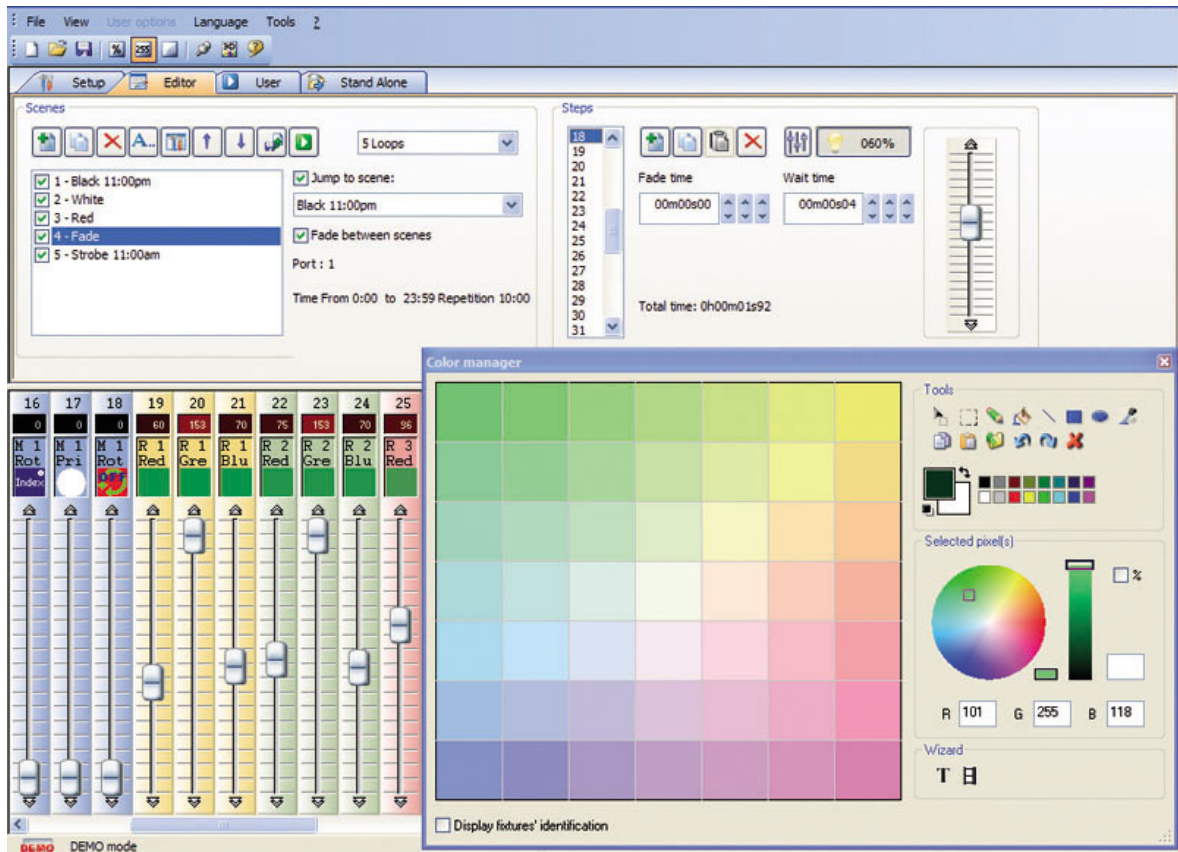# THORN

SENSA SOFT

Getting started manual

1. Step 1 - Starting the software

You must select the operating mode after starting the software.

There are 4 operating modes:

· DEMO mode: there is no interface controlled by the software
· USB mode: if a USB interface is connected to your computer, you will be able to control it
· INTERNET mode: if your computer is connected to Internet and if you have an IP interface connected to Internet, you will be able to control this interface. You need its serial number and password to do so.
· ETHERNET mode: if an IP interface is connected to your computer or to the same local network , you will be able to control it
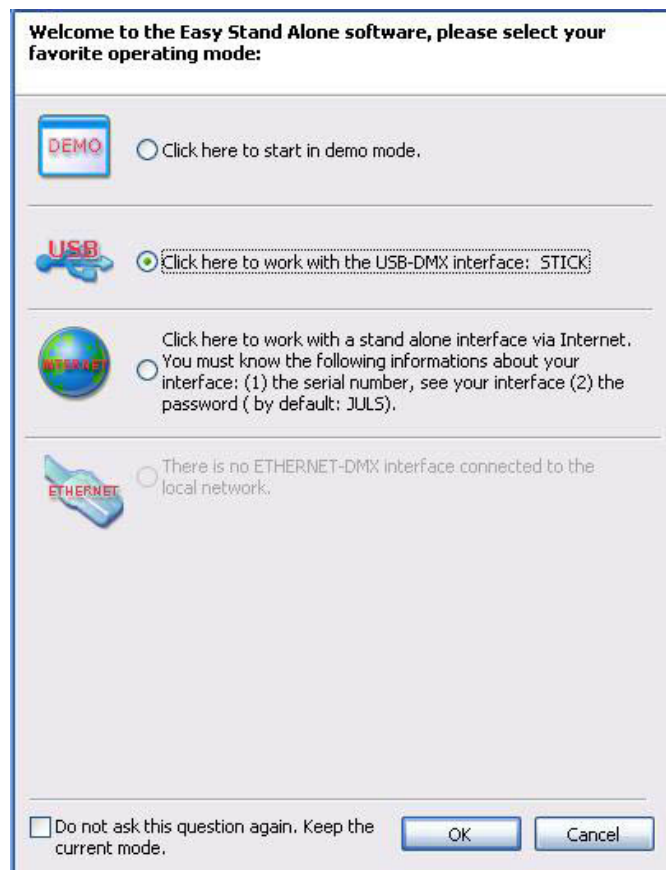
2. Step 2 - Setup, add lighting fixtures

With a few clicks of the mouse button, you can set your traditional lighting channels as well as your scans, heads, LEDs...The software uses the ScanLibrary (a library of SSL-type fixtures) which is currently the best choice you can make and a guarantee of evolution over the next few years. The ScanLibrary editor is included and allows you to create your own library/profiles in just a matter of minutes.
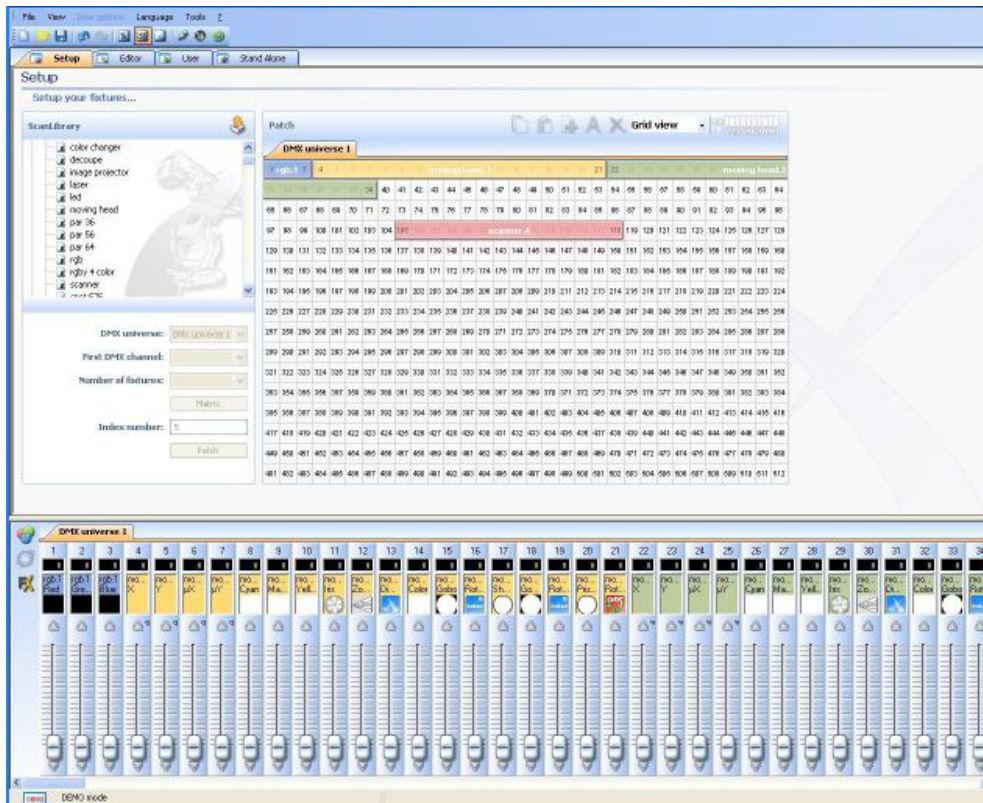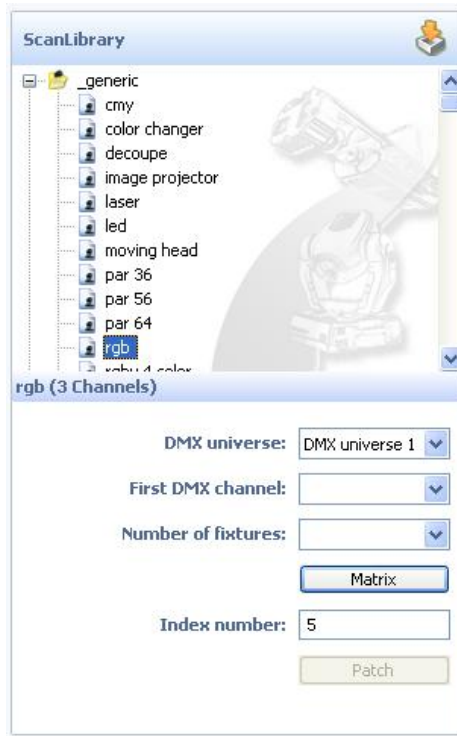

