Glight

André Offringa

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This is the manual for Glight, a program that turns your computer into a professional DMX controller for live lighting control, with many advanced features.

The source code of Glight can be found here: https://github.com/aroffringa/glight

If you have any questions, feel free to mail me at offringa@gmail.com, or open a ticket on the github page.

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CHAPTER

ONE

TUTORIAL

This tutorial will demonstrate how to make a simple show. It is assumed that we have 8 simple RGB spots, of which 4 are located on each side of a room / dance floor / theatre / ...

It is not necessary to have these exact same (number of) lights to follow the tutorial.

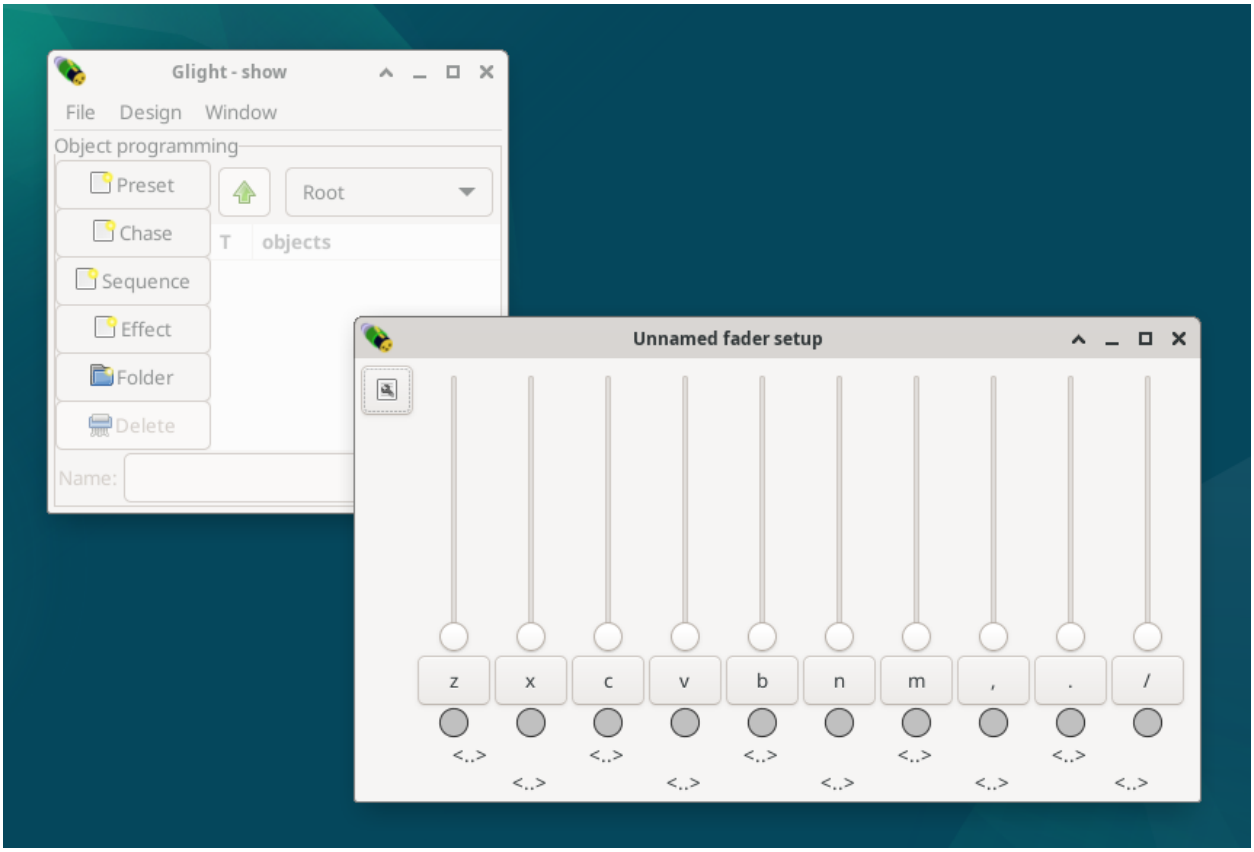
1.1 Connection to DMX interface

Upon start, Glight will connect to the Open Lighting Architecture (OLA), a daemon that controls the DMX devices. Therefore, before starting Glight, make sure that OLA is running and correctly configured. See the OLA documentation for more info on how to do this.

If OLA is not working, Glight will use a dummy output.

1.2 Starting Glight

When glight is started, two windows will show:



1. The *show* window (left on image). This window contains the main menu bar, a list of all objects in your show and some buttons to create things.
2. A default fader window. This window holds 10 faders. These are not yet connected to anything, and will therefore not do anything.

