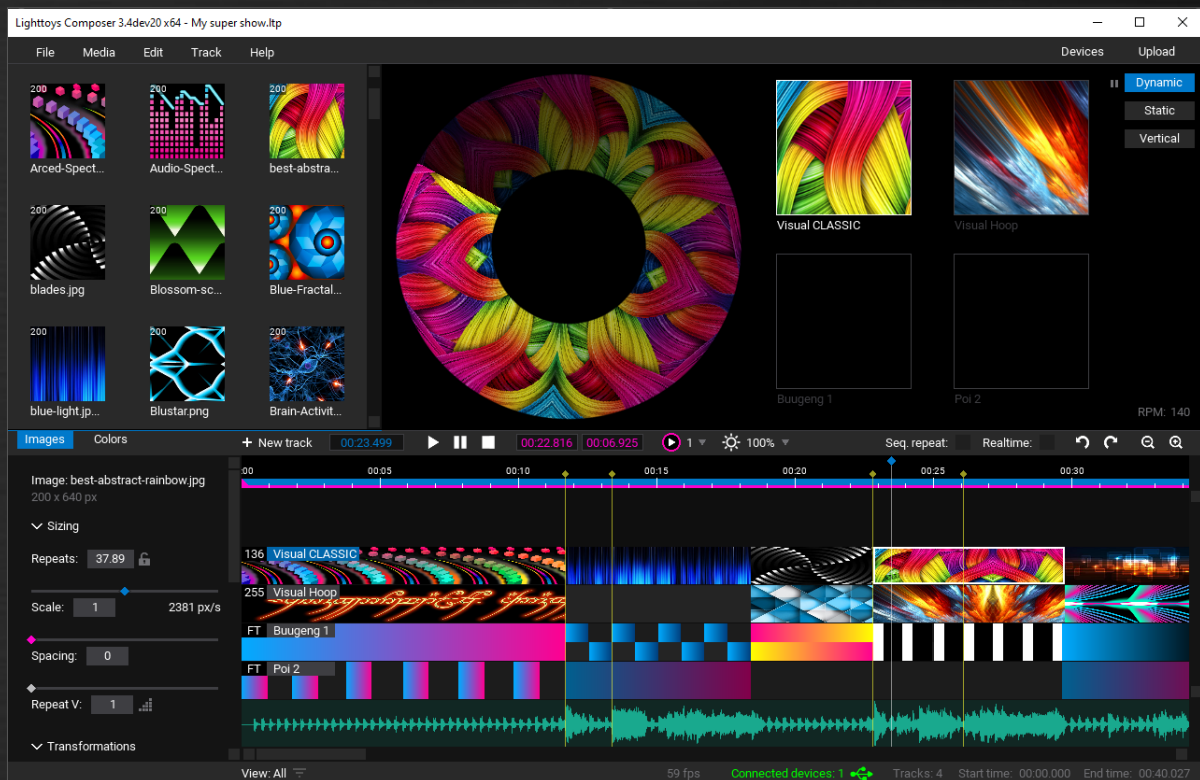




Lighttoys



Lighttoys composer

user manual

v3.4

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Introduction

Lighttoys Composer is a light composing software from Pyroterra Lighttoys, created from the ground up to help you with the design of light patterns and image sequences for your Visual and FT devices. With its intuitive interface and powerful feature set, we are convinced it will empower you to create amazing light performances with your Lighttoys equipment!

This manual will guide you through the installation of the software and explain how to use all the features of Lighttoys Composer (further abbreviated "LtComposer").

System requirements

LtComposer is available for both Windows and macOS operating systems. Our team successfully tested its compatibility with the following OS versions:

- Microsoft Windows 7 (64-bit) and higher
- Apple macOS 10.10 Yosemite and higher

LtComposer relies on the use of Open Graphics Library (OpenGL) and its shading language. Please make sure that your graphics card is running the latest driver from the graphics card manufacturer with a minimum support of:

- OpenGL 3.3

Compatible devices


LtComposer 3.4 is currently compatible with the following products from Pyroterra Lighttoys:

- Visual Poi V3 and V3 MINI
- Visual Poi V4 MINI, CLASSIC, MAXI
- Visual Wand
- Visual Hoop
- all Lighttoys FT devices

Visual Poi driver

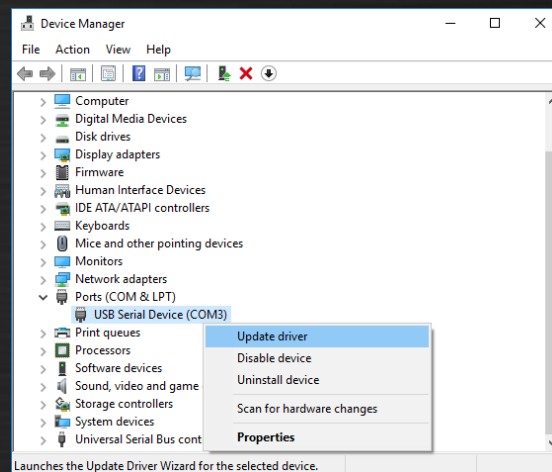
If you plan to use Visual Poi, Wand or device with LtComposer on Windows OS, you might need to install a special driver first. If you are running a modern edition of Windows – version 10 or later, you can skip this chapter. For Windows 7 or 8 please follow the instructions below:

Connect one Visual device with a USB cable to your PC and turn the device on with a long press of its power button. You should hear the familiar USB sound.

In Windows, click the  button, type “**Device Manager**” into the search bar (without the “ ”) and hit the Enter key. A new window will appear. Your connected device will be listed under the section “**Ports (COM & LPT)**”. If you see a line:

- **Lighttoys Visual Poi (COM)** – you have already the correct driver installed, you can skip the rest of the instructions
- **USB Serial Device (COM)** – the driver is not yet installed, please continue below:

Right click on the **USB Serial Device** and select **Update driver**:

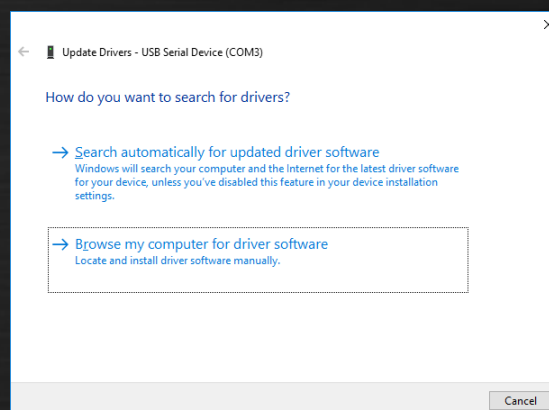


Device manager with attached Visual device and no driver installed yet



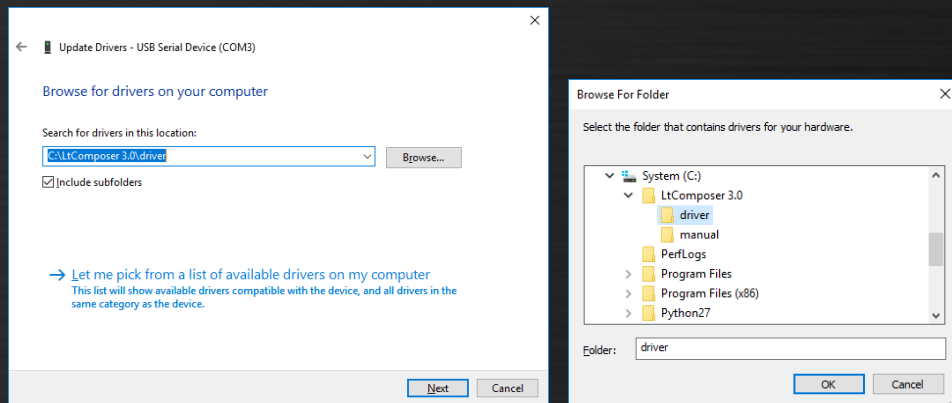
If you cannot find the Visual device listed in the Device Manager window like shown above, try disconnecting and reconnecting the device to your PC and watch for a new item to appear on the list. The new item on the list is your Visual device.