1. Select your lighting fixtures

Using the Scanlibrary menu on the left, you can select between thousands of lighting fixture profiles.

Once you select the profile you want to add, underneath the list you will see options that allow you to:
- select the 1st DMX channel assiged to your fixture
- define the number of fixtures using the selected profile
- create a matrix of lighting fixtures (most commonly used with LED walls)

Once these options are defined, click the PATCH button.

Note: if you cannot see these options underneath the folder list, please find the fader to scroll down this window all the way to the right of your screen, beside the DMX map area.

2 - DMX map

As you patch your lighting fixtures, you will see them being added into the DMX map on the right.
If you ever want to change the DMX address of a fixture, you can drag and drop the desired fixture into the new address.

You can also drag and drop fixtures directly from the Scanlibrary folders on the left into the DMX map.
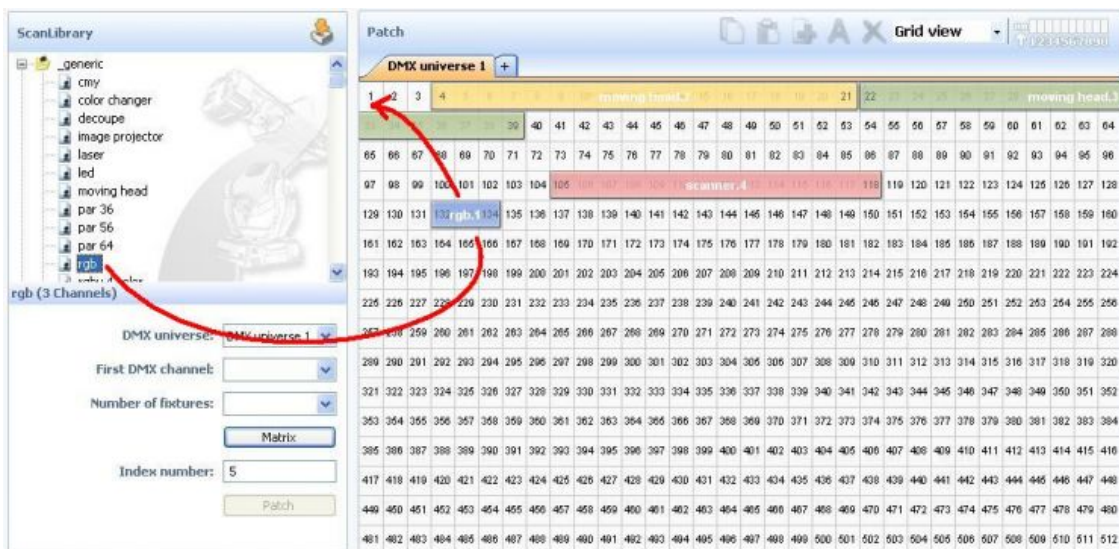
3 - List View - Advanced options

Above the DMX map area you will see a pull down menu, with the option "Grid View" selected. Change this to "List View" to access some advanced fixture configuration options like:

- channel shortcut keys
 - to control channels directly with the computer mouse at any time by holding any key on your computer keyboard, you can change them at any time by clicking on the corresponding Shortcut area for each channel.

- enable channel fade
 - if not selected, the fade time between 2 steps or scenes will not affect the corresponding channel (very useful for Gobo channels, for example, where you want only the position to fade slowly, but the gobos to change quickly)

- enable Stand Alone dimmer
 - if your interface has internal memory and 3 external buttons, you can press and hold the 3rd button [arrow] along with either the [+] or [-] buttons to adjust the dimming level

- invert Pan/Tilt, swap Pan/Tilt
 - each of these options allow you to invert Pan/Tilt control, or swap Pan with Tilt, ONLY when they are being controlled using the keyboard shortcuts and mouse described above.
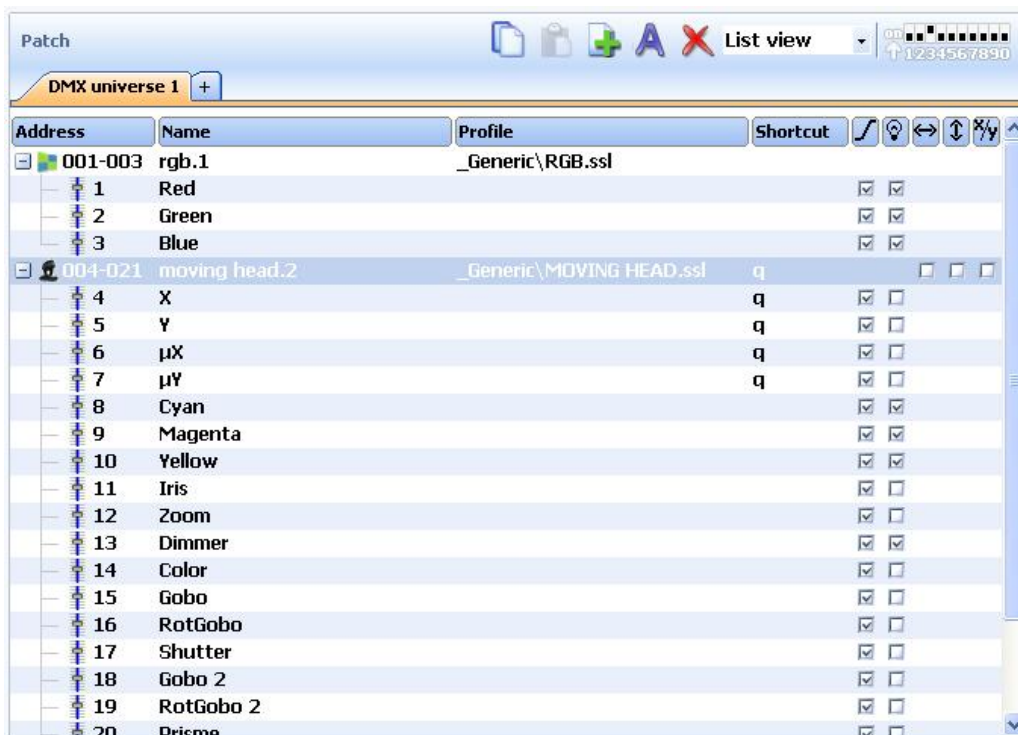
3. Step 3 - Editor, creating scenes

Creating scenes can be carried out very easily. For each scene, the software allows you to determine any number of steps. Each of these steps has a fade time (slow transition between steps) and a wait time (time that any particular step will stay before starting the transition to the next), both of which can be defined. By creating several steps in sequence, you can build a dynamic scenes. It is also possible to define the number of loops (repetitions) for any specific scene, as well as the proceeding scene after this number of loops has been met.

