NICOLAUDIE ARCHITECTURAL

ESA PRO2

User Guide - v1.05

Before We Start

What's New

Welcome to ESA Pro 2 - a powerful DMX programming software package for standalone DMX interfaces. For a quick overview of the software, jump straight to the *Getting Started* topics.

Below is a list of some new features added since ESA Pro:

- New User Interface - Zones are managed via tabs at the top. The main work area is divided into Builder, Selections and Mappings
- Timeline automation - Color, dimmer, saturation...and other features can now be modified with linear curves on top of the timelines. For example, add a dimmer to an effect allowing it to fade from 0% to 100% following the timeline
- Sequences - a new way to program, streamlined for controllers with limited storage.
- New bank of effects
- Full color management
- New looping modes
- Mac compatibility
- Compatibility with DMX interfaces containing Flash Memory
- Connect your DMX interface at any time without the need to restart the software.

The ESA Pro 2 Package

What's in the box
Your package should include the following:

- USB-DMX interface
- USB cable
- Technical datasheet
- Power supply (optional accessory)

The latest software versions and user manuals are available from the downloads section of our website.

Compatibility

- Microsoft Windows 10&11 64bit
- Mac OS (See 'Downloads' on our website for more information)
- 4Gb ram, 1GB free hard disk space, 1680x1500 minimum display resolution
- OpenGL 3.2 minimum for Easy View 2 (3D)

Limitations
For dmx controllers with internal flash memory only, we recommend only using *Sequences* as these are more memory efficient than Scenes. To use Scenes we recommend selecting a DMX controller with SD memory. Refer to the Technical Datasheet for your controller to see the type of memory used. A brief guide to our architectural controllers' memory is below.

Internal Flash Memory:
STICK-CW4, STICK-GU2, STICK-GA2, SLESA-U9, SLESA-U8 (discontinued) , SLESA-U10, DINA DR Micro

SD Memory:
SLESA-U11, DINA DR2, DINA DR1, DINA SR1, STICK-KE2, STICK-DE3, SLESA-U7B (discontinued)

Software

The following software is included:
ESA Pro 2 - DMX lighting programming software.
EasyView 2 - real-time 3D visualizer.
Hardware Manager - dmx interface management software. Update firmware, diagnostics, change settings etc.

Fixture Profiles

To program your lights or fixtures, ESA Pro 2 needs to understand the DMX channels and functions (presets) that make up each DMX channel. The more accurate the fixture profile, the easier it will be to program your lighting with ESA Pro 2. DMX channels and other information is stored in 'Fixture Profiles' which have the ssl2 file extension. Standard architectural lights, such as mono (single dimmer), RGB, RGBW and LED pixel tape are now easily accessible in the *Add Lights* panel.

For more complex lights, you can search for a suitable profile from our database of over 15,000 fixtures by brand and fixture model name. These fixtures are located within the ESA Pro2\ScanLibrary folder. You can also search the database online at https://store.nicolaudie.com/ssl

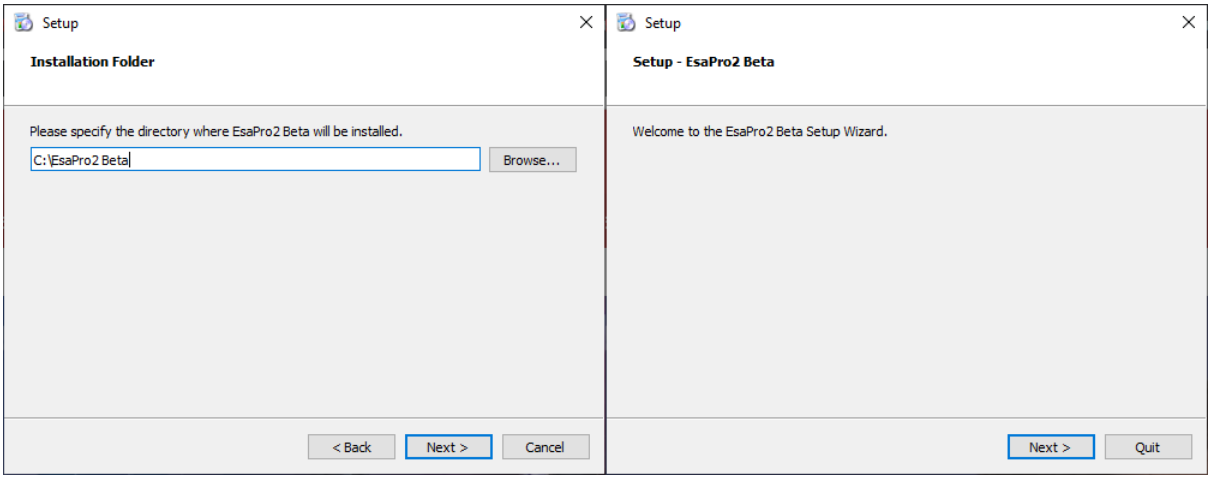
If you have a fixture that does not exist in our database, you can launch a *New fixture Request* to have a profile built for you by our team. You can also create your own fixture profile using our online Profile Builder app
https://cloud.lightingsoft.com/profilebuilder
A user guide for the Profile Builder app is available at the link below:
https://storage.googleapis.com/nicolaudie-eu-litterature/Release/profile_builder_user_guide_en.pdf

Getting Started

Installation

- Download the latest version of ESA Pro 2 from our website nicolaudie.com/esapro2.htm
- Install ESA Pro 2 using the downloaded file
- Once the installation is complete, connect your USB-DMX interface

Note: Windows systems may run a second device driver installation. Once you see a message on the taskbar to say that the driver has been installed, you are ready to start the ESA Pro 2 software.

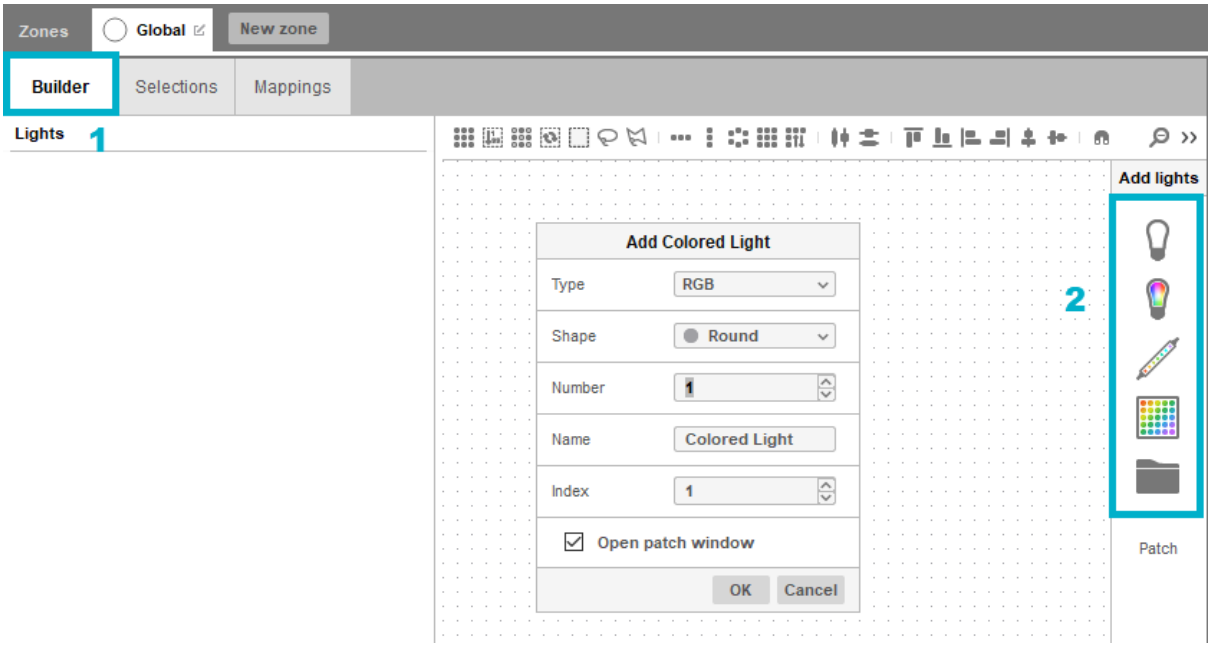


Once ESA Pro 2 has been installed, start the software and continue to the section below about adding your lights to the software.

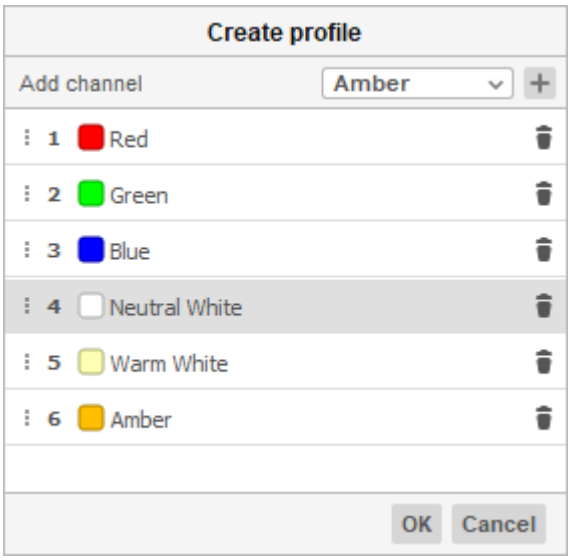
Add Fixtures

ESA Pro 2 needs to be told what type of fixtures you have and what DMX address has been set for each fixture.

Make sure you are on the Builder tab (1) and select your fixture type in the *Add Lights panel (2)*. There are 4 basic lighting types to choose from: Mono (single channel dimmer), Colored, Strip and Matrix. Each of these opens up a window allowing you to change the parameters.



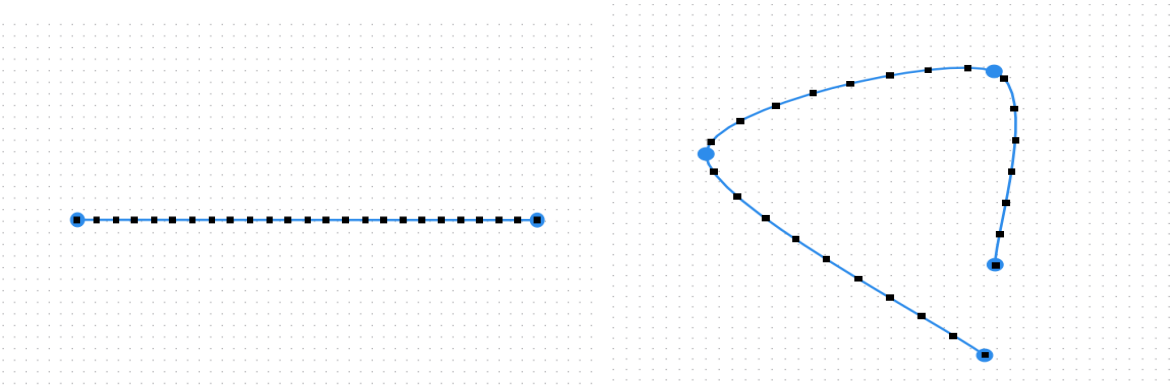
If your colored fixture is not listed in the *Type* dropdown box, you can create your own profile by selecting *Custom* (found at the bottom of the dropdown). The *Create profile* window will open allowing you to add color channels in any order.



For complex lights which contain channels which are split up into different functions (presets), select Add Other and search the Scan Library folder. See section 1.3 for more
information.

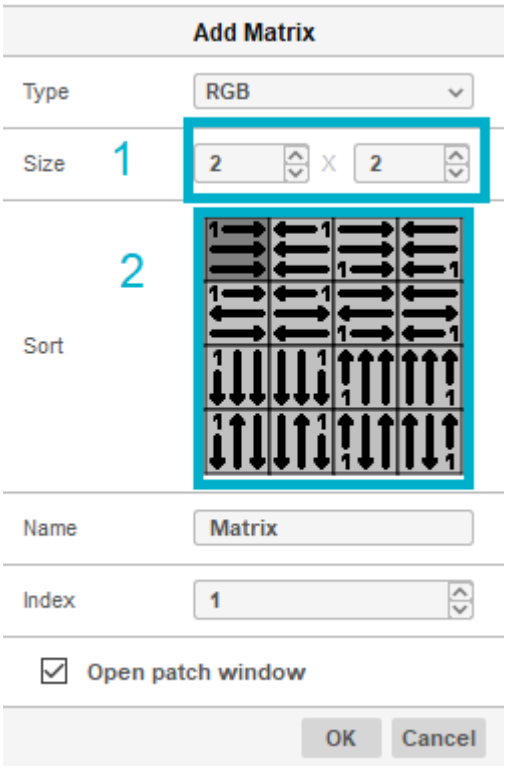
LED Strip

This type of fixture allows you to create strip lighting for your project. The number of Dots indicates the number of lights on the strip. You can also add anchor points by double clicking on the strip, to change its look and orientation.



Matrix

The Matrix option allows you to create a grid or Matrix of fixtures. Once you select the Matrix type of fixture you will be presented with the *Add Matrix* window. From here you can select the size (1) of the matrix, and the direction in which it flows (2).



Once a fixture type has been selected, you will be presented with the *Patch* window allowing you to assign your fixtures DMX addresses.

Patch Window

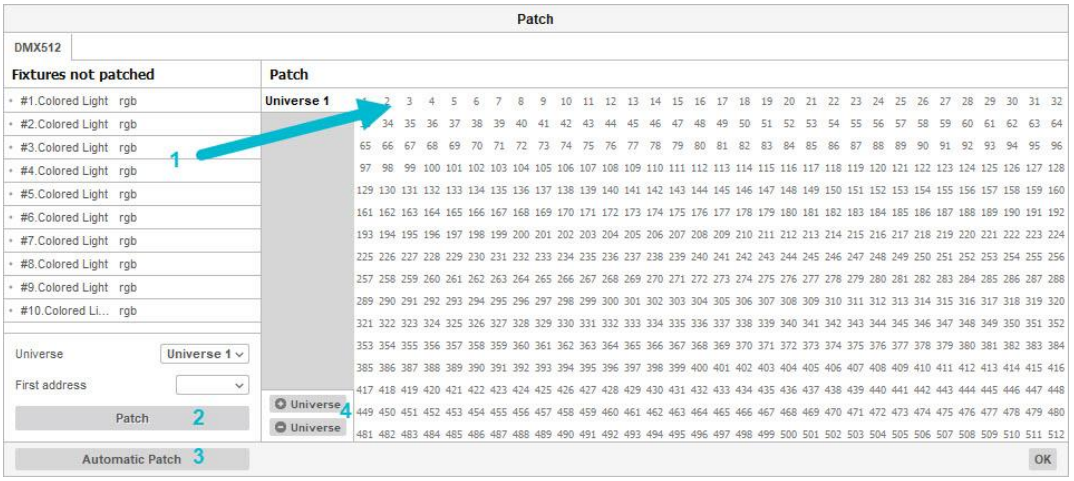
The *Patch* window displays a grid representing the 512 channels in a DMX universe. A DMX fixture can use between 1 and 512 dmx channels. The DMX address is always the first channel / address used by a fixture.

