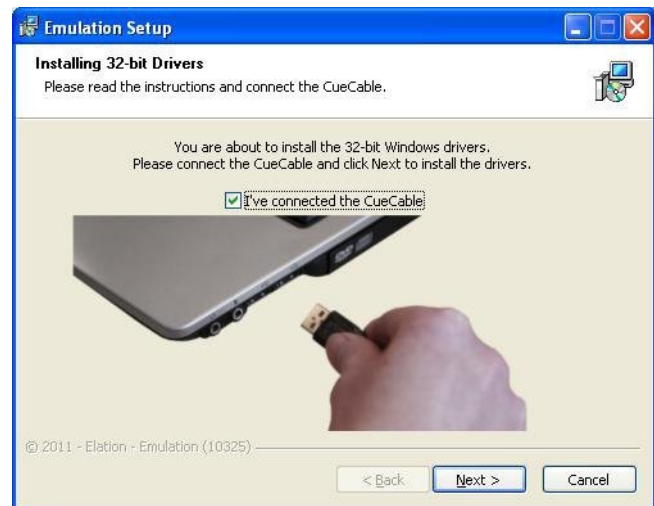
Installing under 64-bit

Follow the instruction in the installer-wizard. During the installation of the driver Windows might prompt you several times to confirm if you would like to install the driver from 'Jungo'; this is the name of the vendor of this specific driver. Please confirm that you would like to install this driver.



Installing under 32-bit

Please make sure your CueCable is connected to the computer for installing the 32-bit driver and follow the instructions on your screen.



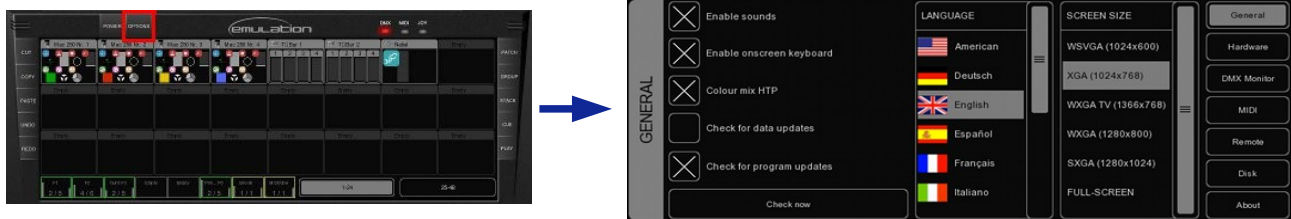
Verifying the driver

Run Emulation and check in the OPTIONS -> HARDWARE that the CueCable is detected.



3 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.

Emulation is updated regularly to provide you with improved features, bug-fixes and new or improved personality-files. To check for updates, click CHECK NOW . To have Emulation check automatically at startup - only once a day – you should enable the CHECK FOR PROGRAM UPDATES check box.

The CHECK FOR DATA UPDATES check box enables Emulation to automatically update its data files like personalities, languages and midi-maps. N.B. This feature is not yet operational in software version 1.03.18.

The COLOUR MIX HTP check box sets the HTP or LTP mode for the Colourmix RGB attribute. When enabled, the highest RGB Colour Mix value out of all active cuelists will be outputted. The “highest” colour is white (RGB 255,255,255). When disabled, the most recently changed value for RGB Colour Mix will be outputted (LTP).

HARDWARE

In the hardware tab you can check that the CueCable is properly connected. You can also enable Art-Net (a protocol to send DMX data over the network). Art-Net is a very useful protocol to connect Emulation to third-party visualizers (e.g. WYSIWYG or Capture Polar). The Art-Net protocol supports up to 256 universes whilst Emulation only supports 1 universe, so the ARTNET UNIVERSE field allows you to select on which ArtNet universe Emulation will broadcast its one and only universe. The default value is 0.

Please take into account that the Art-Net feature is only enabled while a CueCable is connected.



DMX MONITOR

This tab shows you the DMX values that are currently sent out.

DMX MONITOR	001	002	003	004	005	006	007	008
	020	204	000	156	000	005	000	000
	009	010	011	012	013	014	015	016
	000	087	070	080	127	255	193	084
	017	018	019	020	021	022	023	024
	000	000	020	255	000	156	000	005
	025	026	027	028	029	030	031	032
	000	000	000	001	106	080	127	255
	033	034	035	036	037	038	039	040
	193	084	000	000	020	255	000	156
	041	042	043	044	045	046	047	048
	000	005	000	000	000	001	106	080

MIDI

Emulation supports various MIDI control surfaces; it allows you to control Emulation's 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 Emulation UI.

To set up Emulation for use with your MIDI controller, select the appropriate INPUT DEVICE and optionally an OUTPUT DEVICE. The output device is used by Emulation to provide feedback to MIDI controller's LEDs and motorized faders. Then select the MAP that corresponds to your MIDI controller.



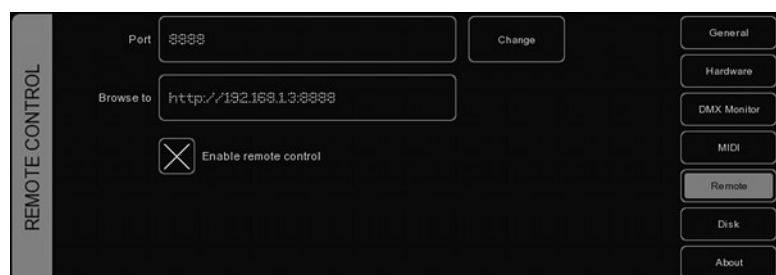
Please take into account that the MIDI controller needs to be connected to the computer before Emulation starts up; Emulation only scans for MIDI devices at start up. After that you would need to use the REFRESH button to scan again.

Please refer to page 24 for diagrams describing the layout of various Midi-maps.

REMOTE

The Remote feature allows you to view the patch including addresses and dip-switch settings per fixture in real-time from your browser-enabled mobile device. It also allows you to trigger the playback-buttons remotely.

To connect your device to this web-based feature you would need to make sure that the checkbox is enabled and then type in your browser the exact address as displayed in the BROWSE TO field.



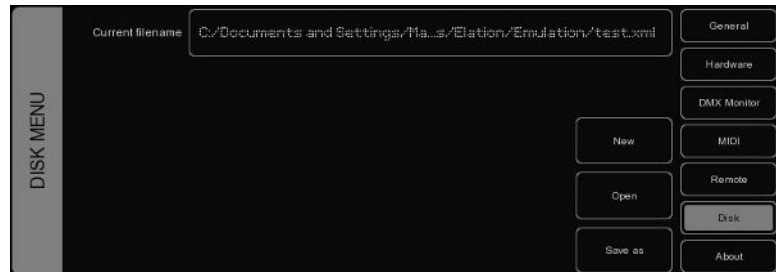
Emulation takes the IP address currently assigned to the computer's network interface. You cannot change this address in Emulation, that would need to be done in the computer's network settings. Please do take into account that Emulation uses the first available network interface, if you have multiple (e.g. wired network and WIFI), there is no way of choosing which interface Emulation uses. This means that sometimes you would need to disable one interface to force Emulation to use the preferred interface.

Please refer to page 29 for step-by-step instructions for setting up this feature with an iPhone.

DISK

The Disk 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 Emulation 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\Elation\Emulation
Windows Vista	C:\Users\[username]\Documents\Elation\Emulation
Mac OS X	/Users/[username]/Elation/Emulation
Ubuntu Linux	/home/[username]/Elation/Emulation

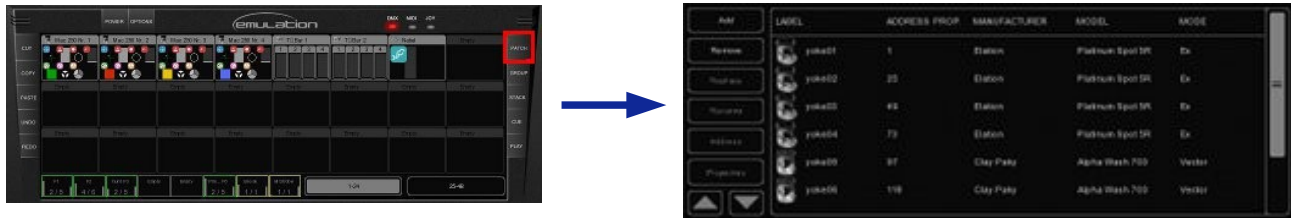
By copying the show-file you can easily transfer your show between different computers or even Operating Systems.