In the next window, select “**Browse my computer for driver software**”:

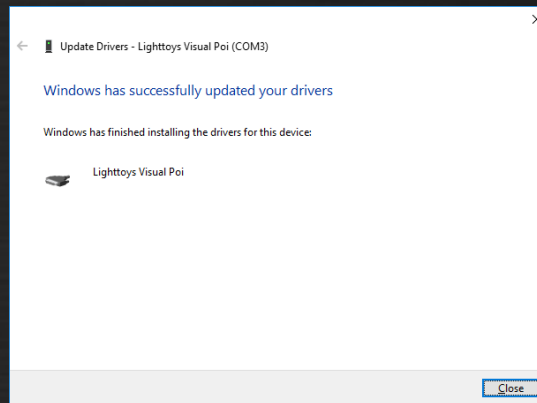


Driver installation process #1

In the new window, select **“Browse...”** and locate the **“driver”** folder that comes together with the LtComposer software package, click **OK** and **Next**.



Driver installation process #2



A successful installation of the driver

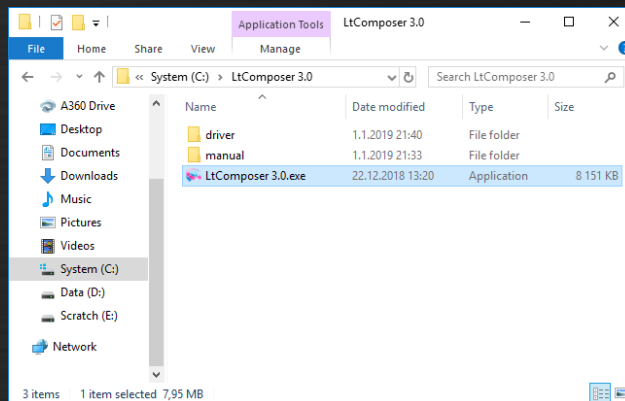
Visual Poi driver should be successfully installed. You can now use LtComposer to control your Visual devices and upload sequences into them!

Installation & first run

Installation of the LtComposer software is easy and straightforward, as is shown in the steps below for both operating systems.

Windows PC

First unzip the provided ZIP archive to your favorite location and then simply double-click the EXE file to run it.



Starting of LtComposer on Windows

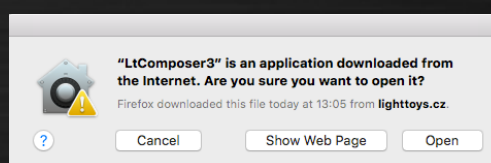
MacOS

First unzip the provided ZIP archive and open the included DMG file in the Finder. In the new window, drag the LtComposer3 icon into the Applications folder in order to install it.



Installation of LtComposer on Mac

After installation, run LtComposer3 from the Applications folder or from macOS Launchpad. During the first run, you might be warned that the application is downloaded from the Internet. Click "Open".



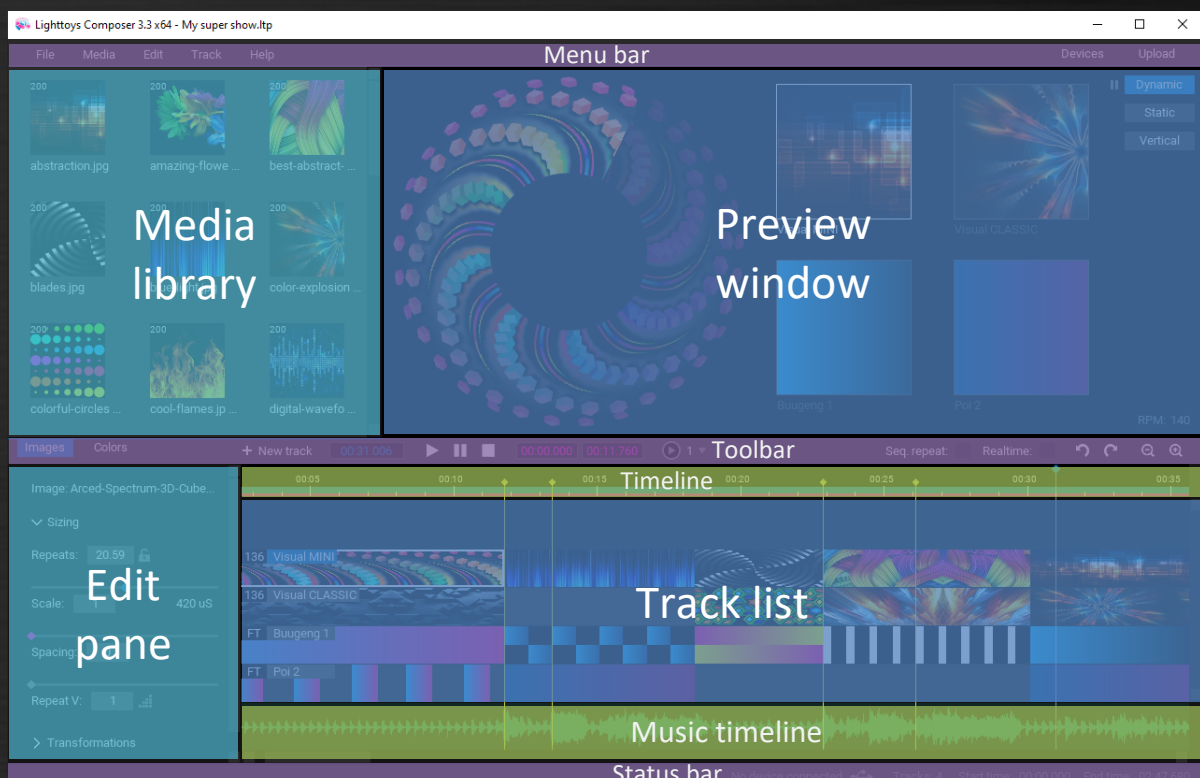
Security warning during the first run of LtComposer

Lighttoys Composer overview

In this chapter we explain the layout of the LtComposer main window and the different tools available to you as a digital artist.

Layout

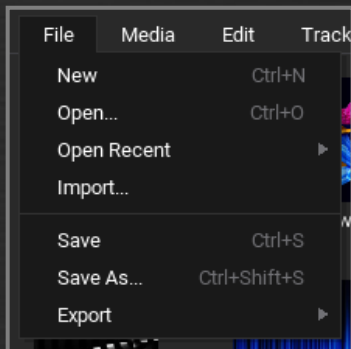
- **Menu bar** – menu commands for manipulation of projects, media and tracks
- **Media library** – catalogue of all available images in your currently selected Image Library folder.
- **Preview window** – displays a nice visualization of the elements on the tracks. There are 3 modes available, representing different situations – Static, Animated, Vertical.
- **Toolbar** – contains useful tools for playback, zoom, undo/redo, etc.
- **Edit pane** – is used to fine tune the parameters of the selected element (image or FT element).
- **Track list** – a list of all your tracks ordered vertically. One track represents an image sequence for a single Lighttoys device.
- **Music timeline** – shows a music waveform of your opened music file. Supported formats: MP3 or WAV.
- **Status bar** – shows whether your Lighttoys devices are connected, status messages and other useful project information.



Lighttoys Composer main window layout

Menu options

File menu



All your media files, tracks, elements and markers (including LtComposer settings) are stored inside an *.ltp project file. You can save your project for future use and then open it to continue with your work.

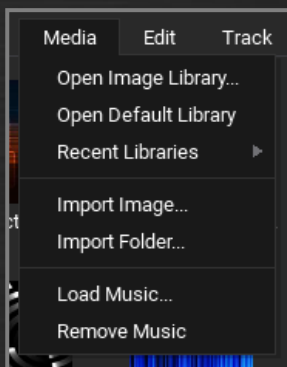
*.vpp project files from older LtComposer 2 are also supported.



The *.ltp project file is a standard ZIP file and its content can be opened and extracted. The content can be also edited if needed (only recommended for experienced power users).

The **Import** command is useful for adding tracks from different project into your current project (to reuse some content). The menu command “**Export .lsf**” is used to export your FT sequences for uploading with the legacy FT Loader application (no longer recommended).