If you need more than 1 universe, and your dmx interface supports this, you can click the *+ Universe* button.

Note: Many of our devices are upgradeable, visit the link below to view what upgrades are available for your device!
https://store.nicolaudie.com/en/my_interfaces

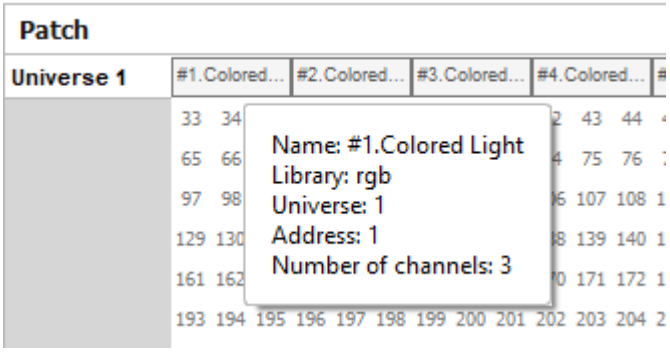
To patch your lights to the dmx channel grid, do any of the following :

- Press *Automatic Patch*. This will patch them in list order.
- Drag and drop them (1) from the list (left) into the grid.
- Select them in the list, select an address and press *Patch.*



Note: Assigning dmx addresses in the software does not update the real dmx address of your fixture. You will need to know what the dmx address for each fixture is. For more information on setting the DMX address of your lighting fixture, refer to the manufacturer's documentation.

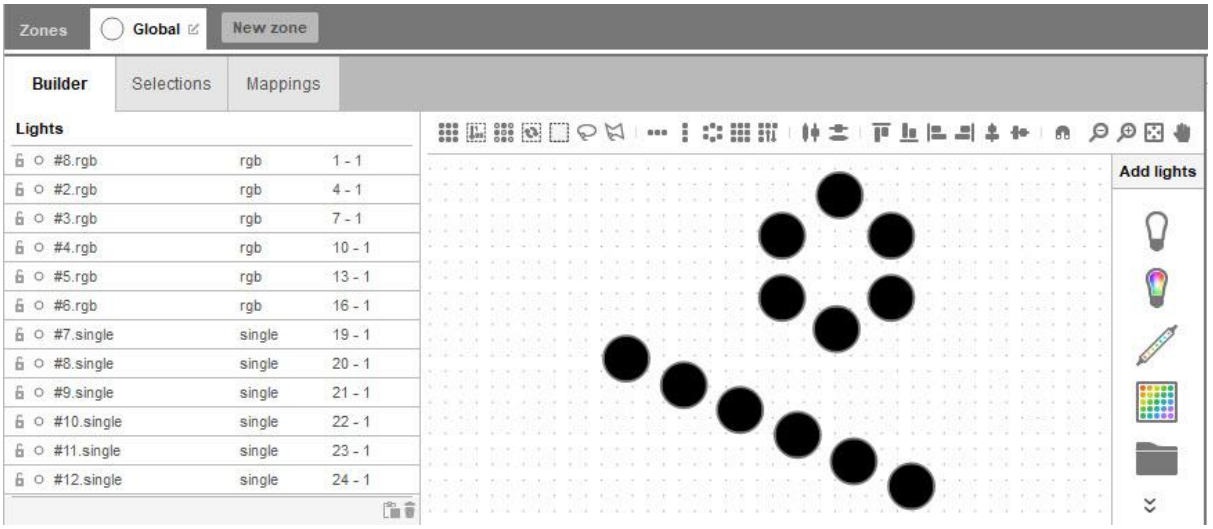
Once patched, you can check the dmx address by hovering your mouse over any fixture.



To adjust the patch at a later date, select the fixtures and hit the *Patch* button in the *Add lights* panel.

Arrange Fixtures

Fixtures can be arranged by selecting and dragging in the same way as you would arrange files within a folder. Use the tools above the grid area to select, move and align your fixtures. For more information, see the Builder section.



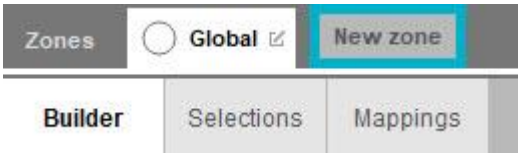
Setup Zones

Zones allow you to group fixtures and control them independently of each other. Scenes from different zones are loaded onto different pages (A,B,C etc) of a controller to be controlled by a user. For example, this is useful for controlling different rooms in a house.

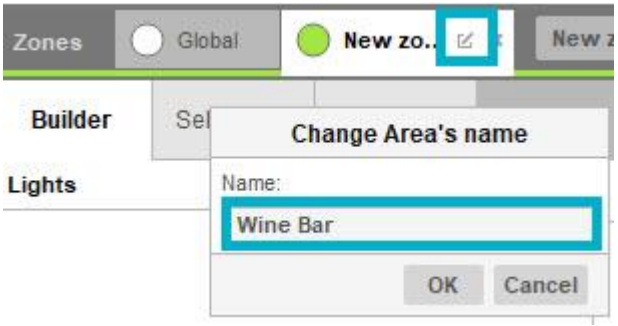
When a new project is created you are given 1 zone called *Global*. Scenes created within this zone will control all of your fixtures. Note that some dmx interfaces only support control of 1 zone; check your model datasheet, if unsure.

To use Multi-zone control, follow the steps below.

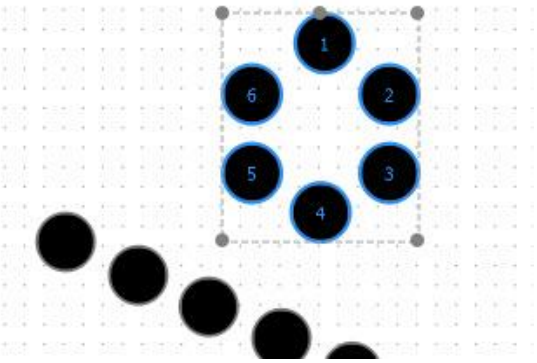
1) Click *New Zone.*



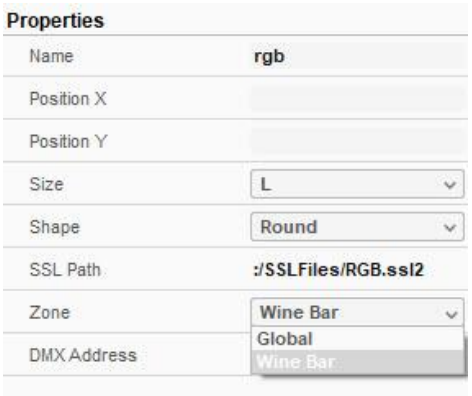
2) Select the pencil icon to rename your zone.



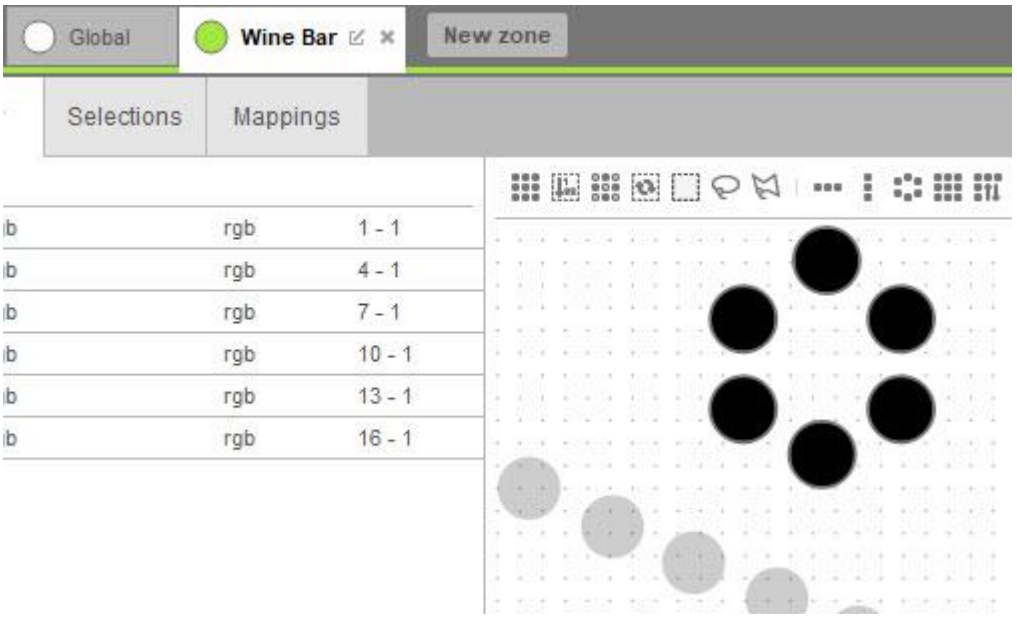
3) Select the Global tab again.
4) Select the fixtures you want to add to your new zone in the work area. These will be outlined in blue and will have a bounding box.



5) In the Properties window select your new zone from the Zone list.



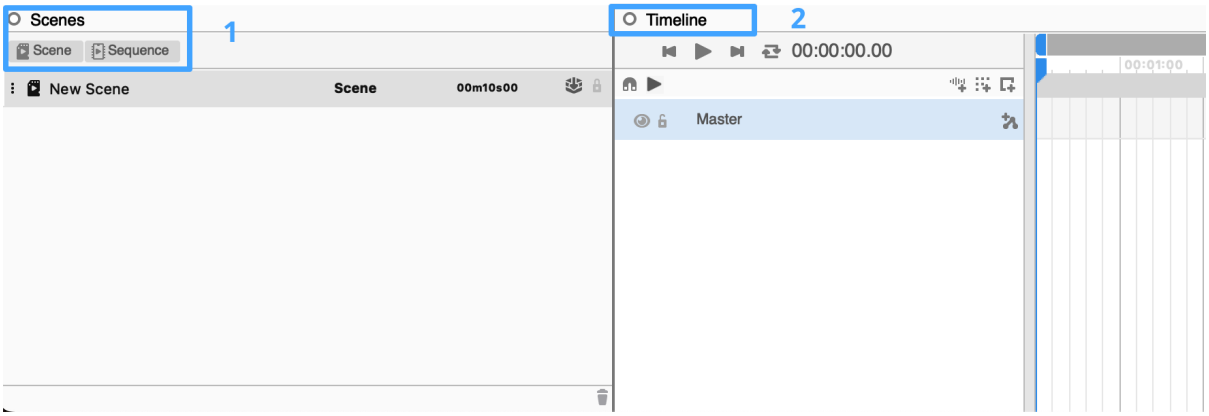
6) Select your new Zone's tab (e.g below *Wine Bar*). You will notice that only the fixtures in the zone are editable. Fixtures not in this zone are displayed but shown as transparent.



Create Scenes

Selections

Press the selections tab (to the right of Builder) to begin creating scenes. The Selections tab is one of the programming areas. Here we will create our scenes. Below the grid you now see 2 windows for *Scenes* (1) and the *Timeline* (2).



Scenes

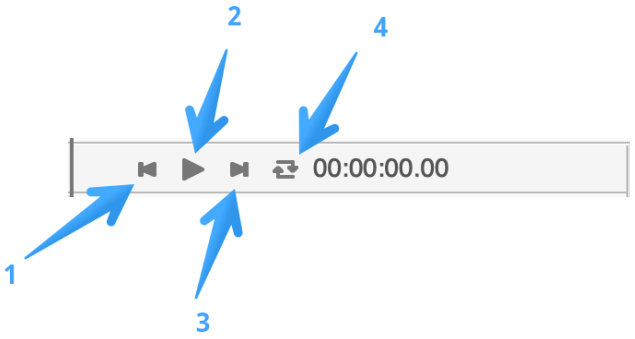
Within the *Scenes* window you have the choice to create a new *Scene* or Sequence. At this time we are going to discuss the *Scene* option. Sequences will be discussed later in the manual. Each scene may contain several timelines of effects. A Scene called *New Scene* is created by default.

Timelines

Basics

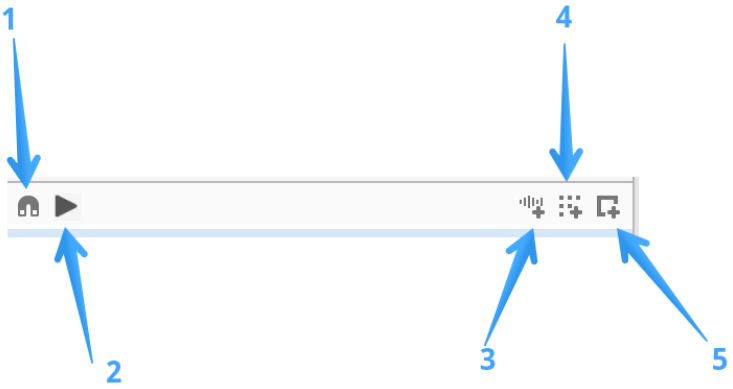
Welcome to the Timelines Window.
Scenes are built by creating blocks on a timeline. ESA Pro 2 has three different timeline options for a variety of programming capabilities which will be individually covered.
To begin, let's have a look at the layout of the timeline window.

Playback bar - This is where timeline playback is controlled.