Structure of a "show"

· A show can include up to 255 scenes.
· Each scene can include up to 1,000 steps.
· Each step is provided with fade time and wait time which can vary from 0 to 43 minutes (resolution: 0.04 seconds).

Since each show is saved as an individual file, the number of shows is unlimited. Save each "show" into a specific document (Myshow.dlm, Show23.dlm…)

Creating scenes

Each scene includes a number of steps which will fade into each other sequentially. Each step represents an "snapshot" for all the DMX channels, for which a fade time and wait time can be determined. For instance, if you wish your lights to:

· show a static color, only one step is necessary in the scene
· change between 6 colors, then 6 steps are necessary
· transition slowly between colors, then your fade time should NOT be zero
· keep a particular color constant, then your wait time should NOT be zero
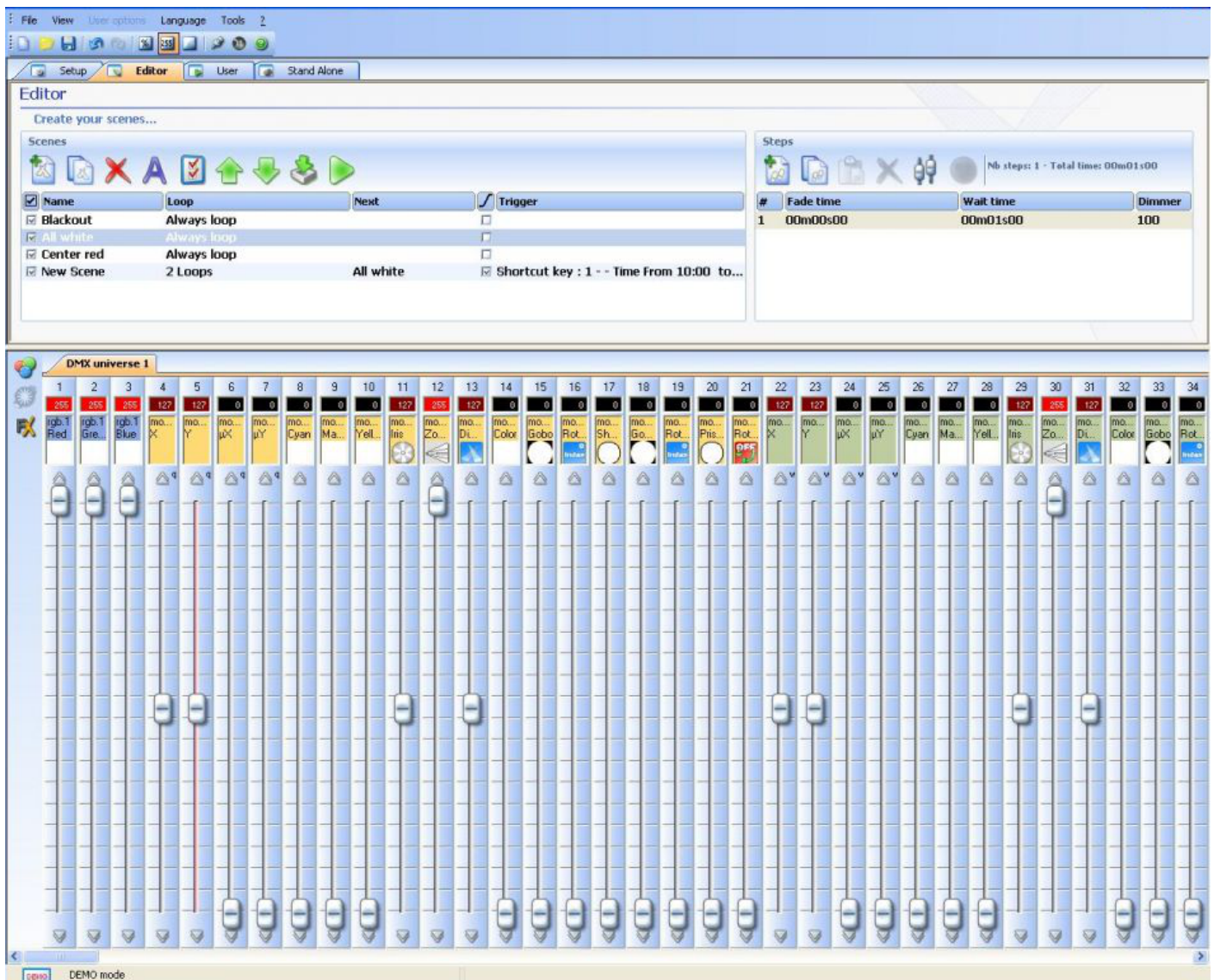
Scenes

The list of scenes is located on the upper left-hand corner of your screen, inside the Editor area.
The icons above the list, from left to right, allow you to:

· create a new scene
· copy a scene
· delete a scene
· rename a scene
· assign triggers
· change scene order within the list
· import Easy Step scenes from the 2006 software
· play the selected scene

Loop

Each scene can be defined to repeat (loop) a certain number of times. The default value is "Always Loop", which can be changed by double clicking on it and then selecting the desired number from a pull-down menu.

Next
If a scene is set to loop only a certain number of times, it is possible to assign a different scene to follow, once the loop count is over (this allows you to create elaborate shows without wasting memory space). This "Next" scene can be defined by double clicking on the empty space to the right of the loop count for each scene AFTER the loop count is defined.

Fade

The "Fade" checkbox for each scene determines whether the selected scene will have a "fade in" time once it is activated, or not. For example, a "blackout" scene can be selected, but the effects of instantaneously shutting off all lights, and that of slowly turning them off, are very different. By selecting the "Fade" checkbox for any particular scene, the fade time for Step 1 will be taken into account before the scene starts.

Trigger
There are several ways to trigger your scenes:
- through computer keyboard shortcuts (in the User screen)
- through the I/O ports (simple dry contact closures, easiest way to integrate with home automation systems)
- using the interface's internal clock and calendar
All of these can be defined from the "Trigger" window, accessible by double clicking on the "Trigger" area for each scene.
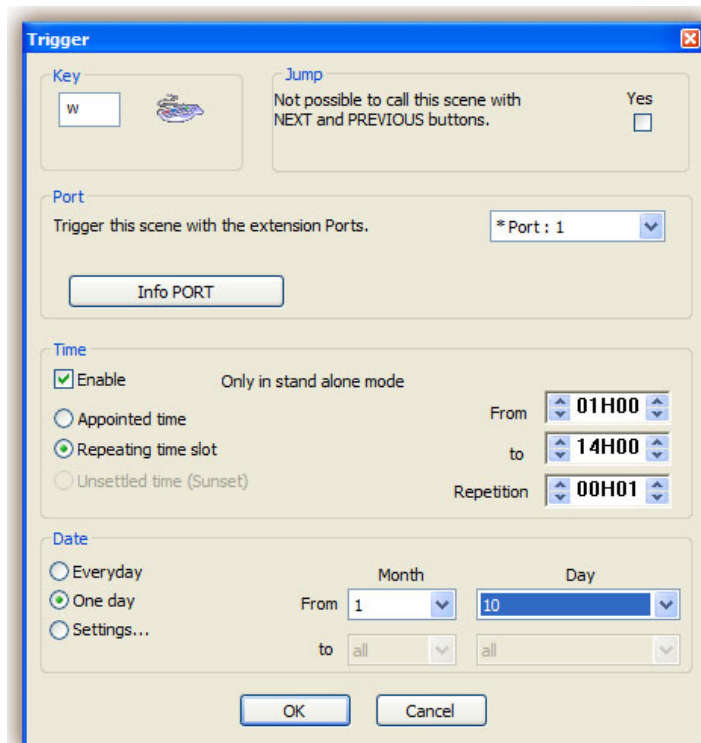
I want to trigger my scene at 12:00am on January 1st:
- enable the Time option
- select "Appointed time" and 00H00 in the "Time" box
- select "One day" from the "Date" area
- From: select "1" for Month and "1" for day