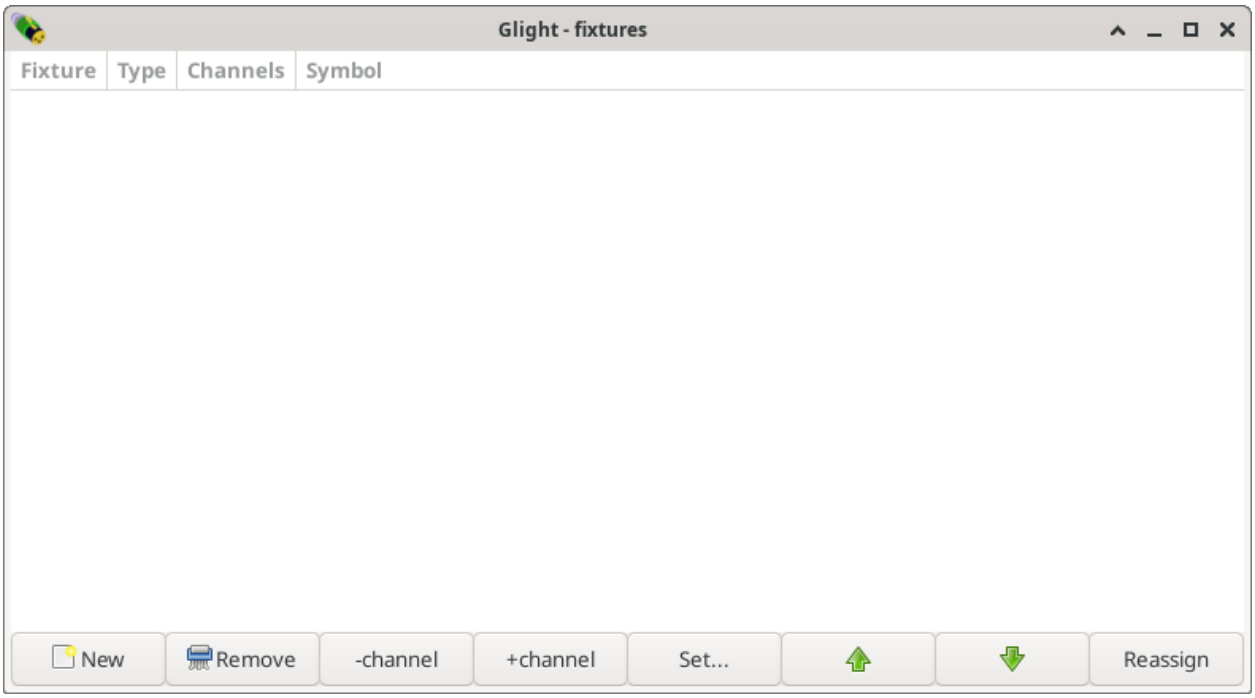
Next chapter: *Add fixtures*

1.3 Add fixtures

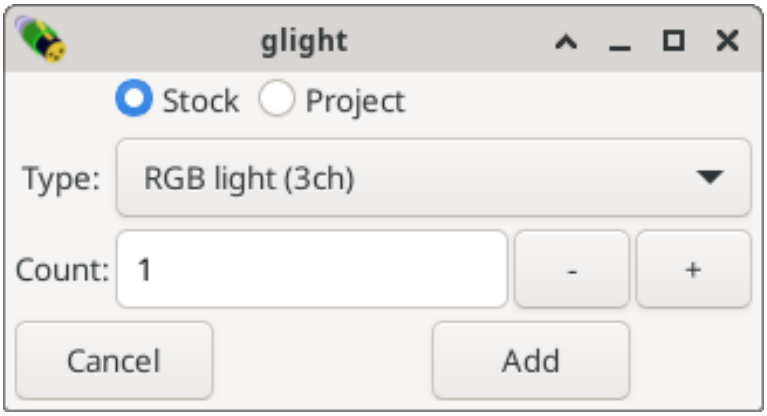
The first step in order to control lights, is to add these lights to Glight and configure these. All controllable devices, such as lights, are called *fixtures* in Glight. From the show window, open the *Window* menu and select *Fixture list*.

Note: Fixtures can also be added from the visualization window, discussed later.

A new window appears:



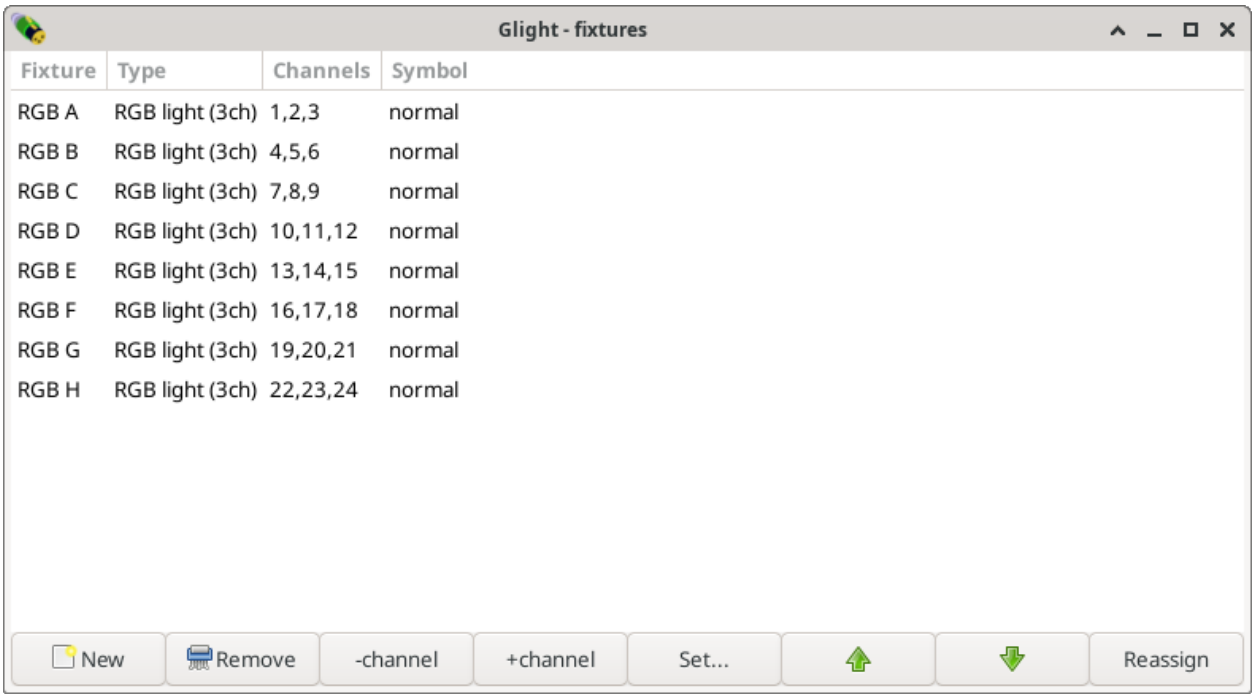
Press the *New* button to open another window:



In the drop down menu, select the appropriate light. Many lights have different DMX modes, so some light types are shown multiple times but with different number of channels. To make controlling the colours with Glight easy, it is recommended that a DMX mode is used that has one channel per colour (RGB) and no master channel.