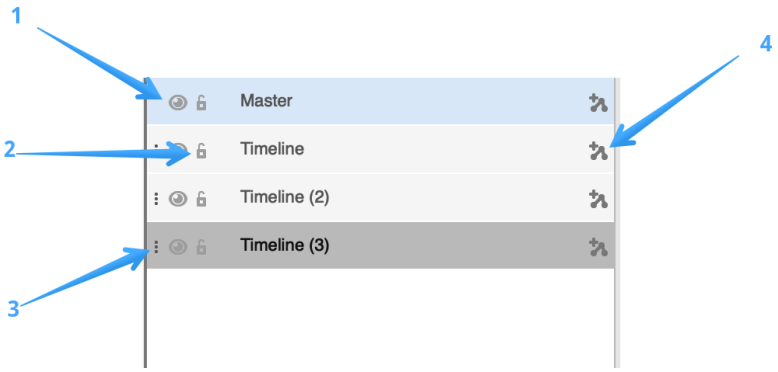
1) Skip to beginning
2) Play/Pause
3) Skip to end
4) Enable/Disable Loop

Timeline Creation - Here you can select the type of timeline you want to create and enable/disable snap behaviour.



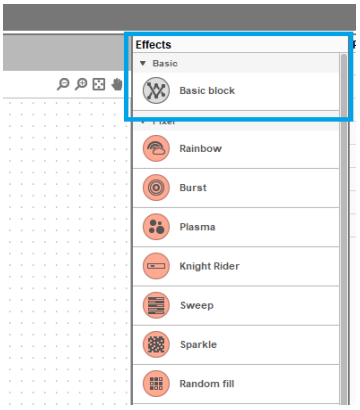
1) Snap - When enabled and moving a timeline block this will cause the block to snap to the nearest grid line.
2) Preview
3)Audio Timeline - These timelines carry Audio data allowing you to manually create light shows in time with music or audio effects.
4) Selection Timeline - Creates a timeline targeting the fixtures you have in your current selection.
5) Mapping Timeline - Allows you to map moving images to your fixtures.

Timeline List - This is where your various timelines in a scene are listed.



1) Activate/Deactivate - When selected the fixtures associated with a timeline will turn off/on
2) Lock - This enables you to lock a timeline, you cannot edit a timeline whilst this is enabled.
3) Move Timeline - When pressed, held and dragged this will allow you to reorganise the order of your timelines.
4) Automation - When selected this will enable/disable automation on your timeline.

Selection Timeline
Each timeline is linked with a selection of fixtures or with a mapping (covered later on). This is called a *Target*. Several timelines can be linked with the same selection of fixtures with the topmost taking priority over the timelines below. Each timeline may contain one or more Effect Blocks. To get started, make a selection of fixtures and drag an effect from the list on the right onto the fixtures. A timeline will be created automatically and linked with the selected fixtures (or *Targets*).

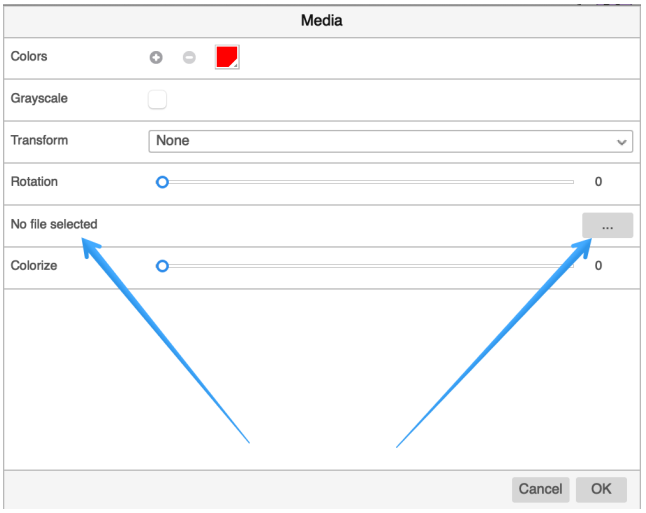


Additional blocks can be dropped onto the timeline to create multiple effects running one after another. To add or remove fixtures linked with the timeline, right click the timeline and go to *Selections.*

Use the playback bar at the top left of the timeline to play and navigate to the start and end, or to loop the scene.

Mapping Timeline

For more information on Mappings please see 'Mappings' section page 29.
Mapping Timelines allow you to map moving images to your fixtures!
Once you've created a mapping selection in the mapping window it's time to move back to the effects window, where under mapping there will be a 'multimedia' effect. Drag this to your desired fixtures and then locate the new effect block.
Double click on the block or right click and select properties, then select the '.....' highlighted below to import your chosen file.



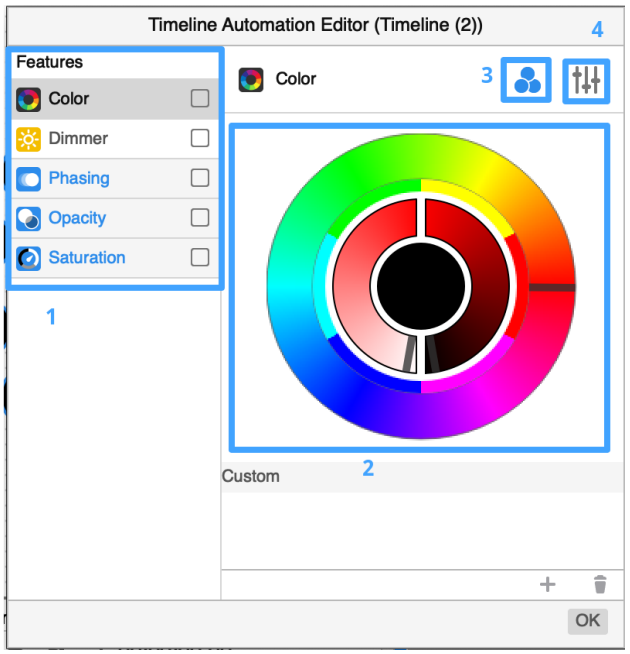
Note: Only .MOV, .MP4, .PNG, .JPG & .HEIC file formats are accepted.

Audio Timeline
Audio timelines are the perfect way to program to music. Simply create an audio timeline and drag and drop your desired audio file onto it!
You can move the block to your desired location relative to the other timelines you've created.
It's worth noting that our devices don't support audio playback, this needs to be handled by a DMX triggerable audio player which can be bought from a third party supplier.

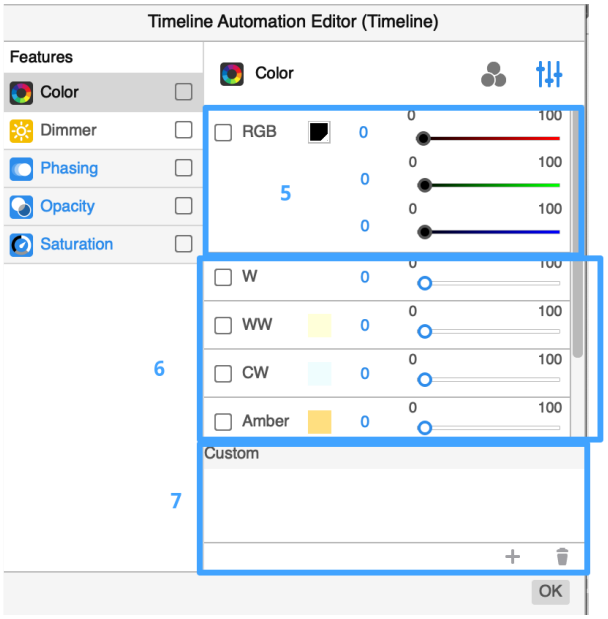
Note: Only .MP3 and .WAV files are compatible with ESA Pro 2.

Effects

Effects can be dropped from the effects list onto fixtures and empty timelines. The first effect in the list is called *Basic block*. This effect consists of a static value for a specific length of time. Once added, you will be presented with the Effect Editor window.



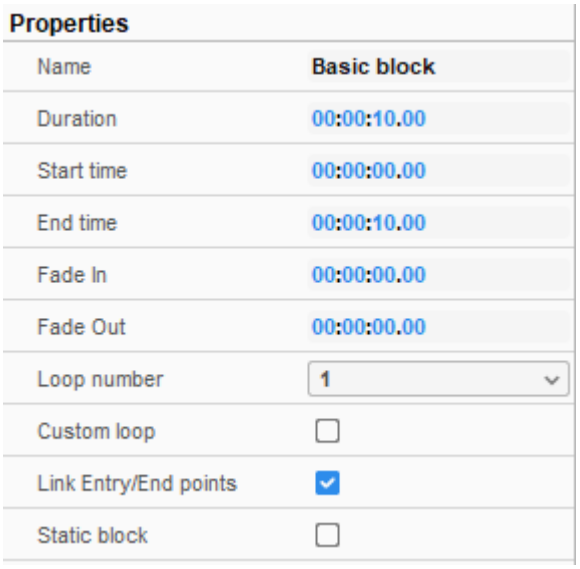
1) Features - The options here will change depending on the fixture selected, here we see a basic RGB fixture.
2) Color Wheel.
3) Color Wheel switch.
4) Custom Color switch.



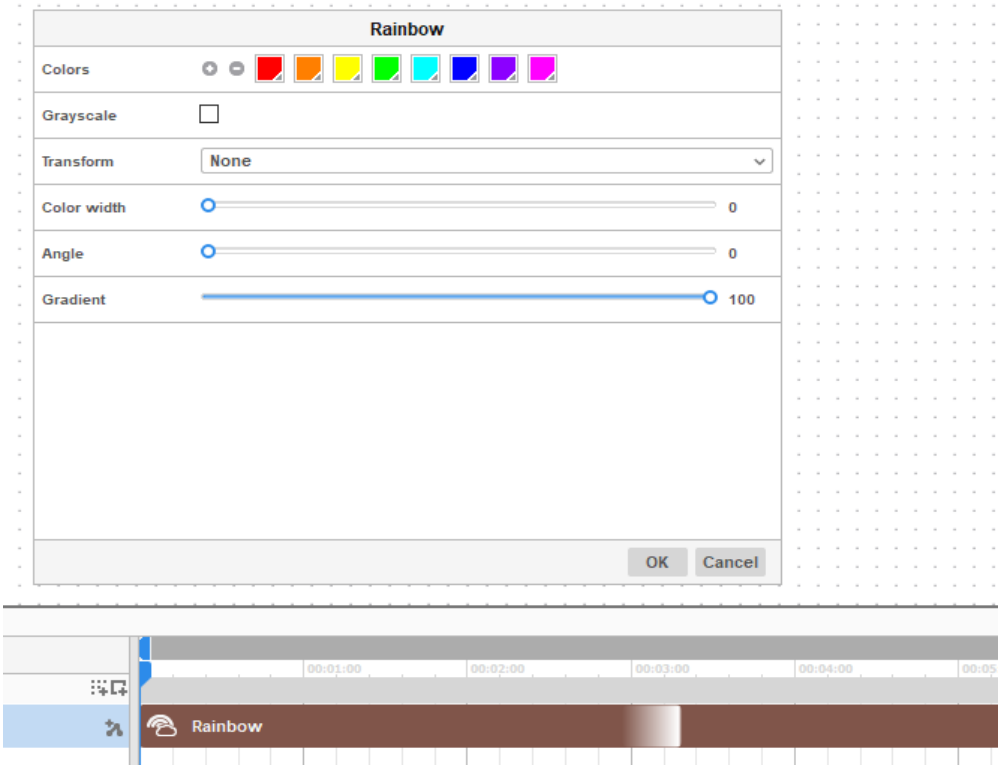
5) RGB Sliders
6) Additional channels
7) Custom color save/select/delete

Once added to the timeline, the block may be edited from the Properties window on the top right side of the screen. Here you can change the name of the effect and the duration and start time.

Fade In and Fade out times can be set here as well. The option to link the Entry and End points for any automation is located here, to keep any looping effects working properly.



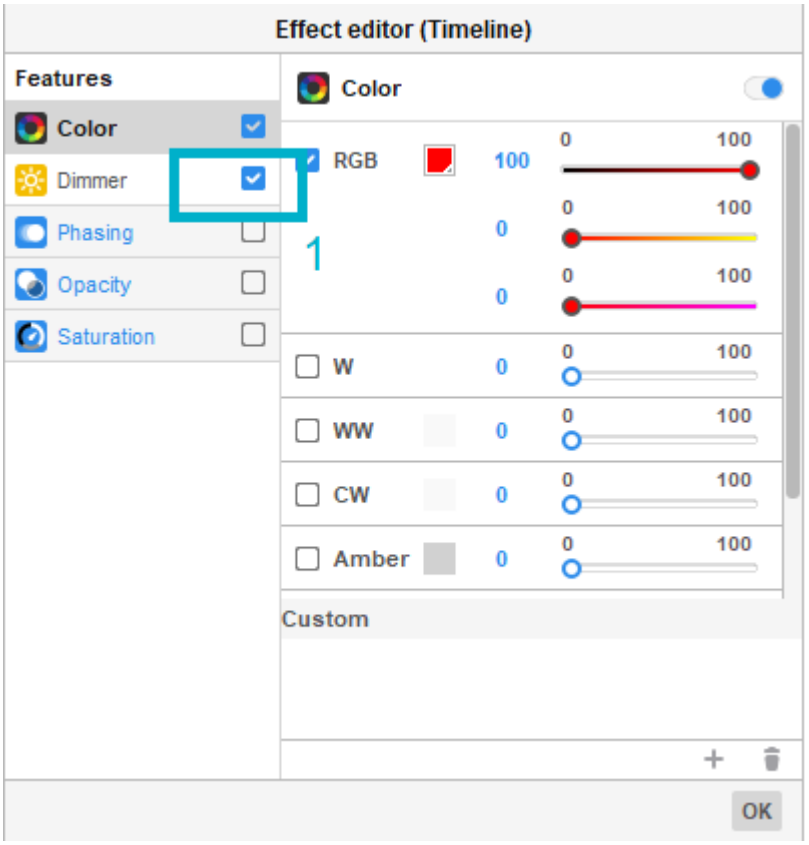
Double clicking an effect block allows for the effect to be modified. The options presented are different for each effect.