It is important to understand that the only way to stop a scene is to start a new one.
I want to trigger my scene every 30 min from 9:00am to 5:00pm, from Monday to Friday:

- enable the Time option
- select "Repeating time slot" from the "Time" area
- select 9h00 for "From"
- select 17h00 for "to"
- select 0h30 for "Repetition"
- select "Settings" from the "Date" area
- From: select "All" for Month and "Monday" for day
- to: select "All" for Month and "Friday" for day

Steps

A list of the corresponding steps for each scene can be found on the right-hand side of your screen. The steps displayed will be those of the scene currently selected.

The icons above the list all have specific functions. From left to right:
- create new step
- copy current step
- paste on new step
- delete step
- set DMX levels for any selection of channels in the selected step
- record DMX input (only available if interface has DMX IN connector)

Each step has 2 sets of numbers associated to it: fade and wait times. Fade is the time it takes to slowly transition between 2 steps. Wait is the time a particular step is held in place, after the fade time is over. To modify either time, double-click on the corresponding numbers (00,00,00 correspond each to minutes, seconds, hundreths of a second) which will display 3 pairs of arrows to increase/decrease each time.

If you wish to modify the DMX values of several steps at the same time, or delete a selecting of steps, hold down CTRL and select the steps you want to modify or delete. To select a range of steps, select the first step in the range, hold shift and select the last step in the range.

Channel Faders

The vertical faders at the bottom of your screen correspond to the DMX level for each channel. There are several ways to modify these levels:

· drag a channel-fader with your mouse

· if the channel has been assigned a keyboard shortcut from the Setup screen, hold this key and move the mouse
· if the channel has presets (e.g. : gobos, colors...), right-click on the channel name and make a selection from the pull-down menu
· you can set several channels simultaneously using the "Set levels" button above the Steps list
· if the fader is a color mix channel (RGB or CMY), right-click on the color box to open the Color Manager window (explained in the Advanced features chapter of this manual).

If you want to set the DMX levels of several channels simultaneously using your mouse, you can:

- Hold the CTRL key on your keybard while selecting the faders you want to use. As long as you hold the CTRL key, as you move the last fader all previously selected faders will move as well.
- Select a channel, press and hold the SHIFT key and then select a second channel. This will select all the channels in between
- If you have several identical lighting fixtures and you want to control the same channel for all fixtures, you can select the corresponding fader for the first fixture, then press and hold the SHIFT key, then move THE SAME fader already selected. As you do this, you will see all channels with the same function move together.

Note: By using 2 monitors in "extended desktop" mode. You can stretch the application across both monitors allowing you to see more faders in SETUP mode and more buttons in USER mode.

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4. Step 4 - User, live playback using your computer

If you wish to control your lights via a computer, then you can trigger off scenes with the mouse or the keyboard while visualizing the channels. At any time, you may decide to manually control some channels (either in HTP or LTP) by directly operating the corresponding cursors.
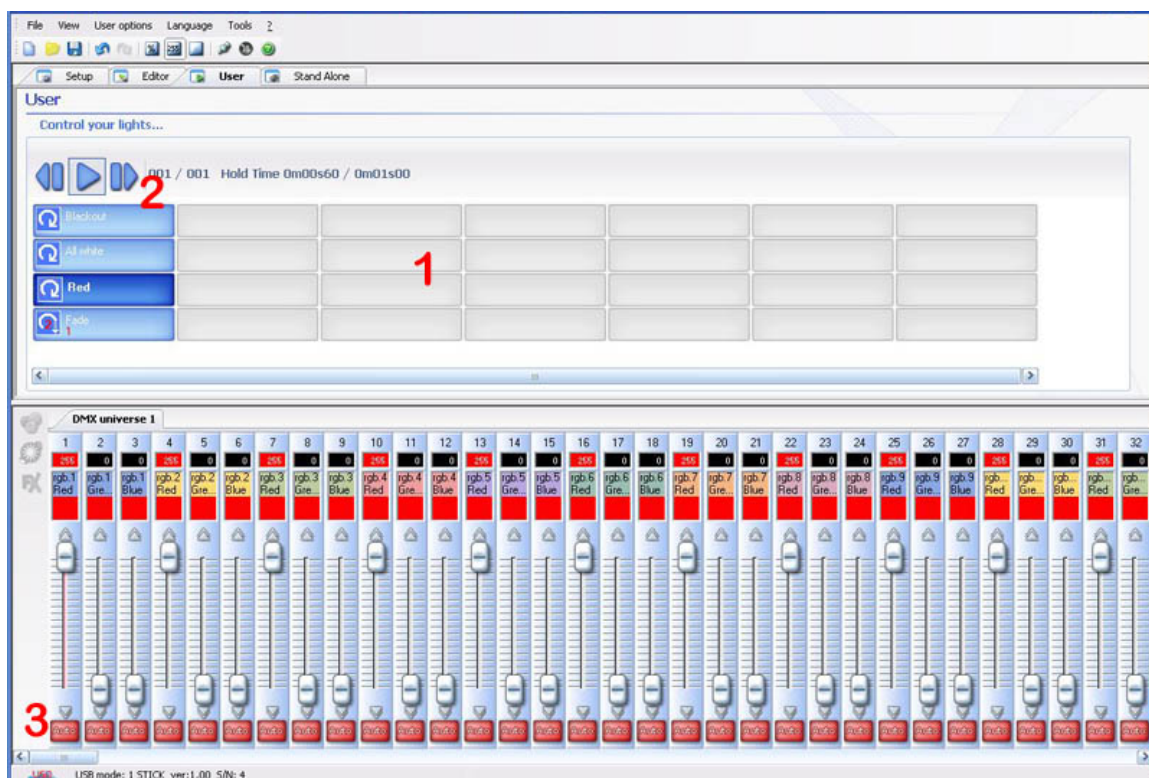
1 - Button-area

Each button represents a "scene" which can be activated with the mouse. If the button is pressed, then the scene is activated. Each button is also used to visualize the number of loops and various triggerings (keyboard key or port input).

2 - "Previous", "Next" and "PLAY CYCLE" functions

By clicking here, you can trigger the previous or next scene in accordance with the order made into the editor. You can also activate "Cycle" mode which enables you to automatically go from a scene to the next one. Of course, this mode can only apply on "go automatically to next scene" scenes.

3 - AUTO/LTP/HTP functions

By clicking here, you may manually control the different channels. 3 modes can be used:

· AUTO : the channel works automatically on the current scene. The manual cursor is de-activated.
· LTP : the channel is in "Latest Takes Priority" mode, the level is that of the cursor. The current scene has no effect on the channel.