Note: Unlike most other DMX software, Glight does not try to list all possible brands and types, but makes you select one of the functional categories of the light, such as *RGB*, *RGBA*, *RGBW*, *RGBAW+UV* etc. If you cannot find an appropriate description for your fixtures, you may define a new *fixture type*.

Select a basic *RGB light (3ch)* light, change *Count* to 8 and press *Add*.



As shown, Glight has added 8 RGB lights with names A, B, . . . , H and with consecutive DMX channels. If the channels are not correct, the DMX channels can be changed by selecting a RGB light and by:

- pressing the + or - buttons to increase or decrease the DMX channel by one channel at a time;
- or by pressing the *Set. . .* button to type in the start DMX channel of the fixture.

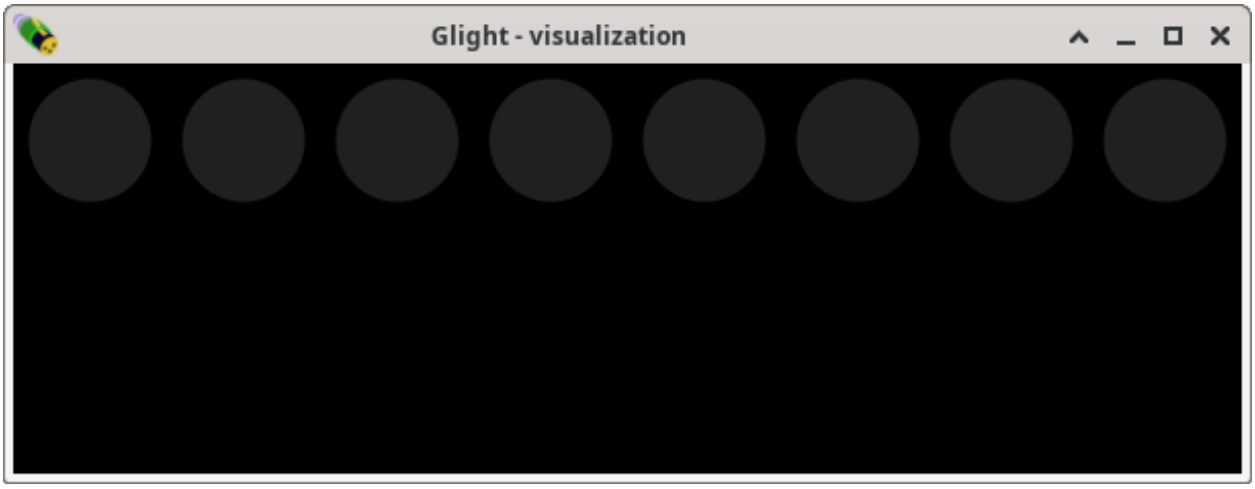
When done, close the fixture list window.

Be aware that the order of the fixtures is relevant when creating chases. It is easiest when fixtures are ordered such that the ordering has a physical meaning as well, e.g. the first fixtures is the left-most fixture, the next fixture is the one next to it, etc.

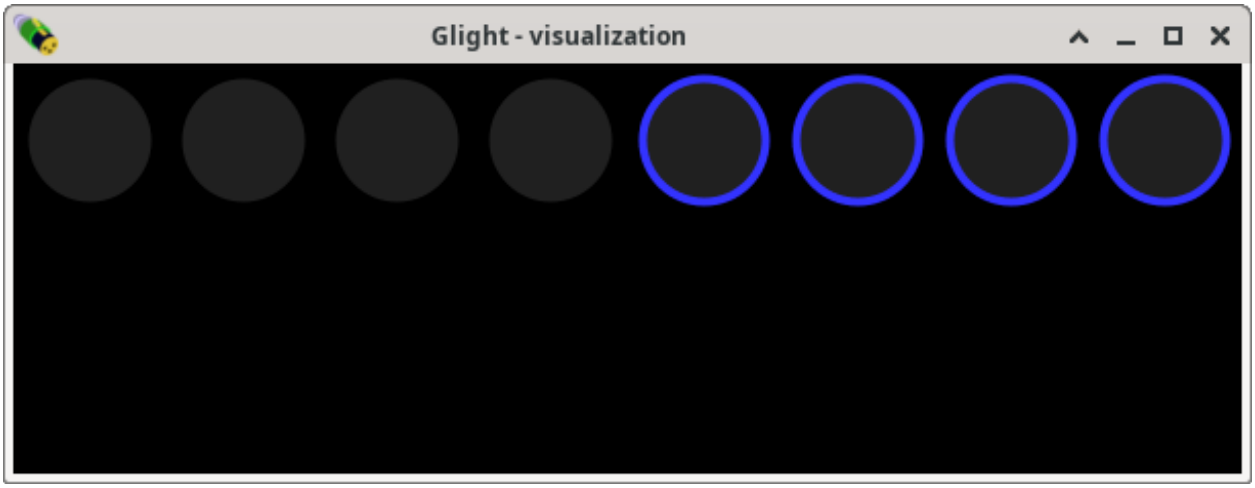
Next chapter: *Setting fixture positions*