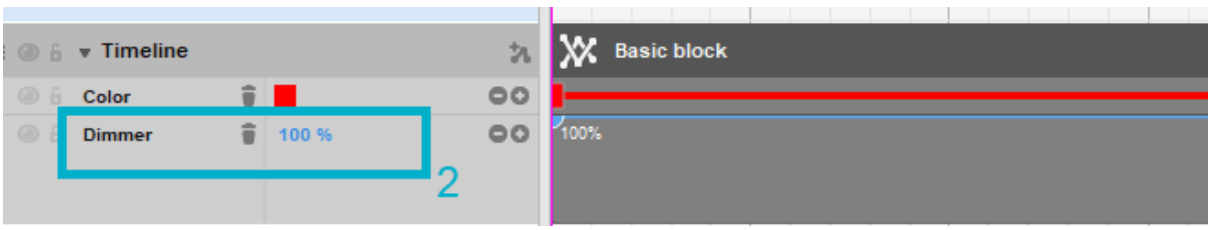


Automation

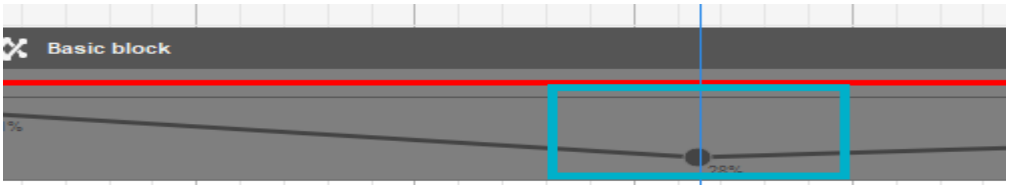
After adding your timeline effects, you can further adjust your scene by adding automations to the effect on the timeline. Press the button to the right of the corresponding timeline to enable automation for that timeline.

After pressing the *Automation* button you will be presented with the *Automation Editor* window. Here we are editing the Color, Dimmer, Phasing, Opacity or Saturation at the selected point on the timeline. For example, selecting *Dimmer* (1) will create a new Dimmer timeline (2).

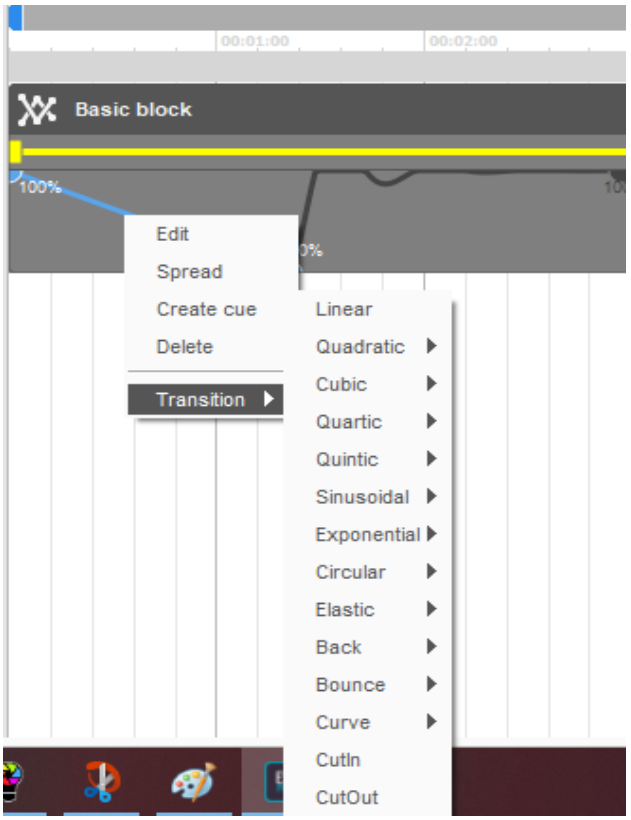




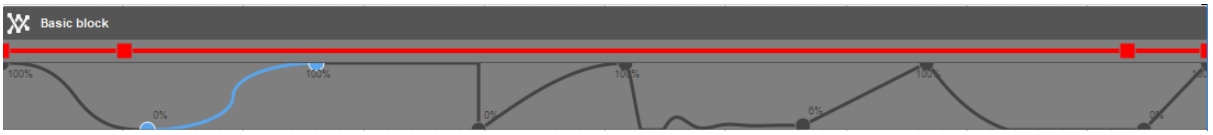
By moving the line you can control the brightness of the dimmer at this point in time. Double clicking anywhere on the line creates a keyframe allowing for a new value to be set.



Right clicking on a keyframe or on a line between keyframes presents a wide list of transition options.



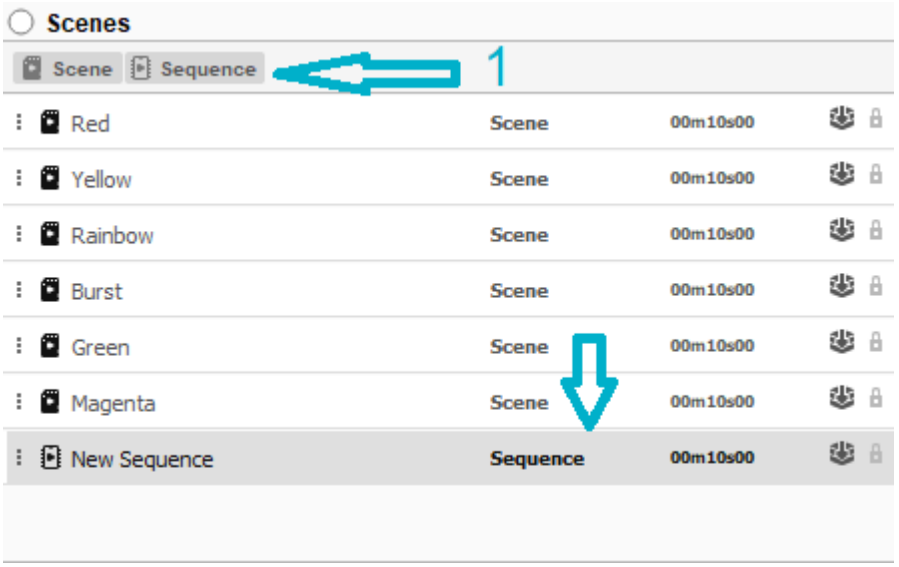
Using Automation you can take a simple Effect block and create a dynamic scene.



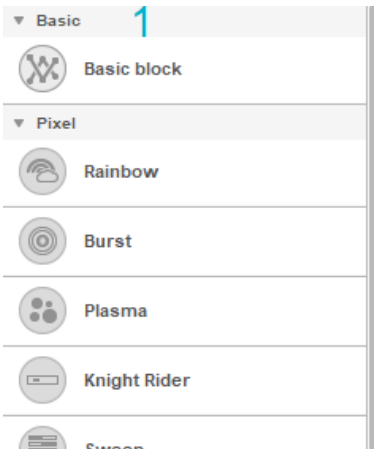
Sequences

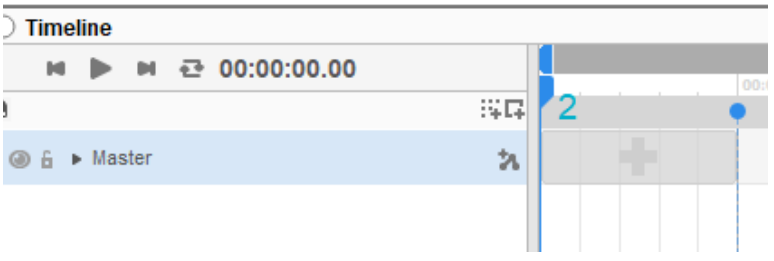
The other option for programming is *Sequences*. *Sequences* contain a limited amount of information compared with a scene, keeping the program size smaller. This is ideal for use with controllers with limited memory (e.g. controllers without SD card memory) and for use with audio triggering where you want to limit the number of frames. Within a sequence, static blocks are locked into *slots* with fade and hold times. Automation curves are not available within sequences.

After selecting a new *sequence* (1) you will see it added to the list of scenes and sequences to the left of the timeline.



In a *sequence*, all the effect blocks are disabled and cannot be added to the timeline (1). When you go to select the timeline you'll see a (+) button (2) appear to the right.

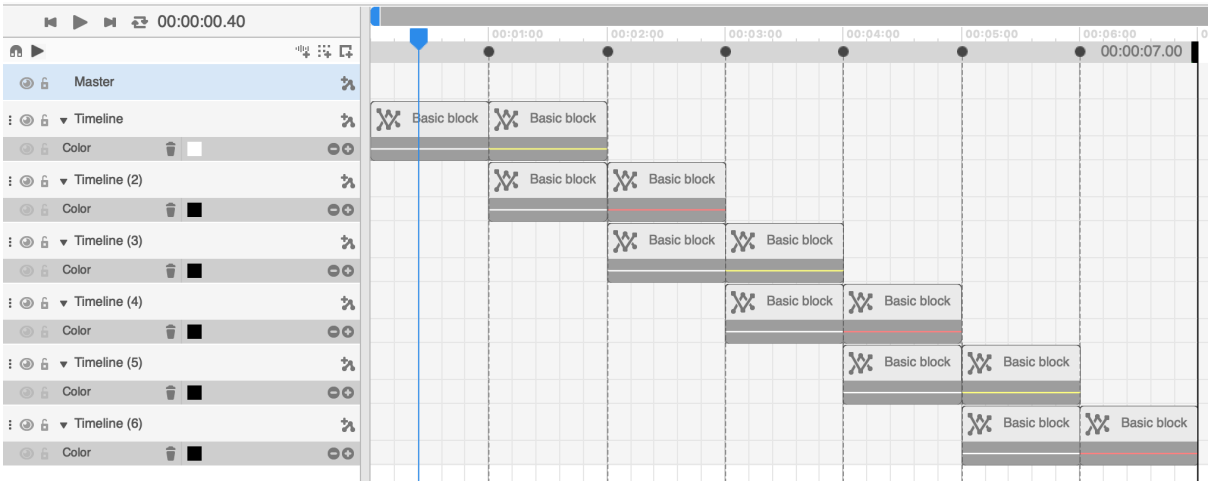




Clicking the (+) button will open up the Timeline Automation window and allow you to add a basic block to the timeline. Once a block has been added, it may be resized across multiple slots, or the slot size can be changed by dragging one of

the vertical lines. Each vertical line is a keyframe.

As with scenes you can create multiple timelines assigned to different fixtures to create basic effects. In the example below, we have 6 timelines assigned to 6 color mixing lights with a basic chaser effect. You can select 'Link Entry/End Points' in the block properties to prevent any fading.



Editor

The Editor is split into three sections, *Builder*, *Selections*, and *Mappings*.

Builder

The builder is where lighting fixtures are added to your project. Light fixtures are displayed in list format on the left with the fixture grid displayed on the right. Each fixture is represented by a circle or a line of squares.

Arranging Fixtures

There are multiple options for selecting and arranging fixtures after they have been added to a project.

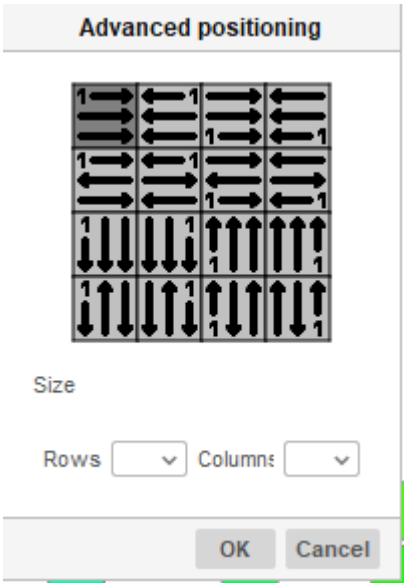
1. Select all fixtures
2. Invert fixture selection
3. Select every second fixture
4. Invert the fixture order. If fixtures are selected 1-6, they will be inverted 6-1, consequently inverting the order in which an effect is applied or the order in which they are positioned in a line

The next options determine the way you click and drag to select fixtures.

A. The default is the Square option. Click and drag to create a square that highlights all the fixtures within
B. The Lasso option lets you select by clicking and dragging to “rope” fixtures in to select them
C. The Line Option allows you to select the fixture you want by clicking and dragging a line through the fixtures you want. Fixtures are indexed according to the order in which they are selected

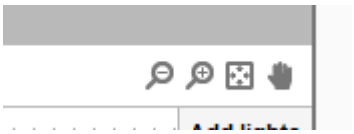
The next set of icons allows you to position, distribute and align the fixtures on the grid.

1. Arrange horizontally
2. Arrange vertically
3. Arrange in a circle
4. Arrange in a square Matrix
5. Arrange in a custom Matrix and set the Matrix dimensions and direction in which the fixtures are positioned within the Matrix (left to right, top to bottom etc…)



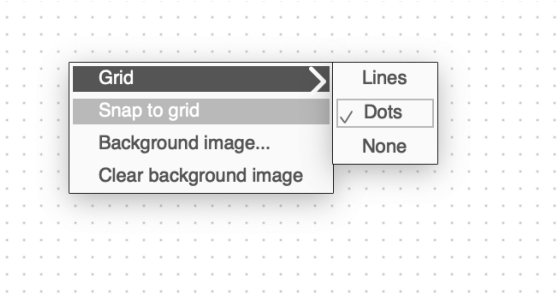
Managing the Fixture Grid

The icons on the far right of the screen allow you to control the view and position of all the fixtures you have patched. Zoom Out, Zoom In, Reset Zoom, Move Canvas.



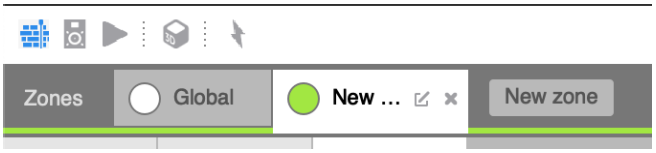
Right clicking on the 2D grid brings up the grid options menu.

- Show lines or dots in the background to help align fixtures.
- Set a custom background image.



Creating Zones

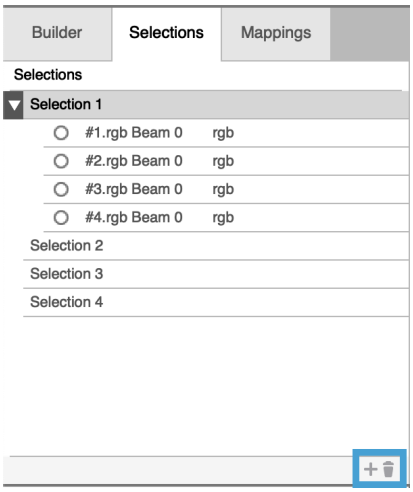
Fixtures, Scenes, Selections and Mappings are organised into Zones which can be created along the top by selecting *New Zone.* Refer to the *Getting Started* topic for tips on setting up Zones.