ABOUT

This tab displays the software's version number.

4 PATCH

The PATCH view allows you to setup the DMX fixtures which are connected to Emulation.

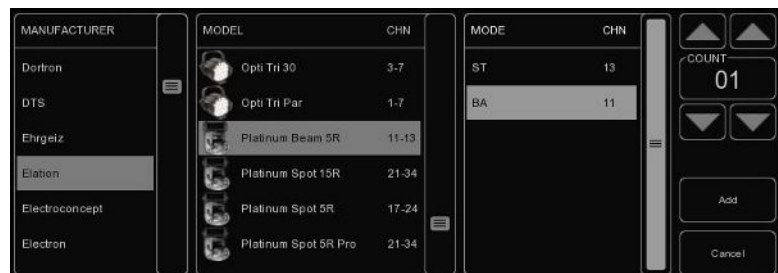


Add

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 30 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, the REPLACE tool can help you. Select the fixtures you would like to replace by clicking or dragging in the Patch view and click REPLACE. 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.

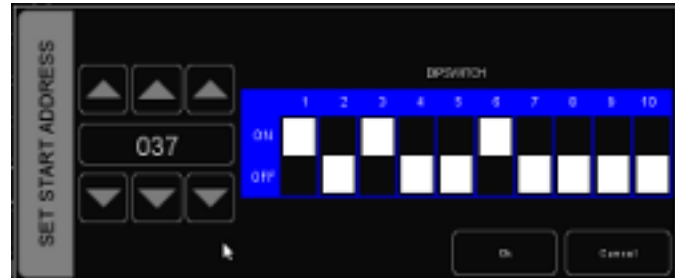
Rename

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

Address

Emulation 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 1 or multiple fixtures and click ADDRESS. Enter the new address and click OK.

If you had multiple fixtures selected, Emulation 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 a fixture and clicking on the PROPERTIES 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.



5 PLAYBACKS

Playbacks are an important element in a cuelist based lighting controller like Emulation. 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. Playbacks can also contain stacklists and groups.



Illustration 2: Playback Faders



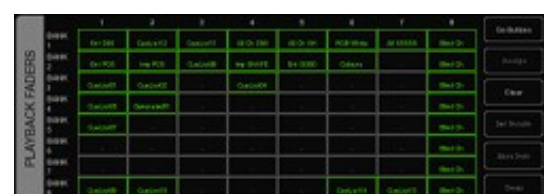
Illustration 3: Playback Buttons

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. Therefore the playback button takes up less space in the Emulation 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.

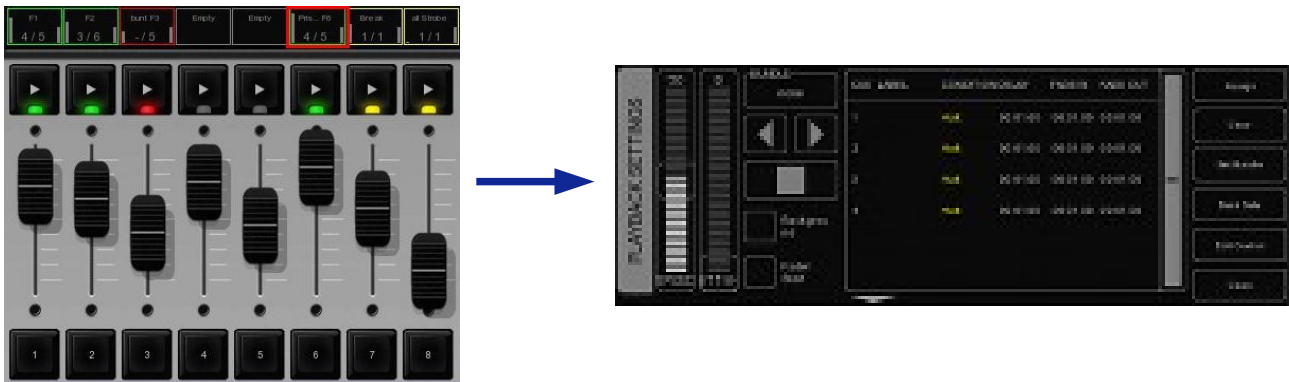
Assignment

You can assign a playback in three ways.

Firstly, you open the PLAY menu, select a cell corresponding to playback and press the ASSIGN button. The dialog that will pop-up guides you through selecting a cuelist, stacklist or group to assign to this playback. The PLAY menu also enables you to Copy/Paste and SWAP assignments.



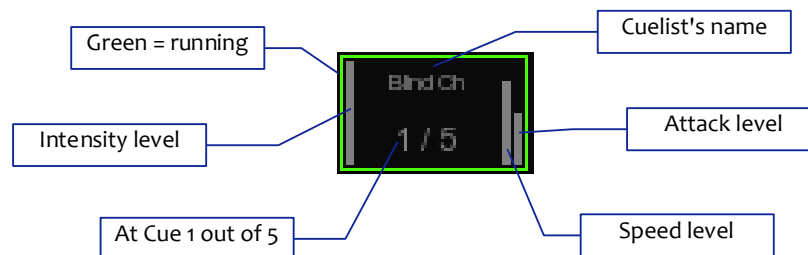
Alternatively, you can double-click on the 'indicator' just above a playback to bring up the Playback Settings view. Pressing the ASSIGN button in this dialog will bring up the assignment dialog.



Finally, you can also assign by creating a new cuelist, stacklist or group in main view, this implicitly assigns the new cuelist, stacklist or group to a playback. Please refer to the Cuelist, Stacklist or Group 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.



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.



Sub-masters

When you attach a Group to a playback button, the playback button allows you to quickly select the fixtures in that group. When attached to a playback fader, the PLAY-button of the playback fader acts as the selection button and the fader becomes a live intensity fader for the group.

Banksafe

Some cuelists or sub-masters 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.

6 GROUPS

The Group menu enables you to create groups with fixtures and/or sub-fixtures. This makes selection of groups or (sub) fixtures easy and, when assigned to a playback, allows you to use sub-masters per group (see page 11 for more information on playbacks).



6.1 CREATING A GROUP

Add a group with the ADD button on the left. Select the newly created group and add fixtures to it by clicking on the ADD button on the right. The following dialog will pop-up.

Select fixtures in the FIXTURES or SUBS list. Click “>>” to add the selected fixtures to the group.

You can also create a group directly in the main view by recording your current fixture selection to a playback, the group is then automatically assigned to this playback. To achieve this, execute the following steps:



1. Make sure the programmer is cleared (press CLEAR twice)
2. Select fixtures
3. Press RECORD
4. Press the GO button of an empty playback

6.2 AUTO CLASS & AUTO MODEL

The software can automatically create groups for you. Click AUTO CLASS in the GROUP menu and the software will automatically create groups per fixture-type. Click AUTO MODEL and the software creates groups per model.

6.3 SUB-FIXTURES

Emulation 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. In this manner the maximum of 48 will not be reached that quickly (you can add $48 \times 10 = 480$ dimmer channels). 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.

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 main view or use the CUE menu. This chapter discusses both approaches.

7.1 TRACKING

Cuelist based lighting controllers can be either tracking or non-tracking. Emulation 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.

7.2 CREATING CUELISTS IN THE MAIN VIEW

The fastest way to create cuelists is to do it in the Main view. Special buttons like RECORD, LOAD and DELETE 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.



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%. Therefore 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 DELETE 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.