Media menu



Media menu is used to select the active image library (folder with images for Visual Poi). Supported image formats are: JPG, PNG, BMP, GIF or TIFF in sRGB color space, otherwise the application won't show them in the media Library.

To add a picture, you can use the **Import** command or add them manually in Windows Explorer or Mac Finder.



Whenever you add some pictures externally, press **Ctrl/⌘ + R** key shortcut to reload the Image Library, to immediately see the new pictures in the list.

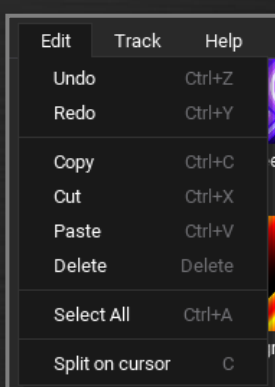
Load Music is used to open either MP3 or WAV music file. After opening, a nice waveform will be shown in the music timeline – this is helpful for placing your elements in sync with the music.



After opening the music file, it can take several seconds to finish the processing of the file and to show the waveform. This is indicated by the “buffering...” message shown in the music timeline.

Remove music removes the music from the timeline, if you do not wish to work with it anymore.

Edit menu



Edit menu is useful for undoing / redoing your last step (if you make a mistake and want to return to a previous state). You will also find the standard cut, copy, paste & delete commands in this menu.

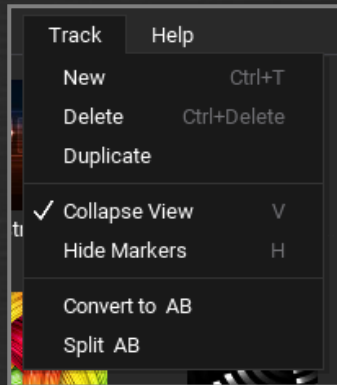
Split on cursor is a handy tool that splits all selected elements on track(s) at the current position of the time cursor.



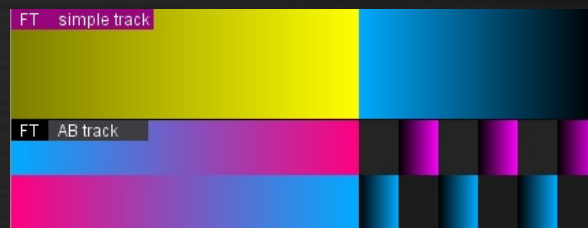
Instead of just using menu options, you can also use keyboard shortcuts, which are generally faster to use. If a shortcut is available for a respective menu command, it is described in a gray color text next to it.

Track menu

Track menu is used to place a new track onto the track list, delete or duplicate an existing track. If you work with many tracks, it may be useful to click the **Collapse View** command, which will make the tracks 50% smaller. Click it again to enlarge it back. Also, if you work with many markers you can temporarily hide them with the **Hide Markers** command.



Track menu also enables you to convert your simple FT track(s) into an FT AB track (two mini tracks instead of one, for FT products with A and B light segments). You can also split an existing FT AB track into two simple FT tracks.



Difference between simple FT and FT AB track

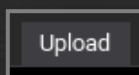
Devices menu



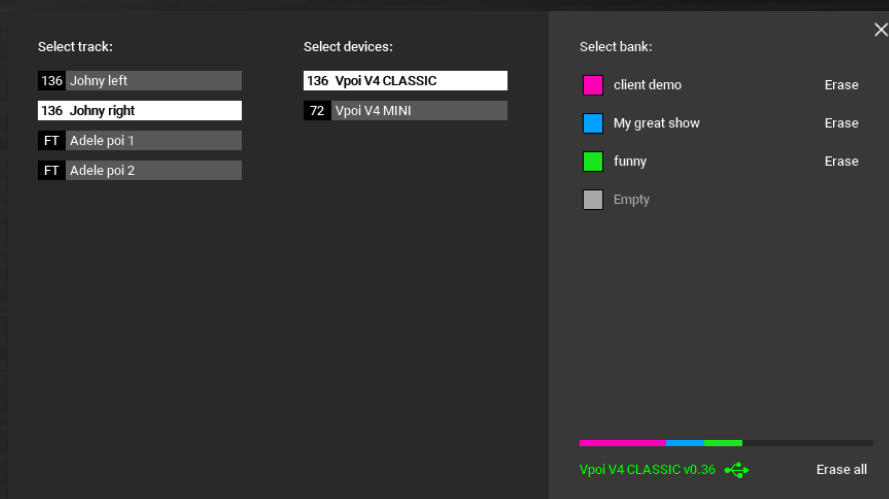
Devices menu lets you check the status of all devices (FT remotes, Visual Pois, FT props...) connected either via USB cable or via radio (wireless).

You can check the battery status, uploaded shows, firmware version and perform other service operations with the devices.

Upload menu



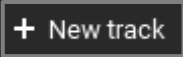
Upload menu opens a new window that facilitates the upload of prepared image sequences into your devices. This functionality will be described in full detail in later chapters.



Upload dialog window opened

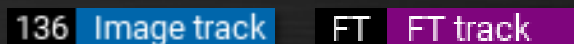
Working with the application

Using tracks

 To start composing your light sequence, you need to add at least one track to your project. This is done by clicking on the button “**New track**” on the toolbar. From the drop-down menu, select the type of Lighttoys device you want to use.

There are 2 basic types of tracks – an **Image track** (used for Visual Poi, Wand and Hoop sequences) and an **FT track** (used for FT light sequences).

Each track is identified by its track header, displayed in the top left corner of each track:



Example of Visual Poi V4 CLASSIC and FT track headers

You can change the type of the track at any time by clicking on the track header and then using the drop-down menu in the **Track edit pane** on the left side.

To change the name of the track, double click the track header and edit the name to your liking:



LtComposer makes it easy to prepare light sequences for multiple Lighttoys devices, using the robust multi-track support. To add more tracks to your project, either click the “**New Track**” button again or select the menu bar option **Tracks > New** or press **Ctrl/⌘ + T**.

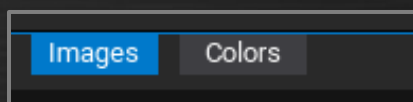
To reorder the tracks, click & drag the track header and move it into a new position:



Reordering of tracks by dragging the track header

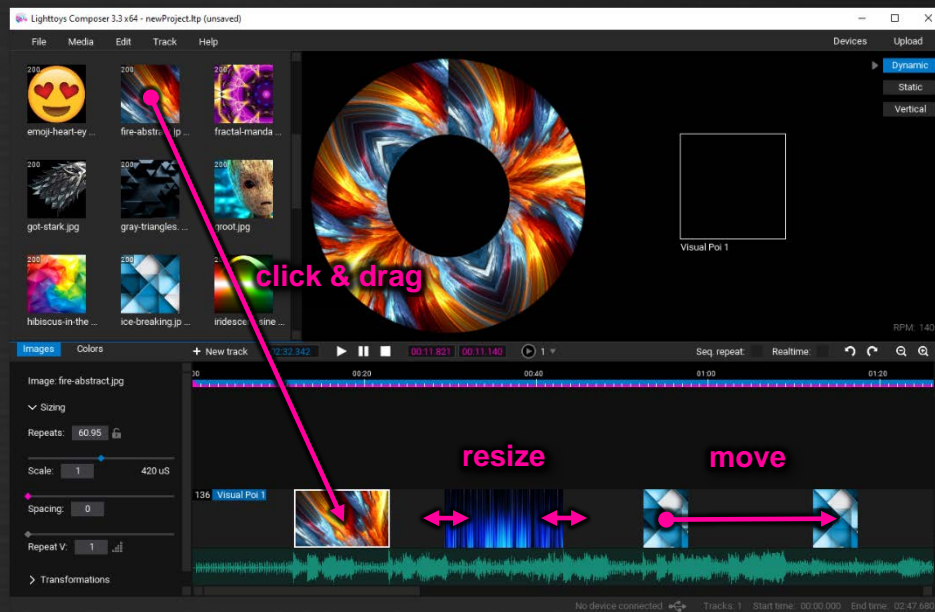
Using elements

Elements are the basic building blocks that you use to create your light sequence. There are 2 types of elements, available by clicking on the blue tab under Media Library window:



- **Images** – bitmap (pixel) images in your currently opened Image library, used exclusively for Visual Poi, Wand and Hoop sequences
- **Colors** – special color blocks, can be used both for FT and Visual device sequences.