1.4 Setting fixture positions

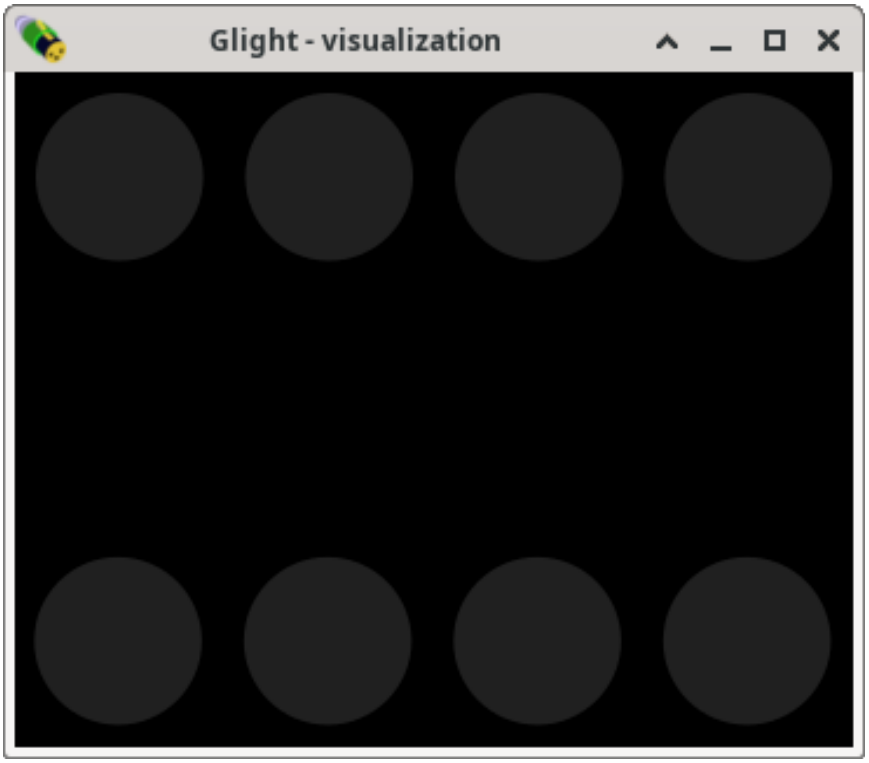
Glight uses a simple visualization screen to display the state of the show. On the main window, open the *Windows* menu and select *Visualization*. A mostly black window appears with 8 circles as symbols the lights:



The lights in this window should reflect their position in real life. In our case, we are dealing with 4 lights on both sides of a dance floor. Therefore, we will move the right-most 4 lights to the bottom. This is done by first drawing a rectangle around the circles to fully enclose them. This selects these four lights, which is shown by a blue band around the lights:



Now, click and hold the mouse on one of the selected lights and drag around to move all four selected lights. By dragging them towards the bottom of the screen, the visualization *zooms out*, making room at the bottom. If the lights become too small or if there's too much space on the right, the visualization window can be resized to a more suitable size, for example like this:



Next chapter: *Assigning faders*

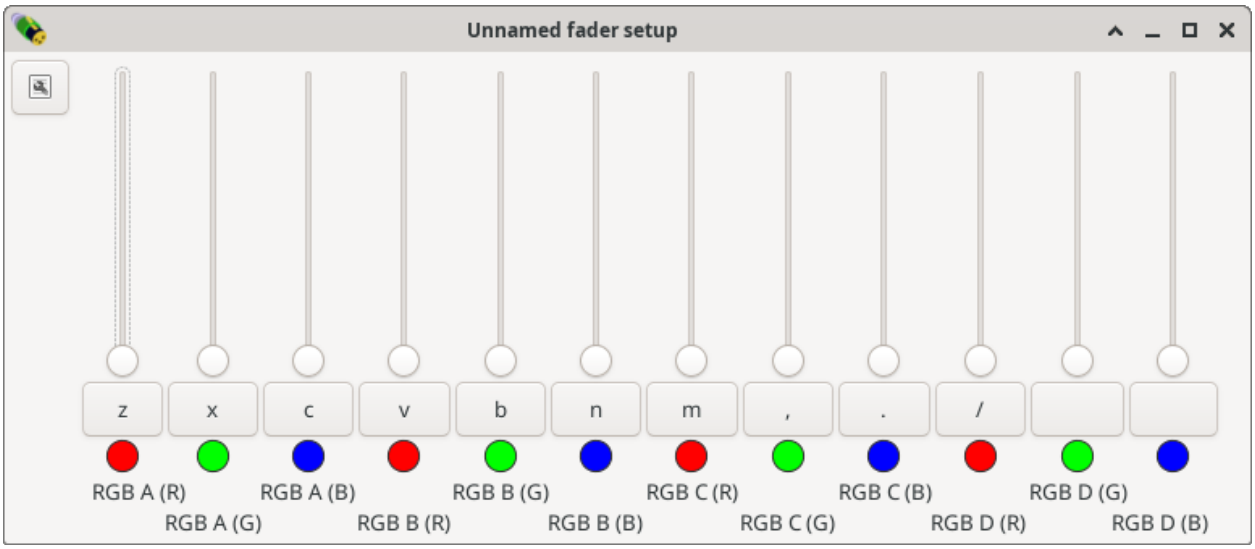
1.5 Assigning faders

Now that the lights are configured, let's start with the most basic controlling of the lights: setting their individual colours. For this, the fader window is used. By default, the fader window has 10 faders. However, with 8 RGB channels, we have 24 colours to control. 24 faders are quite a lot to show at once, so I will show how to create 2 fader frames each with 12 faders.

First we need to add 2 faders to this frame. Press the *Menu* button on the top-left of the fader window, and select *Add fader*. Repeat this once more to end up with 12 faders.

Faders can be assigned in several ways. The simplest way to assign a fader is by pressing <..> below the fader. This opens an object list showing your lights A..H. Select one, then select which *Input* to assign the fader to (R, G or B), and press *Select* to assign the individual fader.