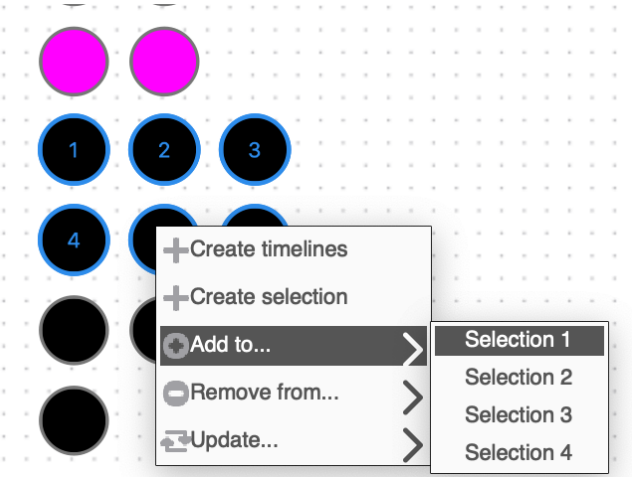


Selections

The Selections tab allows for fixture selections to be created and linked with effects on the timeline. Selections are created either by dragging a box around a set of fixtures on the fixture grid, or by holding ctrl (PC) or command (Mac) and clicking fixtures as you would with files within a folder. Further information on selection options are described in the previous topic.

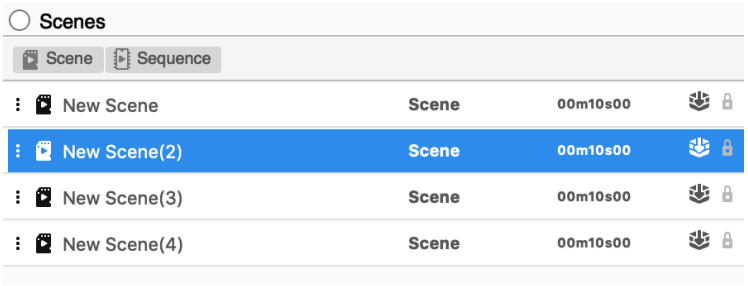
Selections may be saved for later use by clicking the (+) button to the bottom right of the *Selections* panel. Each selection can be expanded to view fixtures within the selection. Select and right click fixtures on the fixture grid to add or remove from a selection.





Scenes

A list of all Scenes and Sequences in the selected Zone are displayed within the *Scenes* window. The information displayed includes Scene name, type (Scene/Sequence) and duration. The two buttons to the right allow for the scene to be pre-selected for standalone or for the scene editing to be locked. Once a scene is selected, it will turn blue and the associated timelines will be shown to the right, and the properties to the top right of the software in the *Properties* window.

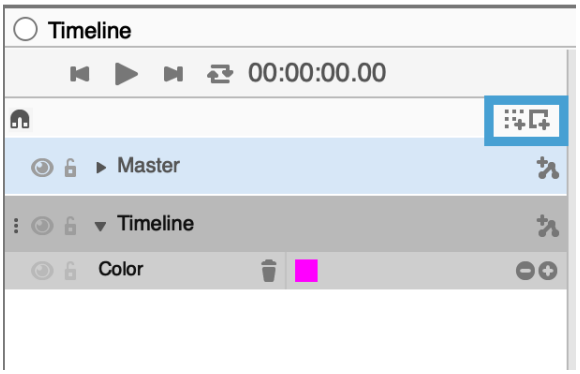


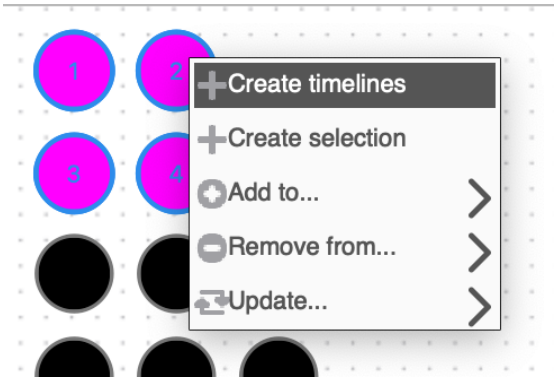
Timeline

All Effects, colors and dimming levels are added as blocks on a timeline. Each timeline is linked with a set of target fixtures.

Creating Timelines

Timelines may be created by clicking *Add Selection Timeline*, *Add Mapping Timeline or Add Audio Timeline* (further information on Mapping timelines will be covered in the next topic). The currently selected fixtures will be linked with the new timeline. Alternatively, timelines may be created by right clicking a selection of fixtures on the fixture grid and selecting *Create Timelines.*

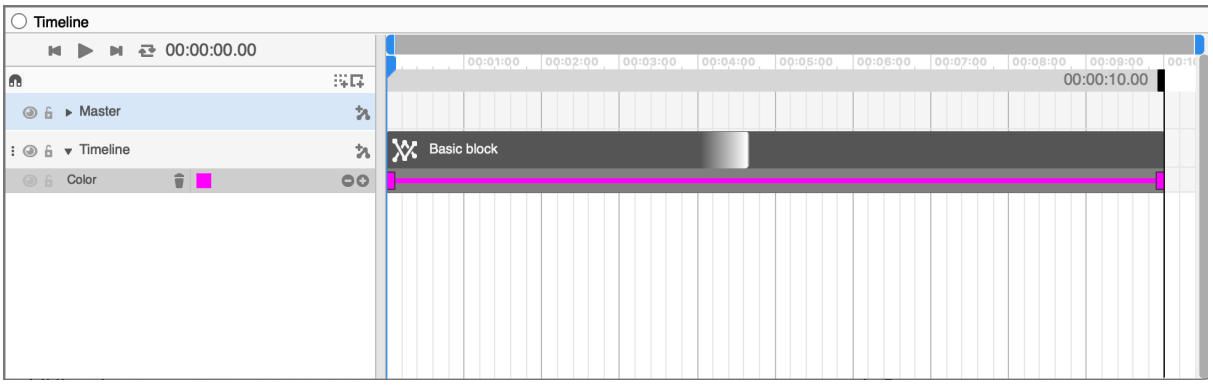




Additional selections may be added or removed from a timeline later on by right clicking on the name of the timeline.

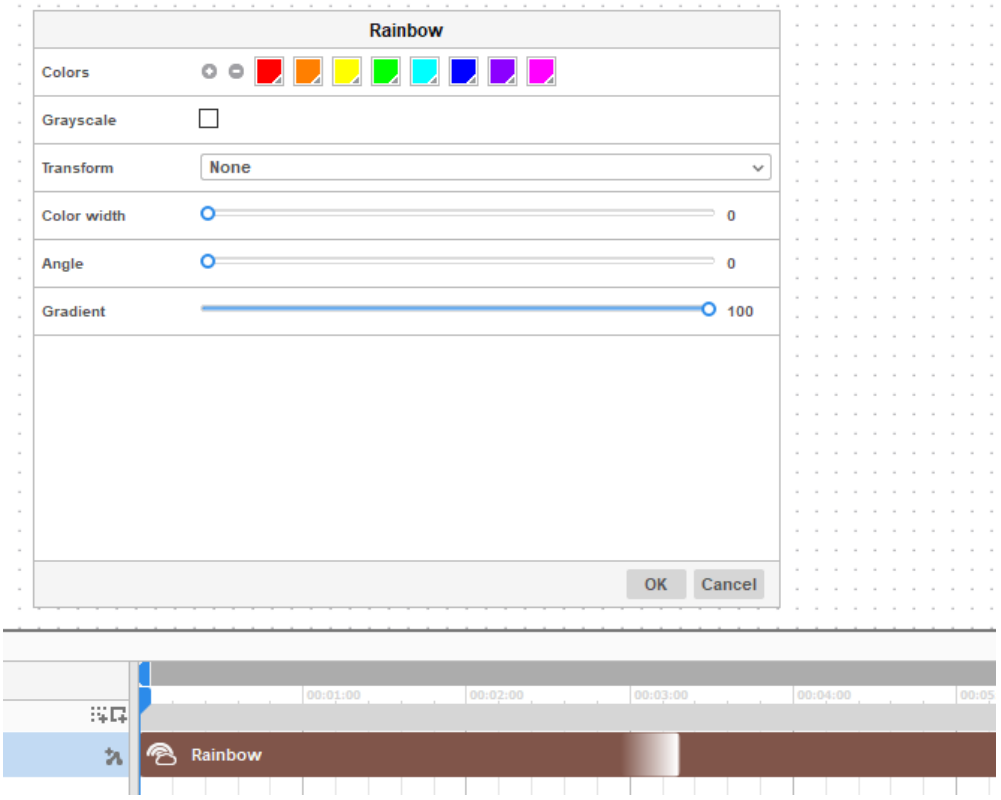
Effect Blocks

Scenes are created by dragging effects from the *Effects* panel onto the corresponding timeline. The effect will be applied to the timeline's target fixtures. The image below shows a basic block with a Magenta color set.



Note: it's possible to create a timeline and assign an effect at the same time by selecting some fixtures and dragging the effect directly onto the selection within the fixture grid.

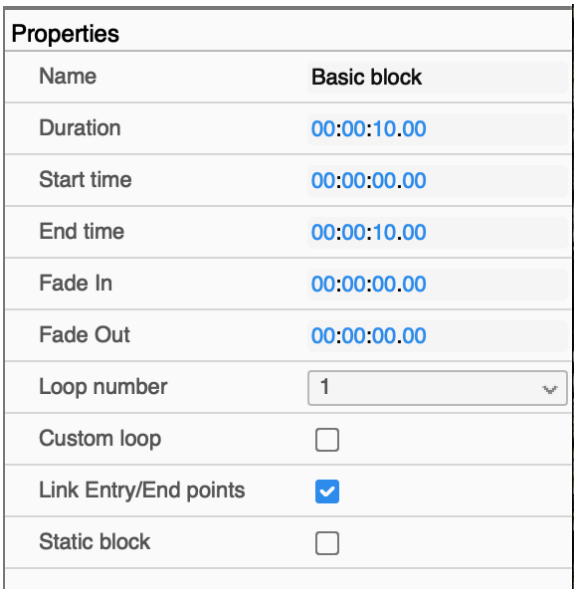
Effect properties can be edited by double clicking on a block. The image below shows the Rainbow effect properties.



The selected effect block's properties can be adjusted from the *Properties* panel.

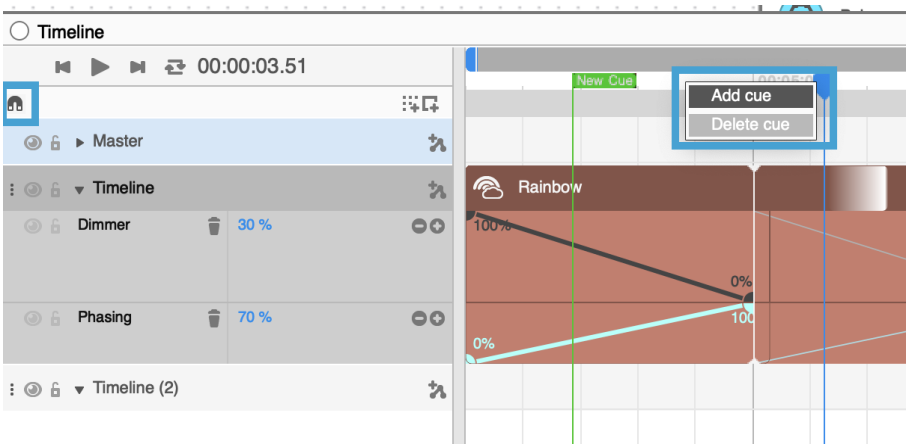
- Name : the name of the block.

- Duration : the total time in which the block is playing.
- Start time : the time within the scene that the effect block begins.
- End time : the time within the scene when the effect block stops.
- Fade in : the time in which it takes for the block to fade in.
- Fade out : the time in which it takes for the block to fade out.
- Loop number : the amount of times an effect will be played within the block.
- Custom loop : when selected, the loop size will be fixed and won't expand when a black is resized. This is useful if you wish to play a proportion of an effect, stopping the effect part-way through.
- Link Entry/End point : when enabled, any automation points and the end of the block will be duplicated at the start of the block, allowing for a smooth transition if the block runs from the beginning to the end of the scene.
- Static block : when selected, the first frame of the block will be frozen throughout the duration of the block.



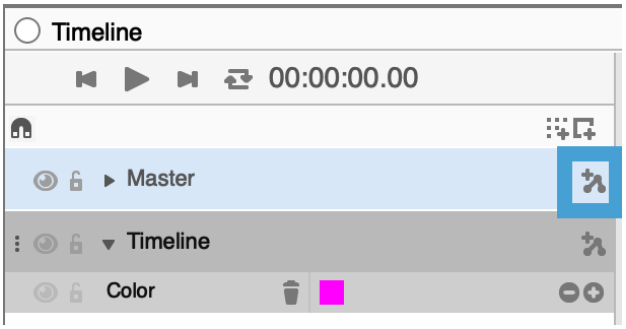
Block Alignment

Effect blocks can be dragged across the timeline and resized by dragging the start and end point. Resizing a block will consequently adjust the speed. (To resize a block without adjusting the speed, choose *Custom Loop*). Blocks can be duplicated onto the same or another timeline by right clicking the block. Clicking the magnet icon will snap blocks to blocks and Cue points close-by. To add a cue point, right click the top of the timeline and select *Add Cue.*



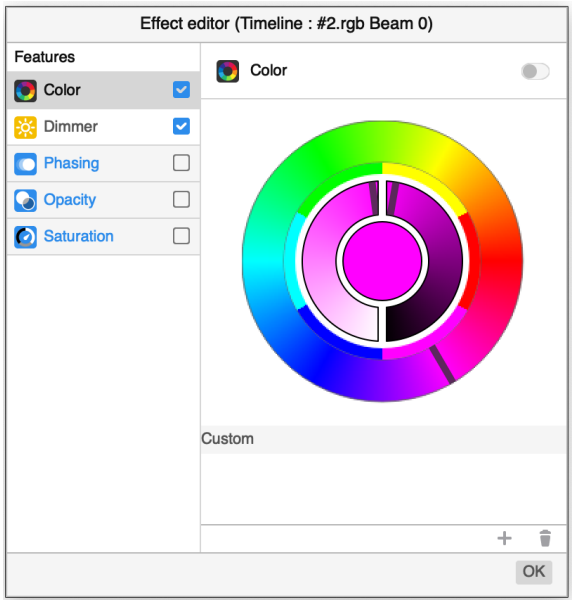
Timeline Automation

In addition to the effect properties, each timeline contains a set of Timeline Automation properties which may be edited by clicking the button to the right of the timeline name. Note that the basic block doesn't have any Effect properties and is used as a placeholder for adjusting timeline automation properties.