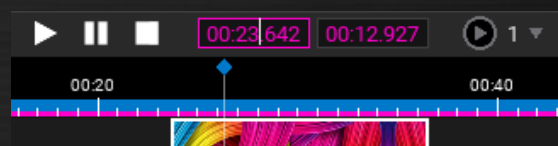
Use click & drag action to move elements from Media Library to the timeline. When you release the mouse button, the start point is set, when you move the mouse horizontally and click again, the end point of the element is set.



Working with elements on the timeline

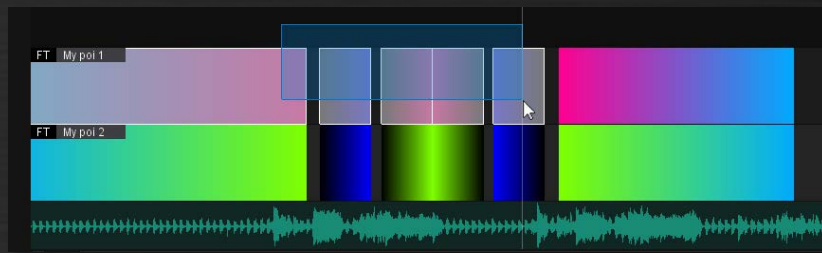
You can change the position and length of any element on the timeline, in two ways:

- **Using the mouse** – first make sure the element is selected (click on it). Then click & drag one of the vertical edges to change the element duration as needed. By clicking inside the element and dragging you reposition the whole element.
- **From the keyboard** – it is possible to input precise time values from the keyboard into the pink colored time boxes on the toolbar. The format of the input is **MINUTES : SECONDS : HUNDREDTHS OF SECONDS**. The first box is used to set the element start time, the second box is used to set the element duration (length):



“Element start” and “Element duration” time boxes (input fields)

Multiple elements can be selected either with the **Ctrl/⌘ + click** or **Shift + click** command or by drawing the selection rectangle by click & drag action of the mouse. The selected elements have a white outline around them.



Selection of multiple elements using the area select



If you have a very dense track and you need to start the selection rectangle inside an existing element, hold the **Alt** key modifier and then click & drag with your mouse.

You can easily duplicate existing elements to speed up the creation of your light sequences. To duplicate the selected element(s), use **Ctrl/⌘ + C** to copy (or **Ctrl/⌘ + X** to cut), followed by **Ctrl/⌘ + V** to paste, or **Ctrl/⌘ + D** to duplicate element(s). You can alternatively also hold the **Ctrl/⌘** key and then **click & drag** the selected element(s) with your mouse.






Various methods of element(s) duplication


Toolbar options


The toolbar of LtComposer hosts several useful tools for composition and playback control. It is described below:







LtComposer3 toolbar

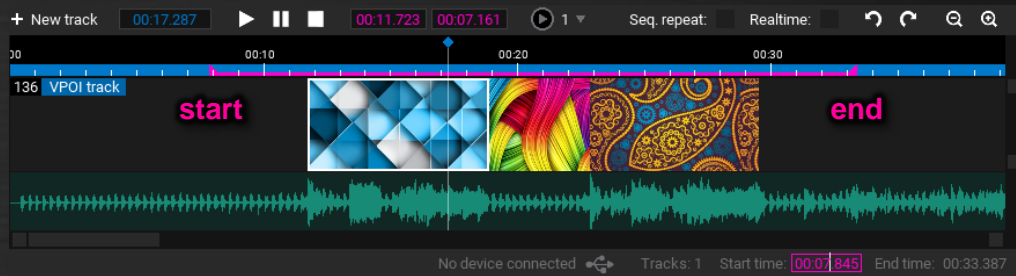
You can control the playback of your show sequence by pressing the buttons    or **spacebar / enter key**. To move the vertical time cursor, either drag its blue diamond, click onto the timeline or enter a precise value into the blue time box.

The Run Show button  is used to start the selected show 1-4 on all FT devices paired to the attached FT remote controller, in sync with LtComposer and the music track.

The Brightness button  controls the light intensity of the show playback, there are 6 levels to choose from. This feature is currently available for FT2 and also FT1 devices after a firmware update.

You can zoom in/out by pressing the buttons  , - and = keys, or by holding **Ctrl/⌘** key while rotating the mouse wheel. To undo / redo the last operation, use the buttons  , **Ctrl/⌘ + Z** / **Ctrl/⌘ + Y** keys or **Edit** menu.

It's important to define the show start and end points. This is done by stretching the pink stripe above the track, either by dragging the pink triangles or by editing the time boxes in the status bar:



Beginning and end of the image sequence

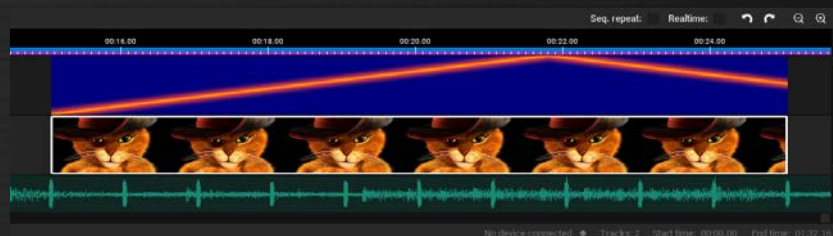


For most situations the left pink triangle will be set to the beginning of the song, but if you plan to start your show from a specific music cue or sound by ear, you want to move the triangle to this point.

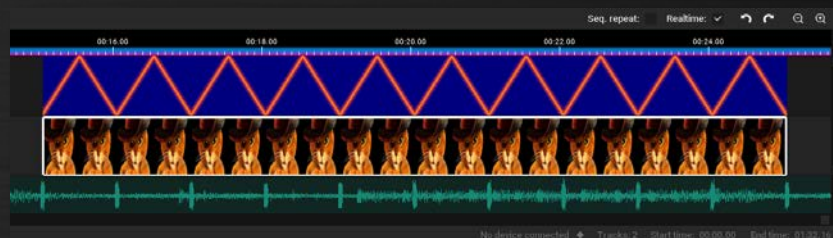
Seq. repeat: ☒ Realtime: ☒

“**Sequence repeat**” option will make the image sequence loop indefinitely. This is useful for demo purposes or when you want to repeat an interesting pattern for the whole show.

When you check the “**Realtime**” option, elements on all tracks start being displayed proportionally to the level of timeline zoom. This is helpful for checking number of repetitions of a picture, or if the pattern is properly aligned to the beats of the music.




*Example of **Realtime** turned **OFF**, the graphics show like the original*



*Example of **Realtime** turned **ON**, the graphics are stretched according to the level of zoom*

Loading music

For most projects, you want to load a music file as a basis for your timing cues. Supported audio formats are: WAV, MP3.

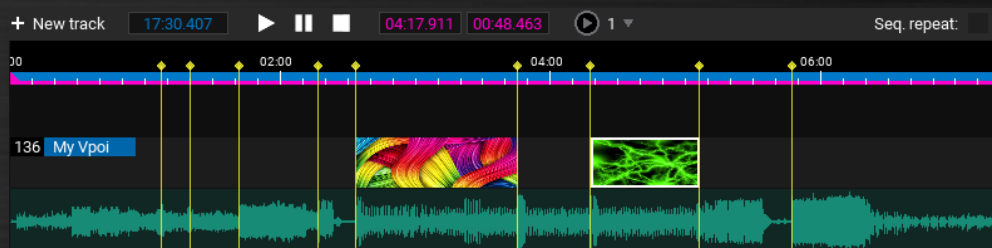
To load a music file, either click on the  icon, or use the menu option **Media > Load Music...** The software then starts analyzing the file, displaying message “**buffering...**” in the music timeline area. This operation can take several seconds, depending on the track length.

After the loading is finished, a nice waveform with peaks will be displayed:



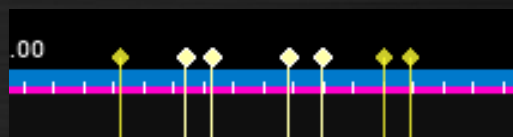
Markers

Markers are auxiliary vertical lines, that help with placing and alignment of elements on tracks. The element edge or time cursor will automatically snap to the marker when close to each other.