This would be rather repetitive to repeat 24 times. From the fader menu, it is also possible to select the option *Assign*, which assigns all the faders within this frame one by one to all (unassigned) inputs. After this, the fader window looks like this:



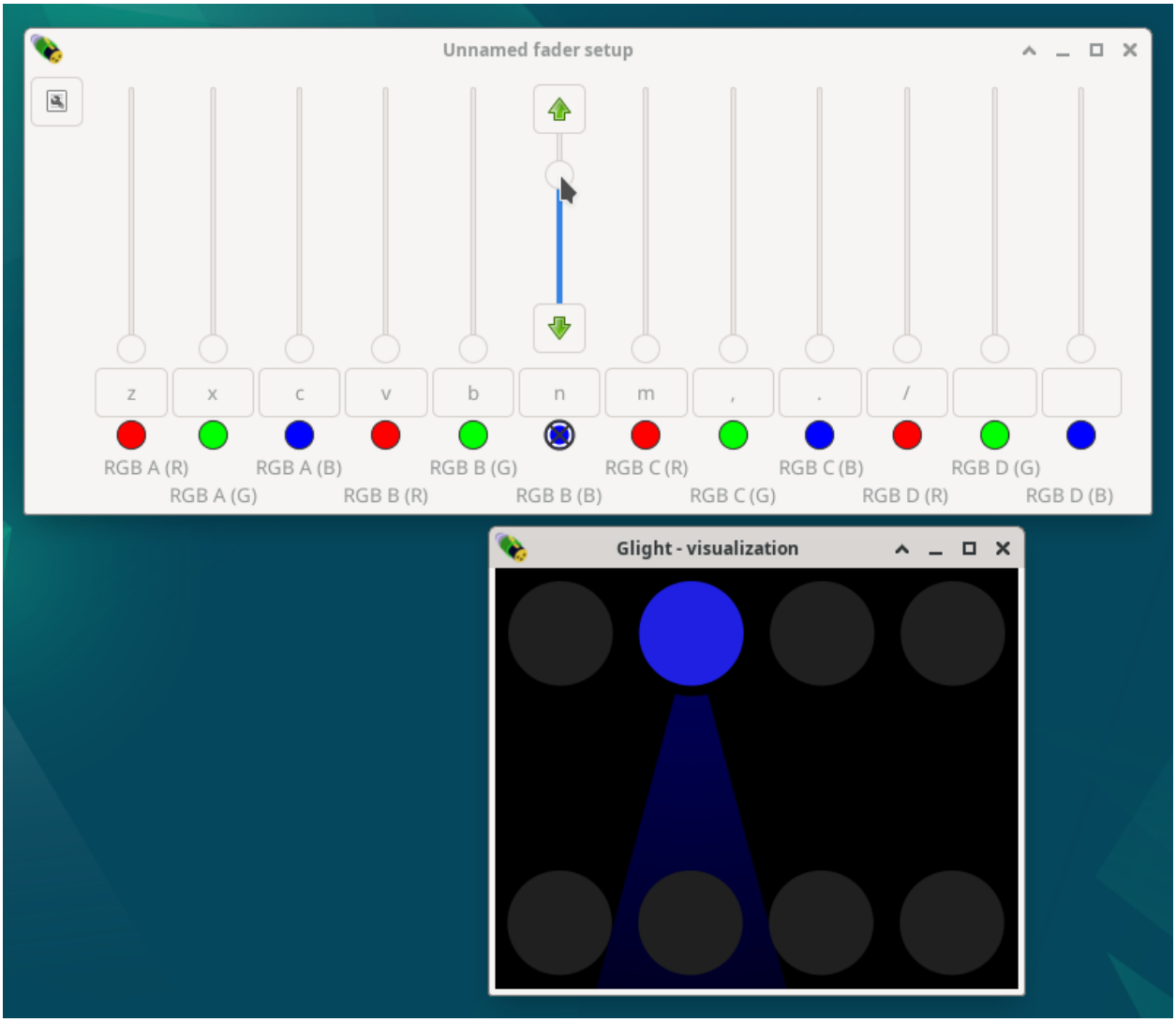
Note the text under the faders, saying (for example) "*RGB A (R)*". This refers to fixture RGB A, channel R.

Next chapter: *Controlling lights*

1.6 Controlling lights

We are now ready to control lights! Drag one of the faders up, and the corresponding light will turn on with that particular colour. If it does not turn on, check your OLA settings, DMX channel settings and connections.

The change is also visible in the visualization window:



Hint: The direction of the beam can be redirected by selecting the relevant fixtures in the visualization window, clicking with the right mouse button on one of them and selecting "*Properties*".

Using faders is an important aspect of controlling the lights in a live show, and there are several ways to control the faders by either mouse or keyboard:

- Fine control with the mouse is possible by dragging the fader up and down. This can be clumsy during a show, so is generally not advisable for fading. Smooth fading can be achieved in other ways.
- Clicking the check-box will turn the channel completely on or off at once.
- The button between the check-box and fader (with a single letter in it) can be used to flash / briefly turn a fader on. The fader will be on only on as long as the mouse button is hold down.
- When hovering with the mouse over a fader, a up and/or down arrow button appears. Pressing these will fade in or out the light, correspondingly.
- The letters on the flash button of each fader specifies a key that can be pressed to switch the fader on or off. For the image, for example, pressing the 'n' key would switch the fader off again. By default, each fader window is assigned to a row of key on a standard US keyboard.

- Finally, by holding shift while pressing a key will flash that channel as long as the key is hold.

1.7 Fader groups

The previously created fader group controls the upper row of lights. A second frame is required to control the lower row of lights. Before we do this, we will give our first fader group a name to be able to distinguish it. Press the top left button on the fader window to make a menu apear. Select the *Name* button and name the fader window appropriately, for example "*Upper lights*".

Make a new fader frame by, from the main window, open the *Window* menu, then the *Fader windows* submenu and select *New*. In this new window, add again two faders and select the *assign* option to assign the faders to the remaining inputs, and name the group *Lower lights*.

