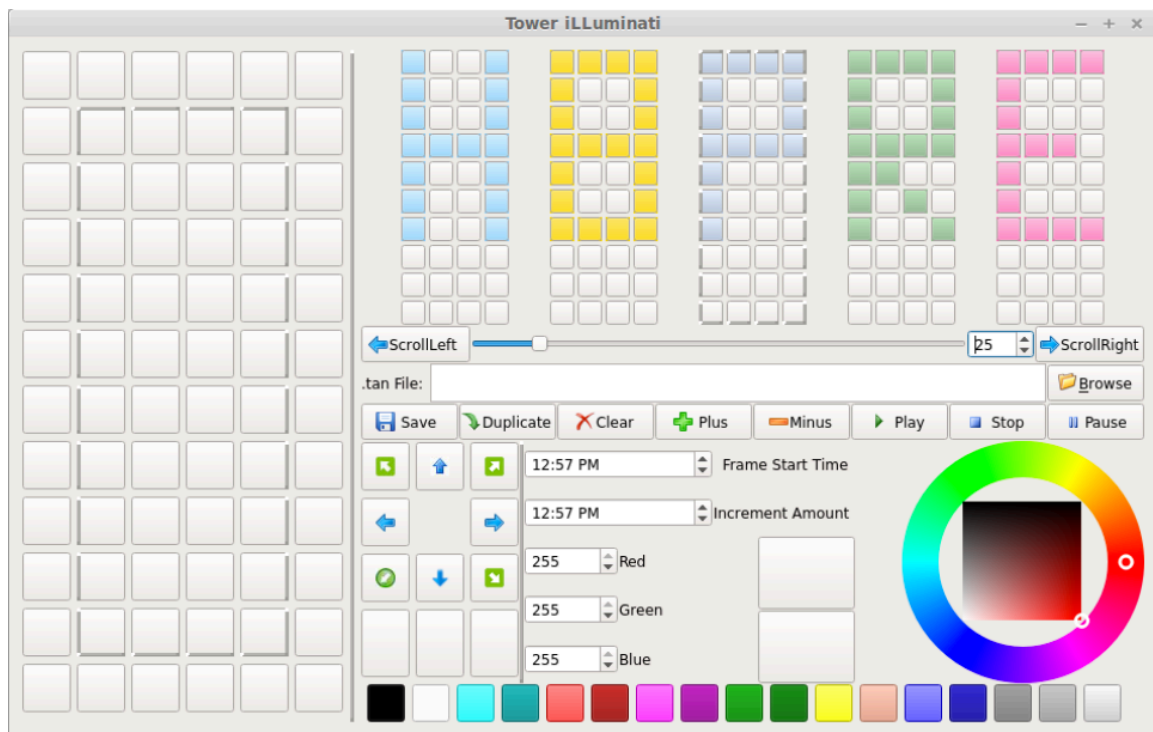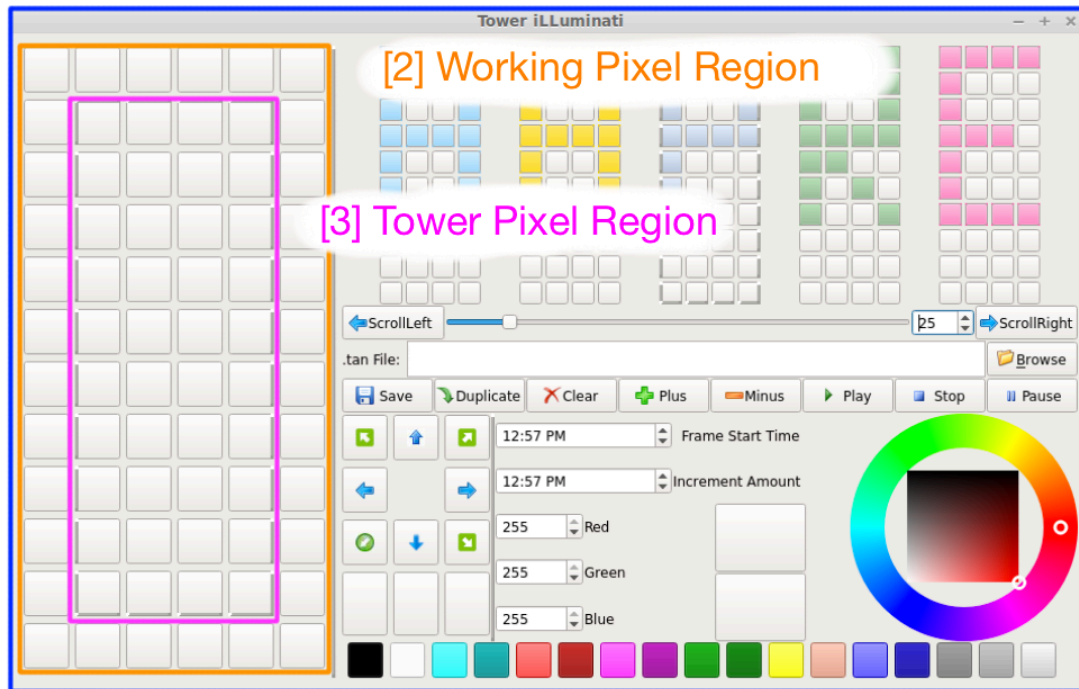# Tower Animator Documentation

