

Introduction to the Pixel Editor

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What is the “Pixel Editor”



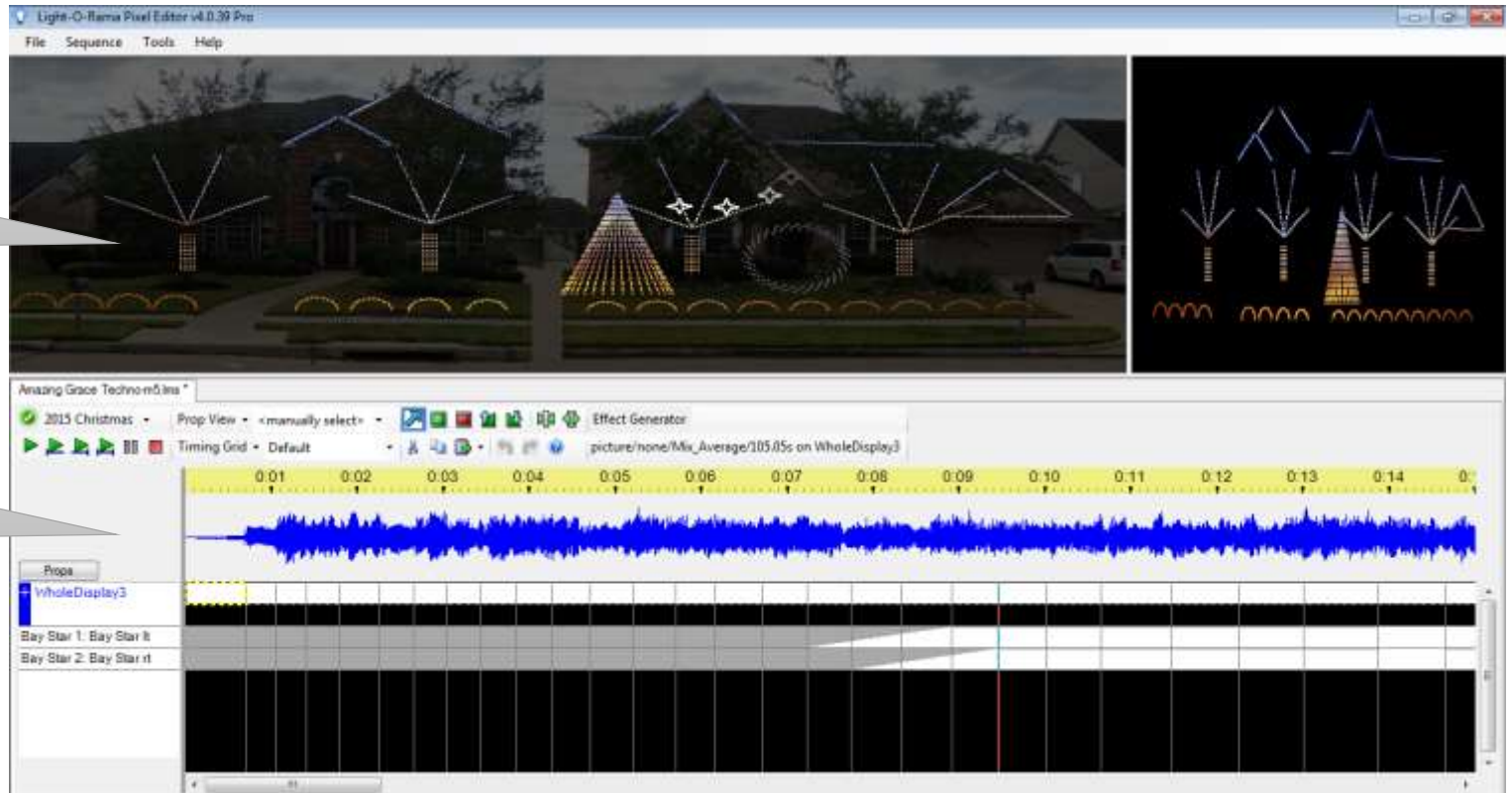
- Newest member of Light-O-Rama’s Software Suite
- Makes it easy to display complex effects on RGB lights
 - CCR trees
 - Other Light-O-Rama Cosmic Color devices
 - Elements connected to DMX/E1.31 pixel controllers



Sequencer and Previewer

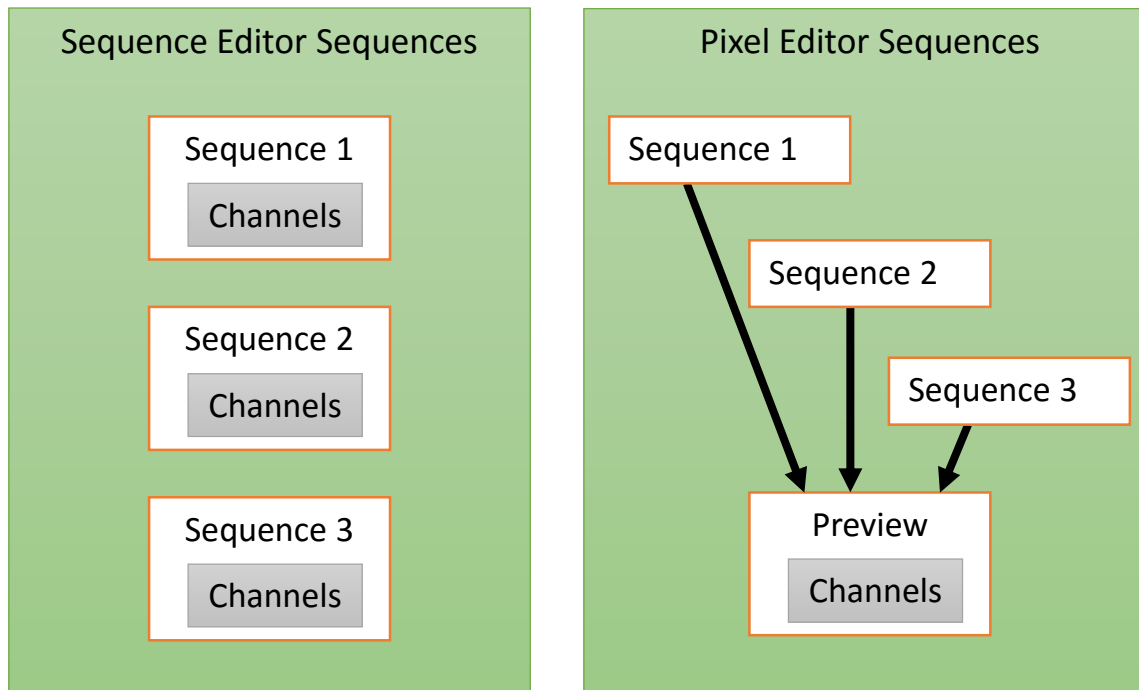
Previewer

Sequencer



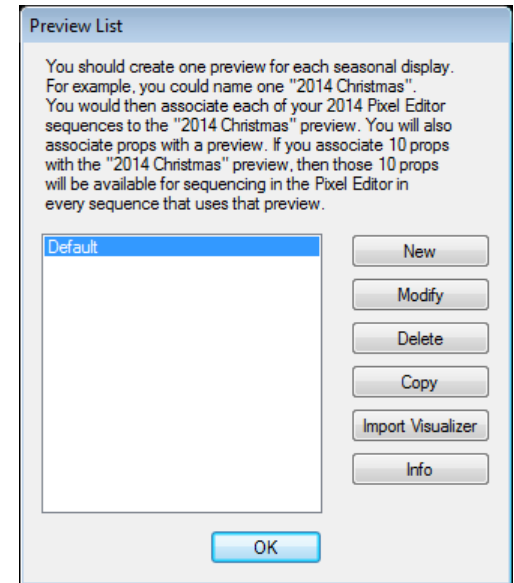
Workflow Step 1: Create a Preview

- Creating a preview only has to be done once. A Pixel Editor preview can be shared across all of your sequences – no additional importing or copying is required.



Workflow Step 1: Create a Preview

- When you first start the Pixel Editor, there is already an empty preview created for you named “Default”. Feel free to use the “Default” preview or create your own (“2015 Christmas Display” perhaps).
- You must add props to the preview for every display element you wish to sequence with the Pixel Editor.
- Optionally, you can also add props that you will be sequencing with the Sequence Editor. Adding Sequence Editor props allows you to see how your entire display will look when played back – Pixel Editor and Sequence Editor props together.



Workflow Step 2: Create a Sequence

You can create a new sequence using the Sequence Editor or the Pixel Editor (starting with version 4.3).

Sequence Editor

- The sequence should only contain the channels you will sequence with the Sequence Editor – leave out channels that will be sequenced with the Pixel Editor.
- Make sure timing grids are set up the way you want. Use the Beat Wizard or Tapper Wizard if desired to create beat channels. Beat channels can be viewed in the Pixel Editor to aid your sequencing.
- Save and close the sequence when you are done.

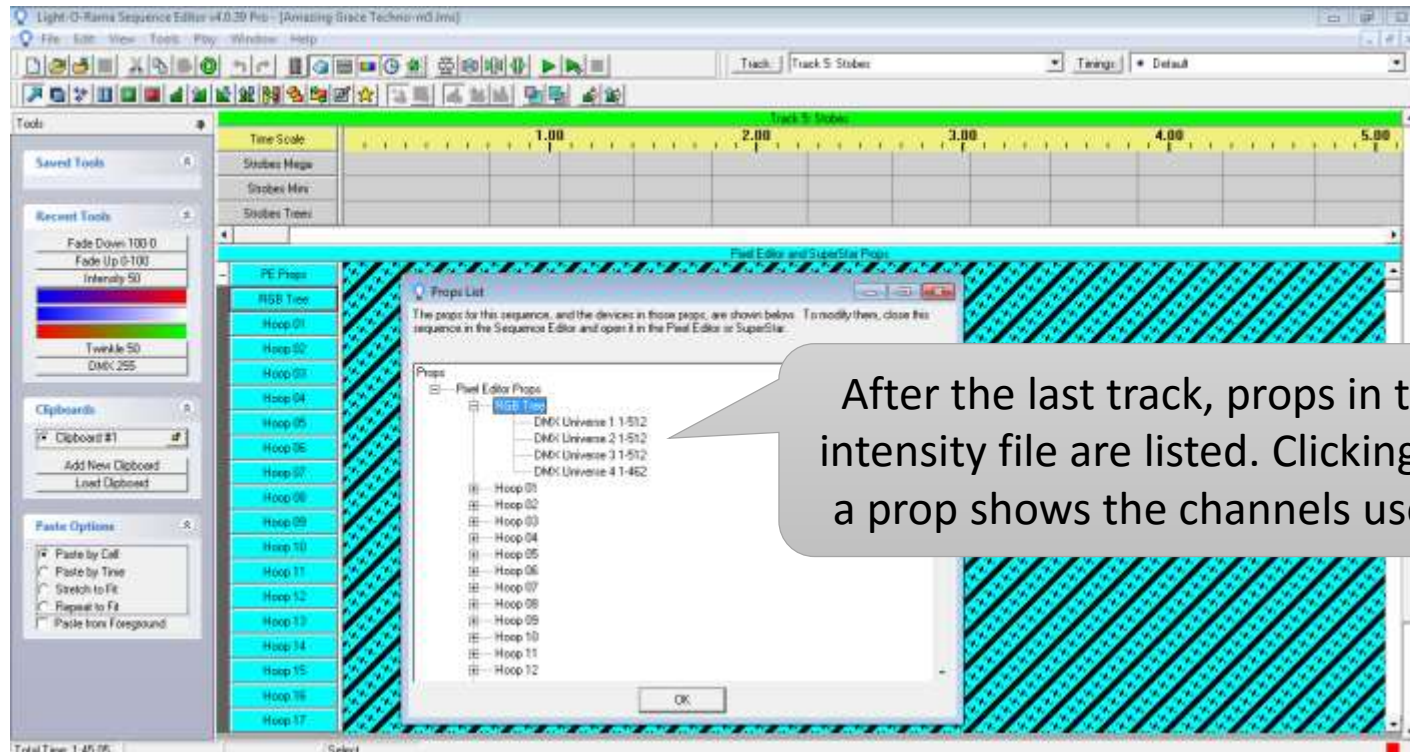
Pixel Editor v4.3 or later

- Select File > New from the menu
- Select the preview associated with this sequence
- Make sure timing grids are set up the way you want.

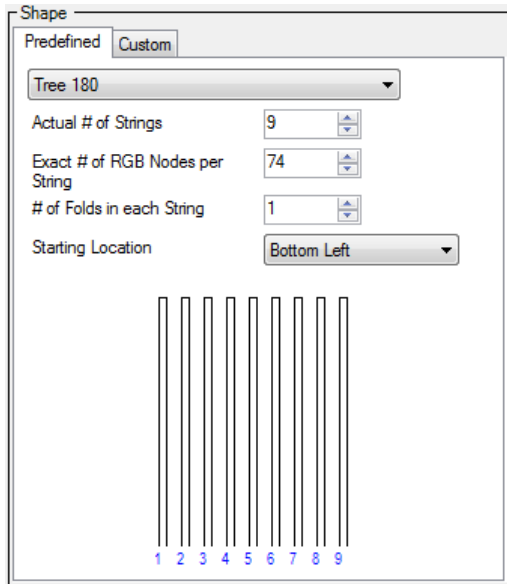
Workflow Step 3: Create RGB Effects

- If the sequence was created in the Sequence Editor, select File > Open from the Pixel Editor menu to open it.
- Add effects to your RGB props as desired.
- Save the sequence (this saves the effects for subsequent editing).
- Save the sequence as an Intensity Data file. The intensity data file is required so that the Sequence Editor and Show Player can play back the Pixel Editor sequence.