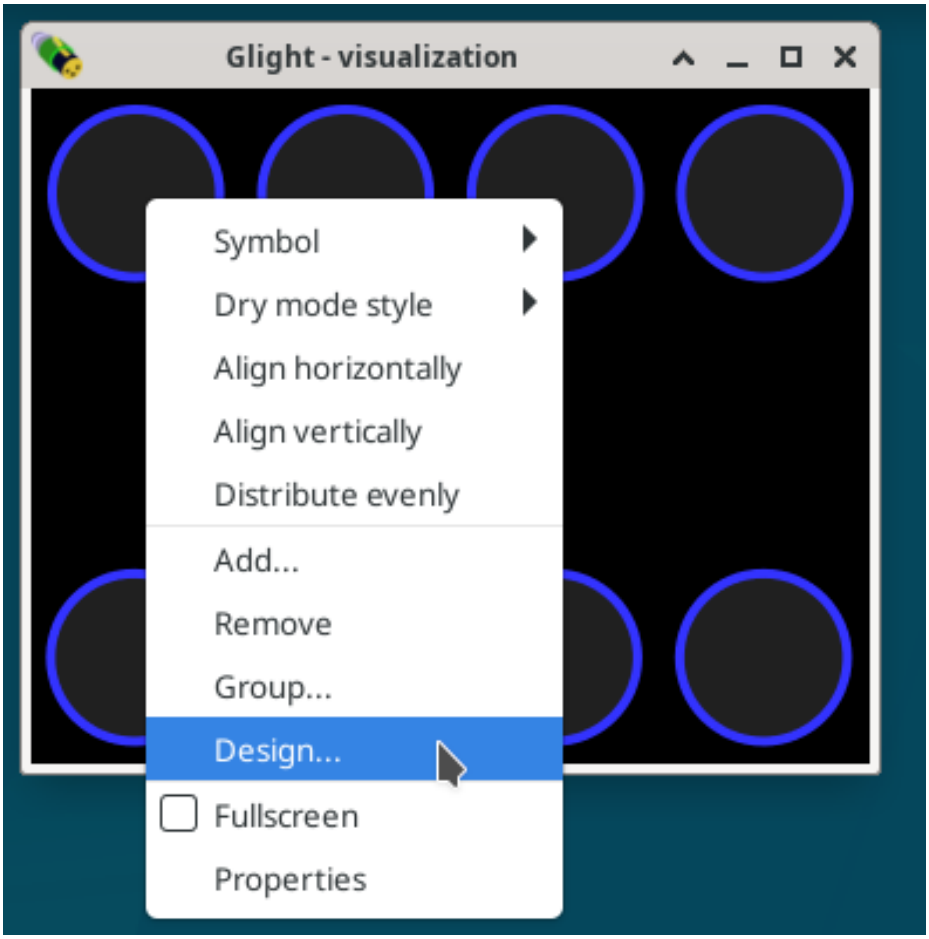
Each group may be assigned distinct settings, such as fading speed and solo mode. These are saved per frame, even if the frame is hidden. The size of the frame will also be restored when the frame is hidden and reshown.

Next chapter: *Designing chases*

1.8 Designing chases

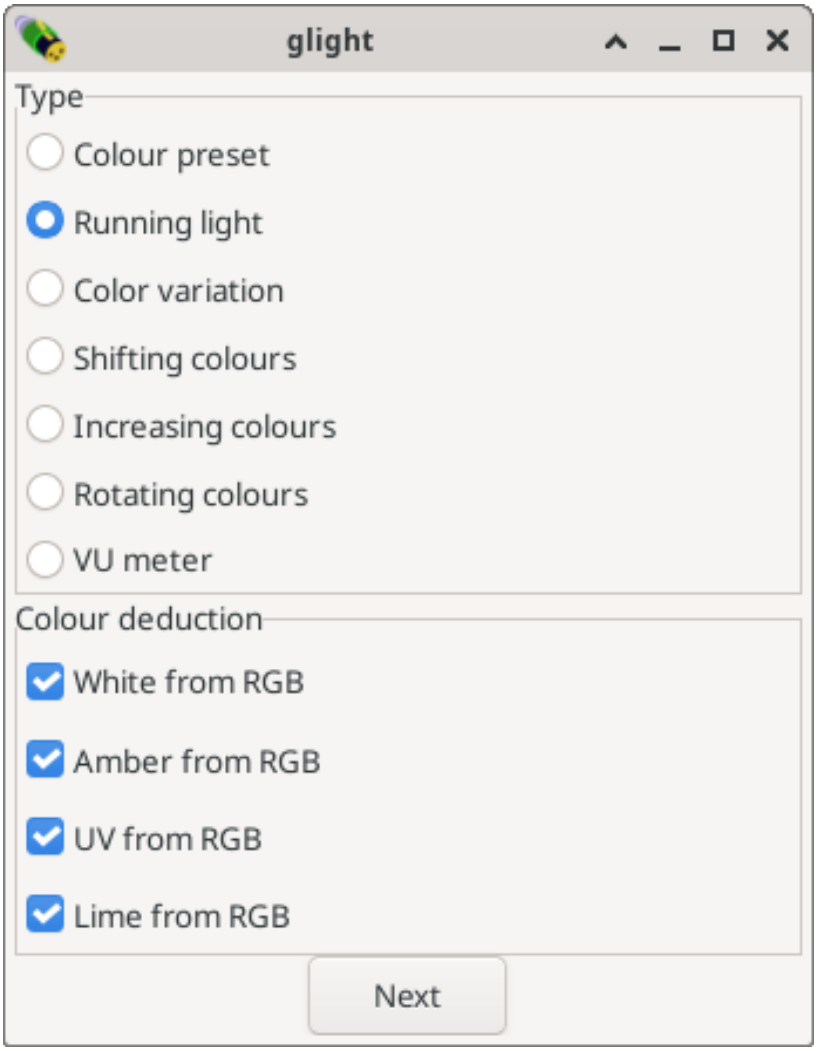
Controlling each channel individually is fun, but tedious. A particular setting of the lights can be stored as a *preset*, and presets can be sequenced to create a *chase*. Creating a chase like this is very flexible, but still very low level and a bit of work. A quicker way of creating simple chases is by using the *design wizard* of Glight. Let's do this…

In the visualization window, select all the lights and right click on one of the lights. From the pop-up menu, select the *Design…* option.