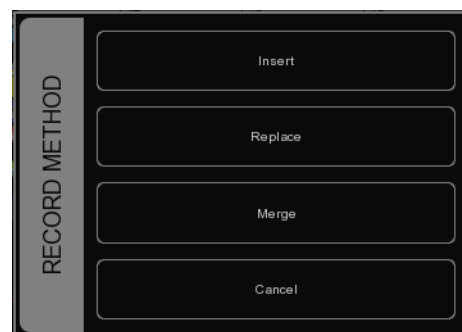
- Press the RECORD button
- Press the GO button of an empty playback

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 popup, 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.

7.3 MODIFYING A CUELIST VIA THE MENU

Next to working in the Main view, you can also edit cuelists via the CUE menu. Although you can create a new cuelist in the CUE menu, the menu is more setup for modifying cuelists once created in the Main view.

To change an existing cuelist, open the CUE 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. The speed of the chase is linked to the main Chase tempo, which can be found at the bottom left of the Emulation 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.

Speed

Speed controls the playback speed of the cueList. 50% reflects normal playback speed, with the programmed timing per cue. Changing the playback speed will scale the timing for all cues in the cueList.

7.4 MODIFYING A CUE VIA THE MENU

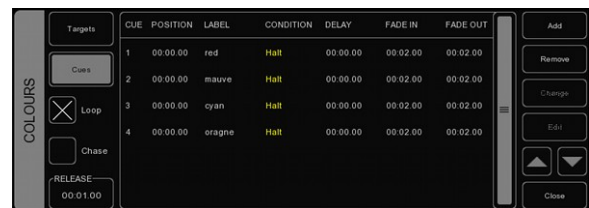
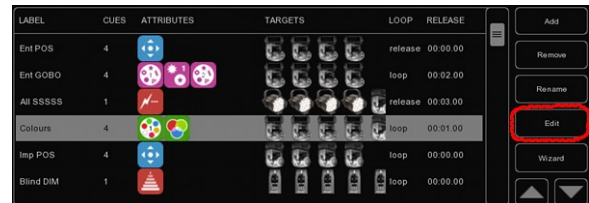
The following properties can be set per cue:

Label

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

Condition

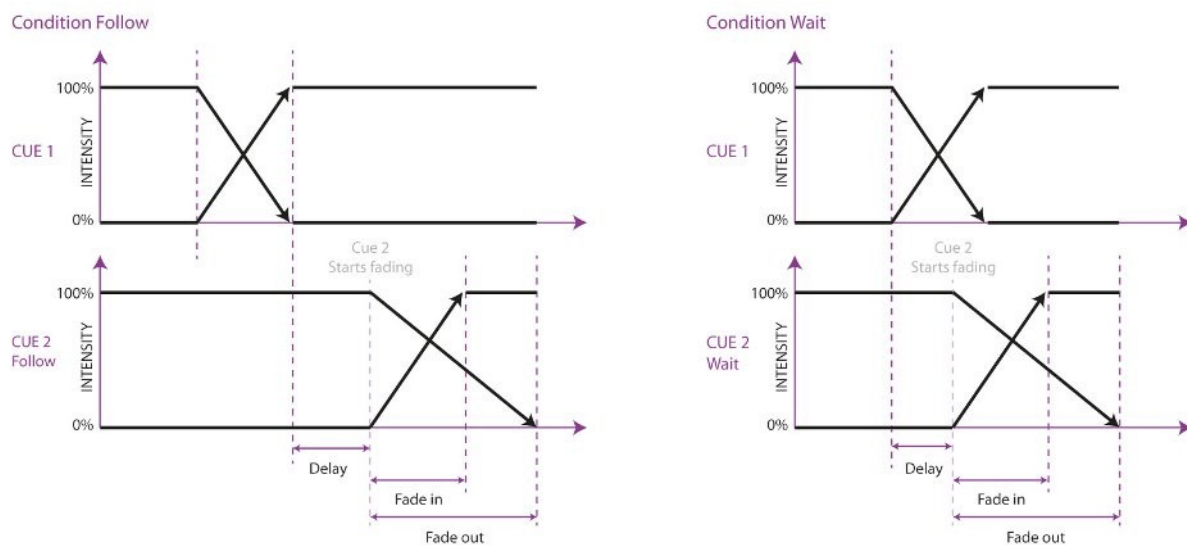
The condition specifies when the cue will be triggered. There are 3 possible Conditions:



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 automatically 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.

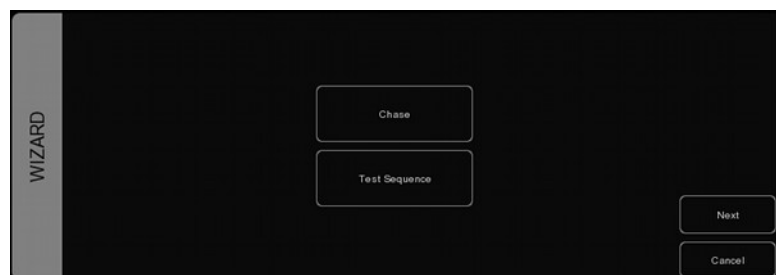
Change

Select one or multiple values and click Change to change the value.

7.5 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 11 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 STACKLISTS

Stacks can be used to combine multiple cuelists into one effect. You could use it on-the-fly to start multiple cuelists in sync, or you can program a stacklist and assign it to a playback.



8.1 USING STACKS LIVE

To trigger multiple playbacks at the same time during live operating, press the STACK button and click on the PLAY buttons of the playbacks you want to trigger at the same time. As soon as you press STACK again, the selected playbacks will trigger simultaneously.

8.2 RECORDING STACKLISTS

If you want to repeatedly trigger the same playbacks, recording to a stack in a stacklist comes in handy. Press the STACK button. Click on the PLAY buttons of the playbacks you want to trigger at the same time and press RECORD. Now click on the PLAY button of an empty playback fader or button. A new stacklist will be created containing the new stack. You can record multiple stacks on the same playback fader or button.

8.3 EDIT A STACKLIST

To edit a stacklist, go to the Stack menu or double-click on the Playback Indicator above the playback button or playback fader where the stacklist is recorded.



The Stacklist has several properties you can change.

Loop

This check box controls whether the stacklist will release after running the last stack or whether it will go back to the first stack and keep looping until it is released manually.

Label

You can give each stack a label for your own reference.

Condition

Similar to making cues, you can set conditions for each stack. Although for stacks only 'Halt' and 'Follow' are supported.

Delay

A delay time can be set between triggering the stack and when the cuelists will become active.

9 GLOBALS

On the main screen of Emulation, you'll notice 3 GLOBALS for FOG, STROBE and BLINDER. These buttons can be instantly used without programming individual cuelists. When patching fixtures, the software automatically recognizes strobes and fog generators and allocates them directly.



Fog

All fog machines in the configuration will be activated for as long as you keep the button pressed.

TIP: Would you like to use the FOG global only for a selection of fog machines? Create a group, rename it "fog" and add the fog machines of your choice to that group to have them responding to the FOG global.

Strobe

All strobes in the configuration will strobe while keeping the button pressed

TIP: Need more strobe-power? Create a group, rename it "strobe" and add fixtures to that group. Don't forget to add the strobes manually to the strobe-group too!

Blinder

All fixtures in the group "blinder" will flash at 100% intensity as long as the button is pressed. Because Emulation doesn't know to which dimmer-channels the blinders have been connected to, you have to create a group with the name "blinder" and include the dimmer-channels or fixtures you wish to use.

10 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 Emulation window .

Using the TEMPO button below the tempo display, you can tap to the music to change the tempo in Emulation. 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 Emulation 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.



Illustration 4: Manual mode



Illustration 5: MIDI mode

11 HOT-KEYS

Depending the current view, menu or dialog, the most used mouse operations are also assigned to the keyboard's keys. Using these 'hot-keys' can speed up your tasks significantly. Below is a summary of the major views in Emulation.