Sequence Editor with Intensity File

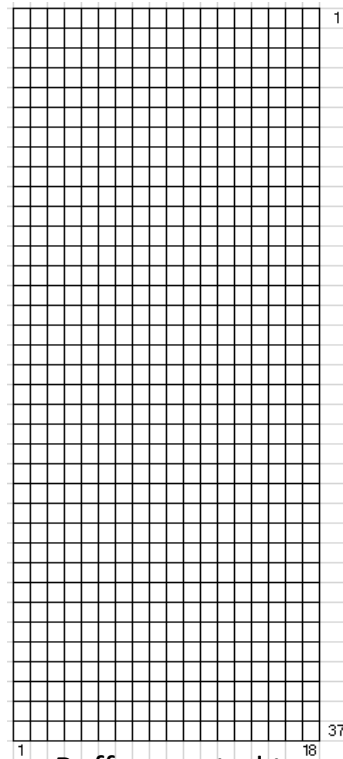


How Effects Work

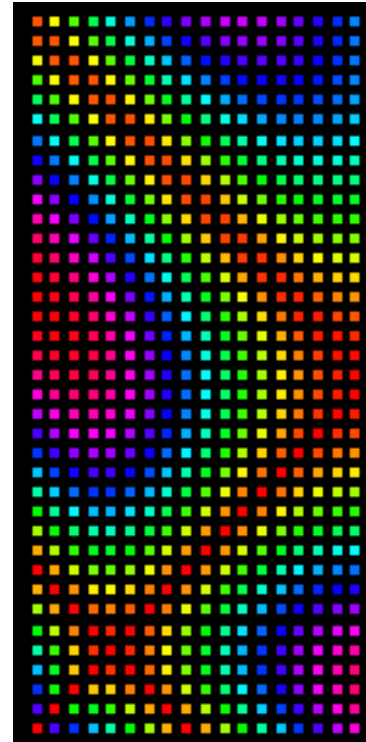


You define a prop

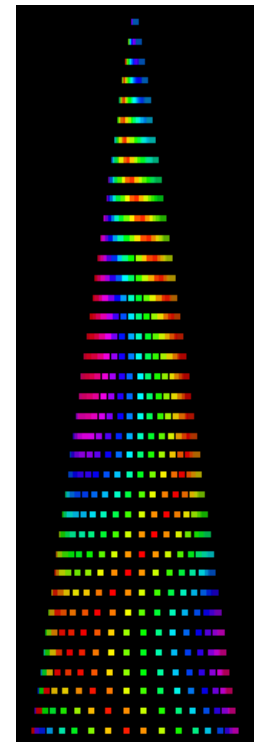
“Line” shapes are for roof lines and wire frames!



Buffer created to match prop definition



Effect scaled to buffer



Result

Hands-on Tutorial

Creating your first Pixel Editor sequence

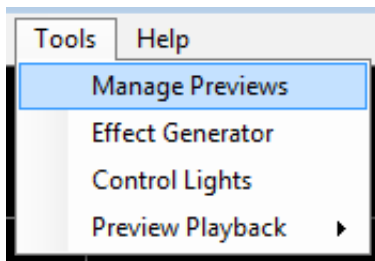
Tutorial: Creating a Sequence

- In the following step-by-step tutorial, we will create a Pixel Editor sequence that runs through all* of the effects
 - Create a simple preview
 - Create a new animation sequence
 - Add effects to the sequence
 - Play it back
- This tutorial assumes you are using version 4.3 or later

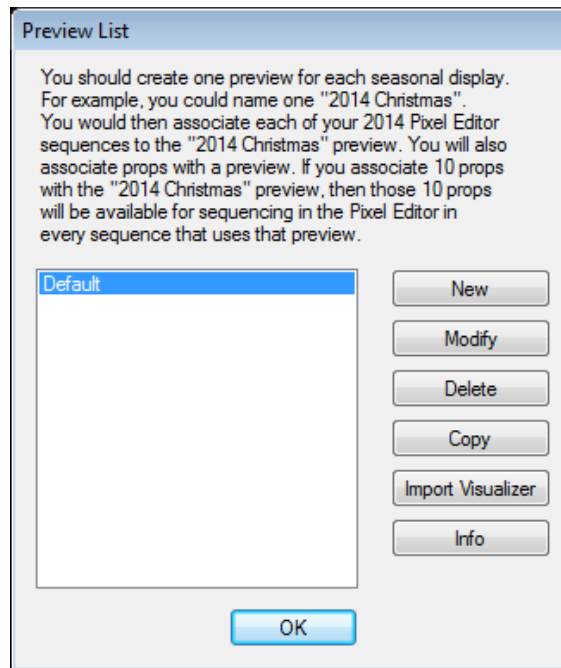
* We will skip the “none” effect because it doesn’t do anything, and also the “movie” effect because it will have its own tutorial.

Create a Pixel Editor Preview

Open the Pixel Editor...



Select Tools > Manage Previews from the menu to open the Preview List window.



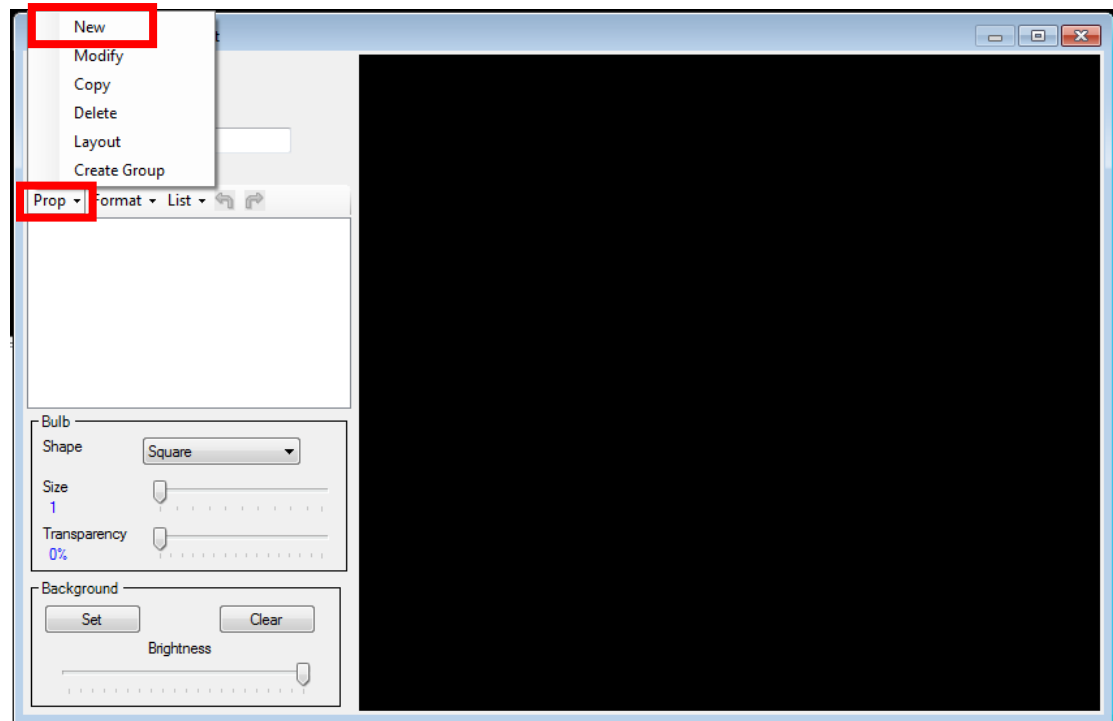
Double-click on the “Default” preview to modify it...

or click on “Default” to select it, then click the “Modify” button.

If you don’t want to use the Default preview, create a new one by clicking the “New” button.

Add a Prop to the Preview

- Select Prop > New from the preview window menu. This will open a Prop Definition window.



Define the Prop

- Set the name to “Hmatrix”
- Click the RGB tab and make sure the “RGB Pixels” button is selected
- In the Shape section, select “Matrix-Horizontal” from the drop-down. We will use the default values for this shape – 16 strings of 50 pixels each.
- In the Channel section, select “Undetermined” from the drop-down. This means there is no physical prop, but we can still create effects for it.

The screenshot shows the "Prop Definition" dialog box with several fields highlighted by red rectangles:

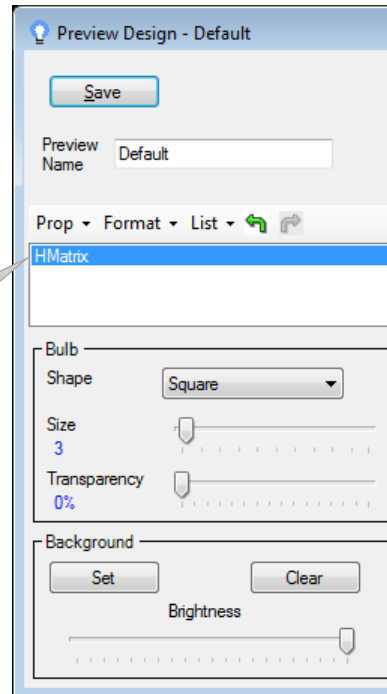
- Name:** HMatrix
- Lights:** Traditional RGB (selected), Dimming Curve: None, Channel Order: RGB order.
- Shape:** Matrix-Horizontal (selected from the dropdown).
- Channel:** Undetermined (selected from the dropdown).
- Action Buttons:** Save and Cancel.

Other visible settings include Sequence Method: Pixel Editor, Comment field, Max Circuit: 150, Individual Start Channels: unchecked, Separate Unit # for each RGB string: checked, and a grid for defining units.

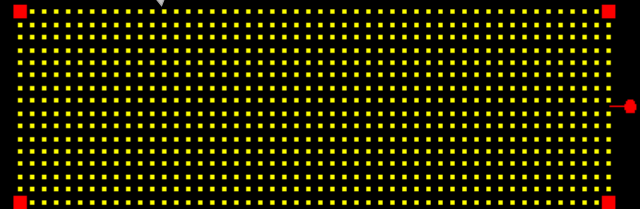
Save Preview

- Click “Save” once the prop has been sized to your satisfaction.

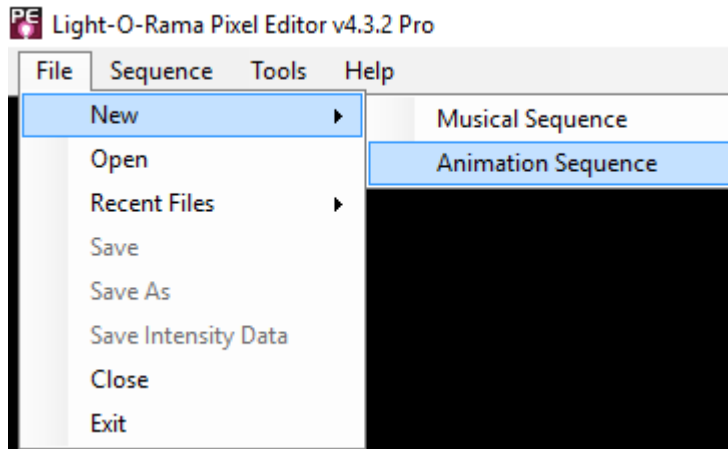
New prop is listed on the left



Stretch prop to yield roughly equal horizontal and vertical spacing between pixels. Drag any of the 4 red “handles” in the corners to resize.



Create a New Animation Sequence



Select File > New > Animation Sequence from the menu to open the New Sequence window.

A screenshot of the 'New Sequence' dialog box. It has fields for 'Length of animation' (set to 1:00.00), 'Preview' (set to Default), and 'Author' (set to Your Name). There are two sections: 'Fixed Timing' and 'Freeform Timing'. In the 'Fixed Timing' section, the checkbox 'Create a fixed timing grid' is checked, and the radio button 'One second intervals' is selected. In the 'Freeform Timing' section, the checkbox 'Create an empty freeform timing grid' is unchecked. At the bottom, there are 'Create' and 'Cancel' buttons. Several callout boxes provide additional information: 'Leave at the 1 minute default length' points to the length field; 'The preview you just created' points to the preview dropdown; 'Create a timing grid of fixed 1 second intervals' points to the 'One second intervals' radio button; and another box points to the 'Create' button.

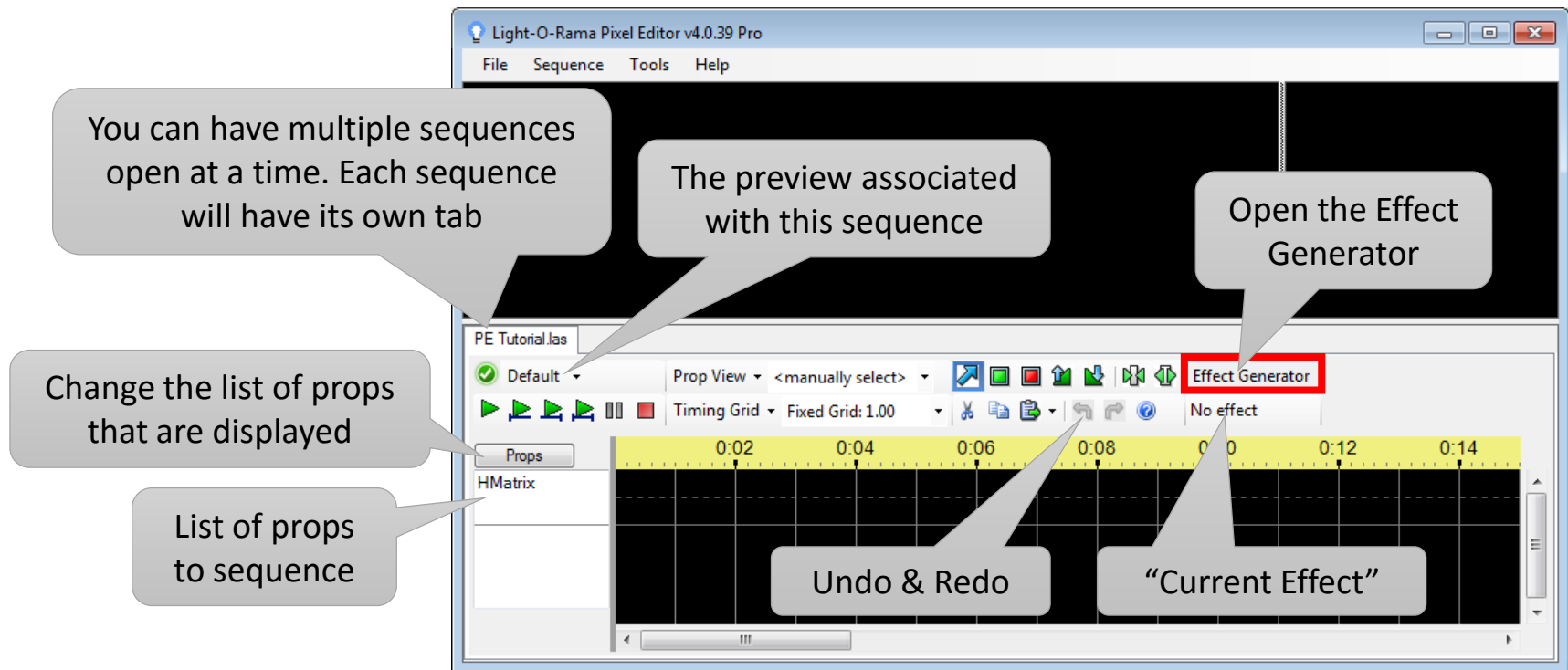
Leave at the 1 minute default length

The preview you just created

Create a timing grid of fixed 1 second intervals

File > New was added in version 4.3. In prior versions, a new sequence must be created using the Sequence Editor.