Example of several markers placed on the timeline

To place a new marker at the current cursor position, press the “**M**” shortcut key. It is possible to place markers even when the playback is running.



Example of 4 selected markers

To move the markers, select them by **Ctrl/⌘ + click** or **Shift + click** on the yellow diamond heads. The selection will turn light yellow. Now you can drag the selection along the timeline or hit **Delete** key to remove it completely.



To toggle the visibility of markers, press the “**H**” shortcut key. This is useful for very dense projects with lots of markers, when you want to get a clearer view of your tracks.

Visualization (Preview window)

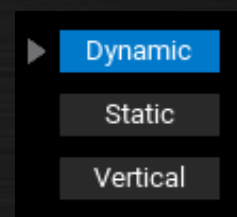
Lighttoys Composer offers several unique visualization modes that simulate how your image patterns will look in real life. When you click an element on the timeline, a preview appears in the preview window:



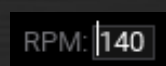
modes of visualization: dynamic (stop), dynamic (play), vertical

By clicking on one of the 3 buttons in the top right corner, you can switch between 3 modes of visualization:

- **Dynamic** – shows the device in rotation, can be toggled between playing / stopped state
- **Static** – shows the device in a static state
- **Vertical** – shows all devices at once as vertical lines



Dynamic mode is best for simulating how the audience will experience the Visual Poi effect, Static mode for fade and ramp effects, when the prop is not spun. Vertical mode is useful for checking light effects of all props interacting together.

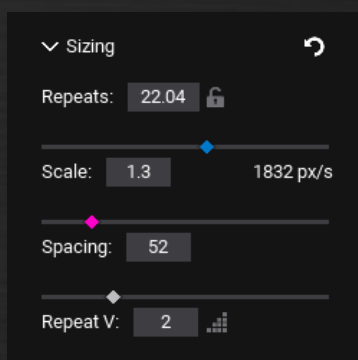


The speed of the Dynamic preview is set to **140 RPM** (rotations per minute) by default. You can edit this value in the bottom right corner of the Preview window.

Image element tuning

Each image element you put onto the timeline can be fine-tuned for optimal display to the audience in the Edit pane. There are 3 submenus which let you alter the different aspects of your image.

Sizing submenu

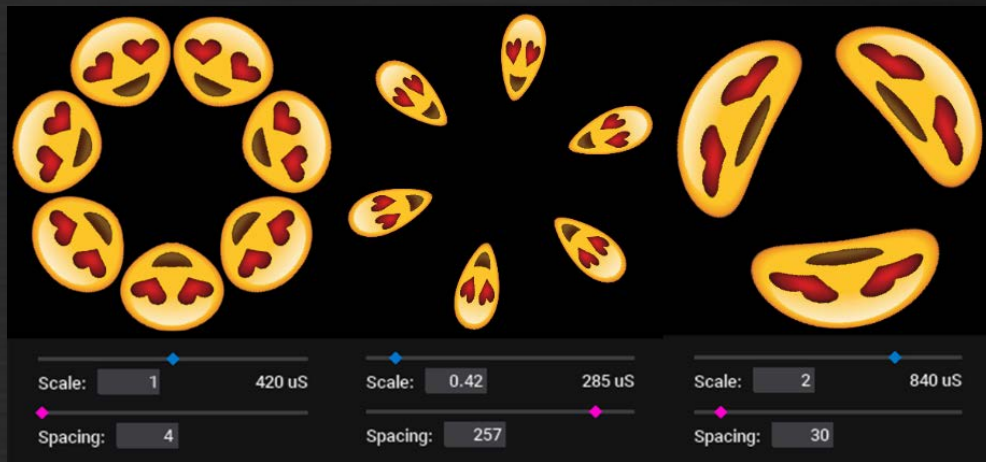


The sizing submenu lets you stretch and space the image, so it fits your desired artistic intent and is synchronized with the tempo of the music. To size the image, you use two sliders located in the Edit pane: “**Scale**” and “**Spacing**”. Scale is used to stretch or shorten the image. Spacing is used to set the distance (empty space) between repetitions of the same image.



You can reset the sliders by double-clicking on the diamonds. You can also input precise values into the text boxes. The Scale box can accept larger range of values: 0.01 - 10000.


“Repeats” shows the total number of repetitions of the selected image. When you edit this value from a keyboard, the app automatically adjusts the Scale value accordingly.



The effect of scale and spacing parameters on the image visualization



To see the effect of Scaling and Spacing on all image elements on the timeline, it is recommend to have the “Realtime” option on the toolbar activated.

The reset  button appears in the header whenever any parameter was changed from default. Click it to quickly reset all parameters in the submenu back to default.

Repeats: 2 

When moving images from one type of track to another, the number of repeats changes because of the resolution difference. To prevent that, click on the padlock icon to active the “Lock Sizing” option.

Also activate this option when you want to have the number of Repeats always fixed when resizing the image on the track horizontally (changing its duration).

To quickly lock the image to useful Repeat values in the range 1-9, use the shortcut **Ctrl/⌘ + 1-9** on your keyboard.



Lock sizing plays images at the same pixel speed across all types of Visual Pois, but at the cost of some aspect ratio deformations. This option is best used for pulsing graphics (that must be all in sync), for text and logos it is best to leave this option turned off.

Repeat V: 0.68 

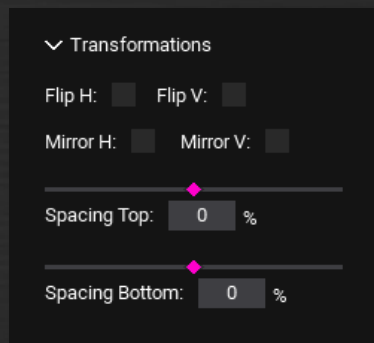
“Repeat V” slider repeats (duplicates) the picture vertically. This is useful for creating interesting new patterns from the original image or round devices like Visual hoop.

When you click on the triangle icon, “Keep original resolution” option is activated. This maps the source picture 1:1 (pixel-for-pixel) to the track resolution without any rescaling and sets the “Repeat V” value accordingly.



This option is useful when you are working with very small pictures, pixel art or repeating patterns (< 50 px) and you want to retain the sharpness of the original pixels. Without it, rescaling occurs and the pixels might appear blurred.

Transformations submenu

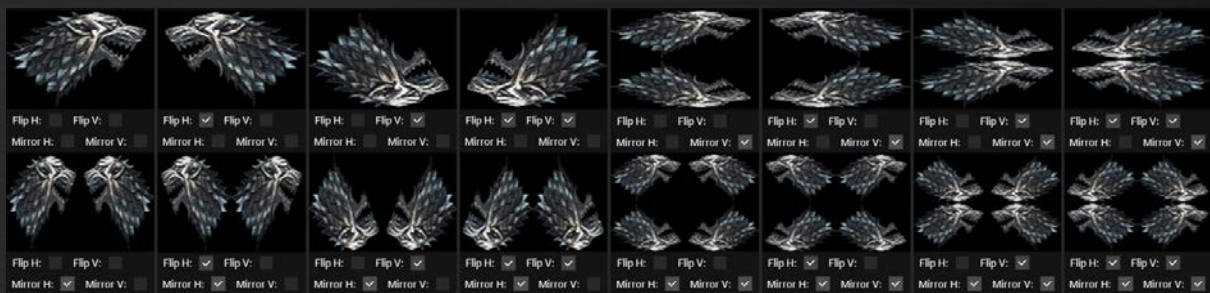


The transformations submenu lets you perform cool transformations – flipping & mirroring effects and spacing of top and bottom edge.

Flip and Mirror can often lead to a more interesting picture than the original, so feel free to experiment with these checkboxes, together with the “Repeat V” slider!