Main view

F1-F8: playback button go
F9-F10: playback button bank down-up
1-8: playback fader go
Q-I: playback fader flash
Page down/up: playback fader bank down-up
Home: Page 1-24
End: Page 25-48
/*-: globals
pause/break: break
ctrl+S: stack
backspace: release
INS: record
ctrl+L: load
DEL: delete
Tab: tempo tap
left/right: selection left/right

Patch menu

INS: add
DEL: delete
F2: rename
Enter: address
F3: props

Group menu

Ins: add group/member
Del: remove group/member
F2: rename
Tab: switch focus

Stack menu

Ins: add
Del: remove
F2: rename
Enter: edit

Cue menu

Ins: add
Del: remove
F2: rename
Enter: edit
W: wizard

Play menu

Tab: switch buttons/faders
Enter: assign
Del: clear
B: bundle
S: swap

12 MIDI CONTROLLERS MAPPINGS

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

Generic Midi-map

Next to the hardware specific midi-maps, Emulation 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.



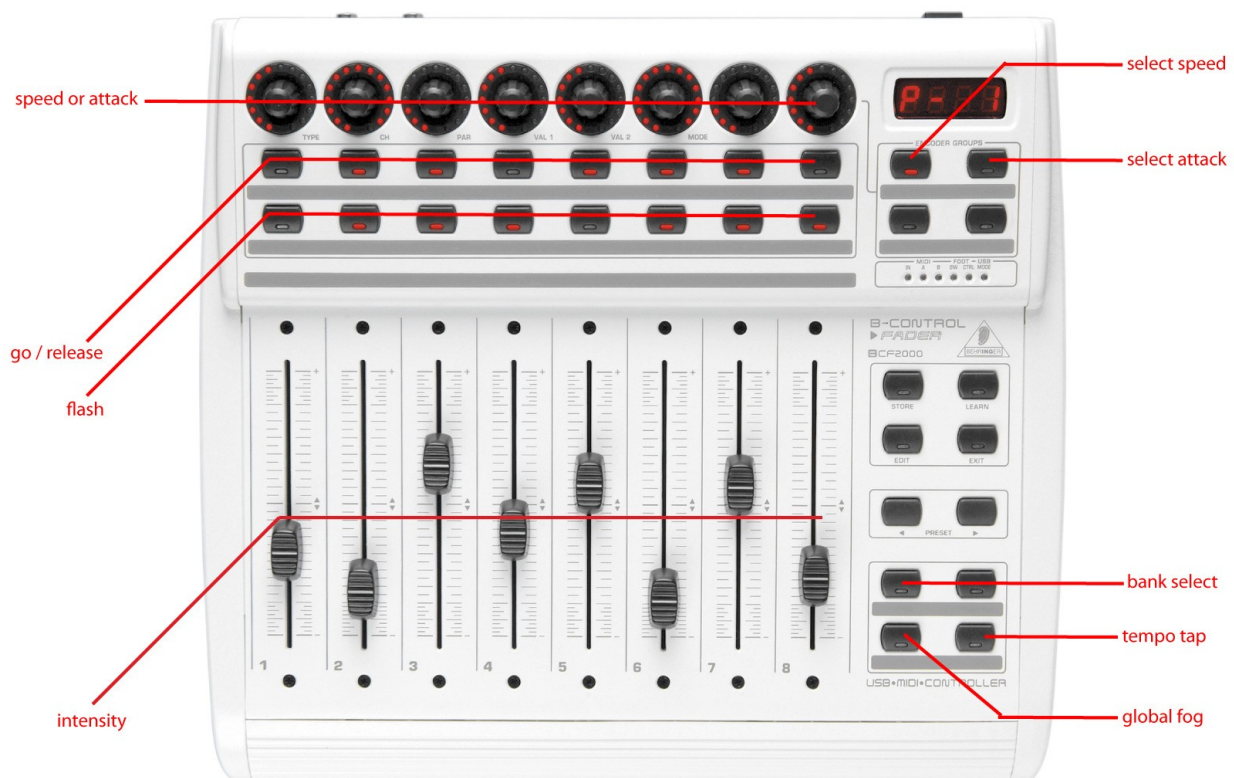
Behringer BCF-2000

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/Elation/Emulation/Sysex/" folder on Windows systems.

The Sysex file can be uploaded to the BCF-2000 using one of the following (free) tools:

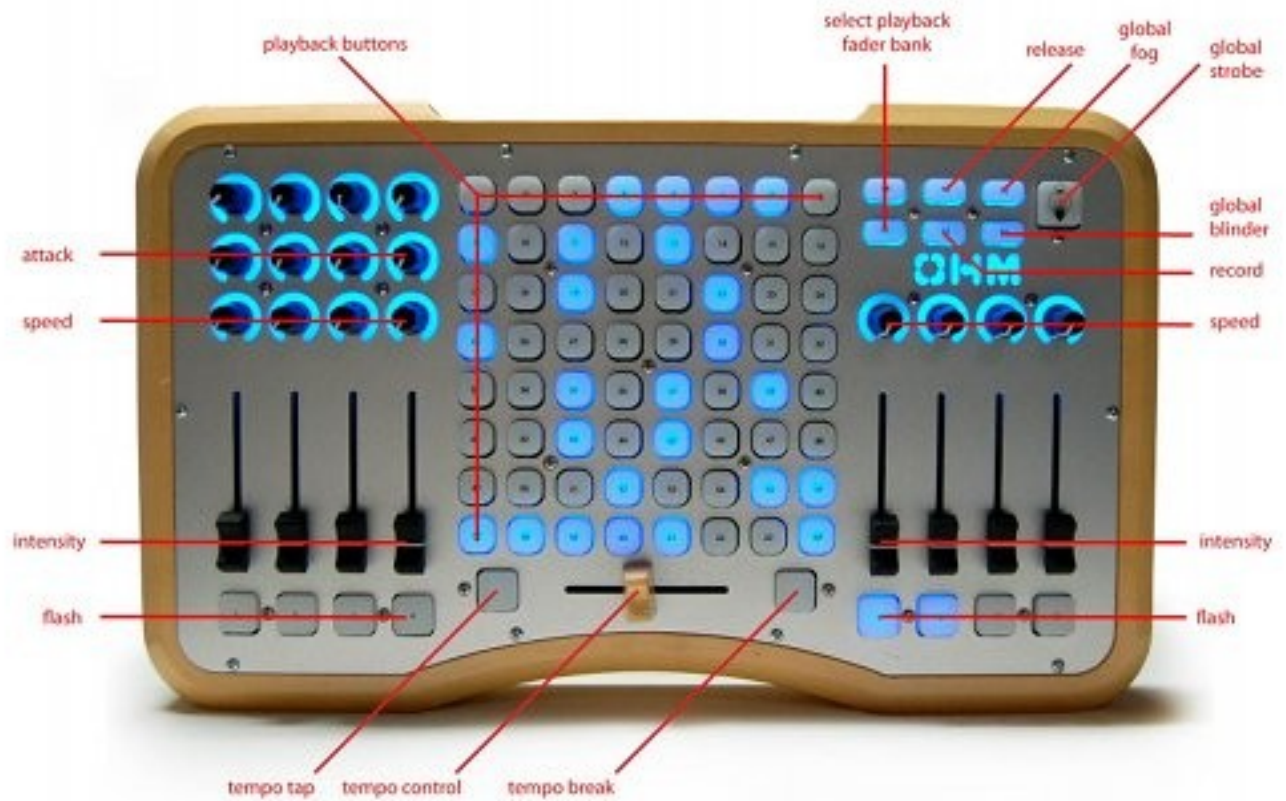
- Midi-OX for Windows: <http://www.midiox.com>
- SyEx Librarian for Mac OS X: <http://www.snoize.com/SyExLibrarian/>

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.



Livid Instruments Ohm64

The Livid Instruments Ohm64 is supported Plug & Play.