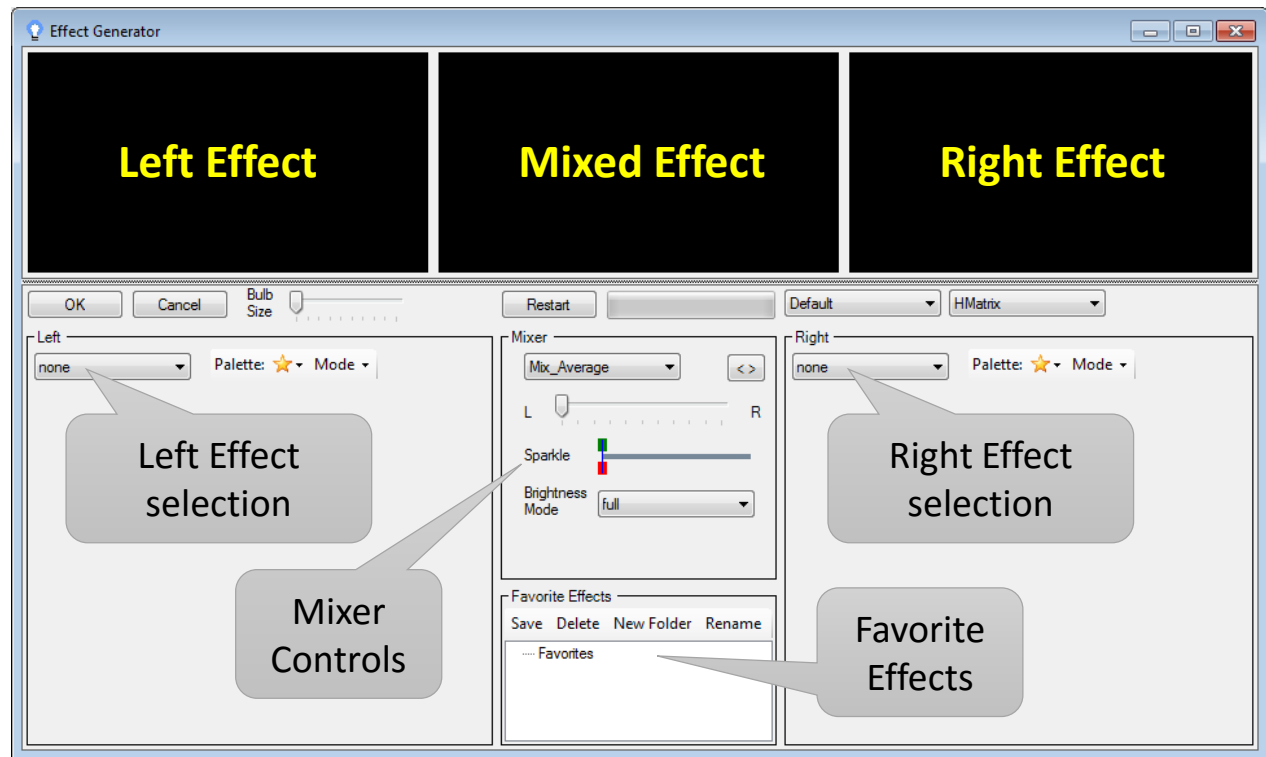
The Sequence Window



Next, we will look at the Effect Generator window, so click the "Effect Generator" button

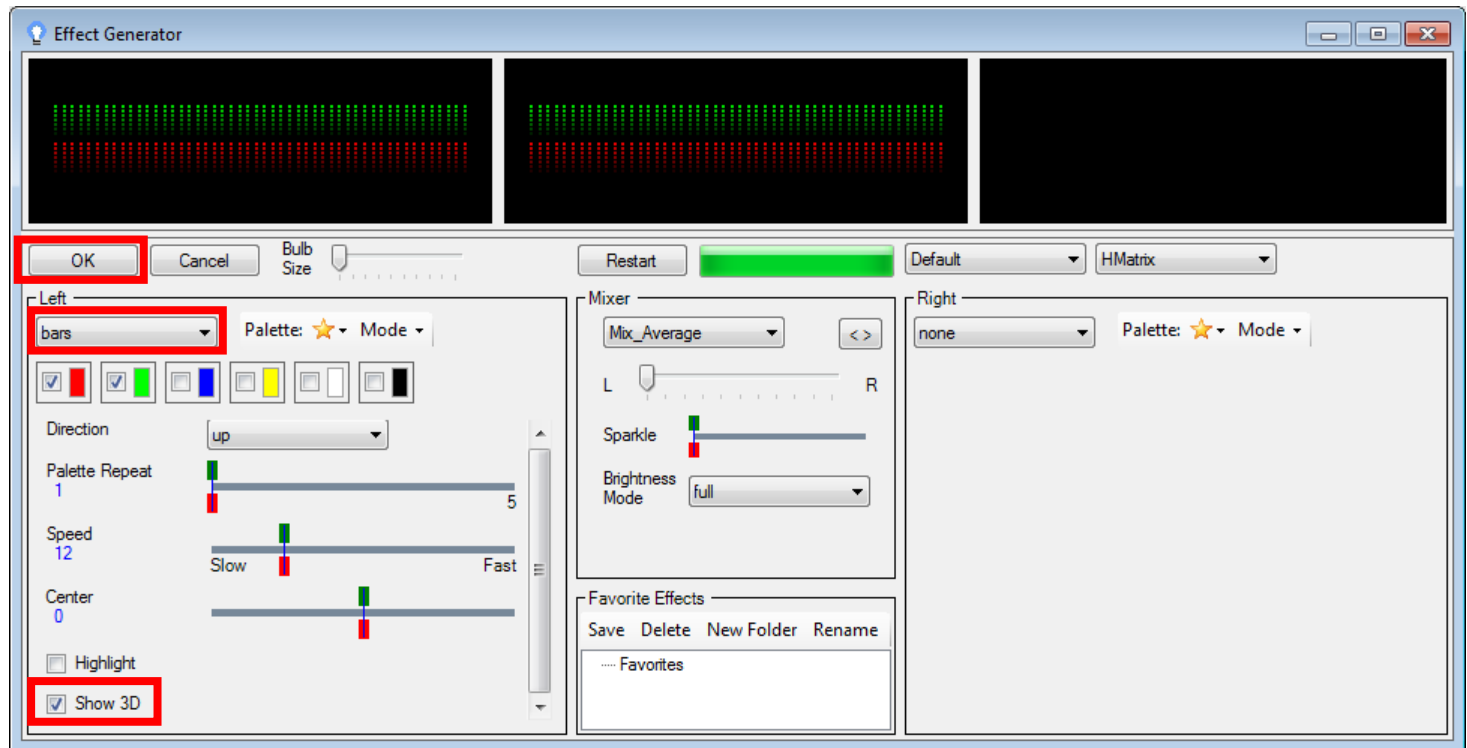
Open the Effect Generator

Open the Effect Generator by clicking the “Effect Generator” button above the sequence grid; or use the “E” shortcut key

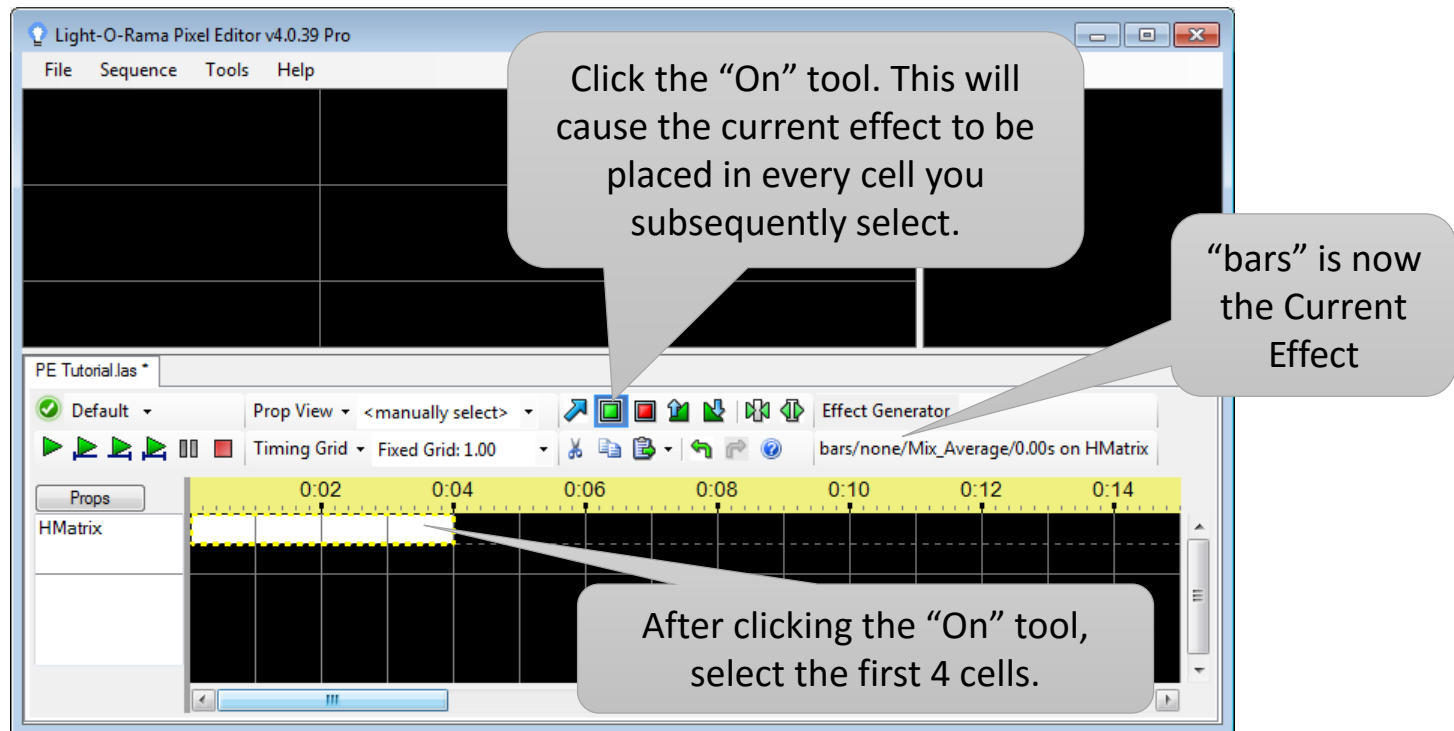


Select the “bars” Effect

- Select “bars” from the left drop-down box
- A bunch of controls will appear that allow you to control the bar effect. You can leave them at their default positions.
- Click “Show 3D”
- Click “OK”. This will close the window.