5. Step 5 - Stand Alone mode

If you would rather control your lights without any computer, in a few seconds you will be able to store your scenes into the box to activate Stand Alone mode. Depending on the DMX interfaces, starting scenes can then be carried out in sequential access by using "previous" and "next" on the box, via the external connector which triggers off up to 255 scenes in direct access or thanks to the touch-sensitive panel of the S.T.I.C.K.
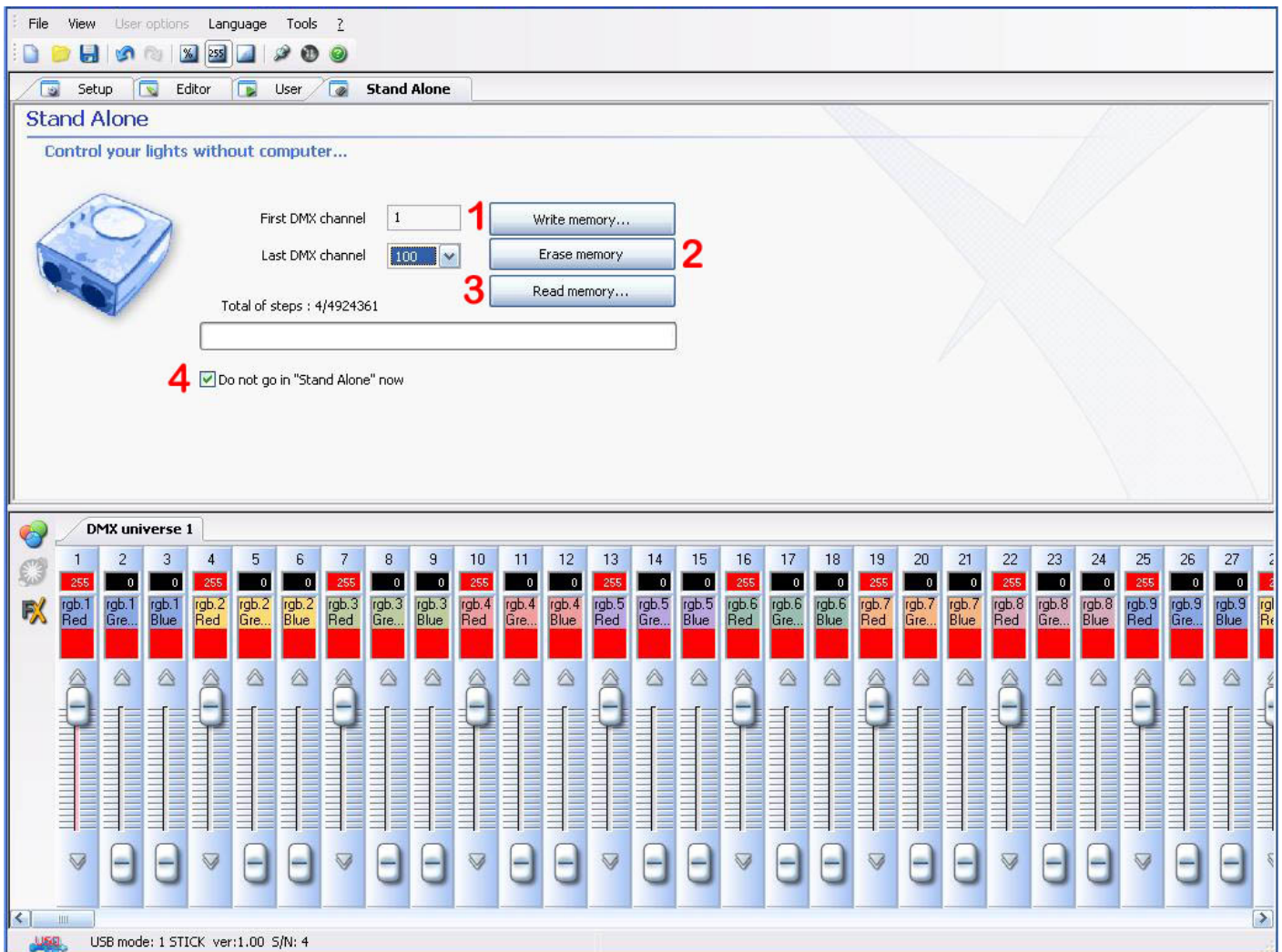
1 - Write memory

It is now possible to write scenes into the memory of the box. If you wish to test in Stand Alone mode without quitting the software, it is necessary to uncheck the box labelled "Do not go in Stand Alone now" (4). The number of channels available in Stand Alone mode depends on the DMX interface (between 60 and 1024).

S.T.I.C.K : you can write up to 40 scenes (5 pages of 8 buttons) and their size depends on the memory card capacity. Scenes #1 to #8 will be automatically assigned to buttons 1 to 8 of the 1st page, then scenes #9 to #16 to buttons 1 to 8 of the 2nd page and so on.

2 - Erase memory

You can delete box-memory, Stand Alone mode will then reset all the channels to ZERO.

3 - Read memory

You can load a show from the memory of your interface. The loaded show won't have any patch

information, you will have to create it if you ever need it.

4 - Do not go in "Stand Alone" now

You can test the stand alone mode without turning the sofware off by removing the check in this box. As long as there is a check, there will be communication between the software and the interface.

Caution: If 2 scenes (located on 2 different pages) use the same DMX channels, the priority between them follows the alphabetic order (A has the priority, then B and so on...).

Advanced features

1. Color Manager

The "Color Manager" tool is a color editor for RGB or CMY fixtures. It allows you to create both static and dynamic color sequences very easily. To open "Color Manager", right-click on the color box above any RGB/CMY channel in the Editor screen.
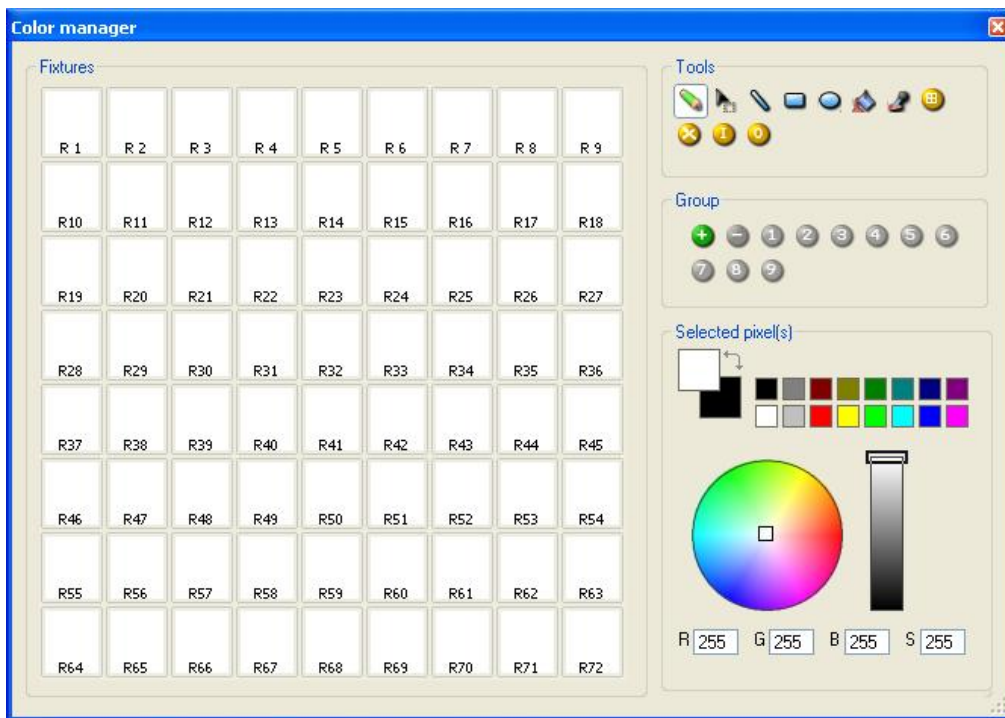
Tools

The standard tools are situated in the "Tools" area of the Color Manager window. From left to right:
- Pencil: assign the selected color to the fixtures
- Select: use it if you want to maintain a selection of fixtures throughout numerous steps
- Line, Rectangle, Circle: if you created an RGB matrix, you can draw lines, rectangles, or circles using the selected color
- Paint bucket: change the color of all fixtures that already have the same color
- Pipette: pick any color already added into a fixture
- Select All: select all fixtures
- Unselect All: remove fixture selection
- Invert: inverts the selection of fixtures
- Uneven selection: selects only unevenly numbered fixtures

Group

Using this section, you can add up to 9 groups of fixtures for easy access.
Select your fixtures using any of the above mentioned tools, then click on the [+] button to add a group. You will see the corresponding number change color on your screen.
To access this group, simply press the highlighted number from this Group area.