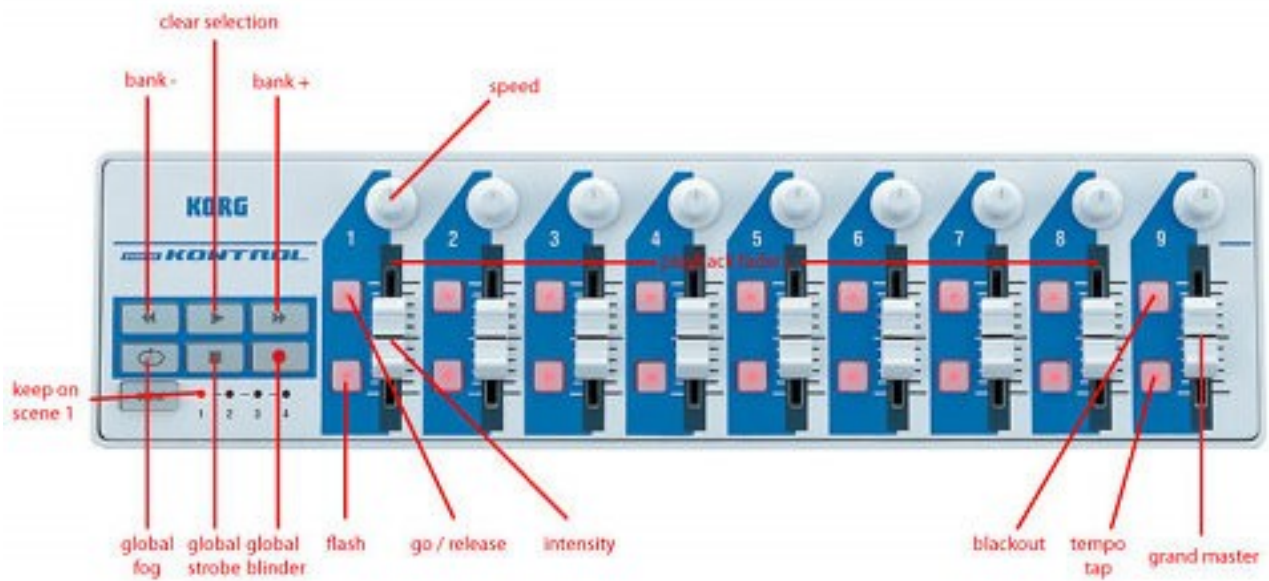
Novation Launchpad

The Novation Launchpad is supported Plug & Play.



Korg nanoKontrol

The Korg nanoKontrol is supported Plug & Play.



13 IPHONE REMOTE

This chapter explains, step-by-step, how to set up your iPhone to use the Remote function as described on page 7.

Step 1

Make sure the computer running Emulation and your iPhone are connected via WIFI (for example via a simple WIFI router as displayed).



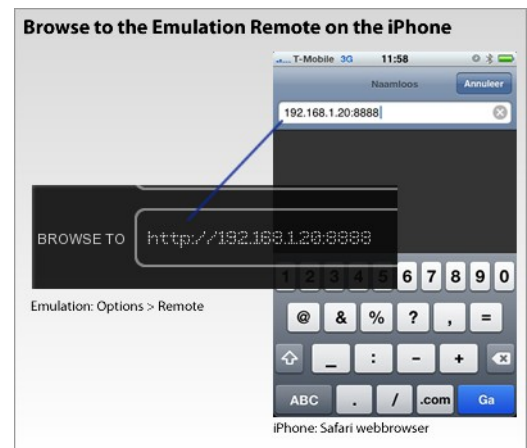
Step 2

In Emulation, go to Options -> Remote and turn on ENABLE REMOTE CONTROL.



Step 3

On your iPhone, browse to the address displayed in Emulation.



Step 4

Finished!



14 PERSONALITY FILES

Most fixtures differ in the way how they are controlled by DMX. Emulation 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 9). This chapter describes how to obtain additional personality files in case your fixture is not yet present in our list.

14.1 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.

14.2 REQUEST NEW PERSONALITIES

Elation provides a free-of-charge service for creating personality files on request. Please make the request on the Elation Forum (<http://forums.elationlighting.com>) and include a link to the user-manual or DMX- chart of your fixture.

When you receive the file from Elation it needs to be copied into the following location, before starting up Emulation:

Windows XP	C:\Documents and Settings\[username]\My Documents\Elation\Common\Factory
Windows Vista	C:\Users\[username]\Documents\Elation\Common\Factory
Mac OS X	/Users/[username]/Elation/Common/Factory
Ubuntu Linux	/home/[username]/Elation/Common/Factory

14.3 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 Emulation. The Builder is supplied free-of-charge for all Emulation users and can be downloaded from <http://www.elationlighting.com>.

For a detailed description of this editor please read from page 31.

15 PERSONALITY BUILDER

The Personality Builder is a software program that you can use to create or modify the personality files used by Emulation. It is available on Mac and Windows and you can download it free of charge from <http://www.elationlighting.com>.

This chapter will describe the Personality Builder software by guiding you through the software. This text is written for Builder version 1.01.6.

15.1 OVERVIEW

The software is built in two sections, the Factory section and the User section.

Within the factory section nothing can be changed, these are the default personality files as supplied by Elation. The user section contains all the User Manufacturers which can be modified with the Personality Builder.

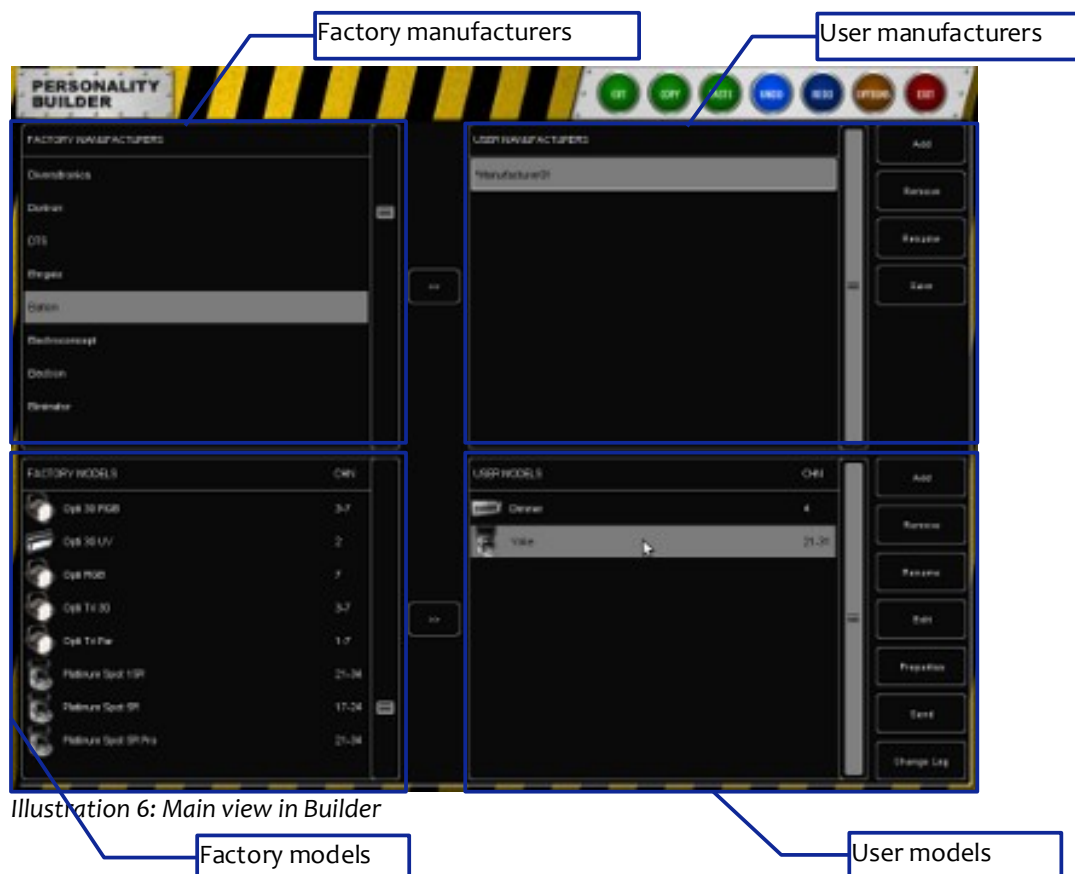


Illustration 6: Main view in Builder

15.2 DMX DIAGRAM

In the DMX diagram you can see what channels are being used and which are not.