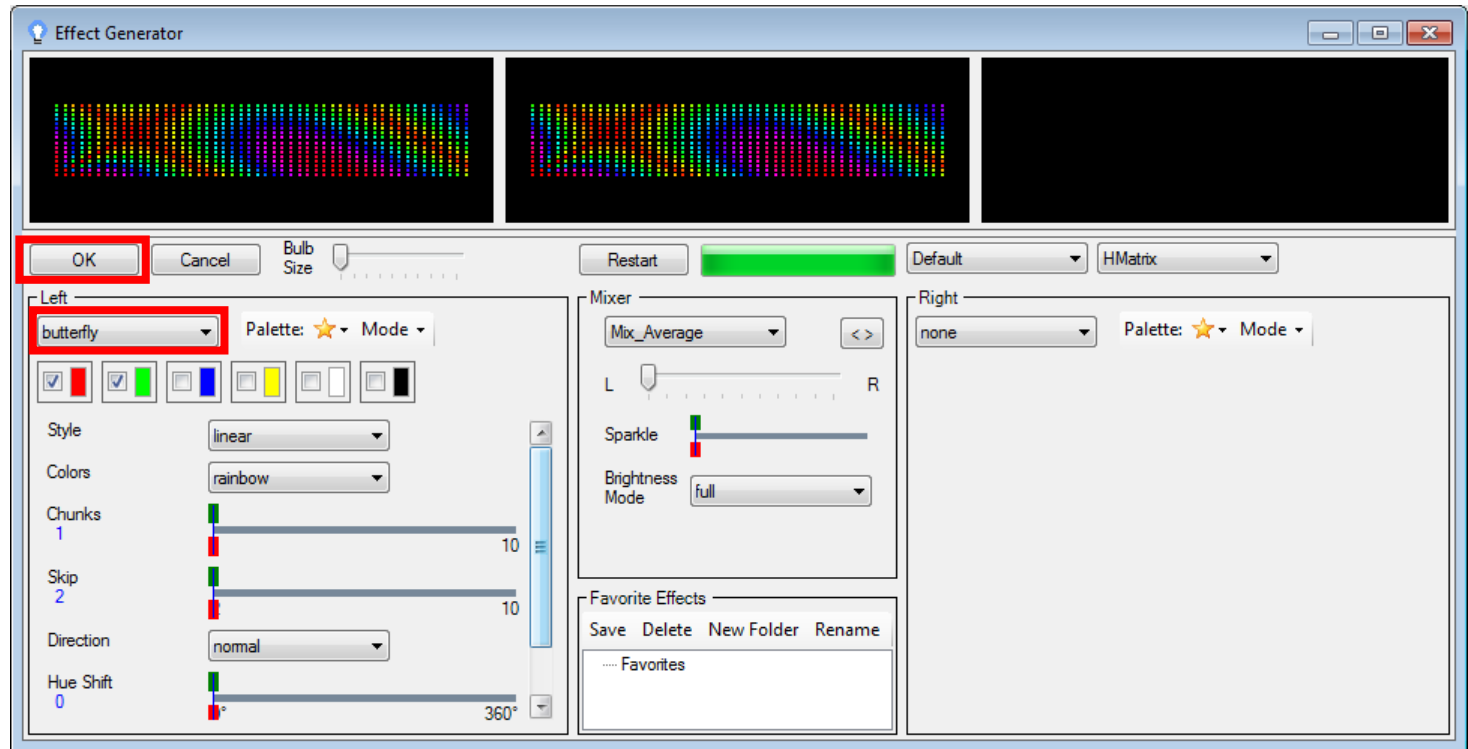


Add the Effect to the Sequence



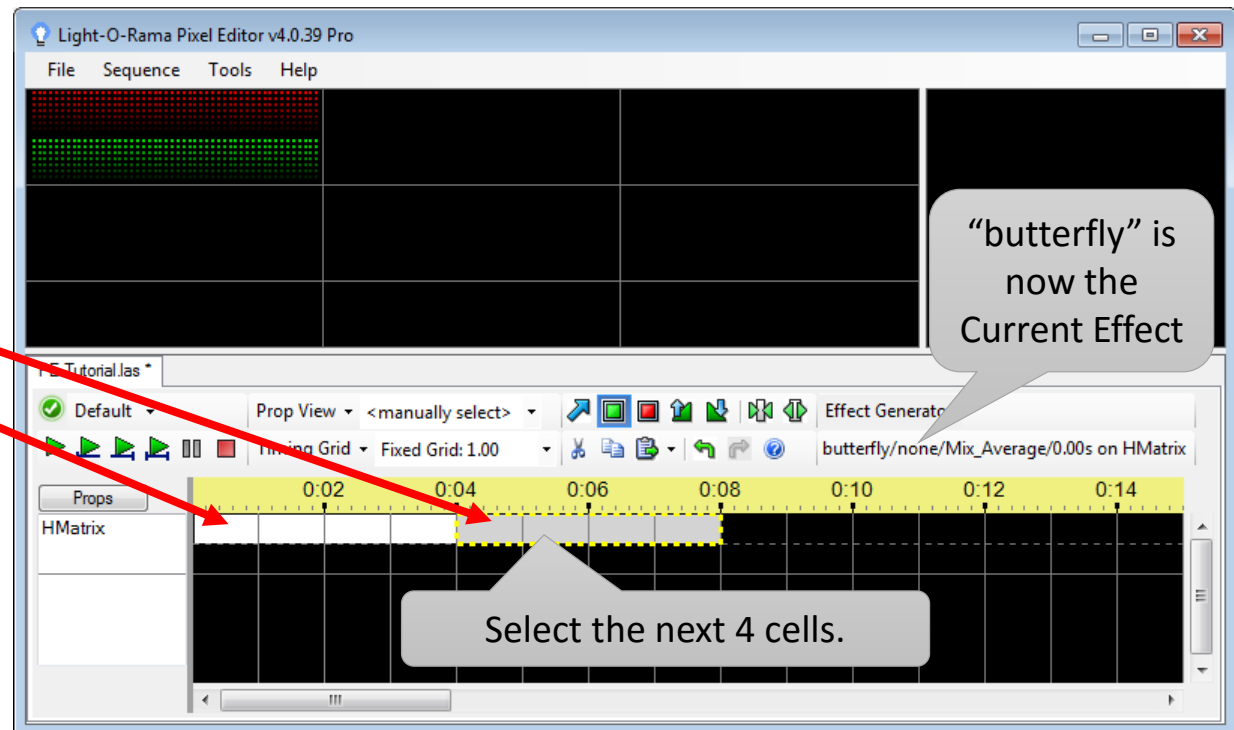
Select the “butterfly” Effect

- Reopen the Effect Generator
- Select “butterfly” from the left drop-down box
- Leave the butterfly controls at their default positions.
- Click “OK” to close the window.



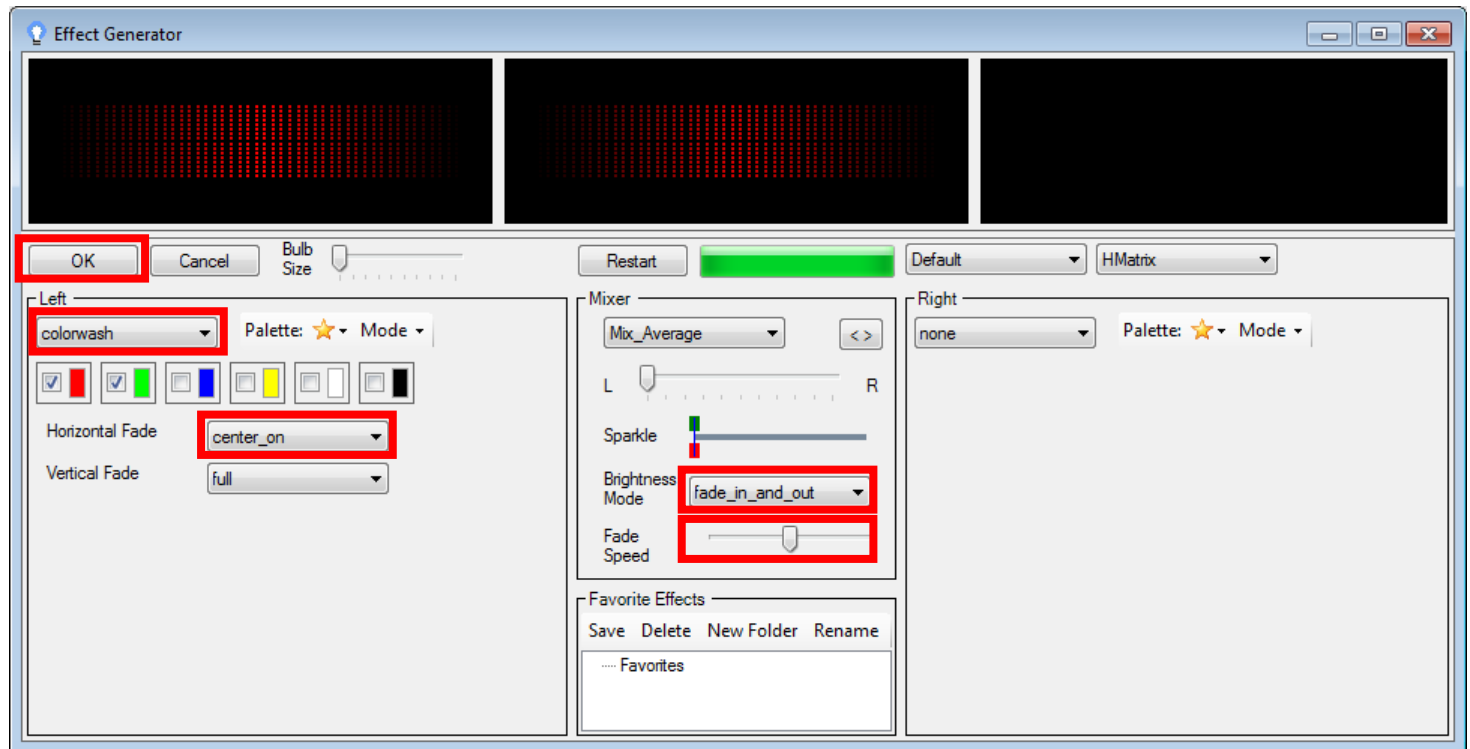
Add the Effect to the Sequence

On a given sequence row, the grid colors will alternate white and gray to indicate where one effect stops and the next one starts.

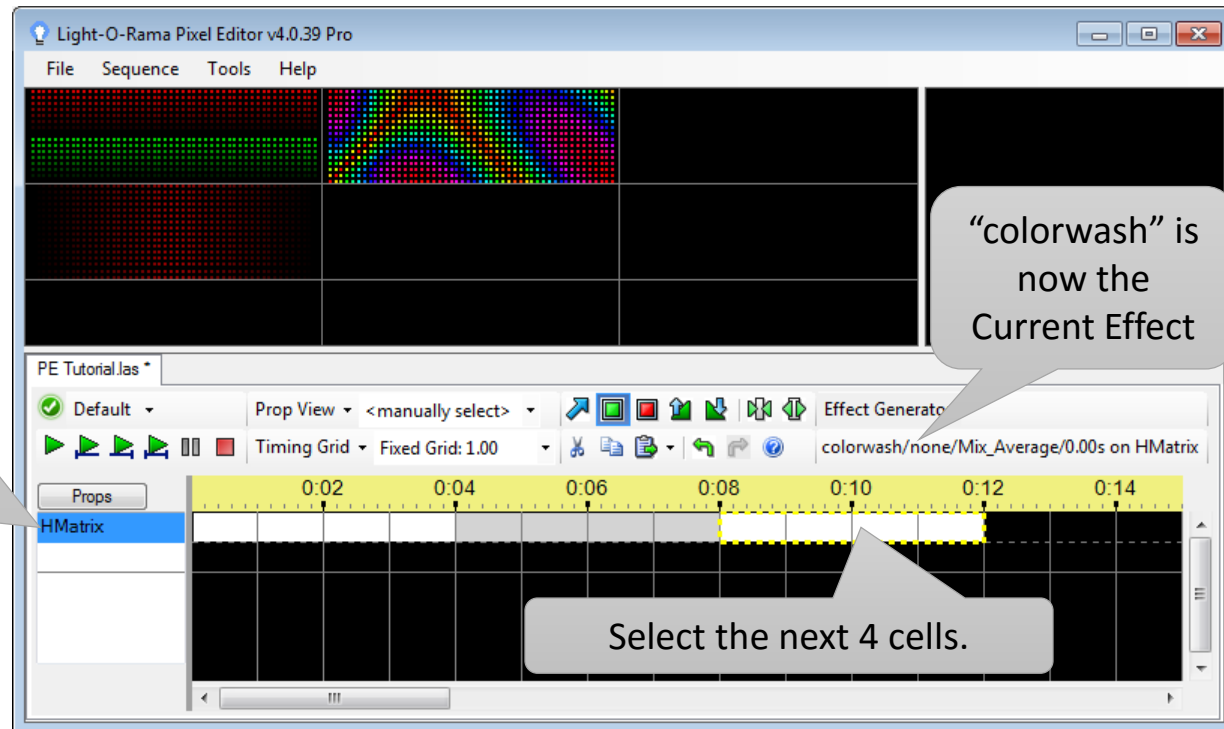


Select the “colorwash” Effect

- Select “colorwash” from the left drop-down box
- Set Horizontal Fade to “center on”.
- Set Mixer Brightness Mode to “fade in and out”.
- Move Fade Speed to about mid-position.
- Click “OK”

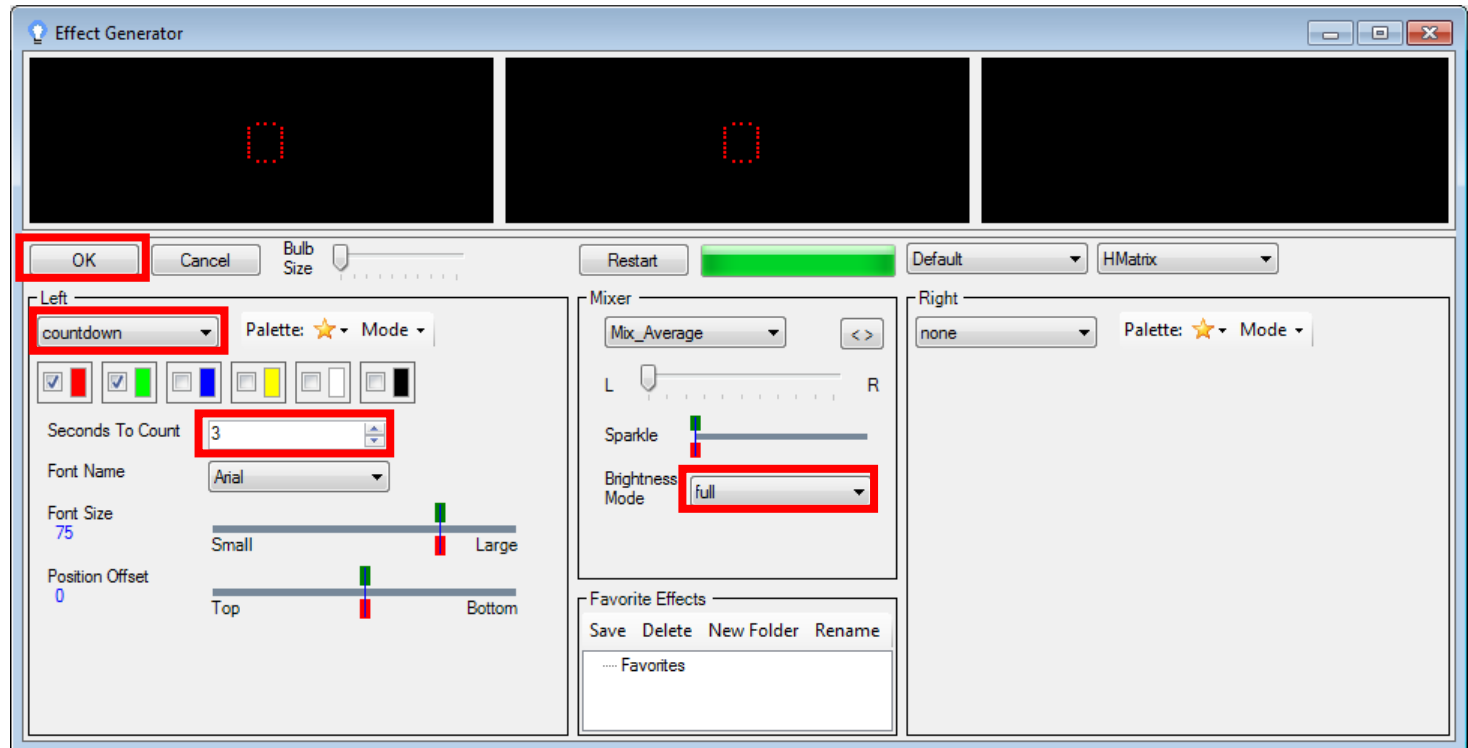


Add the Effect to the Sequence



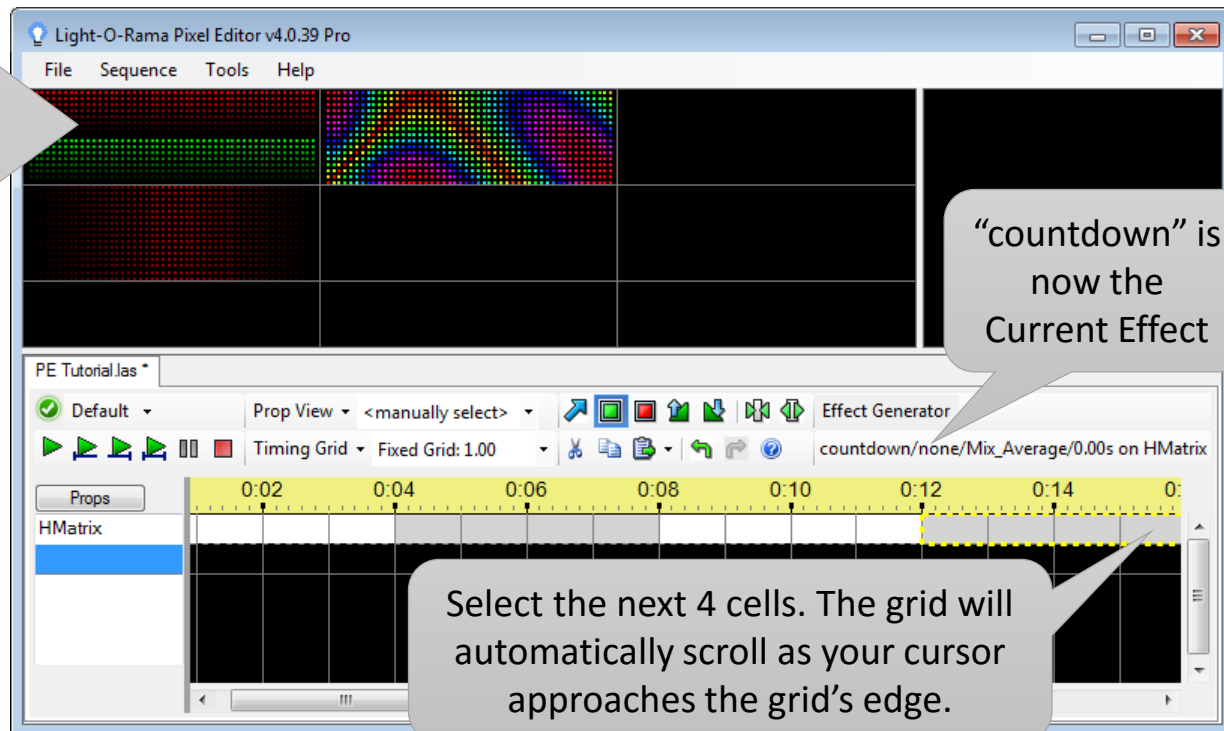
Select the “countdown” Effect

- Select “countdown” from the left drop-down box
- Set Seconds To Count to “3”.
- Reset Mixer Brightness Mode to “full”.
- Click “OK”