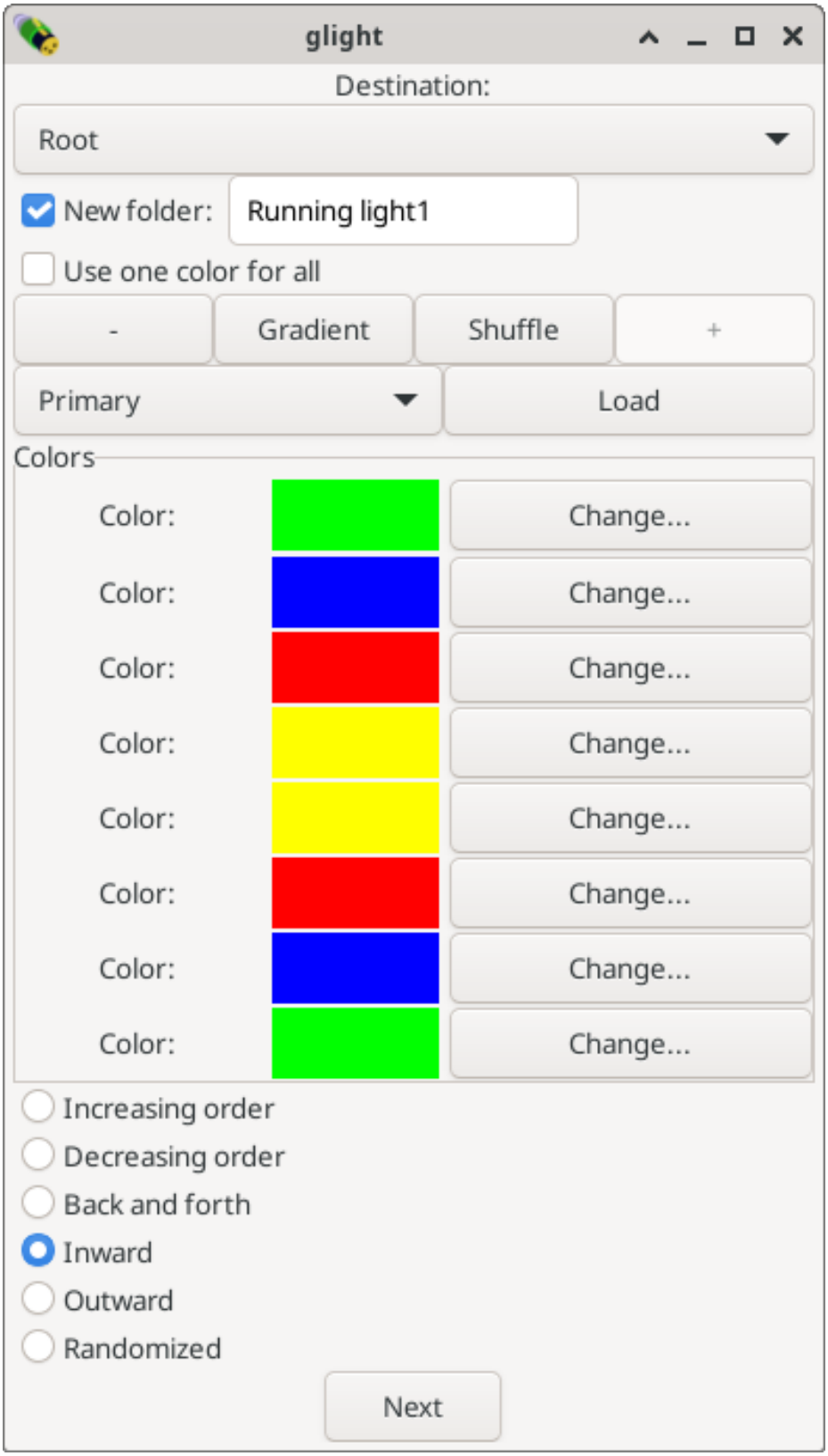
The design window appears, showing all of the lights already selected. Since we want to create a chase involving all the lights, this is what we want. If we were creating a chase with only the 4 upper row lights, we could have selected those 4 in the visualization window, or we could change the selection at this point in the design window.

Press the *next* button to continue the design process. In this step, the selected fixtures can be reordered, if this would be necessary to create the particular desired chase. Because our fixtures are already ordered logically, we can skip this step and immediately press *next*. The next step is to select what type of chase (or effect) we want to create. Select *Running light*: this is a simple chase that switches one light on at a time and moves it from one to another light. Note also the options in the bottom half of the screen, which affect how amber, white or UV channels are going to be interpreted, if present.