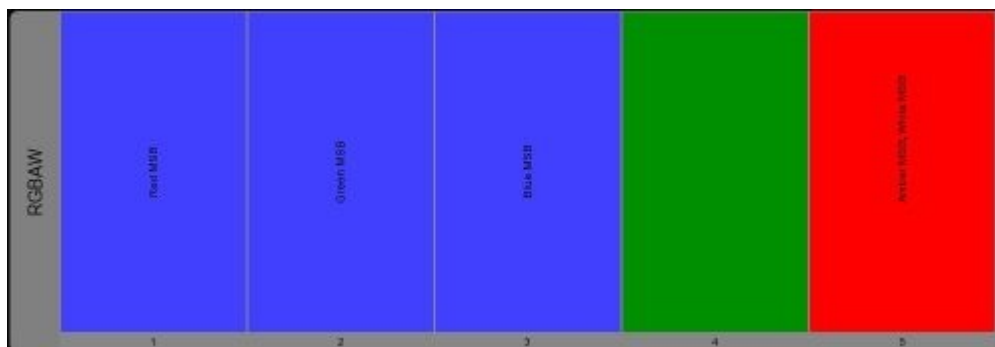
You are also able to see if there is any DMX overlap; this would mean that there is an error.

Legend

Green: represents empty spaces in a DMX channel

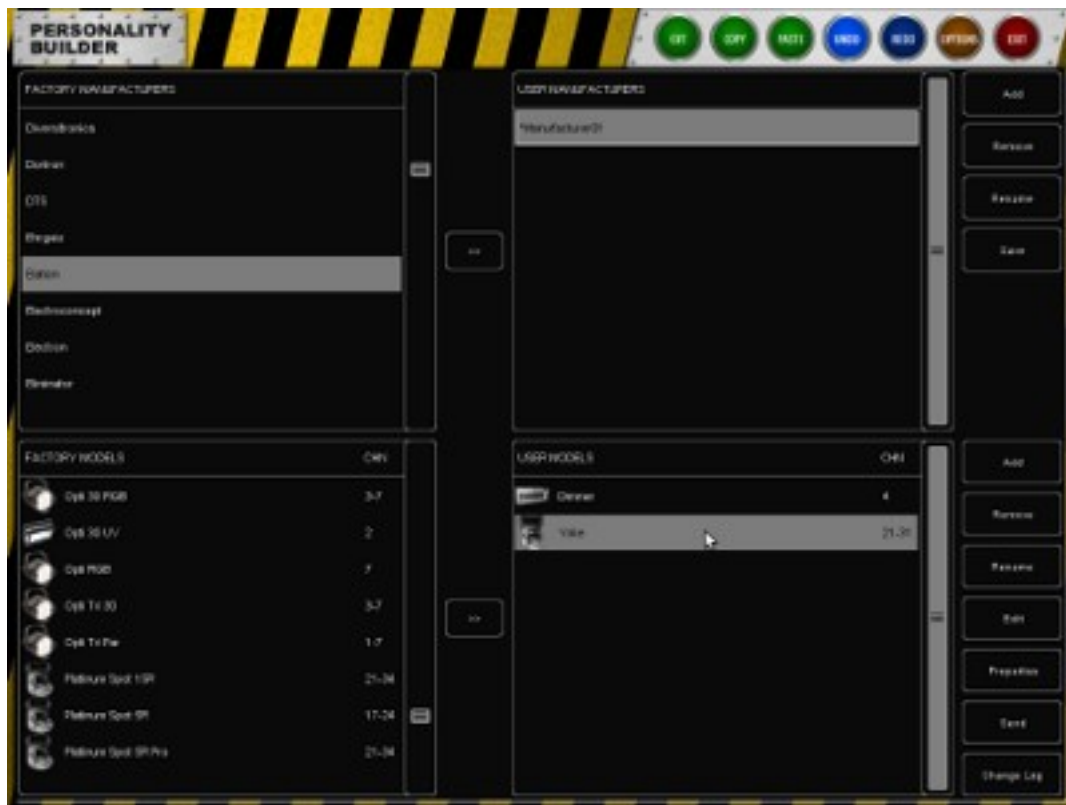
Blue: represents used space in a DMX channel

Red: represents an overlap



15.3 MANAGING PERSONALITIES

Although you cannot edit Factory Manufacturers directly, you can copy them to your User Manufacturers and then change them from here.



Duplicate Factory Manufacturers

If you would like to add a new model to a Factory Manufacturer you have to copy the manufacturer to the User Manufacturers.

To do so, select the Factory Manufacturer and click on the >>.

Since the manufacturer is now in the User Manufacturers you are able to change and add models.

Duplicate Factory Models

It is also possible to add a Factory Model to your User Manufacturers.

Select the User Manufacturer that you would like to use, and then select the Factory Model that you would like to copy.

Press the >> next to the models section to copy the Factory Model to the User Models.

Now you are able to change the existing model without having to create a new one from scratch.

Creating a new manufacturer

To add a new manufacturer to your personality library, click on the ADD button next to the "User Manufacturer" section.

This will add a manufacturer named "Manufacturer01". To rename select this and click the RENAME

button.

Creating a new model

Select a User Manufacturer and click on the ADD button next to the “User Models” section to add a new model.

To rename the model, click RENAME and enter the new name of this fixture.

Saving the personality file

When you have finished editing a personality you can press the save button next to the User Manufacturers section, this will save the manufacturer to your disc.

When a manufacturers name has a * in front of it, it means that it has been modified and that it needs to be saved.

15.4 MODEL PROPERTIES

In the main overview, select the model that you want to edit and click PROPERTIES.



This dialog allows you to enter the following properties:

Alias

The Alias field defines a default name when patching this model in Emulation. If you leave this field blank it will use the name of the model instead.

Angle Pan

Maximum pan movement, when the light is not a moving light you do not need to change this.

Angle Tilt

Maximum tilt movement, when the light is not a moving light you do not need to change this.

Matrix Width

Width of a matrix; by setting the width Emulation will calculate the height of the matrix according to the number of sub-fixtures.

Matrix Mapping

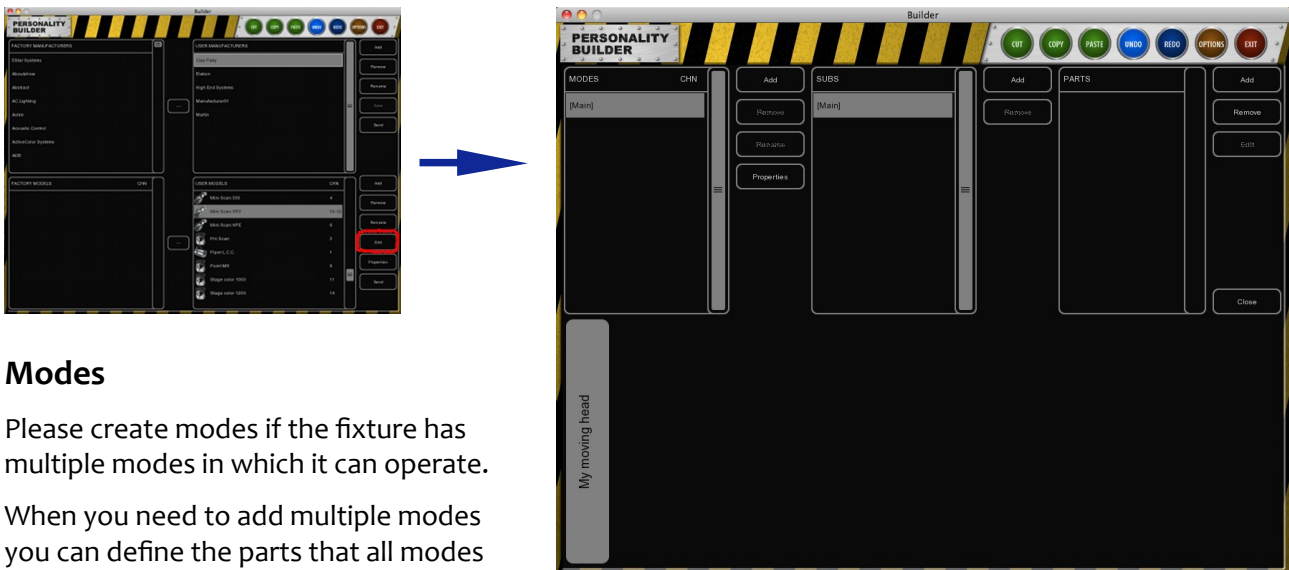
If the model has multiple subs and is used for matrix control, then here you can fill in the order in which the subs are layed out.