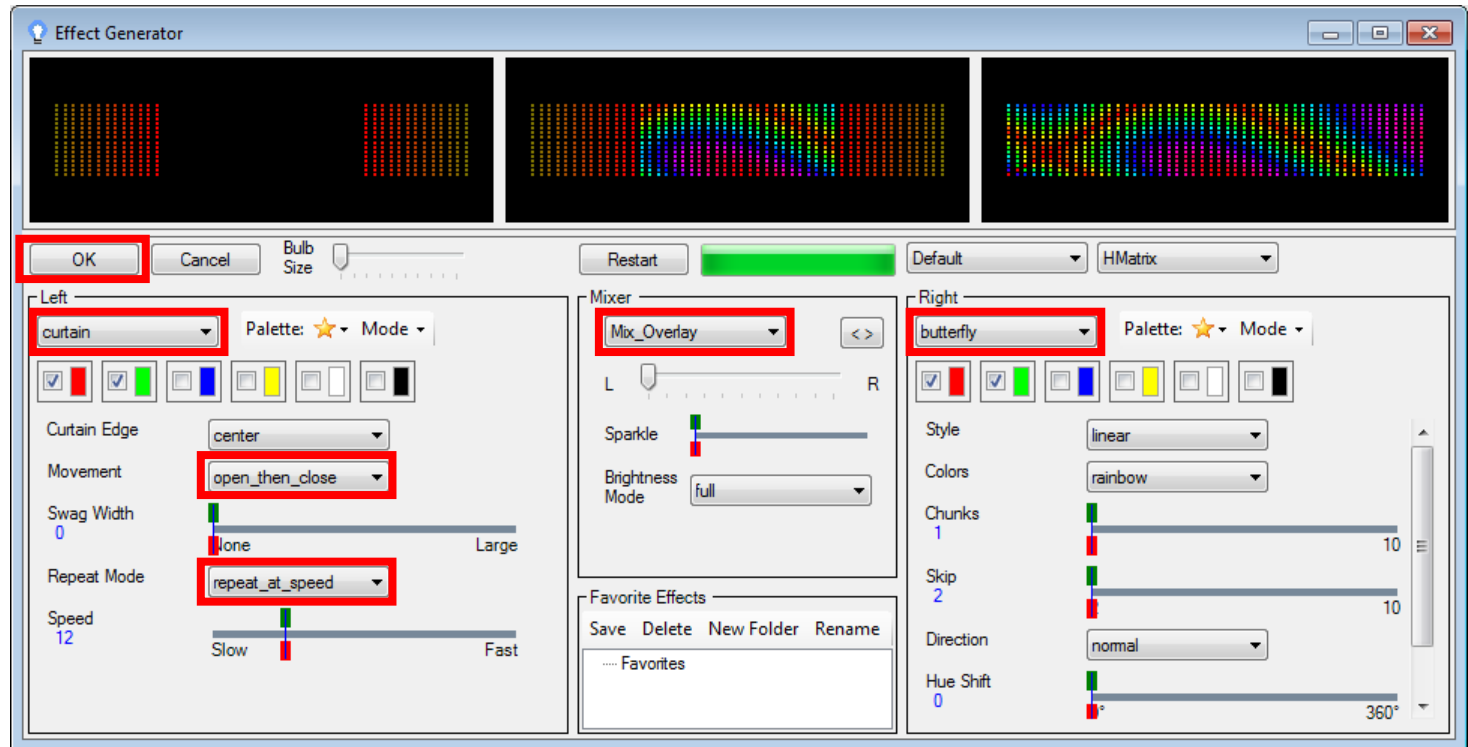
Add the Effect to the Sequence

Effects that you have used in the sequence appear here as thumbnails that you can click on to make it the Current Effect, or drag onto a grid cell.

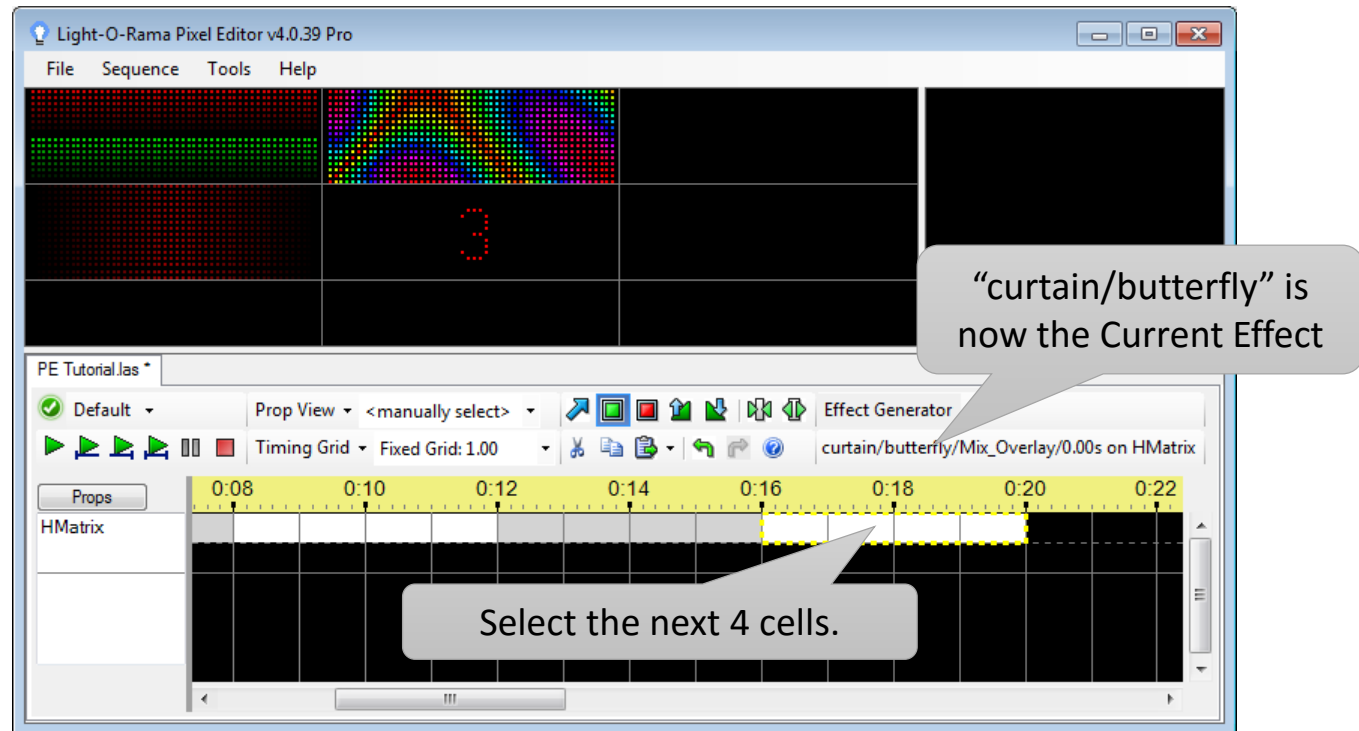


Select the “curtain” Effect

- Select “curtain” from the left drop-down box
- Set Movement to “open then close”
- Set Repeat Mode to “repeat at speed”
- Select “butterfly” from the right drop-down box
- Set Mixer to “Mix Overlay”.
- Click “OK”

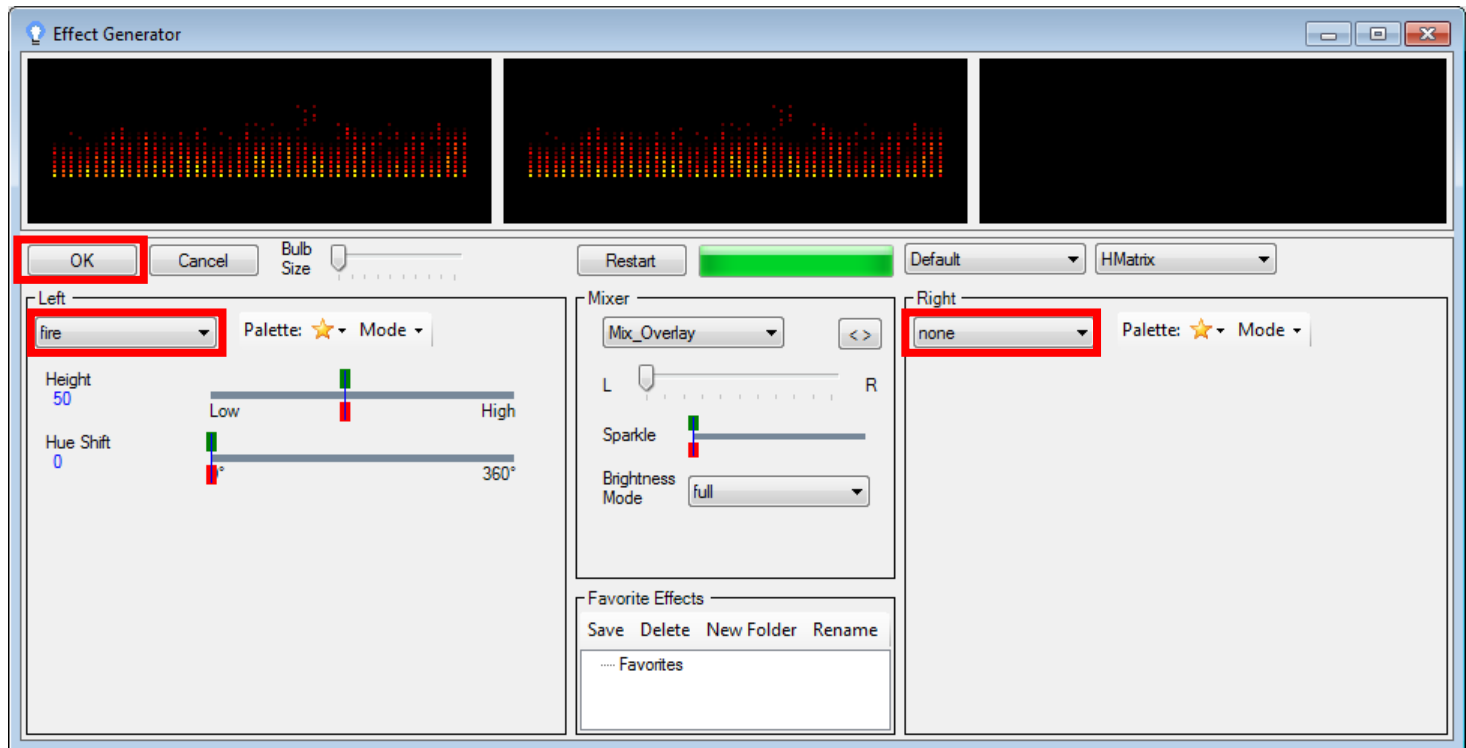


Add the Effect to the Sequence



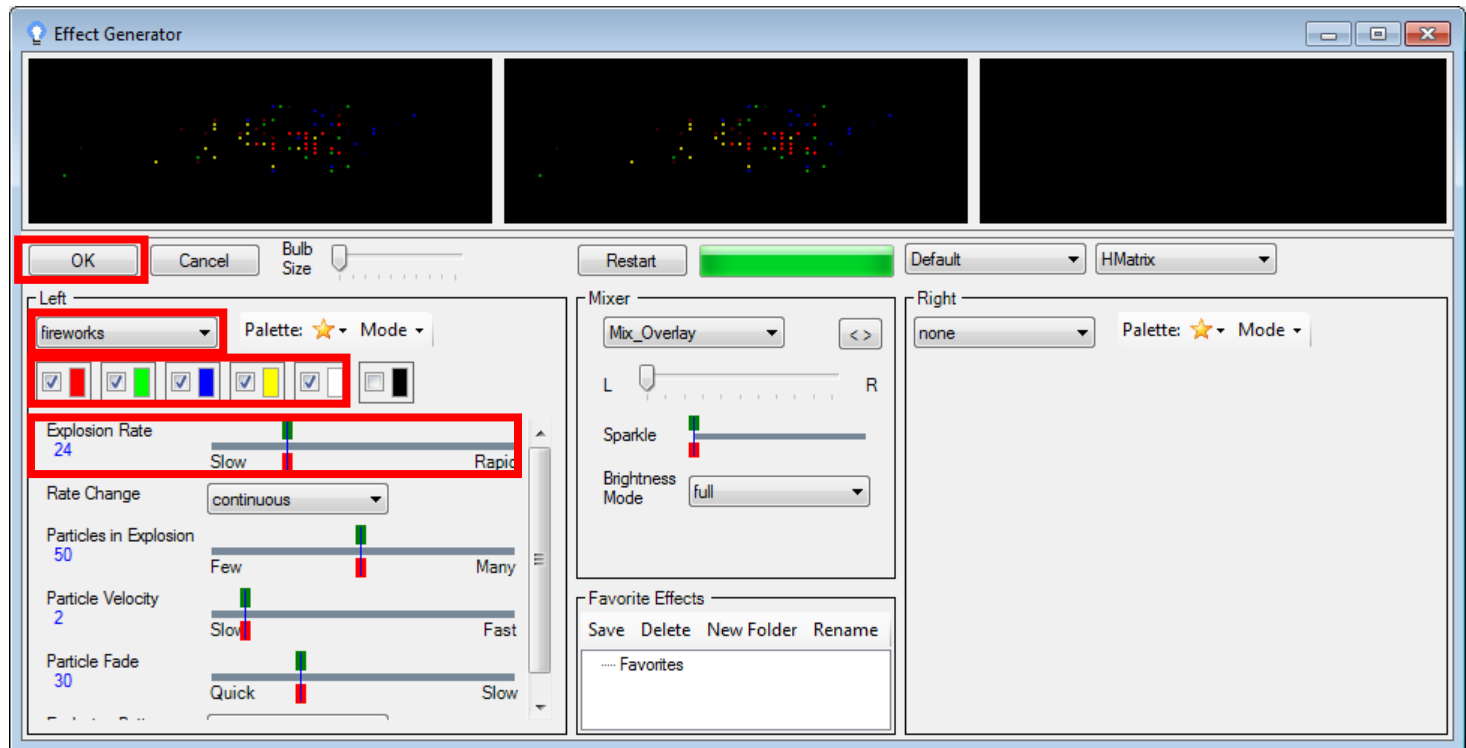
Select the “fire” Effect

- Select “fire” from the left drop-down box
- Select “none” from the right drop-down box
- Click “OK”
- Back in the grid, select the next 4 cells. Then Ctrl-S to save the sequence.