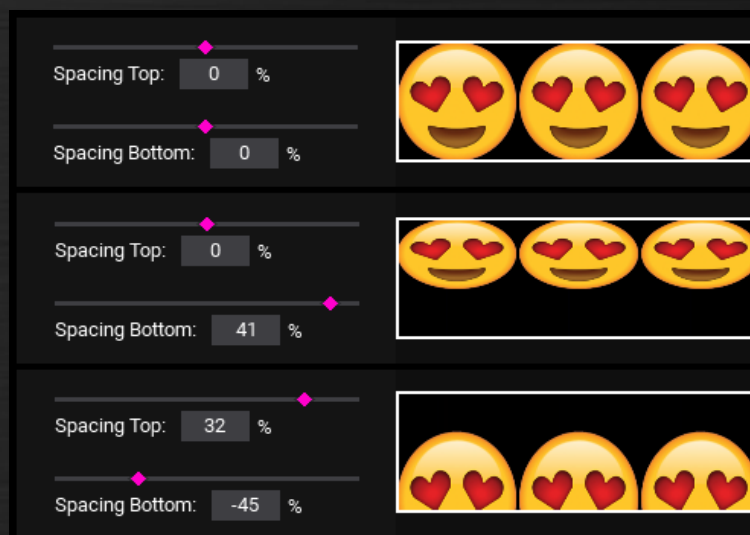


“Flip H” option is useful for making sure the text logo is displayed the right way to the audience when spun, without the need to change the more comfortable spinning direction for the performer.



Examples of different combinations of Flip and Mirror options

Spacing sliders are useful for cutting unwanted parts of the top and bottom part of an image, or on the contrary, for adding empty space (extend the background), which can be used for artistic purposes or to improve readability of texts or logos (by adding positive bottom spacing).



Examples of different combinations of Spacing Top & Bottom sliders

Adjustments submenu



The adjustments submenu lets you change brightness, contrast, saturation and hue (color) of the picture. This is useful in situations, when the source picture is of poor quality or when you want to enhance or boost the picture artistically.

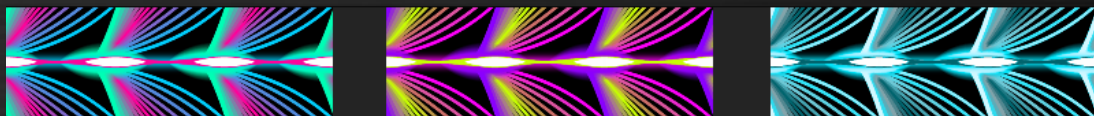
The Recolor slider is a special extension of the Hue shift slider. Turn it on by clicking on the “off” button.

Unlike the Hue shift slider, which shifts all colors in the picture by the same amount, the Recolor slider converts all original colors into shades of just a single hue.

This is useful in situations where you want to stick to a specific color theme with your pictures.



Both the Hue shift and Recolor sliders can be combined together. Hue shift slider changes the contrast of different colors in the original picture, making them either pop out or suppressed after recoloring. Try it and experiment!



Color change example – original image (left), hue shift (center) and recolor (right)

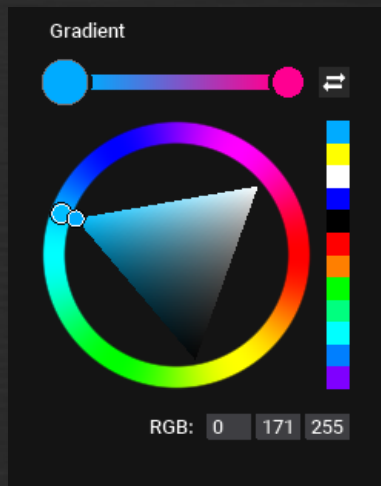


Example of various adjustments performed on the original image


Color element tuning

Each color element placed from the “Colors” library can be also tuned to suit your preference. When you click on a color element, the Edit pane changes to show the color edit tools.

Since each type of color element has slightly different settings and options available, we will explain the Edit pane options with the Gradient element selected.



Gradient element has two editable colors, accessible by clicking on the color circles at the top. The larger circle is the one currently selected (press “X” key to switch selection).

The arrow icon  is used to switch the orientation of the gradient element.

Below lies the color wheel. By clicking on the wheel, you edit the selected color value, by clicking inside the triangle you change its saturation and lightness.



Try holding the Shift key to limit the wheel to 12 basic colors (primary + secondary + tertiary colors).

For precise input, you can also use the RGB input fields at the bottom.

Each time you set a new color it will be added to the recently used color list on the right. You can recall the previous colors at any time by simply clicking onto the color rectangles in the list.


Uploading to the device

Now having learned the basics, you are ready to upload your first light sequence into your Lighttoys props and enjoy it in real life! Depending on the type of track, the upload process differs, which we will show below.

Visual Poi, Wand & Hoop

Connect your Visual device to the computer with a micro-USB cable and power it on with a long press of the main button.

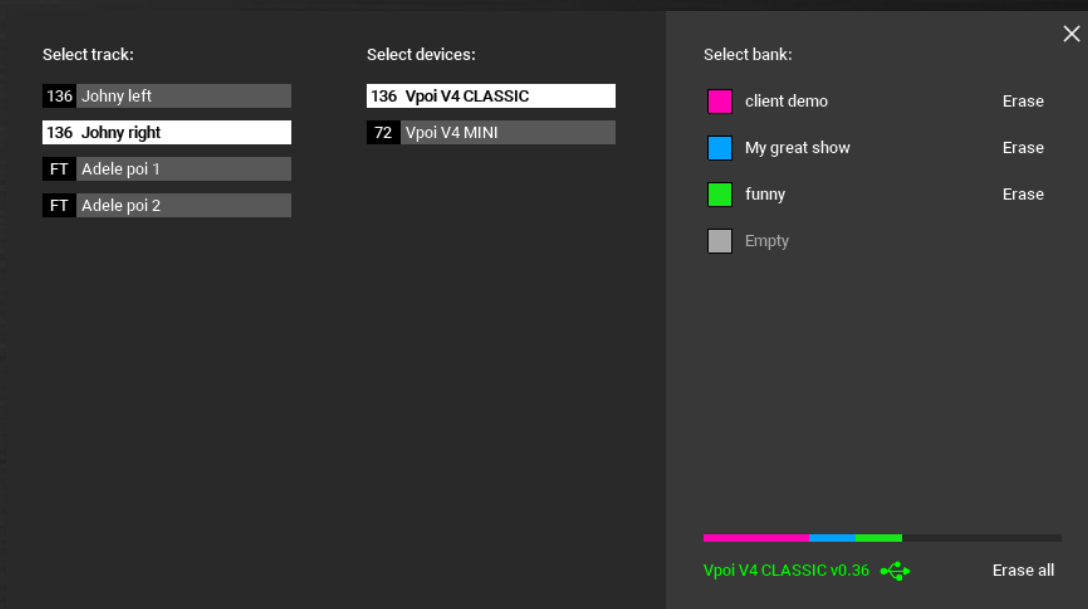
The Visual device should be successfully detected and the status bar should display a message:

Connected devices: X , where X represents the number of all known attached devices.



If the Visual device is not detected by LtComposer, make sure you have the Visual Poi driver installed (on Windows 7), try a different USB cable and make sure the Visual device is really turned ON.

Now click on the **“Upload”** button in the Menu bar or press the **“u”** key. An upload dialog will appear:



Upload dialog window

First select the track which you want to upload in the first column, then select the Visual device which you want to upload to in the second column.



When you click on a device in the second column, the corresponding device will blink momentarily in a white color (ping). This is useful to differentiate one device from another.

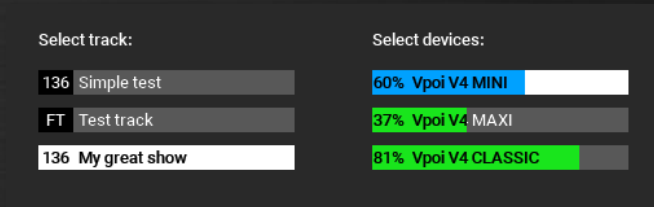
At the right side of the upload dialog, you will see the list of available memory banks and if they are occupied with an image sequence or not.

Click on one of the 4 memory banks on the right. Your sequence will be converted into the Visual Poi format and then uploaded, showing a nice progress bar in the upload dialog and also on the device LEDs.