Class

The Class of a model is set to “Automatic” by default; Emulation determines what type of fixture it is and shows the relating icon. You can override this by manually selecting a class.

15.5 EDITING MODELS

In the main overview, select the model that you want to edit and click “Edit”.



Modes

Please create modes if the fixture has multiple modes in which it can operate.

When you need to add multiple modes you can define the parts that all modes have in common in the “[Main]” mode.

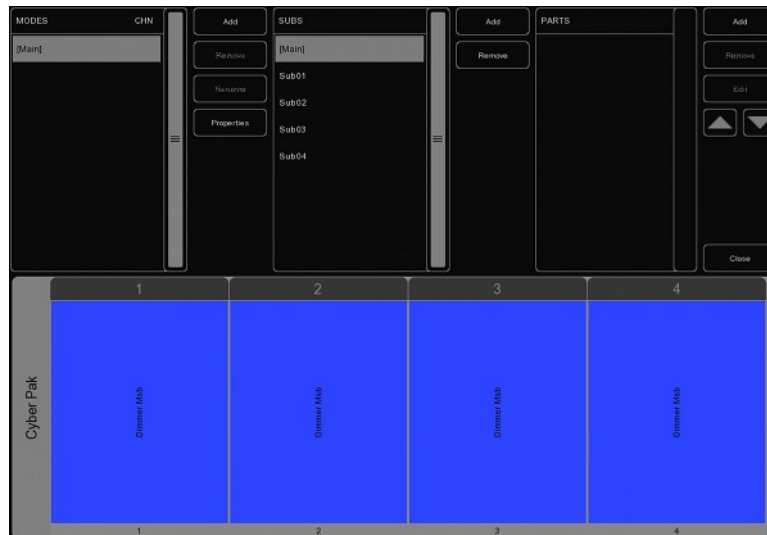
For example the Clay Paky Mini Scan HP3, this model has two modes, an 8-bit mode and a 16-bit mode. Please take a look at the picture below.



Subs

Some fixtures use subs to control a part of the whole fixture, a dimmer for example has multiple Subs. Each Sub can have its own part and can be individually selected and programmed in Emulation.

For example the Elation Cyber Pak: this fixture has 4 different subs which all have their own dimmer.



Parts

To start adding Parts to your model click ADD on the parts section. A list with all the available parts will come up, select the part that you would like to add and click Ok.

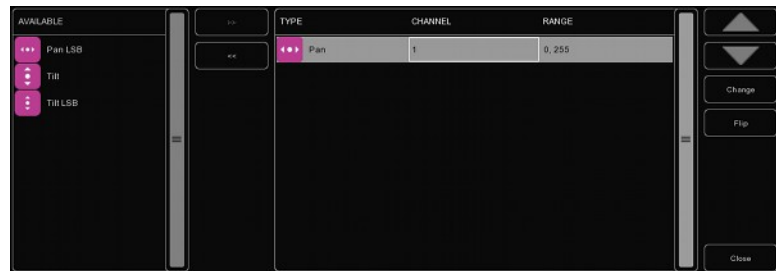


Position

Add a position part if a fixture features pan & tilt movement.

Select the element from the AVAILABLE list and click on the >> button. Once included in the list on the right, you can change the CHANNEL

Once the element is added to the personality file you can change the CHANNEL and the RANGE values of the element.



MSB/LSB

The acronyms MSB (Most Significant Byte) and LSB (Least Significant Byte) are frequently used when creating new personality files.

MSB: Controls the 8-bit operations of the fixture (sometimes referred to as “Coarse”).

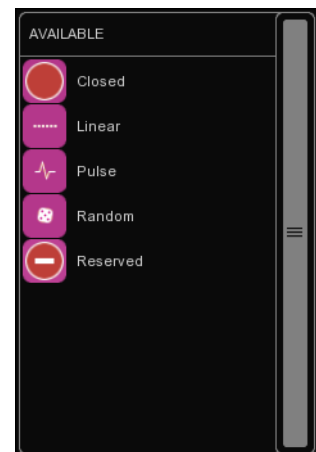
LSB: Controls the 16-bit operations of the fixture, 16-bit is used for the fine adjustments. It can only be used if the fixture supports 16-bit (sometimes referred to as “Fine”). When a fixture supports 16-bit controls, you have to define both MSB and LSB!

Shutter

In the shutter part you can add a shutter closed and three different strobe functions.

If no function is set by Emulation, so no Closed shutter, Strobe Linear, etc, then the channel is set to its ‘idle’ value. You do not need to define an idle value in the Builder; Emulation will automatically choose a value that is not used for anything else. Please note that you can use the RESERVED range to prevent Emulation from using certain values as idle.

Several other parts use idle values as well when not activated, like Reset, Lamp, Display, etc. Therefore these parts will also feature the reserved ranges.



Dimmer

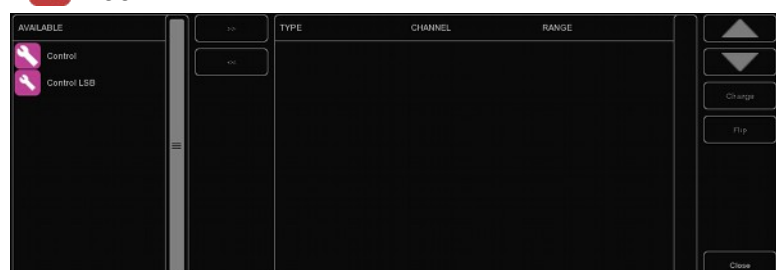
Iris

Focus

Zoom

The Dimmer, Iris, Focus and Zoom have Control and Control LSB ranges that can be added.

When setting the Control range for the Iris part, please make sure that the minimal value represents an open aperture and the maximum value represents iris closed.

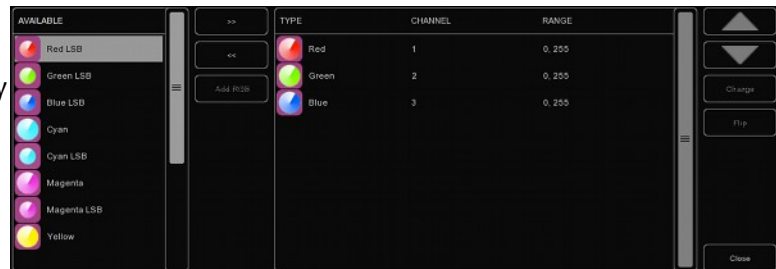


Frost

Frost has two modes of operation, some fixtures use the Control (LSB) ranges while others only have an on/off option for the frost function.

ColourMix

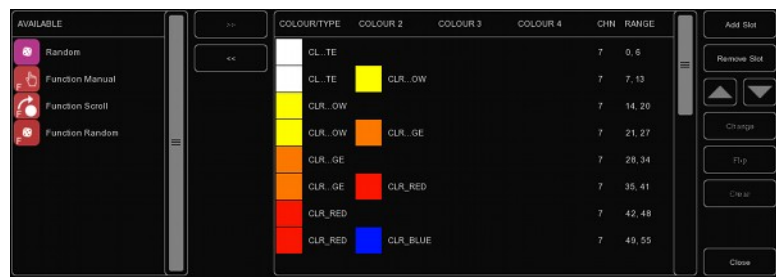
The ColourMix part can hold the RGB, CMY, White and Amber ranges. To quickly add RGB to the fixture you can use the ADD RGB button.