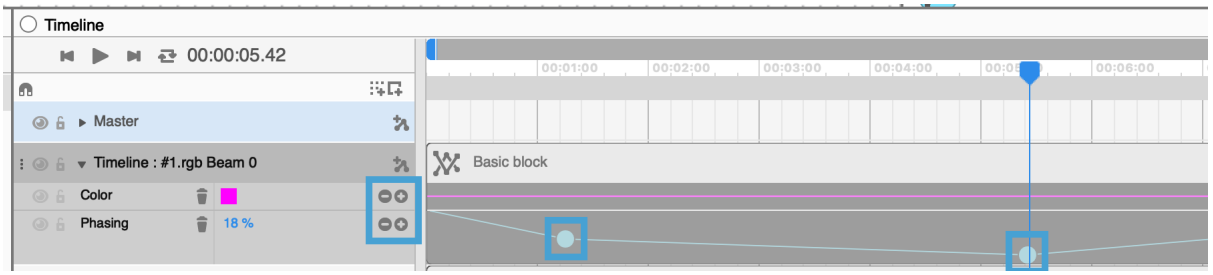


Each timeline contains a set of automation properties including:

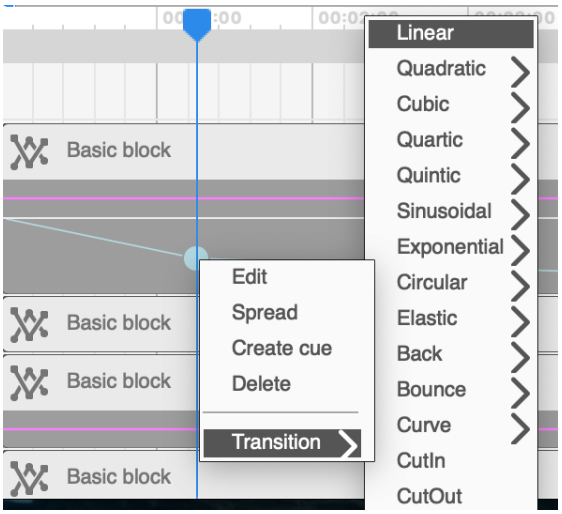
- Color : used to change the color of the target fixtures.
- Dimmer : used to adjust the brightness of the target fixtures.
- Phasing : Creates an offset on the block for each of the target fixtures, ideal for creating wave effects.
- Opacity : adjusts the opacity/transparency of the timeline, allowing timelines below to show through.
- Saturation : adjusts the saturation of colors set within the timeline.



Each Automation value is stored inside a *Keypoint*. Keypoints may be added and removed either by clicking on the (+) or (-) buttons to the left, or by double clicking on the automation line.

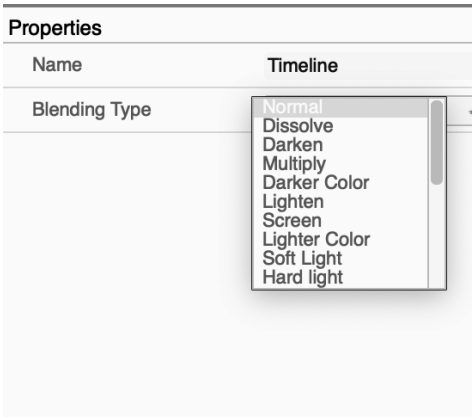


Right clicking on an automation point or line allows for a transition to be chosen for setting curves between points. Selecting *Spread* will place the keypoint in between its adjacent keypoints allowing for an even curve to be created throughout the selected block.



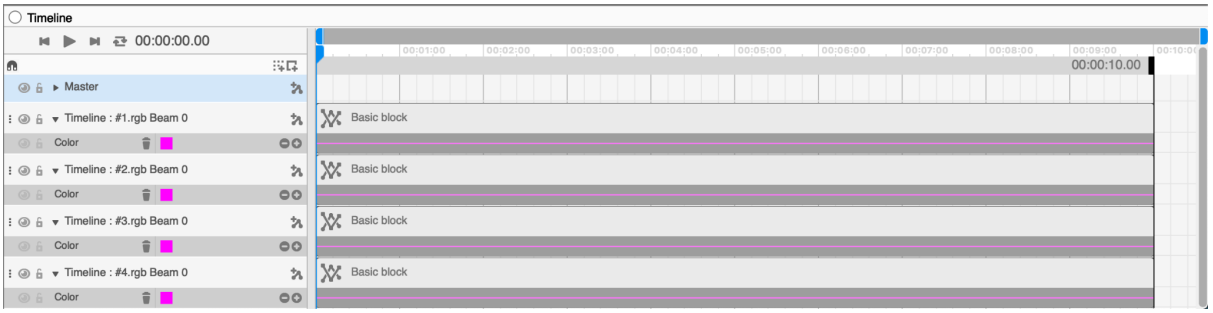
Timeline Blending

Several timelines can be linked with the same target selection of fixtures. The topmost timeline will take priority over the timelines lower down. Timelines may be blended together by selecting the timeline (be sure to select the timeline and not the effect block) and setting the blinding type from the *Properties* pane.



Deconstructing a Timeline

When a timeline is created and linked with a set of fixtures, everything added to the corresponding timeline will be applied to the linked target fixtures. To adjust the effect on one of the fixtures without affecting the rest, select the fixture, right click the timeline and select *Deconstruct*.



Mappings

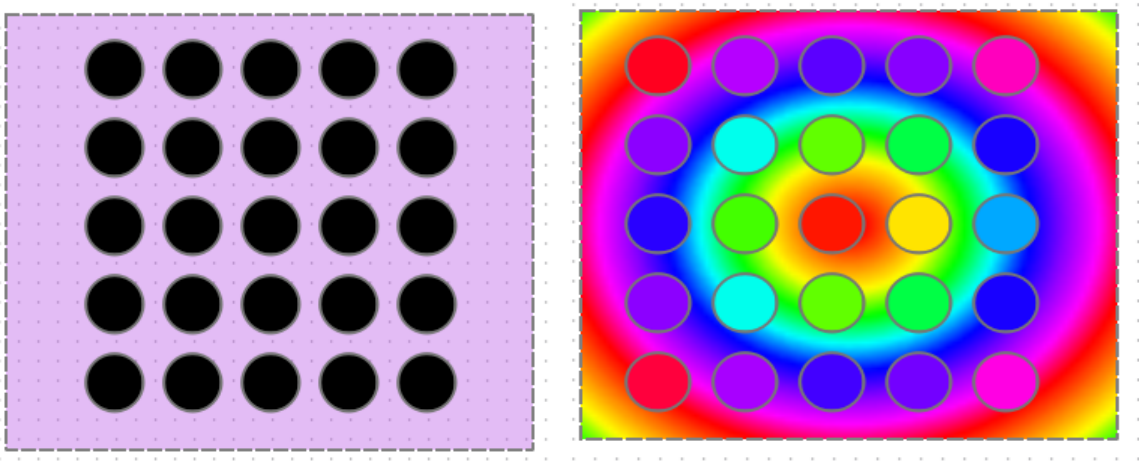
The Mapping section operates in a similar way to the *Rects* from the original ESA Pro software. In this programming mode you will select a shape(1) and then link this shape with a timeline. Effects on the linked timeline will be mapped to the fixtures the shape covers.

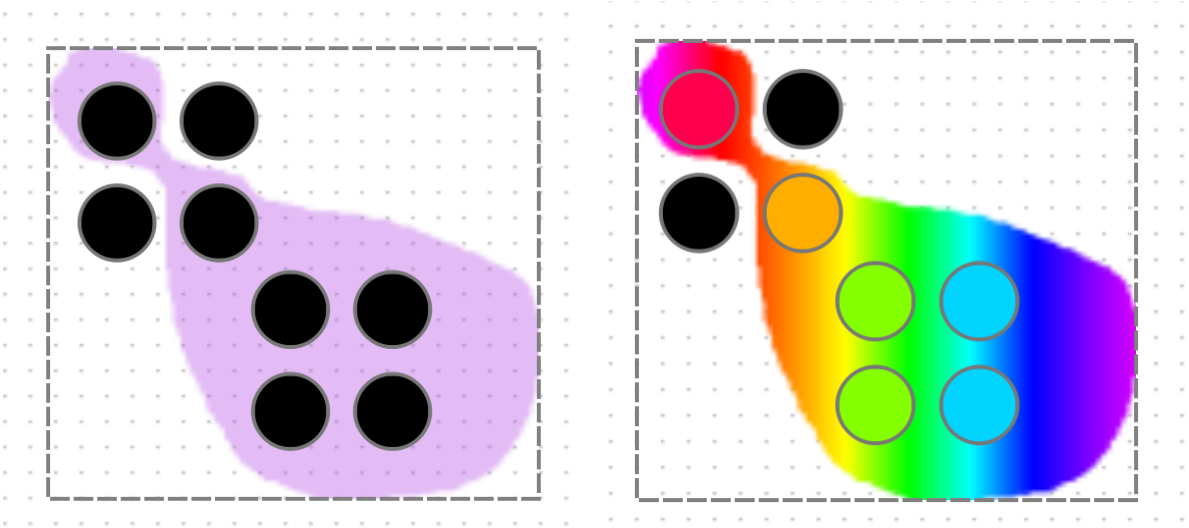
You have a selection of three shapes: a square, a circle or a polygon. Select the shape then drag on the fixture grid to draw.

1. Create a shape
2. Drag an effect to the shape. A timeline will automatically be created.

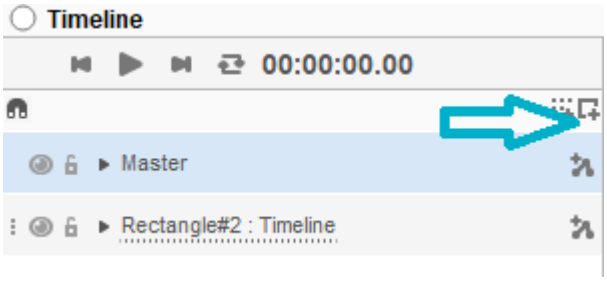
If you decide to create a Mapping Timeline and a shape separately you will need to link the Mapping timeline to the shape. To do this …

- right click where it says *Timeline (no target)* to open a menu.
- *From menu, select Targets > (Your shape name)*

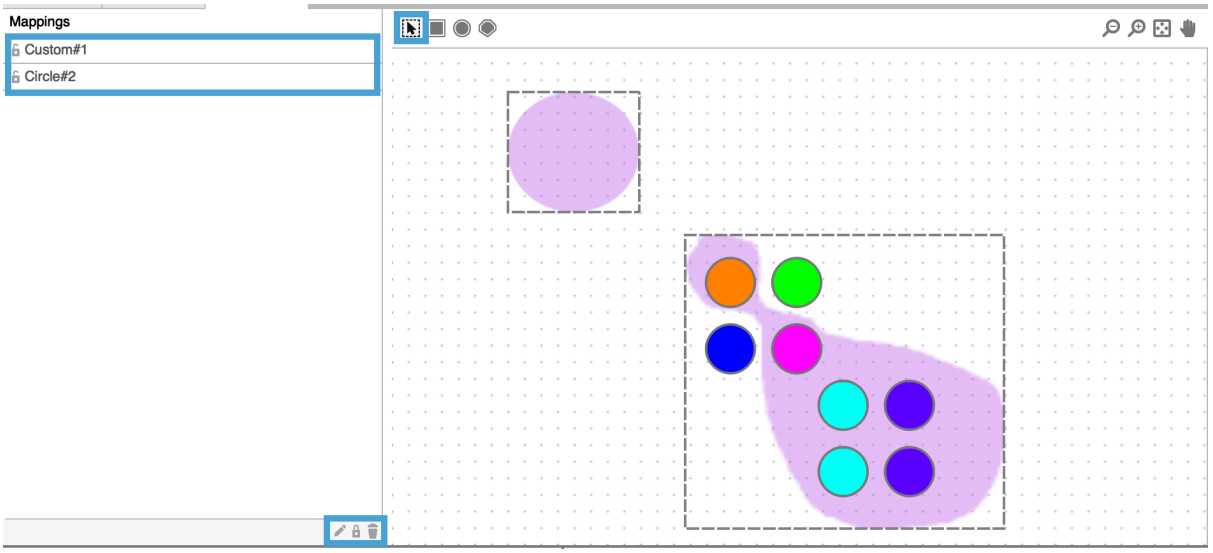




Effects can be dragged from the effect list directly to the shape in the same way as with fixture selections. A mapping timeline will be created automatically with the chosen effect. You can also add a mapping timeline from the top of the Timeline panel.



Mappings can be moved and resized by selecting the mapping from the list or by clicking the selection tool. A mapping can be moved by dragging the mapping or resized by dragging one of the four corners. Mappings may also be locked to prevent accidental editing.



Video and images

You can import video and images using the Media effect which is just like any other mapping effect except you can specify a media file on your computer.