First 16 characters of the track name are used as the memory bank name, stored in the device together with the image sequence. You can rename the track, by double-clicking on its name in the left column.

To upload the same track to multiple devices at once, first **Ctrl**/**⌘** or **Shift** select the devices in the second column. You can also start a new upload to a different device, even when other uploads are still ongoing!



Concurrent upload to several devices at once

Once all your image sequences are uploaded, you can close the upload dialog, disconnect the Visual Pois from PC and enjoy the sequences in real life (using the main power button or paired FT remote controller).

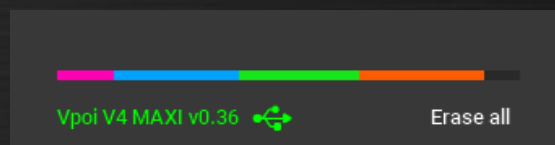
Managing the banks

You can erase unneeded banks (to save memory space or to prevent user error) by clicking on the “**Erase**” button. The bank will be displayed in the list as “Empty”.



To completely format the Visual device memory, press the “Erase all” button. All image sequences will be removed and the file system rebuilt. This is useful, should the image data get corrupted.

To see how much space each memory bank currently occupies, check the bottom right corner of the upload dialog with the colored line segments. The device type and firmware version are also displayed here, e.g. **Vpoi V4 MAXI v0.36**:



Memory utilization bar graph


FT devices

Connect your FT remote controller to the computer with a micro-USB cable and power it on with a long press of the main red button, the blue indicator LED should shine steadily. Make sure at least one FT device is paired to that remote.



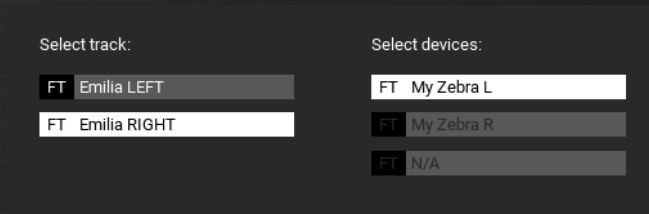
If the FT remote is not detected by LtComposer, make sure you have the mcp2200 driver installed (on Windows), try a different USB cable and make sure the FT remote is really turned ON (pulsing blue LED indicates charging, but the remote is still turned off).

The FT remote should be successfully detected and the status bar should display a message:

Connected devices: X , where X represents the number of all known attached devices.

Now click on the “**Upload**” button in the Menu bar or press the “**u**” key. Again, the upload dialog will appear.

All FT devices (in a radio range) paired to all currently attached FT remotes via USB cable will be shown in the device list. Devices which are switched off will display a message “N/A”, devices which are currently not in range will be shown in a darker color:



Example of in range, out of range, turned off FT device

The rest of the steps is the same as with the Visual device – click on the memory bank on the right side to upload the FT sequence to the FT device, use “**Erase**” button to delete it.

The device type and current firmware are displayed in the bottom right corner of the upload dialog, i.e. **Zebra Poi 180813**.



You can rename the FT device to your liking by double-clicking on the device name in the second column. This is useful when you are dealing with many devices of the same type.

Preview show on devices

LtComposer offers a unique preview feature, which enables you to start show on your Visual and FT devices connected to the PC, perfectly in sync with the timeline and music track.

This is very useful in two distinct scenarios:

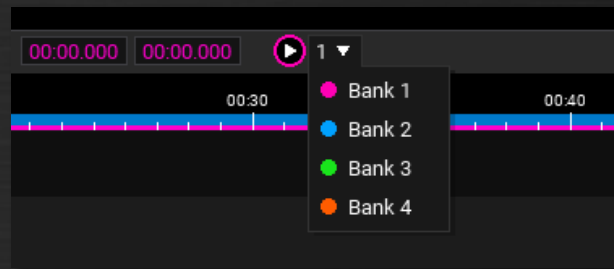
- you want to check how your colors and light effects look in real life during the creation of your light sequence,
- you want to run your light show and music perfectly synchronized from a single digital device (your computer) in front of the audience.



Diagram of how the run show on devices works

- 1) First, make sure that all your Lighttoys devices are turned on and paired to a single FT remote, and this remote is also turned on and attached to the PC via USB cable.
- 2) Upload the show to all the devices you want to use in the live preview, to the same memory bank number 1-4

- 3) Select the same Bank number in the drop-down menu of the Run show button.
- 4) Press the Run show button (or press “R”).
- 5) Enjoy!



Run show button and bank number selection

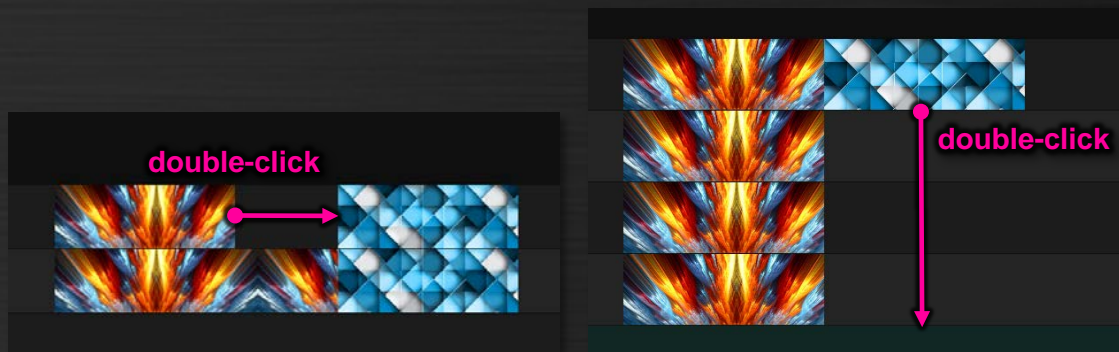


When the Run show is activated, you can even drag the cursor with your mouse or click different parts of the timeline, and the replay will react and update accordingly.

Useful tips & tricks

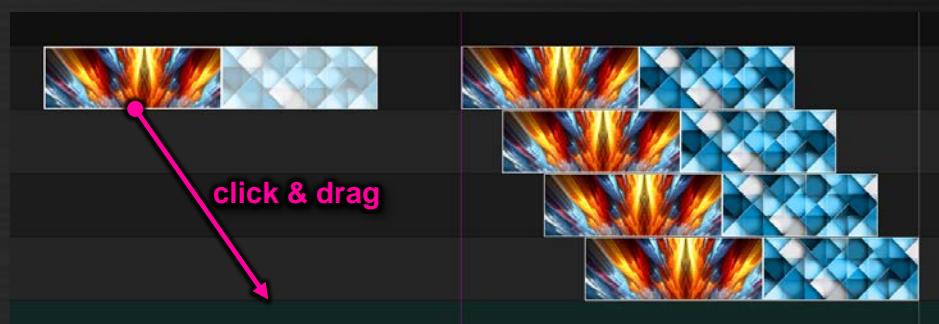
Expansion / cloning of elements

To quickly fill gaps between neighbor elements, double-click on the element's vertical edge that you want to expand to its neighbor. To clone the element vertically over all empty tracks, double-click on the element's horizontal edge.



Expanding elements by double-clicking on the edge

To create cascading effects that evolve diagonally over multiple tracks, click & drag the horizontal edge of the selected element(s) and start moving it up, down or diagonally. Release the mouse button once you are satisfied with the effect.



Vertical / diagonal cloning of elements using the edge click & drag

Magic corners

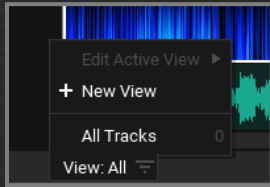
To speed up the work with color elements, LtComposer offers a unique productivity feature – magic corners. With magic corners, you can quickly create new color elements right on the timeline, without the need to go to Colors library.



Example of several FT elements created using magic corners

When you hover the mouse over the top corner of a color element, the cursor changes. Click & drag to the left/right and a new logical color element will be created, based on the type and color of the original element and the adjacent area.