Selected pixel

This tool allows you to define the color of all selected fixtures (if any).
You can select any of the common colors from the boxes, or define a specific color using the colorwheel or Red/Green/Blue/Saturation values at the bottom.
You can right-click on any of the common colors, to assign them into the second color selection box.
You can then paint a fixture using this second color by right-clicking on it using the Pencil tool.
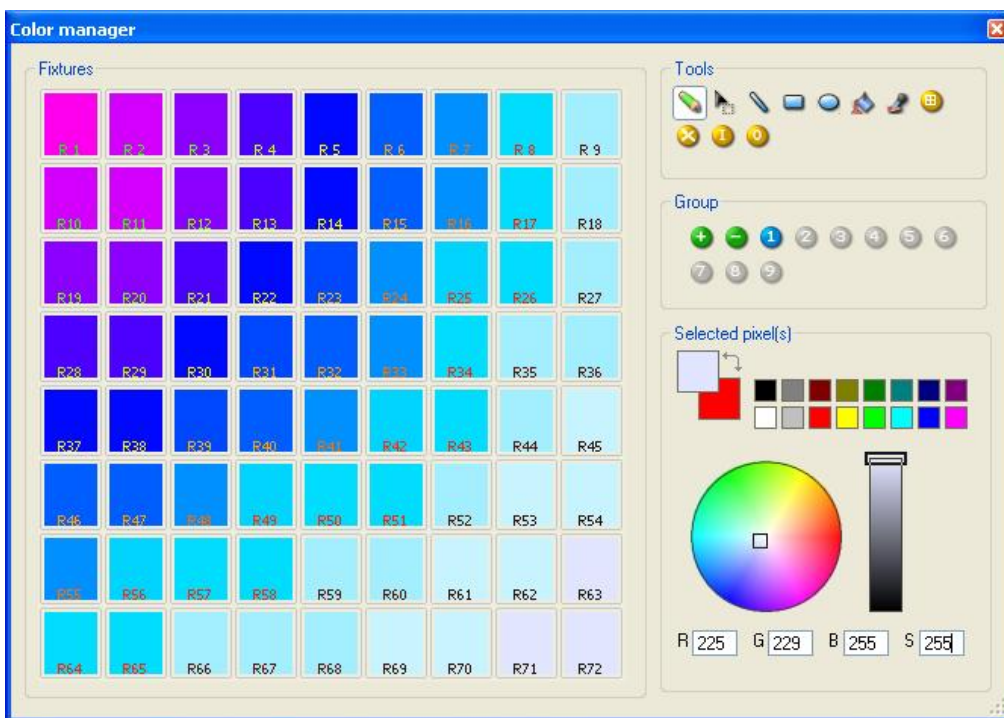

2. Effect Manager

2.1. Overview

The Effect Manager is an extremely powerful tool which
allows you to easily create stunning effects with your lights without having to
go through the laborious process of programming each individual step and scene.
Once you have created your effect with these simple to use tools, you just need
to click "generate" and the software will automatically create the steps
required.
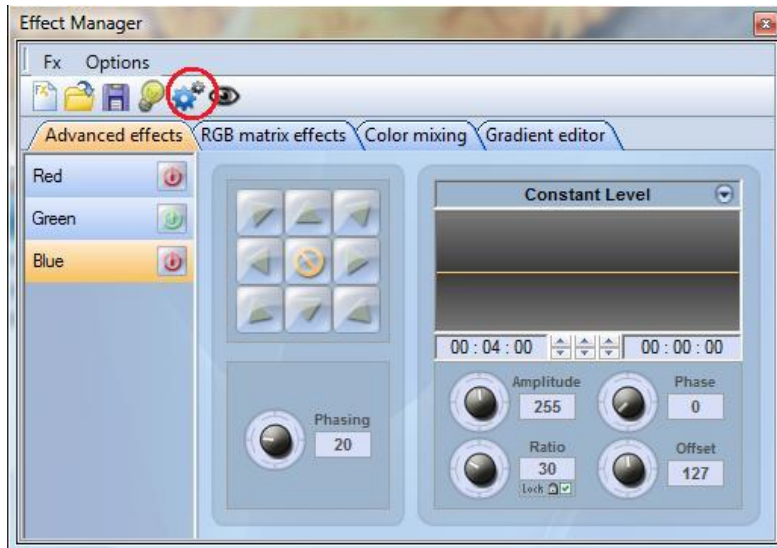
The Effect Manager adapts it's self depending on the
fixtures you are using. To demonstrate the capabilities this tool, we'll start
by using a matrix of generic RGB LED colour mixing fixtures.
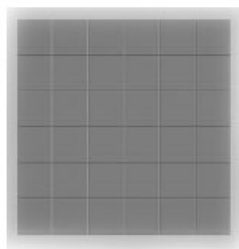
To access the effects editor, simply select the scene which you wish to apply the effect to, then click the
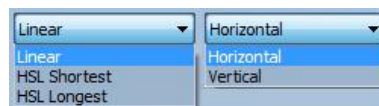FX button.
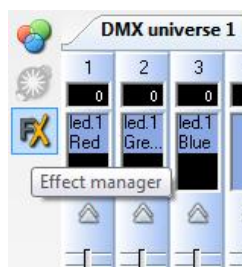
Effects can be saved for later use and reopened in other scenes.

2.2. Gradient Editor

The gradient editor allows you to create many complex static
gradients
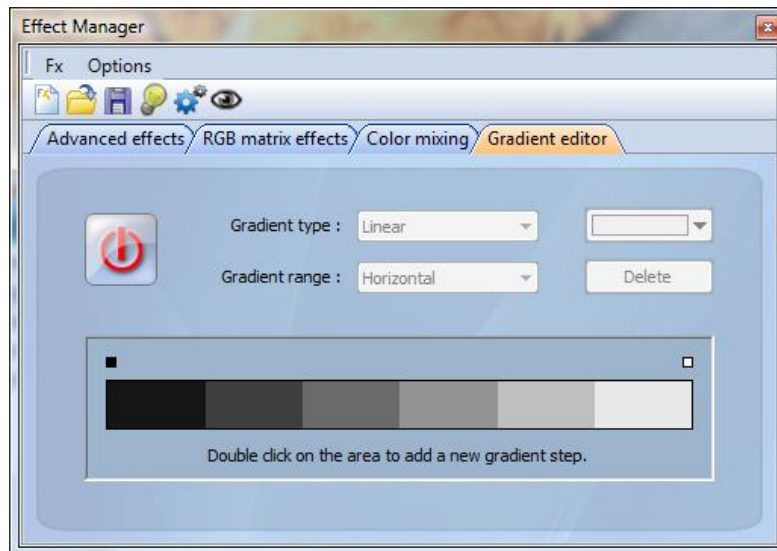
To switch the editor on, click on the red button and select
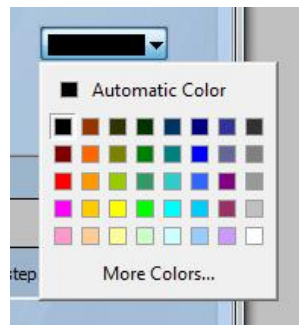a gradient type and range.