Supported file formats:
Video: MP4, MOV (with resolutions less 1280x780 pixels)
Images: PNG, JPG, HEIC (MacOS)

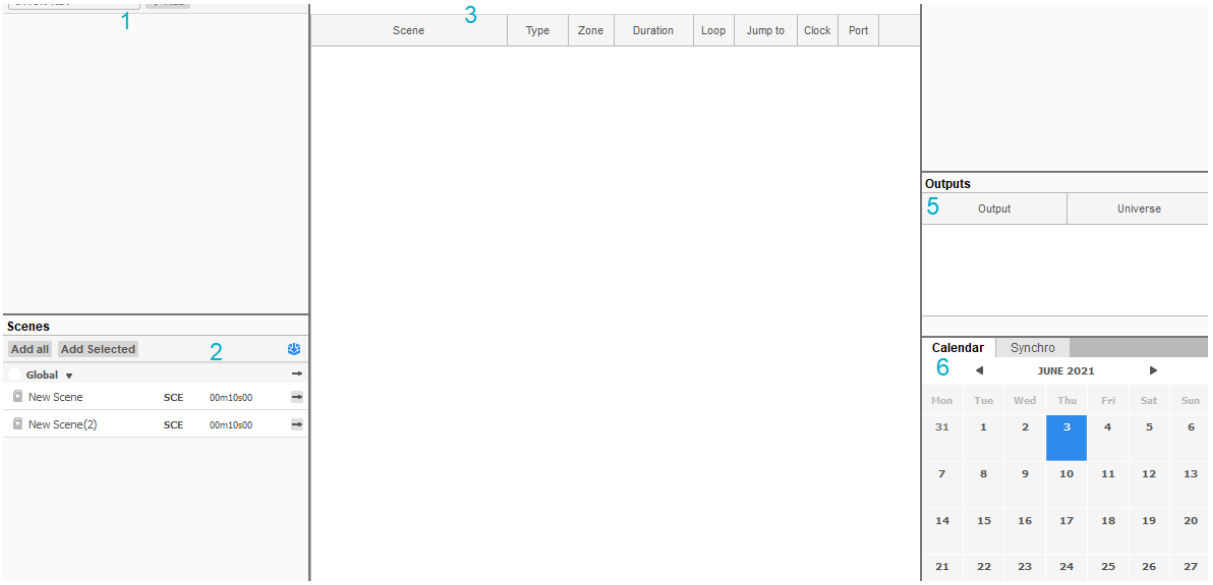
If the video is too large to be processed you will receive a warning. You may need to use video editing software to reduce the size of your video.

Standalone

The standalone screen is where you will add your programmed scenes to your controller. Other standalone options can be set from here, such as calendar triggers and other types of external triggers to start scenes. Note that options displayed here are sometimes dependent on the controller in which you are using.

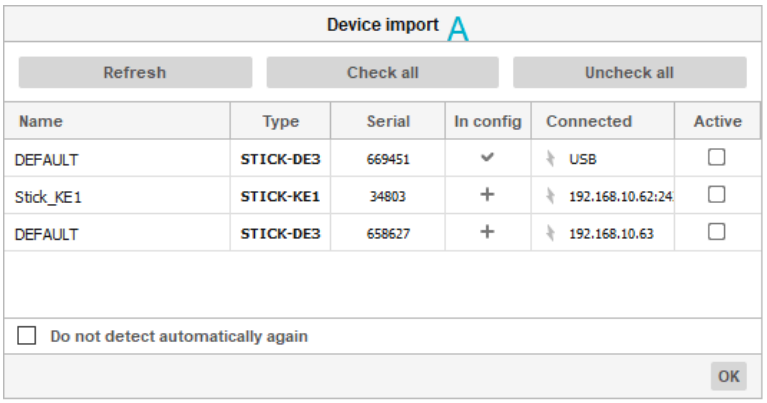
Navigate to the standalone screen by clicking the icon on the top toolbar, or by selecting Standlone from the view menu.

On the standalone screen there are 6 different panes. Devices(1), Scenes(2), Write(3), Properties(4), Outputs(5), Calendar(6). Unless you have a controller currently attached to the software some of these windows will be empty.



Managing devices

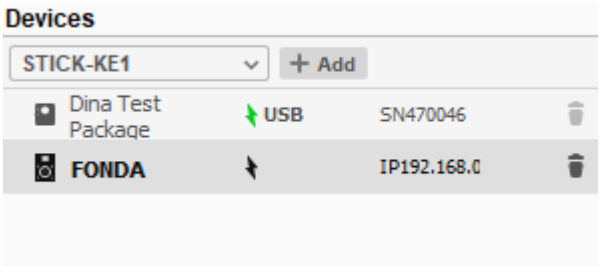
If you have a controller connected to the software you will see it listed in the Devices panel. You can connect a controller after the software has been started. In this case the Device import window will be shown, listing each device detected on the network and via USB. You can also open this window by the top menu: Settings > Import Device.



Once the controller is connected, you will need to make sure it is Active. A green lighting bolt is shown alongside each active device.

You can make a device active by selecting it in the Devices window and then checking Active in the Properties Window.

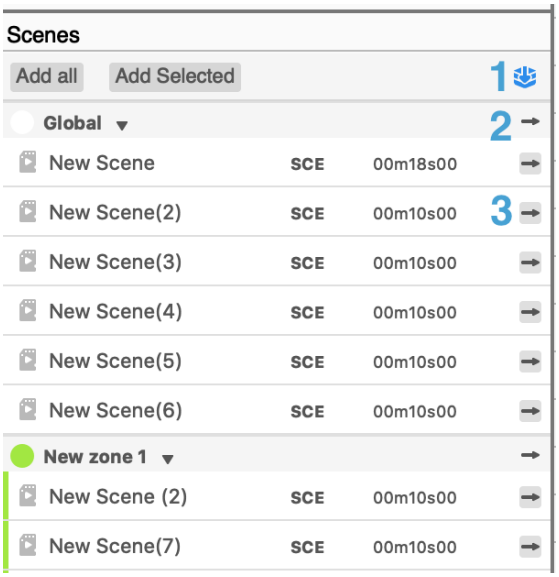
Right clicking the device in the Devices window allows for it to be linked with a serial number. For example, you may have created a configuration for a different device (of the same type) or a virtual device (of the same type) which you want to assign to your new device. Assigning the serial number in the Devices window allows this.



Assigning Scenes

Once a device has been set up and selected, a table will appear in the center of the window. This is where scenes will be added to the device. All scenes are located in the Scenes pane located at the bottom left of the screen.

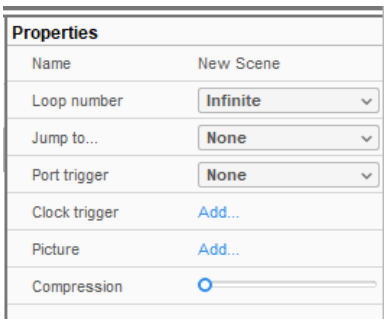
- Click the *Show All Scenes button* (1) to toggle between displaying all scenes in the project, or filtering just the scenes selected for standalone from the Scenes pane in the Editor.
- Clicking *Add all* will assign all scenes to the controller. *Add Selected* will add just the selected rows. A multi-selection can be made by holding ctrl (PC) or command (MAC). A range may be selected by holding shift.
- Clicking here (2) will quickly add all scenes from the corresponding zone and clicking here (3) will add just the corresponding scene.



Setting Scene Properties

Once a scene has been assigned to the controller. Additional properties including triggering commands can be set from the *Properties* panel. The options displayed depend on the device connected. Note that devices which support *TCA* will have fewer options here, as triggering is managed in another location (see the next topic). Standalone Scene properties include:

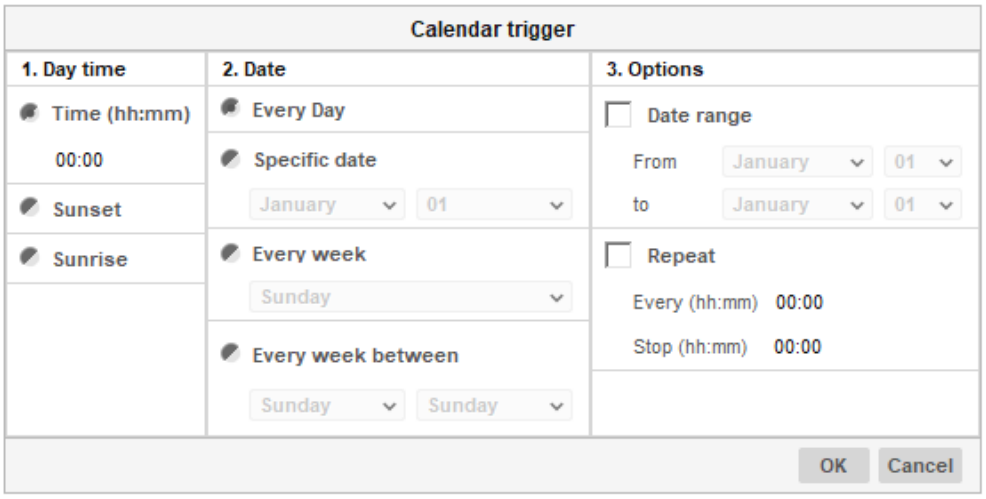
- The name of the scene.
- The number of times a scene should play.
- Release at end : the scene is released once finished, rather than paused on the final frame.
- Where a scene should jump when finished.
- A dry contact port trigger.
- A clock trigger.
- Image file (for devices with a display).
- Compression (for devices with limited memory).



Clock & Calendar

Some devices contain an internal clock and calendar, allowing for scenes to be triggered at certain times of the day. The triggers can be created either from the Scene Properties panel, or from the TCA window for devices supporting TCA triggering. Calendar triggers are set in three stages:

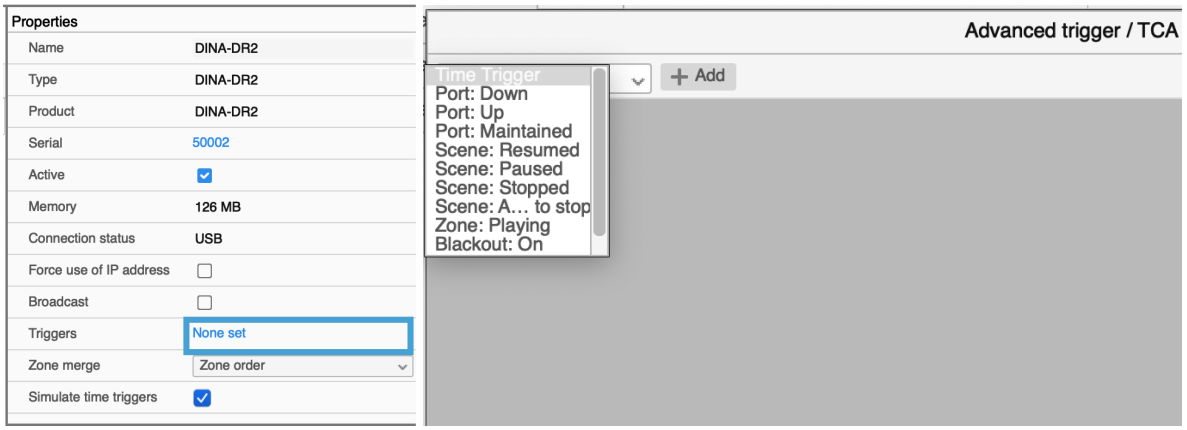
1. The time at which the Scene will trigger. This can be set as a time of day, or a time relative to Sunrise or Sunset. (Note: for Sunrise/Sunset triggers to work accurately, the device's location must be set correctly. This can be set in the Hardware Manager tool).
2. The date at which the Scene will trigger, including recurring dates and days of the week.
3. Other options include triggering during a range of dates of the year, and repeatedly triggering a scene at a specified interval until a chosen time.



TCA (Trigger - Condition - Action)

Some controllers offer a different set of more powerful triggering options called Trigger - Condition - Action (TCA). To access the TCA window, select the device from the *Devices* panel and then click the blue text to the right of the *Triggers* property. A selection of different trigger and condition types are available:

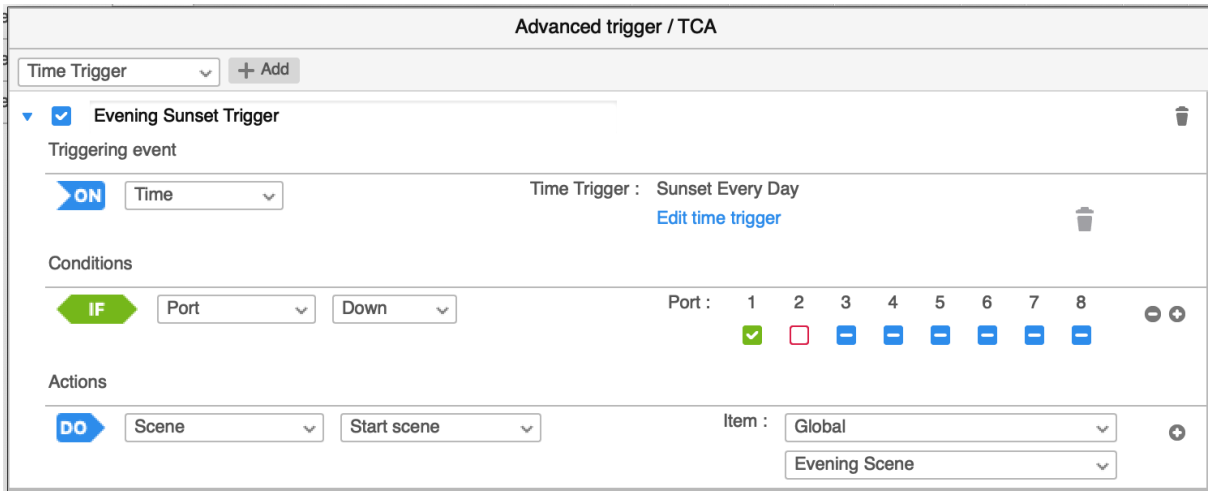
- Time Trigger - trigger an action at a particular time of day.
- Port Trigger - trigger an action when a dry contact port is pressed (down), released (up), or held down.
- Scene Trigger - trigger an action in response to a scene or zone:
    - Scene Resumed.
    - Scene Paused.
    - Scene Stopped (will continually trigger as long as a scene is stopped, more useful as a condition than a trigger).
    - About to Stop (triggers one time when a scene is stopping, e.g. "Play Scene 5 when Scene 1 is about to stop).
    - Zone Playing (will continually trigger as long as a scene within the selected zone is playing, more useful as a condition than a trigger).
- Blackout - trigger an action in response to a blackout.
- Audio Beat - trigger an action in response to a detected audio beat.



Once you have selected the type of triggering event you want to listen out for, further settings will appear.

1. *Triggering Event* : set more specific properties related to the triggering event. For example, Calendar trigger options.
2. *Condition* : set further conditions which must be met for the trigger to be actioned. Each condition may be set as an IF or IF NOT condition by clicking on the IF/IF NOT text. Several conditions can be set by clicking the (+) button to the right of the condition.
3. *Action* : the action to perform if the Triggering event and Conditions are met.

The example below will trigger the Evening Scene within the Global Zone at Sunset every day, but only if Port 1 is closed and Port 2 is released (ports 3-8 states are ignored).