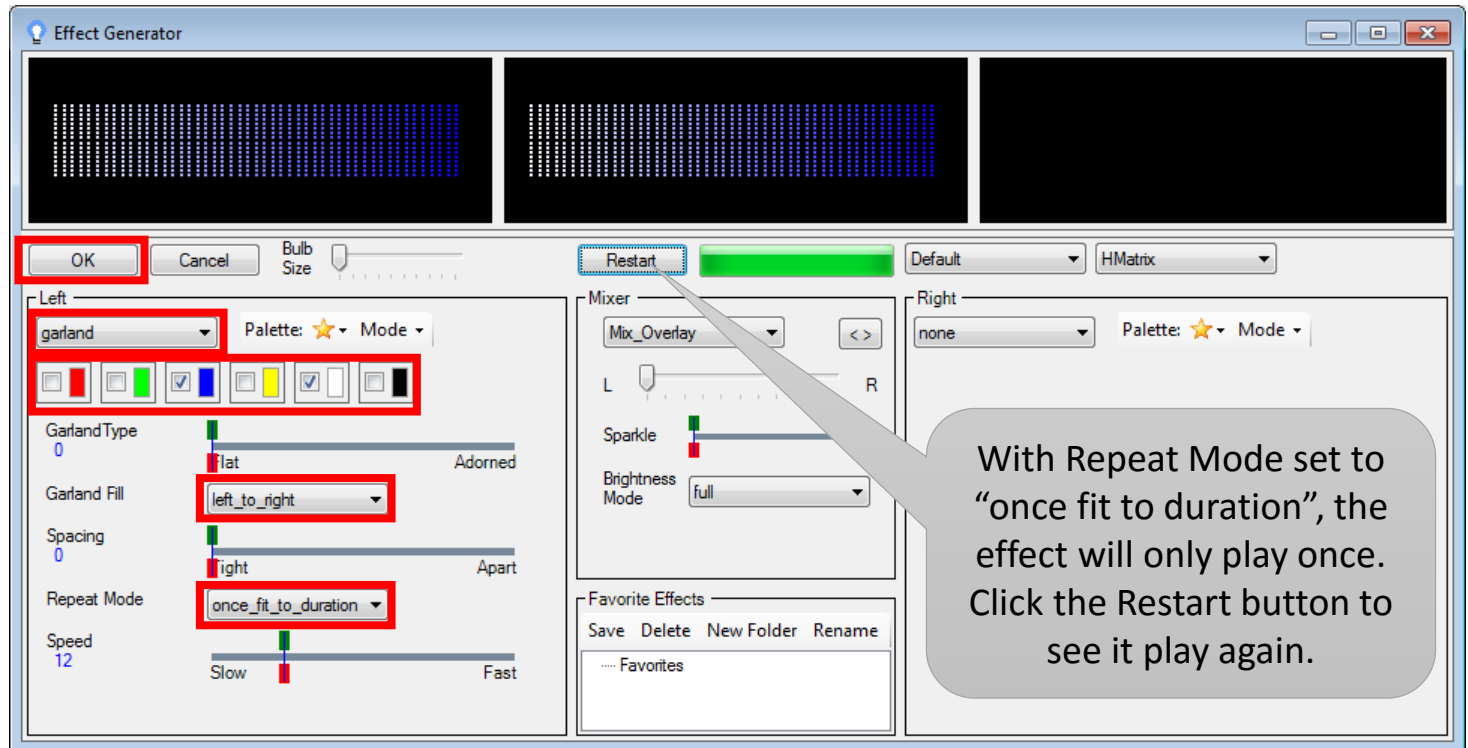
Select the “fireworks” Effect

- Select “fireworks” from the left drop-down box
- Select red, green, blue, yellow, and white color checkboxes
- Increase the Explosion Rate
- Click “OK”
- Back in the grid, select the next 4 cells.



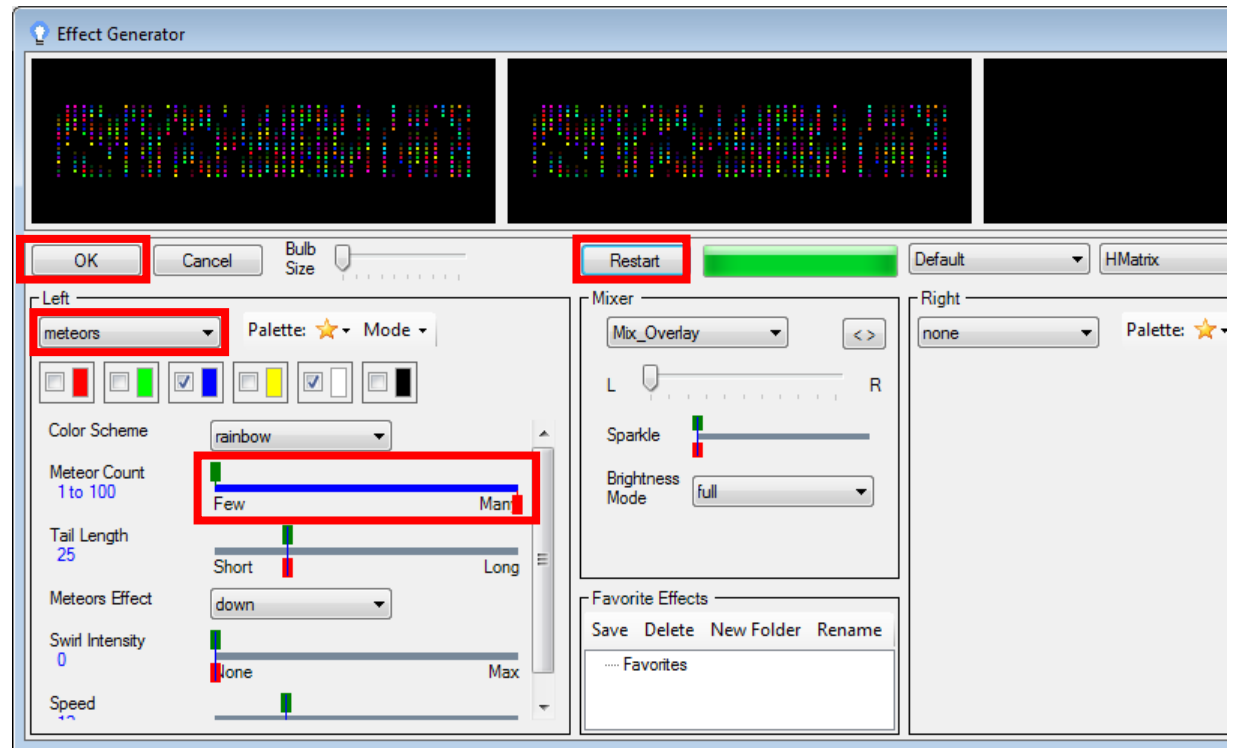
Select the “garland” Effect

- Select “garland” from the left drop-down box
- Select blue & white colors
- Change Garland Fill to “left to right”
- Change Repeat Mode to “once fit to duration”
- Click “OK”
- Back in the grid, select the next 4 cells.



Select the “meteor” Effect

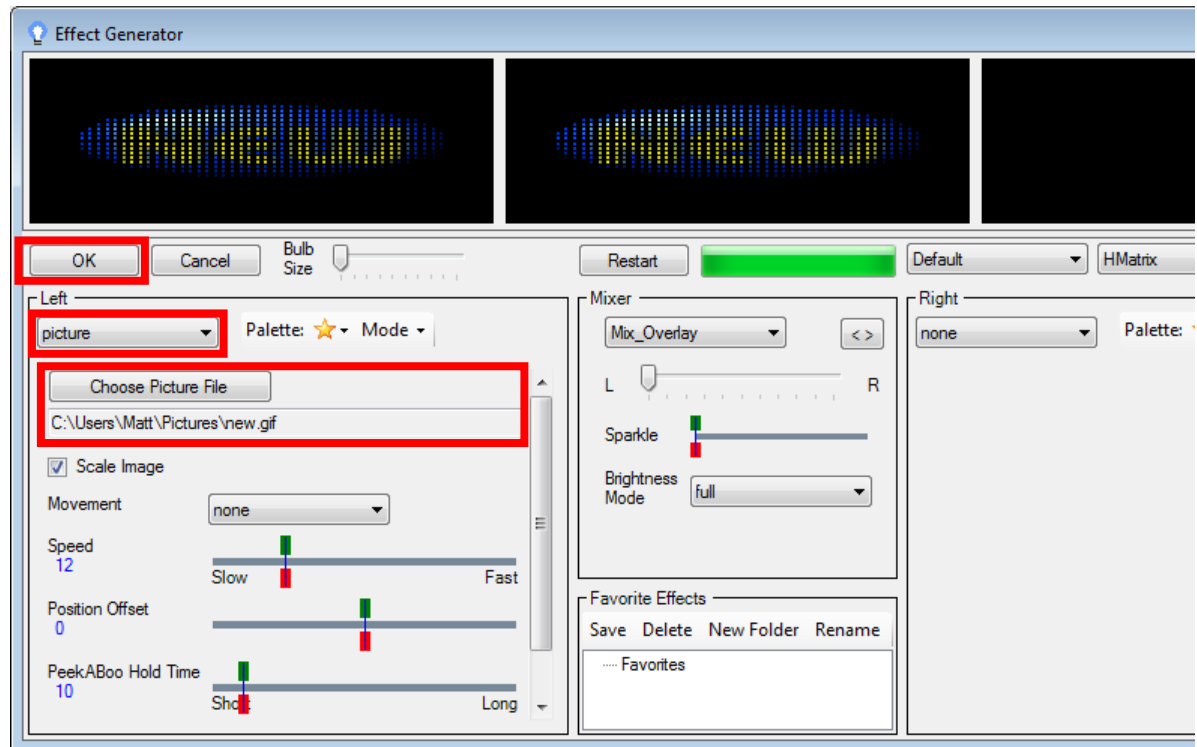
- Select “meteor” from the left drop-down box
- Colors don’t matter when Color Scheme is “rainbow”
- Double-click the Meteor Count slider to unlock start & end handles. Move start handle (green) all the way to the left. Move the end handle (red) all the way to the right.
- Click Restart to see how the number of meteors changes over time
- Click “OK”
- Back in the grid, select the next 4 cells.



Select the “picture” Effect



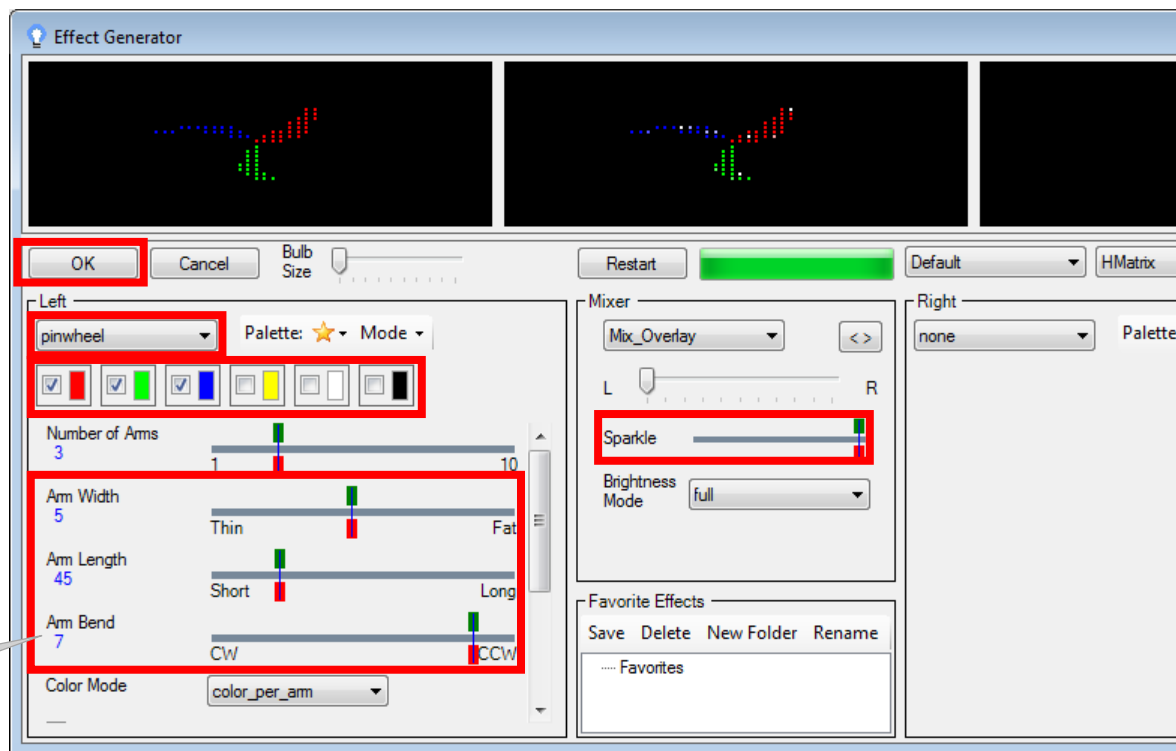
- Select “picture” from the left drop-down box
- Use Google to find an animated gif file that is close to the size of our prop (16x50). Save the file to your Pictures directory.
- Click the Choose Picture File button and from the open file dialog select the picture file you just downloaded. It should immediately start playing.
- Click “OK”
- Back in the grid, select the next 4 cells.