Editing the colour
of a gradient

In this example we have created a fade between blue and green.

Select the colour you wish to edit.

Choose your colour from the dropdown box.

Changing the
length of a gradient

Here we see an even gradient between blue and green. You
may wish for the gradient to be long at the beginning and then short. To
achieve this, we can create a gradient step by double clicking on a particular
part of the gradient. A point will then appear. You can drag this point along
to change the gradient.

Double click on the area to add a new gradient step.

Double click on the area to add a new gradient step.
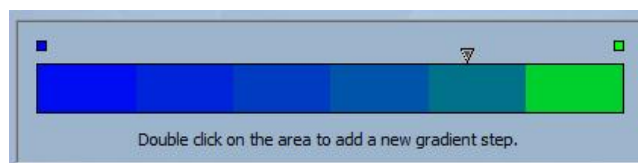
Adding a colour to
a gradient

You can use the points to add multiple colours

to the gradient. For example, we may want the gradient to fade from blue to white, and then from white to green. This can be achieved by selecting the point and changing the colour from the dropdown box.
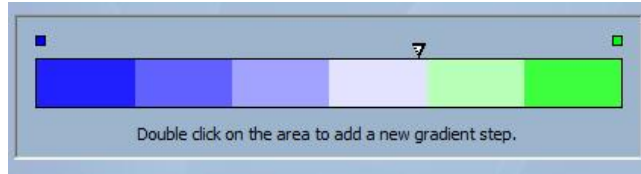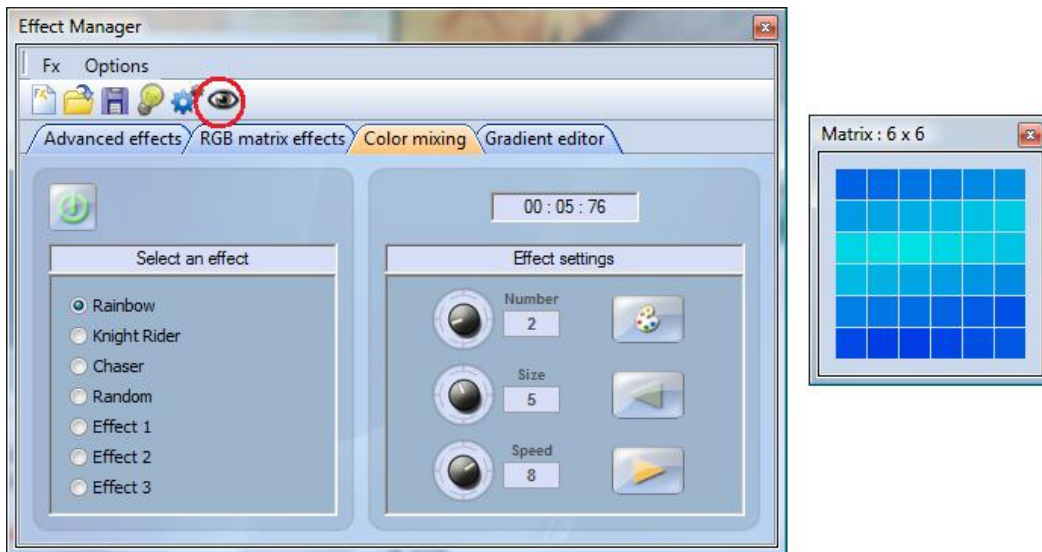

If you are unhappy with the points added, simply select the point and click the "delete" button.

Remember to click generate before closing the effect manager.

2.3. Color Mixing

The colour mixing tool is the easiest way to create complex colour effects. Firstly switch the tool on and select an effect. Click the preview button to see how your final effect will look.

You can vary the size, speed and direction of the effect as well as changing the colours used by clicking the pallet icon. You can also change the number of colours used.

Remember to click generate before closing the effect manager.

2.4. RGB Matrix Effects

Colour Effects

This tool has been specifically designed for the use with a matrix of LED panels. To get started, click the "+" button to add a layer. The layer name can be changed by double clicking it and there are several layer types available, the most basic being colour. The colour can be changed by clicking the pallet. Moving shape effects can also be created by selecting "effect" from the dropdown box.
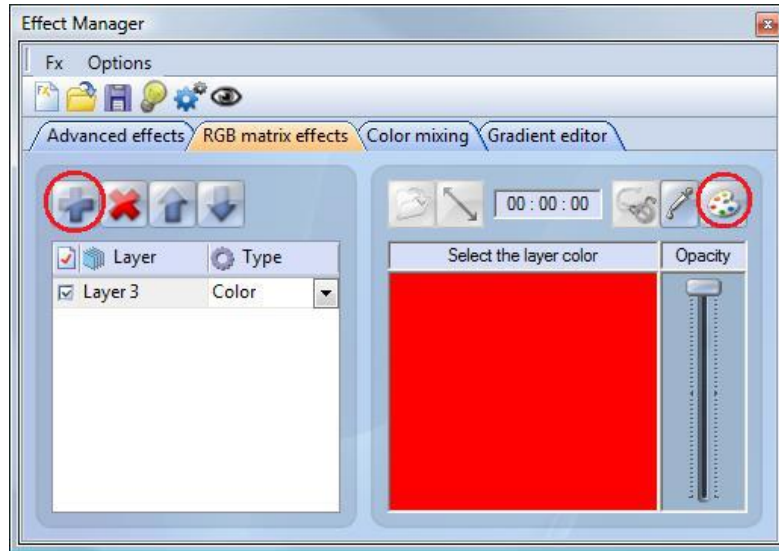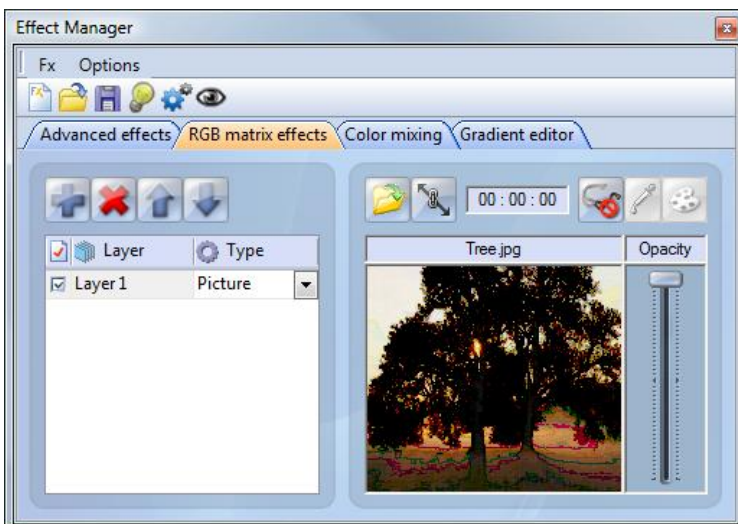

Image and Video

The effect manager is capable of reading a jpg, bmp or gif image and interoperating this on an LED matrix. Select picture from the "type" dropdown box and load your photo. You can choose to stretch your photo filling up the full matrix, or to keep its original proportions. If you wish to go a step further, AVI video can also be played.