Audio Triggering

This section is only relevant to the DINA DR1, DINA DR1 LITE (with Audio triggering license upgrade) and DINA SR1 models which have sound-to-light capabilities.

How does audio triggering work?

When an audio signal is received by the controller, it will look for beats or pulses in the signal. Once detected, these are indicated with a flash from the Audio LED. These beat triggers can be used to step through a pre-programmed scene in time with music or in reaction to pulses of sound.

Using Sequences

It is important to use *Sequences* instead of *Scenes* for audio beat triggering. This is because with Sequences it is easy to set dramatic changes between individual DMX frames. By comparison, when a scene is turned into DMX the software generates 25 frames per second. In most cases, there will be very little change between frames.

Note: Sequences are referred to as Scenes in the software everywhere except on the Selections and Mappings tab.

Configure TCA Triggers

1: Create several *Sequences* in the Editor window. See the section in this manual: Getting Started : Create Scenes : Sequences.

2: Open the Standalone Screen, select your DINA DR1 or DINA SR1 on the left.

In the Properties - Devices panel (right) click the *Triggers link*. The TCA window will open.

3: Add an Audio Beat trigger

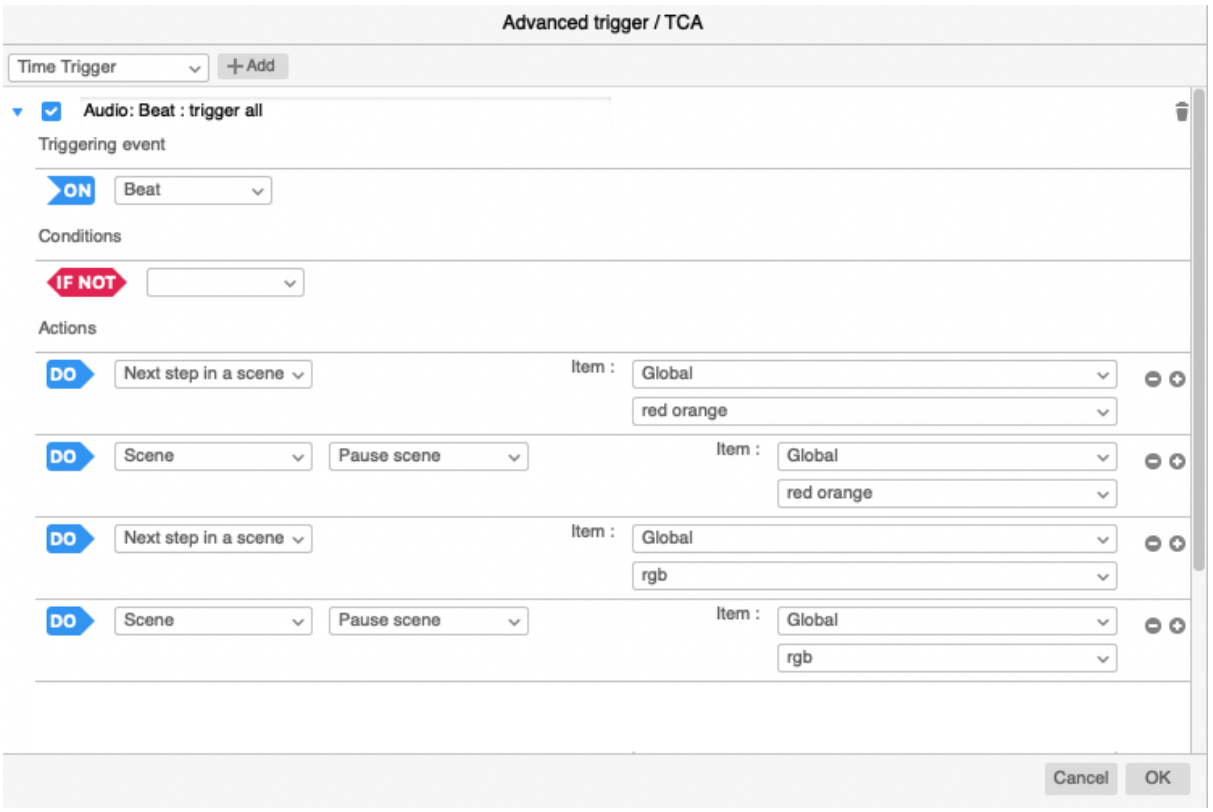
Triggering event On : Beat

Create 2 Actions for each scene (Sequence) you want to use audio beats with.

- Do: Next step in Scene : specify area and sequence name
- Do : Scene : Pause Scene : specify the same area and sequence name

  Repeat for each Sequence you want to use audio with. This one Audio Beat trigger rule will control *all* Sequences once loaded onto your controller.

See example below where 4 DO actions have been added to control 2 scenes.



When you trigger a scene you will notice it will play as normal (i.e. according to time). As soon as it detects an audio beat, it will make 1 step and then pause. With a series of beats it will play in time with the music.

What if you want the scene to only start playing when it detects an audio beat in music? I.e. start in a paused state.

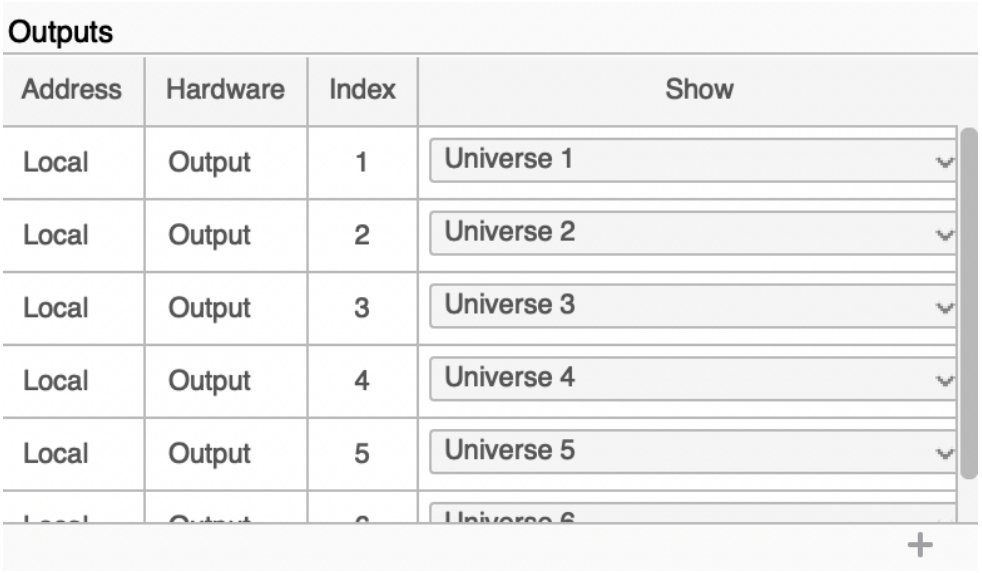
In this case, create a port trigger for each scene you want to work with audio and create 2 actions:

1. Scene : Start Scene : < Select your scene>
2. Scene : Pause Scene : < Select your scene>

When you trigger the port the scene will start with the 1st DMX frame and wait for audio beats. Your first frame could be set to do nothing with your fixtures. Ports are triggered by connecting the GND and the port number with a connector; see the Technical Datasheet for your controller for more information.

Setting Universe Outputs
In the Outputs panel you can set a Show Universe to a physical output on your controller. The *Index* is the number of the physical output. By default, show Universe 1 is assigned to output 1, show Universe 2 to output 2 etc.

Note that the number of outputs you can use is determined both by the number of physical outputs and the SUT licences stored on the controller. For example, the SLESA-U11 has 4 physical XLR outputs but only ships with licences to use 2 of them. As with all SUT compatible controllers, this can be upgraded at store.dmxsoft.com or store.nicolaudie.com.

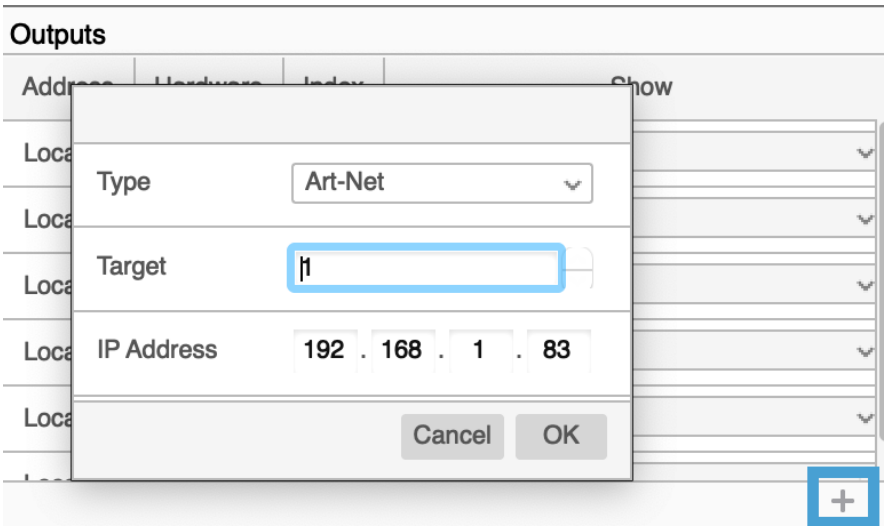


Artnet and sACN Output
The DINA DR1 and SR1 models are able to output Artnet and/or sACN data over a network. You may choose to use these protocols to make it easier to send DMX data over distance or to use more universes than the controller has physical DMX connections for.

Note that the total number of universes is limited by the number of DMX universe licences on a device.

A DINA DR1 comes with licences for 6 DMX universes. Purchasing an additional 8 DMX Universe licences would allow the output of up to 14 universes, for example.

Using the *Output* panel in ESA Pro 2 you can mix and match how the universes are to be output.



To use Artnet or sACN:

- Press the + button in the Outputs window.
- Select type : Art-Net or sACN
- Set a Target number. Many Artnet and sACN devices have more than one DMX output or DMX Node. Set the number of this output here.
- IP Address: Input the IP address of your Artnet node here. The DINA and Artnet node must be on the same network and the IP addresses must be able to communicate with each other.

Example : 2 Art-Net Universes

192.168.1.83	Art-Net	1	Universe 1
192.168.1.83	Art-Net	2	Universe 2

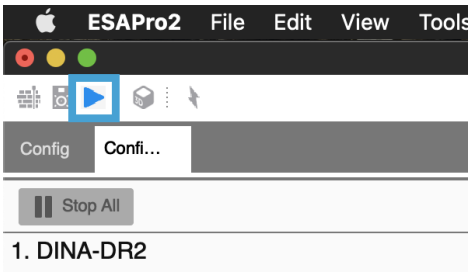
Writing to Standalone

When all scene assignments and triggers have been set up.

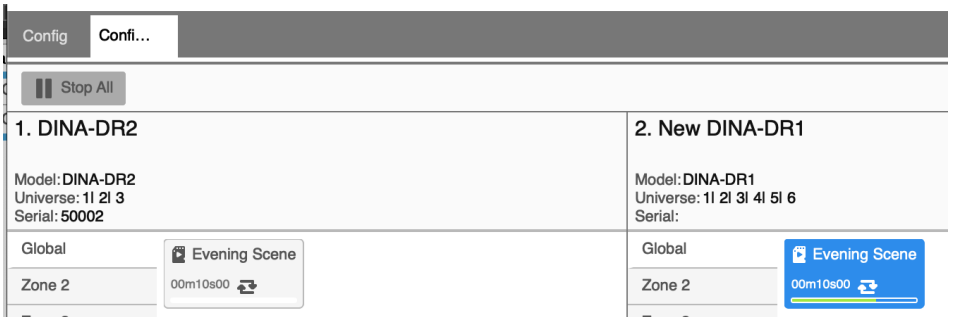
- Clicking the *Write* button will write the project to the controller.
- Clicking *Read* will read a backup project from the controller if one has been stored.
- Clicking the *Test* button will temporarily put your controller into Standalone mode allowing for scenes to be checked as if the controller was disconnected from the computer.
- The *Write on computer* button creates a local folder which can be manually copied over to an SD card at a later date and added directly to the controller. Be sure the correct device has been selected for the project to be compatible.

Simulator

The simulator screen is inspired from the LIVE tab function from our original ESA Pro software. The purpose of the *Simulator* is to verify and test all programmed scenes while your controller is still connected to the computer. The simulator can be accessed from the toolbar and View menu.

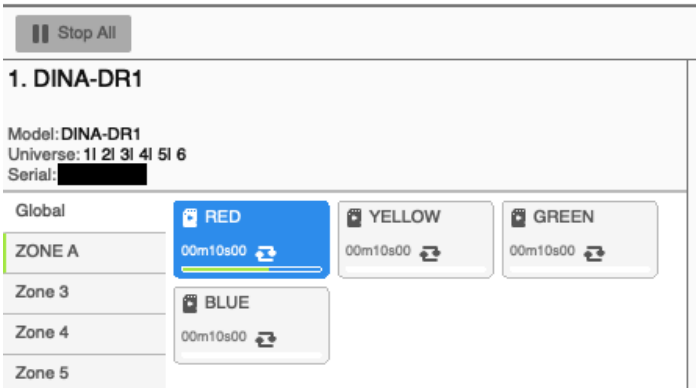


Several controllers may be tested simultaneously. Each is shown side-by-side with the Name, Model, Serial Number and assigned universes written at the top. Zones and scenes are listed below.



The simulator window imports all the scenes that are added/written to the controller. You can manually trigger the scenes by clicking the scene button. As soon as you trigger the scene button, the scene will start playing and the color of the scene button will change to *blue* to indicate which scene is playing.

For controllers with multi-zone functionality, you can play one scene from each zone at the same time. To do this, simply select the zone you want to trigger the scene in, and select the scene you want to play. To stop multiple scenes playing in different zones, you can use the *Stop All* button at the top of the screen.


Stop All
1. DINA-DR1
Model: DINA-DR1
Universe: 1| 2| 3| 4| 5| 6
Serial: [redacted]
Global
ZONE A
Zone 3
Zone 4
Zone 5
RED
00m10s00
YELLOW
00m10s00
GREEN
00m10s00
BLUE
00m10s00

Other Features

Network Synchronisation

This feature allows you to control multiple units at the same time over a local network. As long as they have been set up with the same project and the *Synchro* option is checked, synchronised scenes will be changed together. This is great when controlling one space from multiple locations.