ColourFix

When a fixture has a wheel with fixed colours, you can use the ColourFix to define the slots in the colour wheel. You would need to add slots for each colour position. Up to three ColourFix parts are supported by the Builder.

Select a slot and click CHANGE. Now you can pick the appropriate colour from the list of colour libraries. Quite a few fixtures feature 'split colours'; a position on the wheel where two halves of a colour are visible (e.g. Elation Power Spot 575). The Builder supports up to 4 different colours per slot.



Next to adding slots you can also add ranges for scroll, random and several function ranges. These function ranges are explained on page 41.

To change the range of a colour, select the range and click change. You can either set the range by typing or by using the up/down controls. The fastest way, however, is to type the minimum value, press enter, and type the maximum value, press enter again to close the dialog.

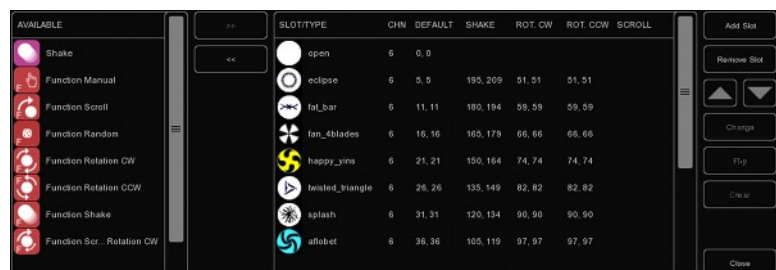
When you change the channel number of a colour slot, all colour slots will automatically get the same channel.

Gobo

Please add a Gobo part for each gobo wheel in the fixture, up to three gobo parts are supported. Then add a slot for each gobo on the wheel, including open-gobo, and set its range.

You can pick an image for each gobo, if you don't know the actual gobo patterns then it is best to stick with the numbered images.

Functions like shake, rotation and index are sometimes controlled by another DMX channel; in this case add a range (e.g. shake) to the part as well. Other times, shake and rotation are set on the same DMX channel as the gobo selection; in this case set an extra range per slot.





Prism

Add a prism part if your fixture has a wheel with prisms. Prisms are identified by their number of facets. The most typical prism has three facets, select a one-facet prism for open or no-prism.



Lamp

To strike the lamp via DMX you can use the Lamp control. You can define an On and an Off range for the lamp.

Some fixtures require the lamp on/off control to hold for a specific amount of time. This can be set in the “Time” section of the Lamp part. If the fixtures manual indicates the value has to be set “for at least 3 seconds” then you can just enter a time of 3; Emulation automatically adds an extra second.



Reset

The fixture reset can be defined in the Reset part. This part only has an On property that you can set.

Most fixtures require the reset to be pressed for an amount of time. If the fixtures manual indicates the value has to be set “for at least 3 seconds” then you can just enter a time of 3; Emulation automatically adds an extra second.



Fog

When you are creating a personality file for a fog machine or hazer you can use the fog attribute.

When using the Fog attribute, the global “Fog” button will be activated within Emulation.

If the fog generator also has a control channel for operating the fan then we recommend using a “custom” part for this feature. Customs are described further in this chapter.



LAD

The LAD (Laser Aiming Device) control can be switched On by defining an On value.

The High End Systems Technobeam has a LAD.



Stand Alone

This can be used if a fixture has a stand-alone or sound activated mode.

This attribute functions as a switch; you can set an On value.



Display

This is used to switch off the display of your fixture during a show.



Barrel

The barrel can have two controls defined, Rotate CW and Rotate CCW.

Two examples of fixtures with a barrel:

Martin Destroyer or a Martin Wizard extreme.



Macro

Use the Macro part for controlling internal “programs” or “macros”.

You can add “On” for each Macro.

Frame

Some fixtures have DMX controlled shutter blades (sometimes also called “framing”); use the Frame part to control this function.

For example the Martin MAC 2000 Performance features framing.

Custom

When a function is not defined in one of the above parts, you can use a Custom.

When defining a Custom, you can choose a name for the Custom which will be displayed under the fader in Emulation.

Tip: Please keep in mind that the space is limited when choosing a name for a Custom, we recommend 4 characters. For example “ANIM” for “Animation Wheel”

You can add up to 8 custom parts.

Parked

Parked can be used to permanently keep a channel in a specific value.

For example: some fixtures have a “control by DMX” setting that needs to be a value in order to control the fixture over DMX. You can set this by creating a Parked with a fixed value.

A fixed value can be created by setting the same value for the minimum and the maximum.

Functions

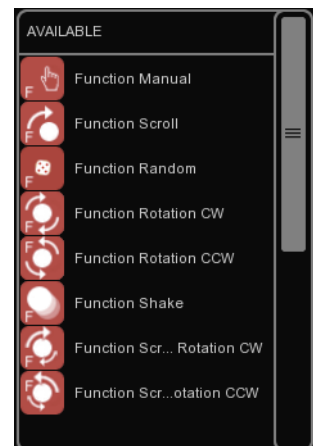
When you are making a model that requires a channel to be at a specific value for a specific function, you can use the “Function ...” attribute.

For example, if you need to define a gobo-scroll with channel 6 and you need channel 5 to be at a specific value to be able to use this scroll, you can create a new “Function Scroll” and give it the settings that are needed on channel 5.

All you need to do now is create the scroll as usual.

When you are using the scroll, Emulation makes sure that channel 5 is set correctly before applying the scroll to your fixture.

For example the gobo wheel of a High End Systems Studio Spot 575 CMY. (see picture below)



SLOT/TYPE	CHN	DEFAULT	SHAKE	ROT. CW	ROT. CCW	SCROLL
 Function Manual	9	0, 0				
 Function...ion CW	9	16, 16				
 Functi...on CCW	9	16, 16				
 Function Scroll	9	48, 48				
 Funct...andom	9	80, 80				
 Scroll	11	4, 255				
 Random	11	4, 255				
 Rotate CW	11	4, 255				

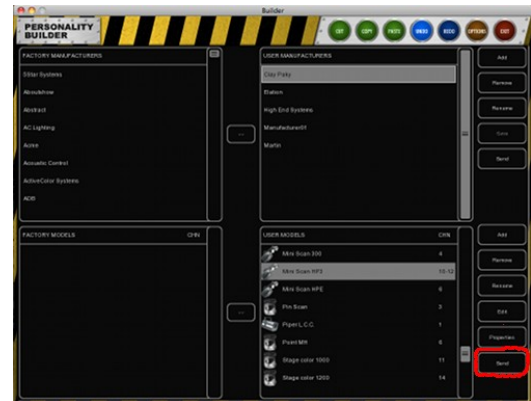
15.6 USING PERSONALITIES

Once created you can start using your new personality file yourself or share it with others.

Uploading to Elation

Please consider sending us your work after you have tested your personality file. This way we can include your personality in the factory library for the next release. We appreciate your help making this personality library the largest and most reliable in our industry.

You can send your models to us using the “Send” button in the main overview.



Sending per e-mail

If you would like to send a personality file to a customer or other user you can add the personality file as an attachment to an e-mail.

All personality files that you have created can be found in:

Windows XP	C:\Documents and Settings\[username]\My Documents\Elation\Common\User
Windows Vista	C:\Users\[username]\Documents\Elation\Common\User
Mac OS X	/Users/[username]/Elation/Common/User
Ubuntu Linux	/home/[username]/Elation/Common/User

Selecting in Emulation

When you have made your own personality file and saved it to disk, you can restart Emulation to find your new file at the very bottom of the Manufacturers list in Patch menu's ADD dialog.

All User Manufacturers will begin with the prefix [User].



NOTES

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