Select the “pinwheel” Effect

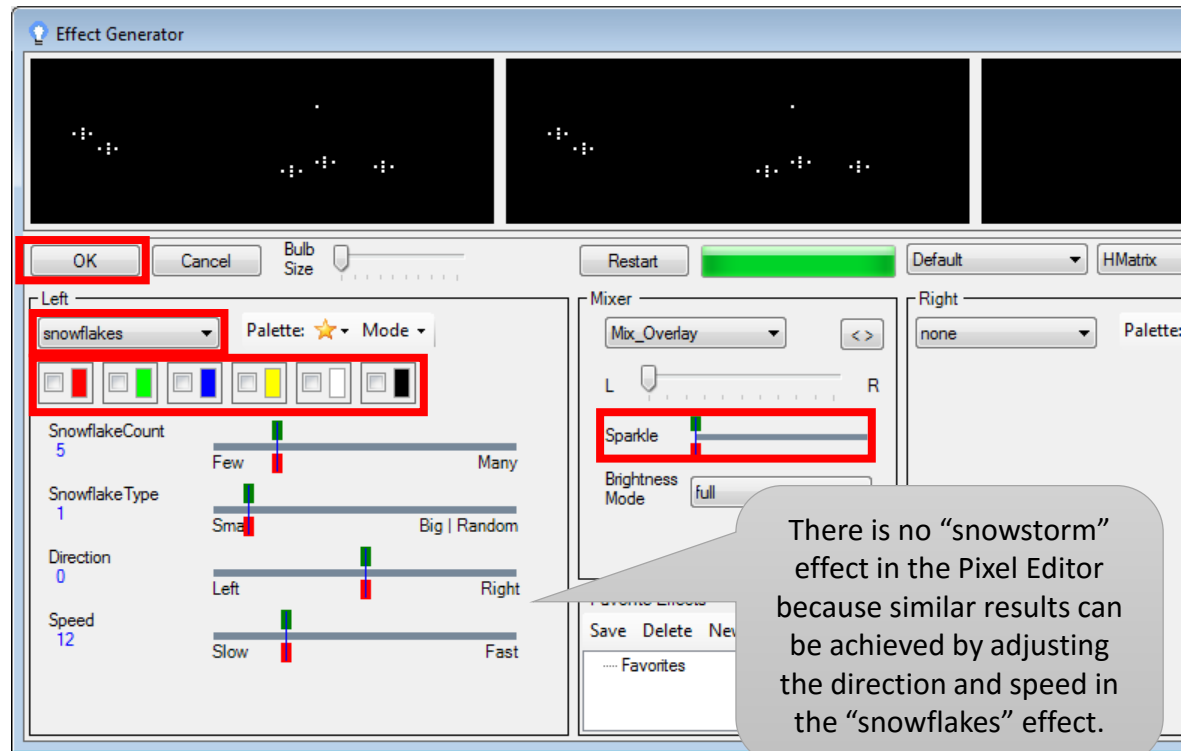
- Select “pinwheel” from the left drop-down box
- Select the red, green, and blue colors from the palette
- Increase Arm Width
- Decrease Arm Length
- Increase Arm Bend
- In the Mixer section, set Sparkle to the max value
- Click “OK”
- Back in the grid, select the next 4 cells.

Numeric values allow you to match the setting exactly



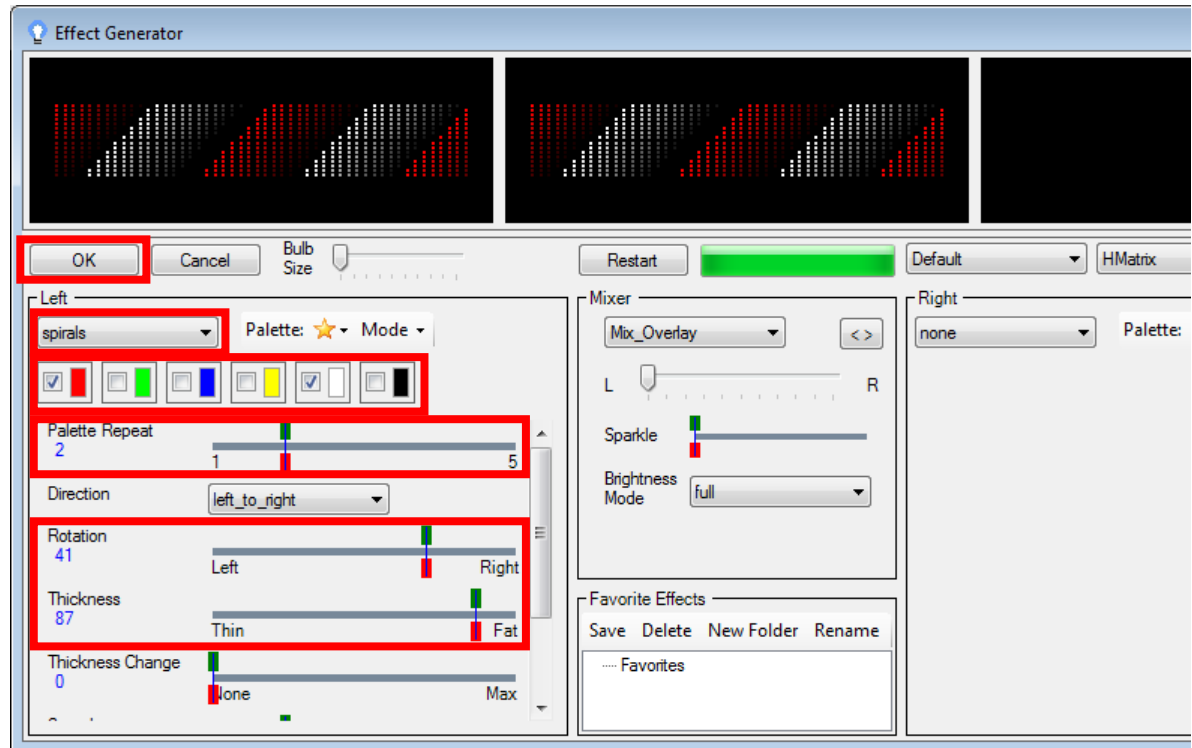
Select the “snowflakes” Effect

- Select “snowflakes” from the left drop-down box
- Deselect all colors from the palette. Notice how it defaults to white.
- Change Snowflake Type to “1”
- In the Mixer section, reset Sparkle to the min value
- Click “OK”
- Back in the grid, select the next 4 cells. Then Ctrl-S to save the sequence.



Select the “spirals” Effect

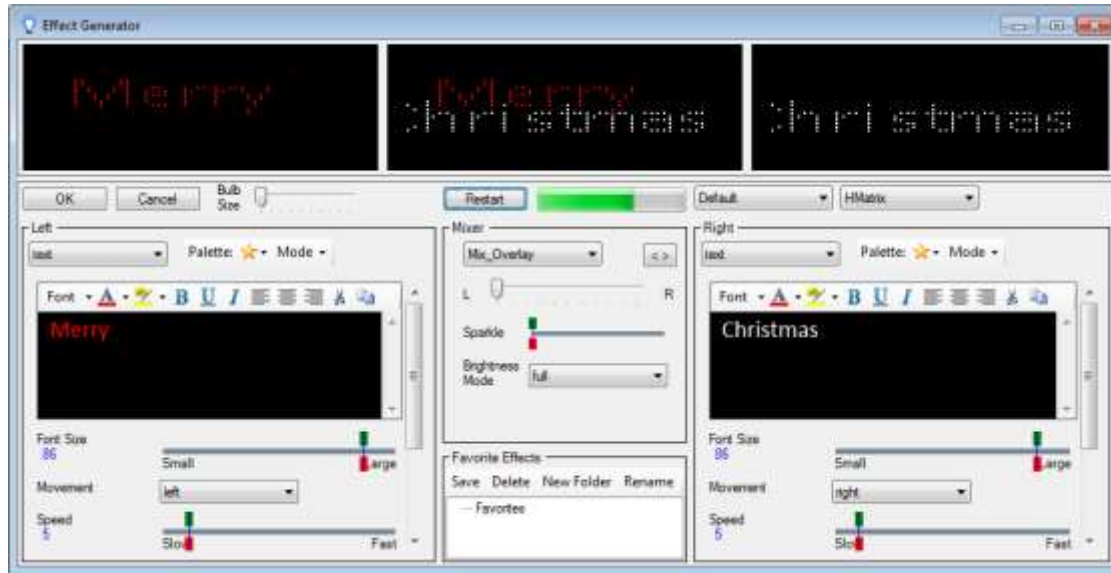
- Select “spirals” from the left drop-down box
- Select red and white colors from the palette.
- Set Palette Repeat to “2”
- Increase Rotation
- Increase Thickness
- Click the “Show 3D” checkbox (you will need to scroll to the bottom of the parameter settings)
- Click “OK”
- Back in the grid, select the next 4 cells.



Select the “text” Effect

Left Side

- Select “text” from the drop-down box
- Enter “Merry” in the text box. Select the text and change the color to red. Change the font to “Calibri” or “Lucida Sans” if you have it.
- Set Font Size to about 86
- Set Movement to “left”
- Set Speed to about 5
- Adjust Position so that text is against the top edge

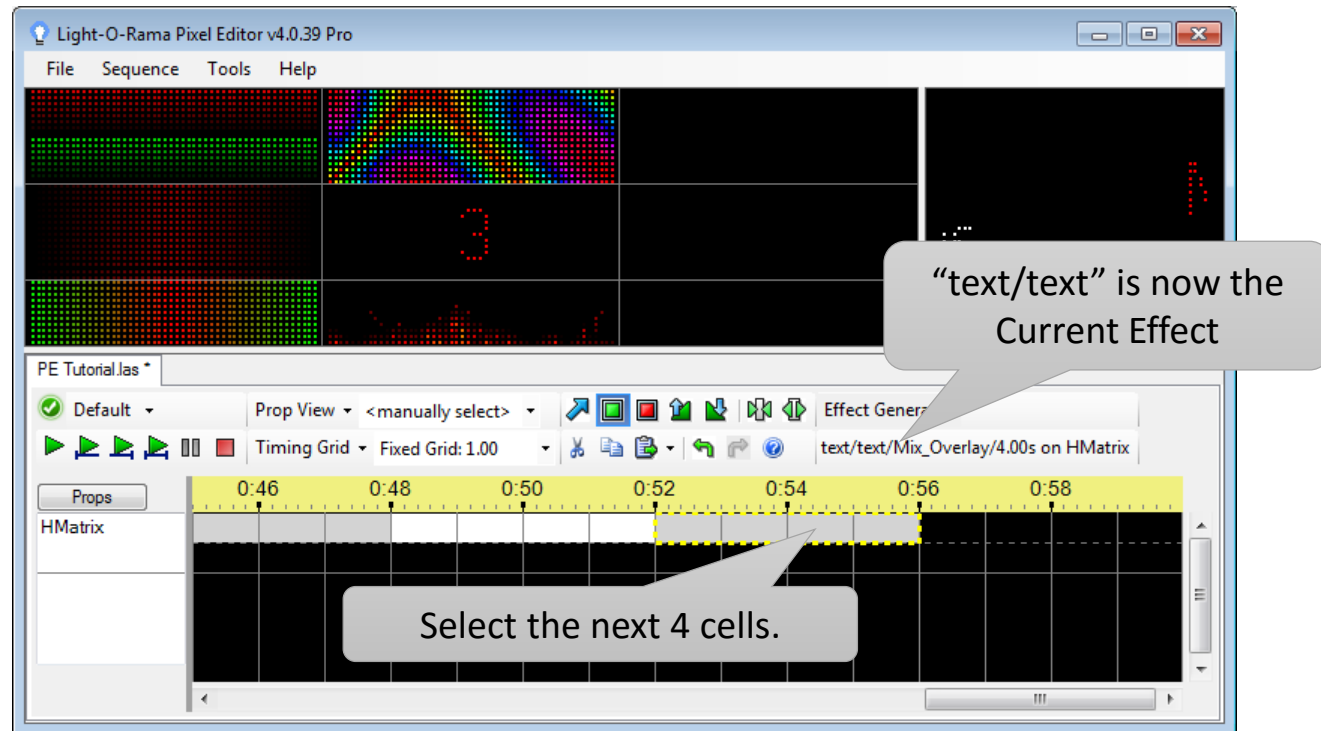


Click “OK” when you are satisfied with the result

Right Side

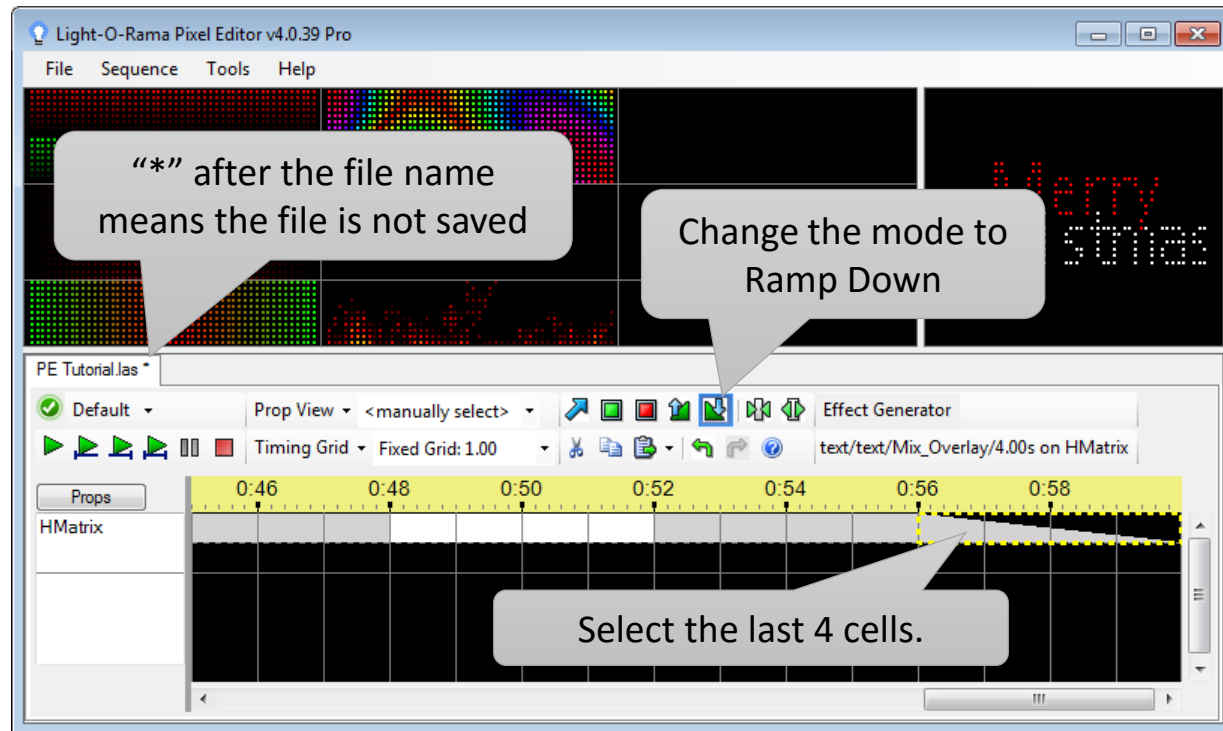
- Select “text” from the drop-down box
- Enter “Christmas” in the text box. Select the text and change the color to white. Change the font to “Calibri” or “Lucida Sans” if you have it.
- Set Font Size to about 86
- Set Movement to “right”
- Set Speed to about 5
- Adjust Position so that text is against the bottom edge

Add the Effect to the Sequence



Complete the Sequence

When you
are done,
type
Ctrl-S
to save
the
sequence



Play Back the Sequence

The screenshot shows the Light-O-Rama Pixel Editor v4.0.39 Pro interface. The main workspace is divided into two panels: a left panel showing a grid of colored pixels and a right panel showing a preview of the sequence. The right panel displays the text "Merry Christmas" in a stylized font. Below the main workspace is a toolbar with various icons for editing and playback. A callout points to the "Play from the beginning of the sequence to the current location" button (a green triangle). Another callout points to the "Play the visible portion of the sequence" button (a green triangle with a double arrow). A third callout points to the "Play from the current location to the end of the sequence" button (a green triangle with a double arrow). A fourth callout points to the "Play the full sequence" button (a green triangle with a double arrow). A fifth callout points to the "Timing Grid" dropdown menu, which is set to "Fixed Grid: 1.00". A sixth callout points to the "Props" list, which includes "HMatrix". A seventh callout points to the "Effect Generator" panel, which shows the text "text/text/Mix_Overlay/4.00s on HMatrix".