Text

Selecting "Text" in the dropdown box opens the text
editor. Here you can enter a piece of text and choose where to place the text
on your LED matrix. You can also scroll the text by clicking on one of the 4
arrows and adjusting the scroll speed. Clicking the "T" button allows you to
change the font. To change the text colour and background, select the colour
pallet.
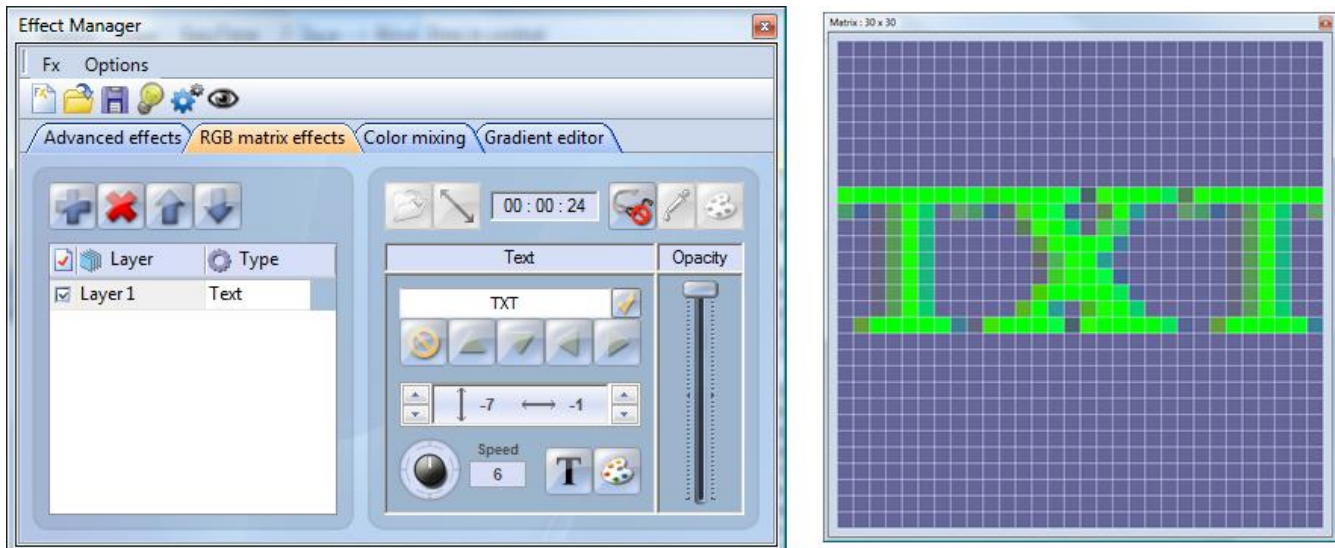
Remember to click generate before closing the effect
manager.

2.5. Advanced Effects

This tool allows you to have more control over the individual channels of
your fixtures and is extremely usefull with moving heads and scanners aswell as LEDs. To demonstrate the advanced
effects section, we will insert 8 generic moving head fixtures. You will notice
that when inserting the moving head fixture, the effect manager interface
adapts itself. The new fixtures channels are displayed and the "RGB matrix
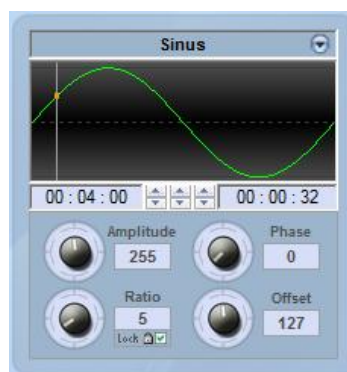effects" tab is replaced with a "Pan/Tilt effects" tab.
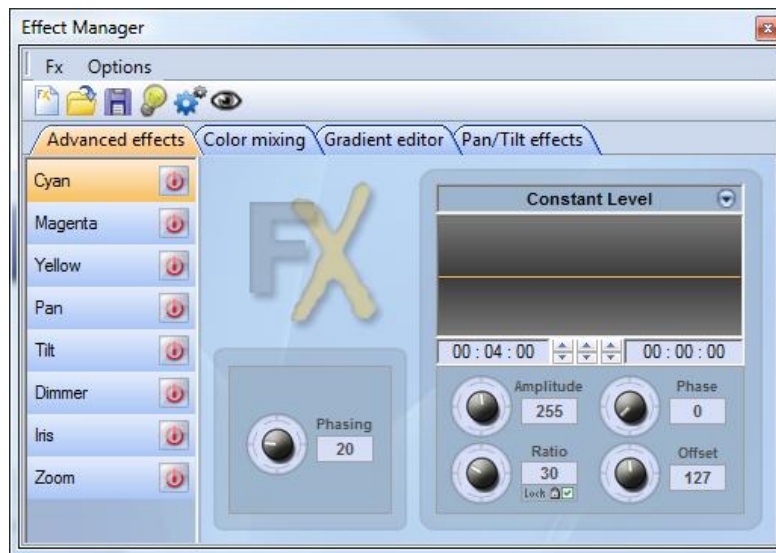
Firstly, you'll need to click "light beam on". This sends a message to all the relevent shutter/iris/dimmer channels to show the light beam.

Select the channel you wish to apply your effect to. Here we have applied an effect to the dimmer channel.

Next, choose a waveform from the dropdown box, here we have chosen a sinus wave. You can preview your scene in real-time using the 3d Visualiser. Adapt the wave settings and choose if you wish to have all your fixtures synchronised or phased, then click "generate".

2.6. Pan/Tilt Effects

As well as using the "advanced effects" tool to create
Pan/Tilt effects by creating waves, you can create more specific moving effects
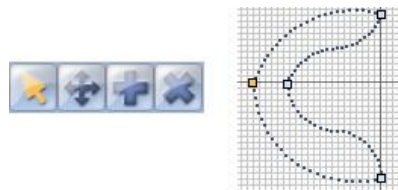with the "Pan/Tilt effects" tool.

As with the other effect manager tools, you'll need to click "light beam
on". This sends a message to all the relevent shutter/iris/dimmer channels to
show the light beam.

Once the tool is switched on, start by creating one of
the shapes listed and hit play to test your effect.
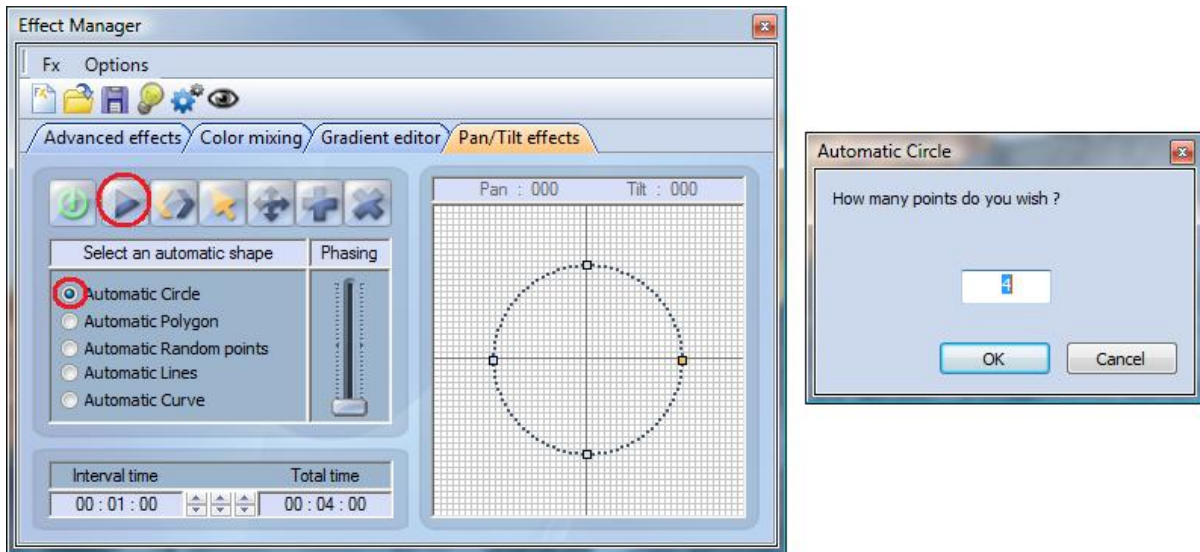
You can edit your shape by adding, deleting and moving
the points.

To slow/speed up
your effect, change the interval time, this changes the time it takes to get
from one point to the next.

Interval time		Total time
00 : 04 : 00		00 : 16 : 00

Remember to click generate before closing the effect
manager.