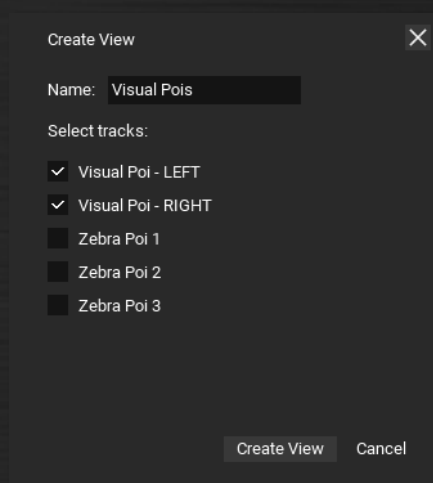
Filtered Views



For larger projects with many tracks, the Views functionality will come handy. Filtered Views enable you to create several different subsets of the original tracks and then quickly switch between them.

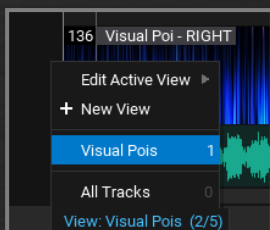
This removes visual clutter and unnecessary vertical scrolling through the track list. This functionality is accessed from the status bar.

Click on the **“View: All”** button, then select **“+ New View”**. A new window will appear:



Create View window

Give this new View a descriptive name, select which tracks will be included in the View and click **“Create View”**.



The new View will become available in the menu list, easily activated by a mouse click or a numerical shortcut **0-9**. When a filtered View is active, the Status bar text turns blue color, showing the current View name, and the number of tracks the View contains / number of all tracks, for example **View: Visual Pois (2/5)**.

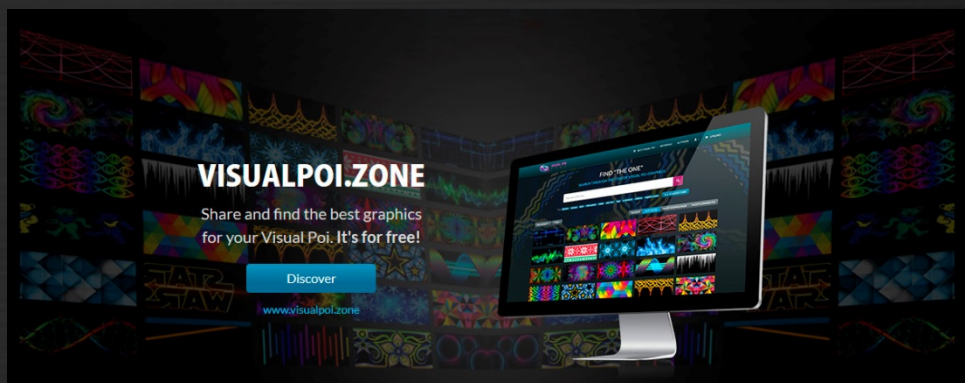
The current active View can be edited, removed or duplicated by selecting the menu option **“Edit Active View”**.



You can reorder the tracks in each View differently and that ordering will be remembered. You can use this feature to better visualize the props on stage using the Vertical preview option.

VisualPoi ZONE

Pyroterra Lighttoys has created a community-based web portal, where you can share and download hundreds of pictures for your Visual Poi, Wand and Hoop. All for free! Don't miss it and check it out: <http://www.visualpoi.zone/>



Looking for pictures for your Halloween party? Searching for Christmas patterns? Or just curious what others have recently uploaded? Head over to VisualPoi ZONE!

Staying up to date

To enjoy the latest and greatest version of Lighttoys Composer from Pyroterra Lighttoys, please check the latest official release available from our support page:

<https://www.lighttoys.cz/support/#downloads>

If you would like to follow the bleeding-edge development, please also join our [Lighttoys Composer user group](#).

Firmware update

Starting with LtComposer version 3.4, the software can perform a complete firmware update of your Lighttoys devices. It also detects if the firmware running in the connected Lighttoys device is out of date (needing update), indicated in the status bar in yellow color:



To learn how to perform the firmware update process, please check our PDF manual "**Firmware update guide**" available from our support page:

<https://www.lighttoys.cz/support/#manuals>

Afterword

“Team Pyroterra Lighttoys wishes you a lot of fun and amazing acts created with the Lighttoys Composer!”



www.lighttoys.cz

List of keyboard shortcuts

Windows

General:

| | |
|------------------|-----------------------|
| F1 | show help |
| ctrl + n | new project |
| ctrl + o | open project |
| ctrl + s | save project |
| ctrl + shift + s | save project as |
| ctrl + i | import project |
| ctrl + r | refresh image library |

Composition:

| | |
|---------------------------|----------------------------|
| ctrl + t | add new track |
| delete (backspace) | delete element(s) |
| ctrl + delete (backspace) | delete track(s) |
| ctrl + click | add to selection |
| shift + click | range selection |
| ctrl + a | select all elements |
| ctrl + z | undo last step |
| ctrl + y | redo last step |
| ctrl + shift + z | redo last step (secondary) |
| ctrl + c | copy element(s) |
| ctrl + v | paste element(s) |
| ctrl + x | cut element(s) |
| ctrl + d | duplicate element(s) |
| ctrl + mouse drag | duplicate element(s) |

Timeline:

| | |
|---------------------------------------|-------------------------------------|
| spacebar | pause / play |
| enter | pause / play (with cursor return) |
| s / shift + spacebar | stop / play from top |
| arrows | select element |
| ctrl + arrows | move element |
| ctrl + shift + arrows | resize element |
| alt + left/right | precisely move the cursor |
| page + up/down | scroll timeline |
| home / end | go to beginning / end |
| mouse wheel | scroll timeline to the left / right |
| shift + mouse wheel | scroll timeline vertically |
| ctrl/alt + mouse wheel, alt + up/down | zoom in / out |
| m | add marker to the cursor position |
| h | hide / show markers |

| | |
|------------|-------------------------------|
| v | collapse / expand tracks |
| c | split elements on time cursor |
| x | toggle edited color |
| shift + x | switch element colors |
| r | run on devices |
| l | toggle lock sizing |
| k | toggle keep original size |
| 0-9 | select active view |
| ctrl + 1-9 | set number of repeats to 1-9x |

Preview:

| | |
|---|------------------------------|
| p | cycle preview styles |
| \ | pause / play dynamic preview |

Upload:

| | |
|-----------|--------------------|
| u | open upload dialog |
| 1-4 | upload to bank 1-4 |
| up / down | select track |

Color picker:

| | |
|--------------------|--|
| shift + mouse drag | limit hue to primary + secondary + tertiary colors of the RYB color model only |
|--------------------|--|

MacOS

General:

| | |
|---------------|-----------------------|
| F1 | show help |
| ⌘ + n | new project |
| ⌘ + o | open project |
| ⌘ + s | save project |
| ⌘ + shift + s | save project as |
| ⌘ + i | import project |
| ⌘ + r | refresh image library |

Composition:

| | |
|------------------------|----------------------------|
| ⌘ + t | add new track |
| delete (backspace) | delete element(s) |
| ⌘ + delete (backspace) | delete track(s) |
| ⌘ + click | add to selection |
| shift + click | range selection |
| ⌘ + a | select all elements |
| ⌘ + z | undo last step |
| ⌘ + y | redo last step |
| ⌘ + shift + z | redo last step (secondary) |
| ⌘ + c | copy element(s) |
| ⌘ + v | paste element(s) |

| | |
|----------------|----------------------|
| ⌘ + x | cut element(s) |
| ⌘ + d | duplicate element(s) |
| ⌘ + mouse drag | duplicate element(s) |

Timeline:

| | |
|----------------------|-----------------------------------|
| spacebar | pause / play |
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| | |
|--------------------|---------------------------|
| arrows | select element |
| ⌘ + arrows | move element |
| ⌘ + shift + arrows | resize element |
| alt + left/right | precisely move the cursor |

| | |
|---------------------|-------------------------------------|
| page + up/down | scroll timeline |
| home / end | go to beginning / end |
| mouse wheel | scroll timeline to the left / right |
| shift + mouse wheel | scroll timeline vertically |

| | |
|------------------------------------|---------------|
| ⌘/alt + mouse wheel, alt + up/down | zoom in / out |
|------------------------------------|---------------|

| | |
|-----------|-----------------------------------|
| m | add marker to the cursor position |
| h | hide / show markers |
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