Play from the beginning of the sequence to the current location

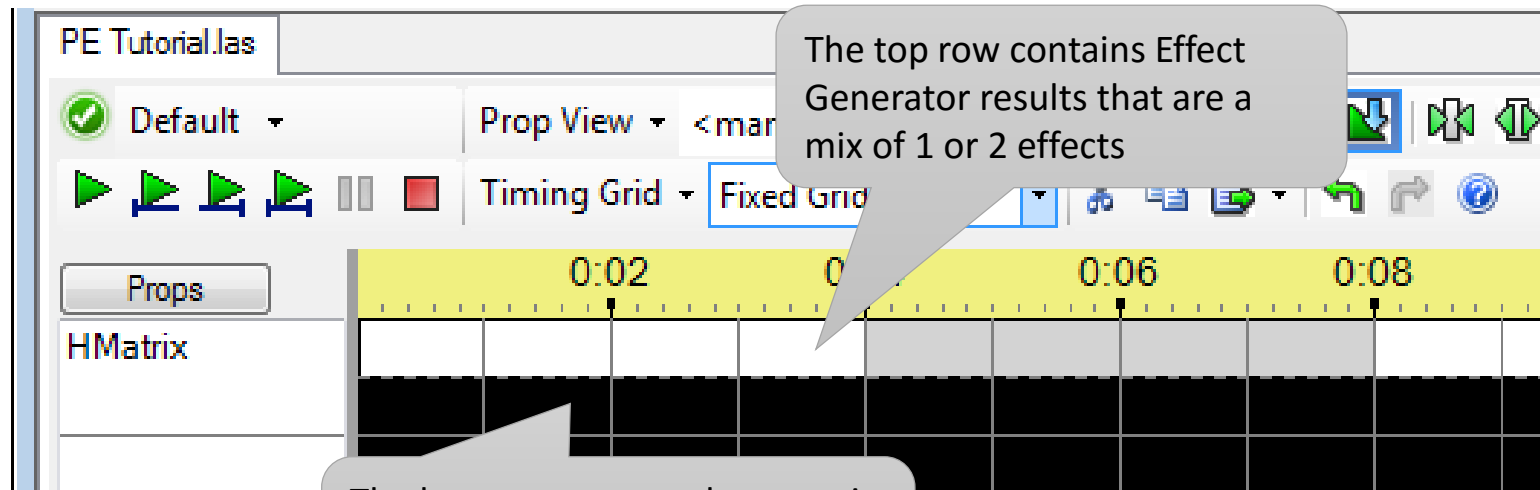
Play the visible portion of the sequence

Play from the current location to the end of the sequence

Play the full sequence

You can also play back a specific prop - preview will play in the left window and the effects for the selected prop will play in the right window. To do this, right-click on a prop name and select one of the choices from the pop-up menu. As a shortcut, you can double-click on a prop name to play the visible portion of the sequence.

2 Sequence Rows Per Prop



The bottom row can also contain Effect Generator results that are a mix of 1 or 2 effects

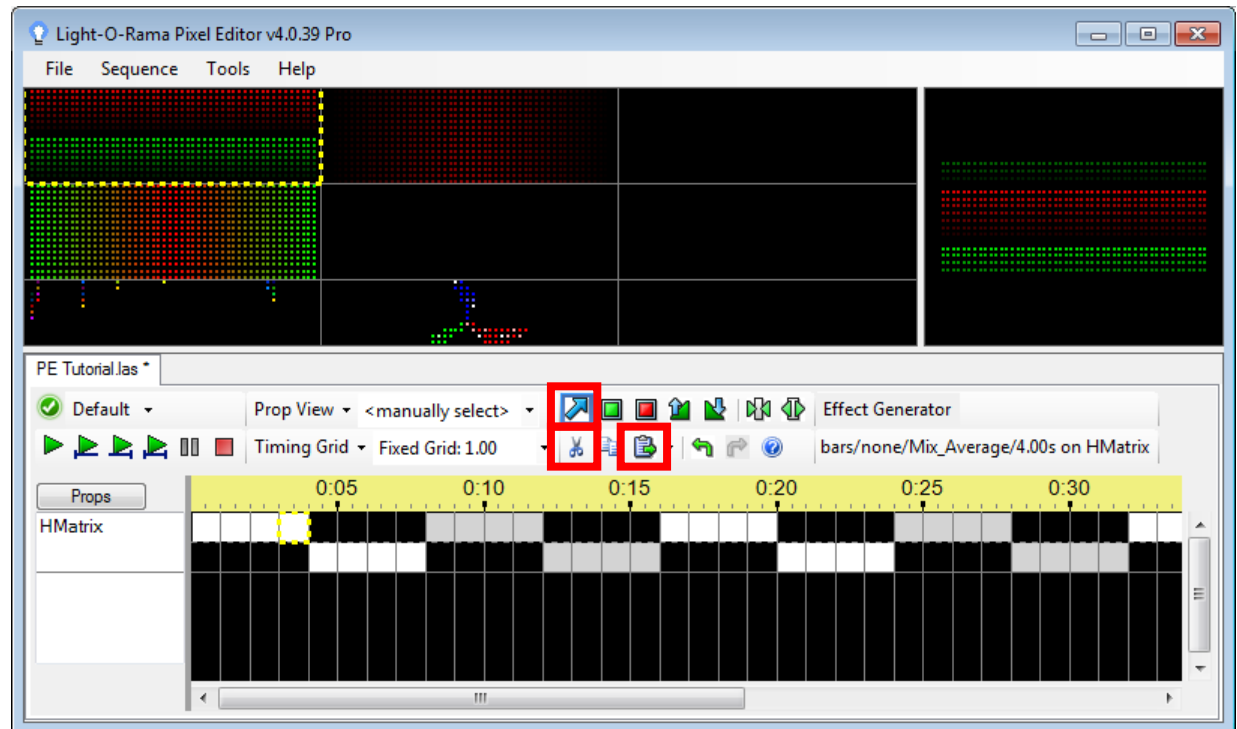
The 2 rows are mixed together to produce the final effect for the prop

Smooth Transitions

- In the sequence we have created so far, effects transition abruptly one to the next.
- Now we are going to modify the sequence so each transition is smooth (crossfade).

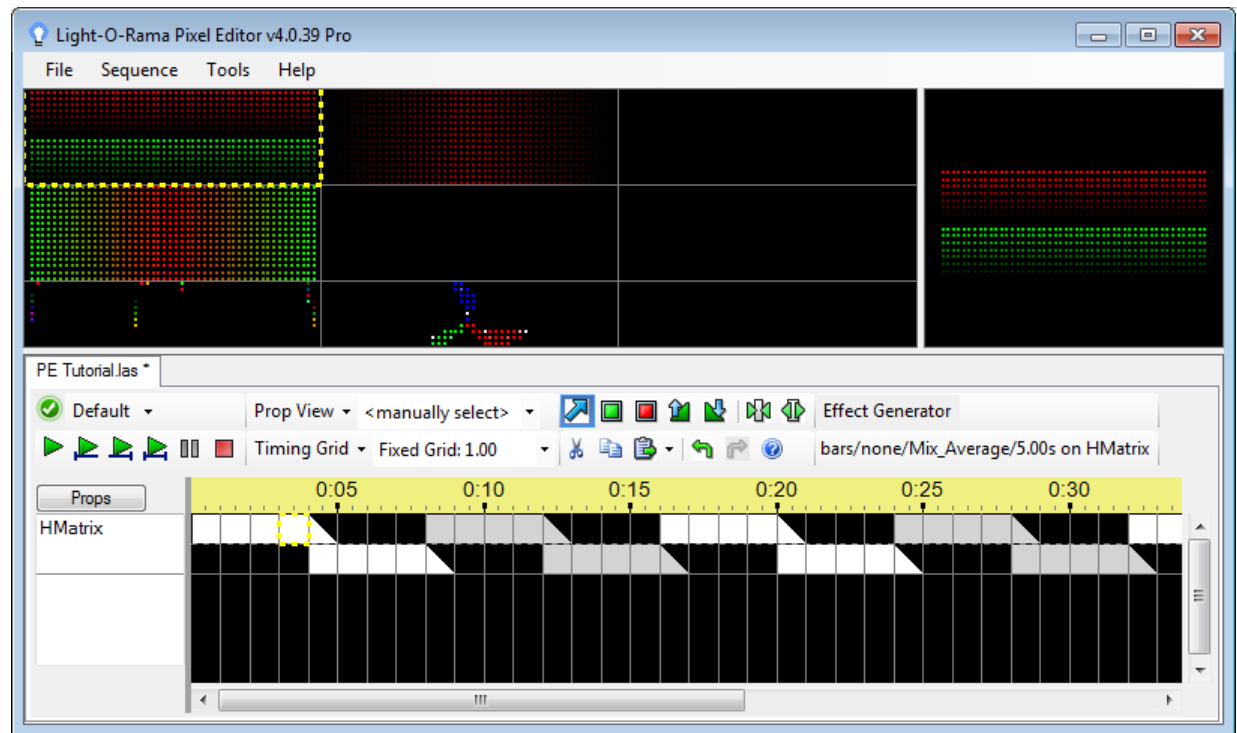
Move Effects to the Bottom Row

- Move every other effect from the top row to the bottom row
- Click the Arrow icon to go into selection mode.
- Select all the cells of an effect using the mouse. Then click the scissors icon to cut, or use the Ctrl-X shortcut key.
- Select the destination grid cells using the mouse. Then click the clipboard paste icon, or use the Ctrl-V shortcut key.
- Repeat until you reach the end of the sequence.
- The result is shown on the right.



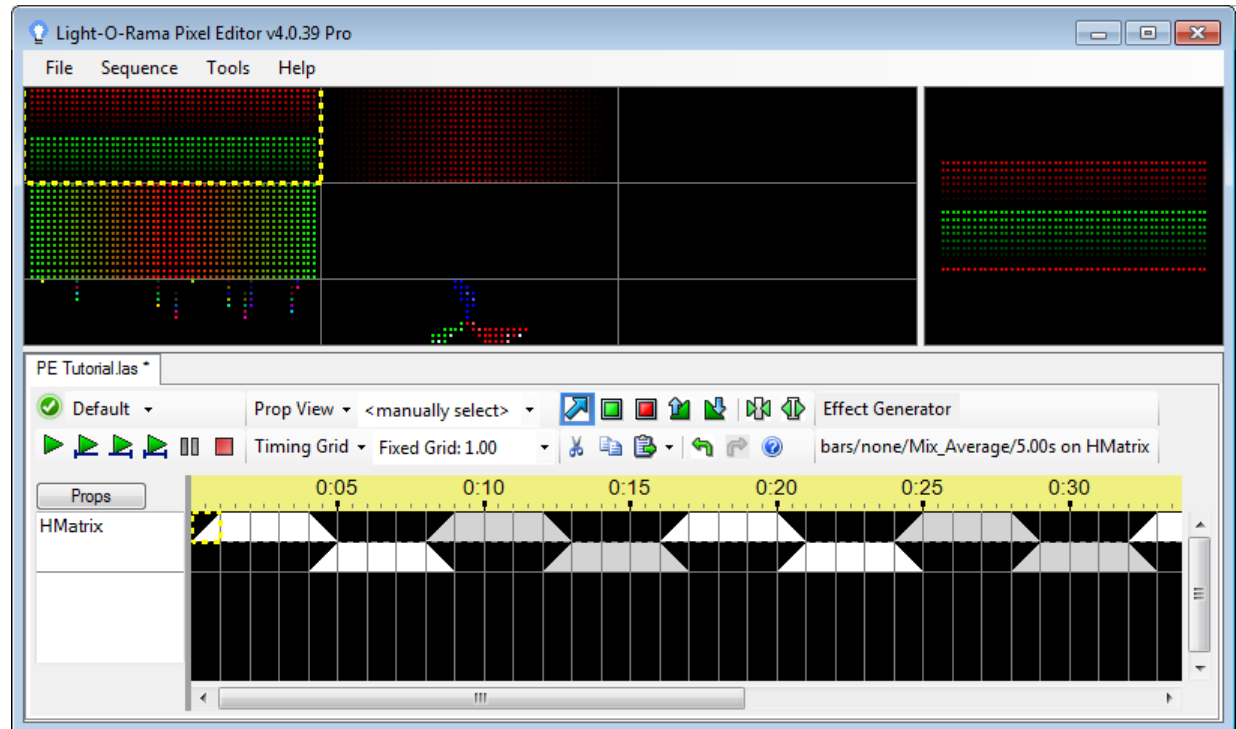
Add Fade Out Transitions

- Add a fade out to every effect, both top and bottom rows.
- Click the last cell in an effect. This causes that effect to be the Current Effect.
- Now click the empty cell to the right. Then type the “D” shortcut key (fade down).
- Repeat for every effect.
- The result is shown on the right.



Add Fade In Transitions

- Change the first cell in every effect to a fade in/up, both top and bottom rows.
- Click the first cell in an effect. This causes that effect to be the Current Effect. Then type the “U” shortcut key (fade up).
- Repeat for every effect.
- The result is shown on the right.
- Type Ctrl-S to save!



Success!

- The sequence looks much better now with smooth transitions.
- You have successfully created a Pixel Editor sequence and used every effect (except movie).
- **Congratulations** and enjoy using the Pixel Editor!

Participate in the Pixel Editor forum on the Light-O-Rama web site to ask questions and find the latest information.