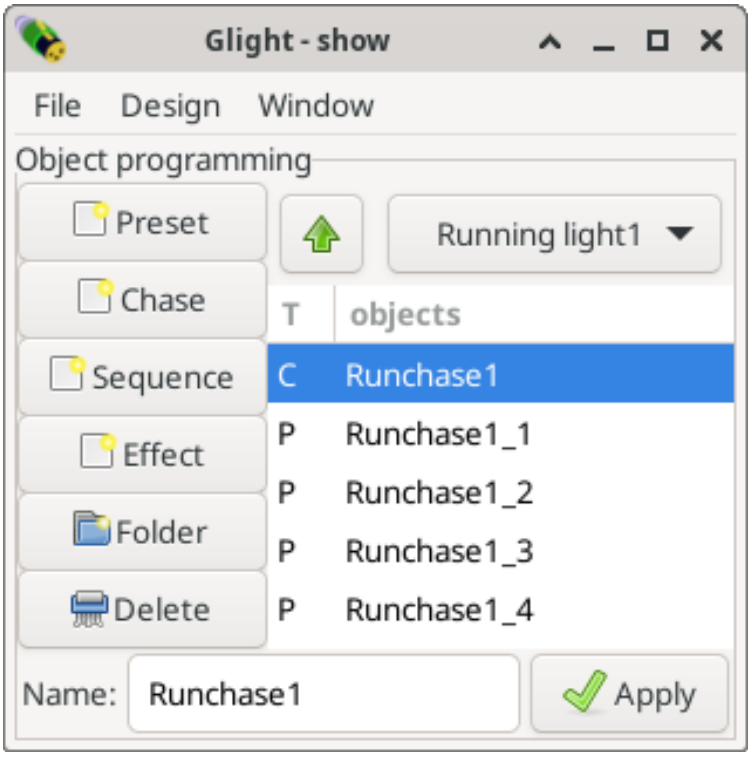


Press next to go to the colour selection step. Here we can assign a colour to each light. Another choice to make is the kind of movement that should be made. *Increasing order*, *decreasing order*, *back and forth* and *random* will switch one light on at a time. With two rows of lights, that is not what we want.

Note: By default, every light is assigned to a step in the chase. The + and - buttons on the top of the window can be used to increase/decrease the number of steps. When there are fewer steps than lights, the sequency is copied untill all lights are involved. For example, by using only two steps, four lights will be on at the same time.



Select *inward* and some nice colours and press next to create the chase. The main window will now show a "*Running light1*" folder. Enter it by double clicking on it, and several *Runchase* objects appear:



There should be one chase ('C') object and four presets ('P'). Each preset is one of the steps of the chase. The chase and presets can be manipulated individually by double clicking on them.

Before doing so, it is useful to turn on the chase, as follows:

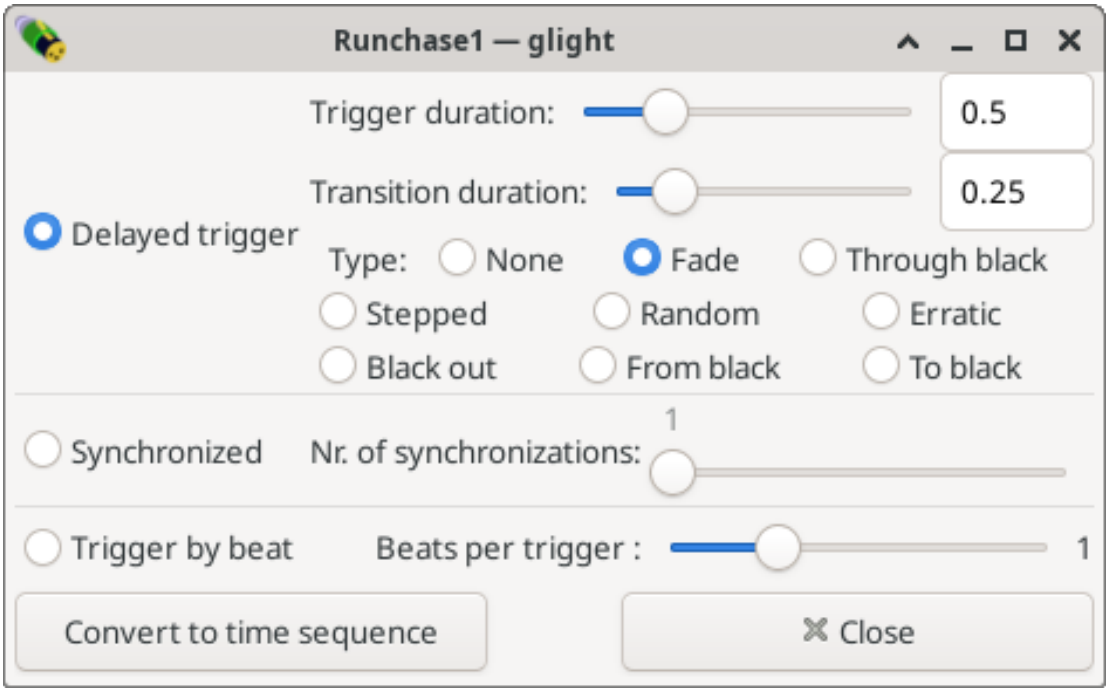
- Open a new fader group frame, assign the first fader to *Runchase1* that is inside the "*Running light1*" folder.
- Optionally, rename the fader group to "*Chases*" and close the other fader frames.
- Switch the *Runchase1* fader on.

You should now see your lights animate!

Next chapter: *Modifying a chase*

1.9 Modifying a chase

On the main window, double click *Runchase1* to open the chase editor.



Here you can set the speed of the chase and optionally a transition effect. Discover the settings by selecting the different options one by one. To use the automatic beat finder, select "*Trigger by beat*" (with one beat per trigger). If your microphone works and music is being played, the chase will move on the beat of the music!

Next chapter: *There's more...*

1.10 There's more...

This concludes this tutorial. Some of the features not yet covered and that you might explore next are:

- Timed sequences. Like chases, but with more flexibility. It allows to program a series of presets every time the sequence is switched on.
- Effects. This allows making lights flicker like a candle, light up on the volume of the music and creating complex logical combinations.
- Many more default designs.
- Structuring your presets, chases and other objects into *folders*. When creating complex shows, the number of objects may become very large. Hierarchical foldering and naming these appropriately helps to keep them easily accessible.
- Using the dry mode. This allows modifying your show while the show runs, without affecting the output.
- Shows can be saved and loaded. This also saves fader groups and fader assignment.

First chapter: *Connection to DMX interface*