Tower iLLuminati Team

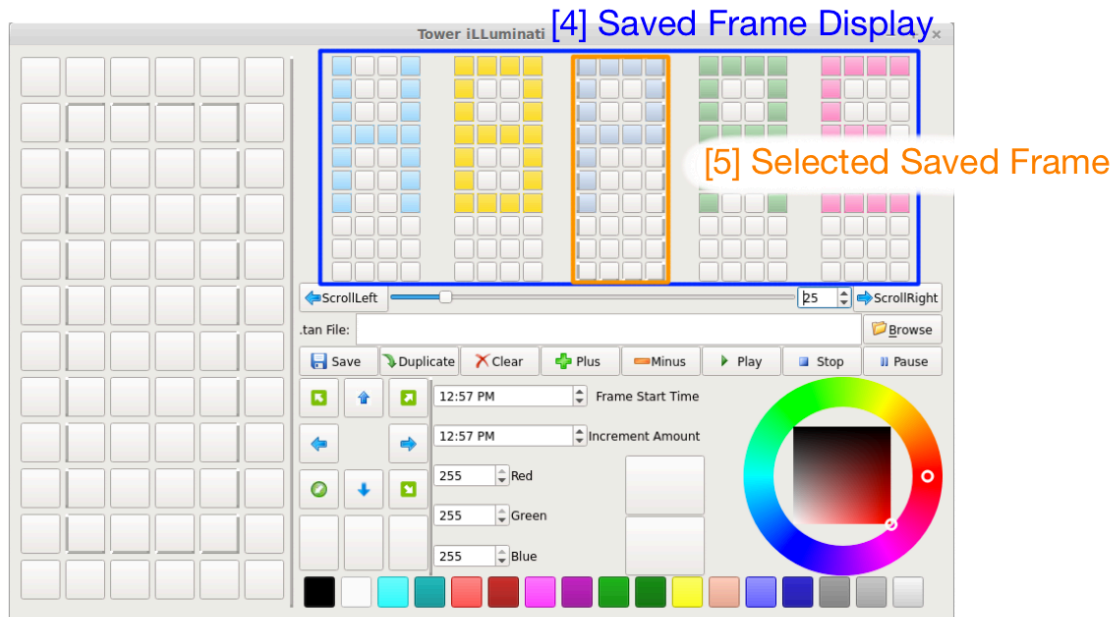**Paul Bailey, Heyan Huang, Emeth Thompson, Ranger Adams, Matt Brown**

[1] Tower Animation GUI

[1] Tower Animation GUI - A Graphical User Interface for creating .tan files to be used as input in the University of Idaho Tower Animation Light Show.
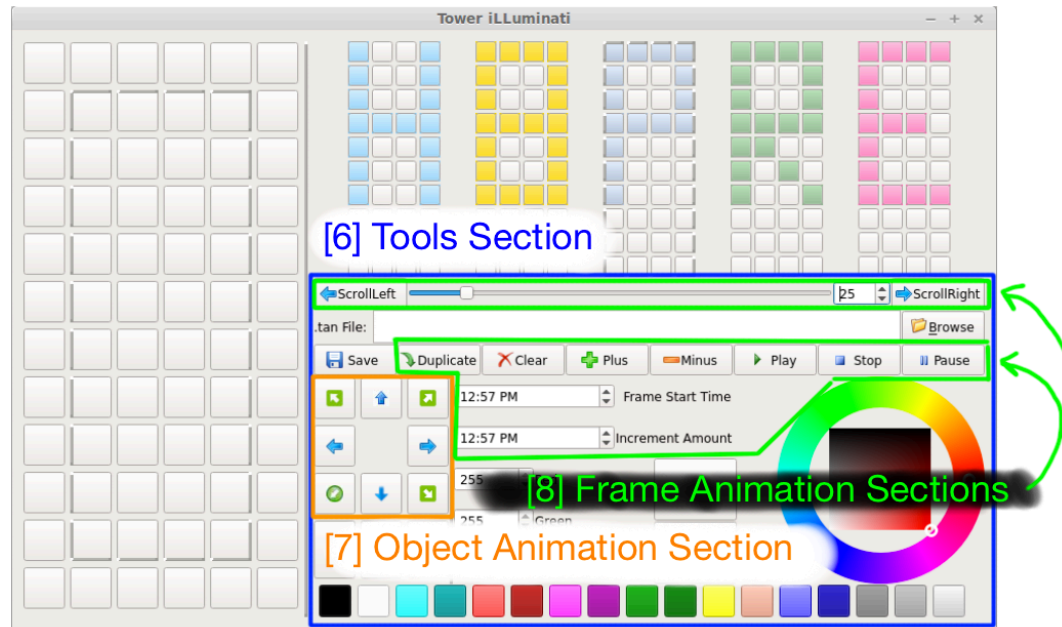
[2] Working Pixel Region – This pixel region is to be used as a canvas. Inside of this region, the tower (outlined in magenta) will be able to move around the canvas. In the final implementation, the Working Pixel Region will extend much farther beyond the tower region than shown in this illustration. We estimate that the size of the canvas will be somewhere in the neighborhood of 60 pixels wide by 30 pixels high.

[3] Tower Pixel Region – This region will be able to move within the bounds of the Working Pixel Region. The pixels, which fall inside the Tower Pixel Region, represent the pixel colors, which can be saved into a light show frame.

[4] Saved Frame Display – Shows a sequence of up to five consecutive frames within the saved light show display. This allows a user work to do work on the current frame and simultaneously view the two preceding frames as well as the two following frames.
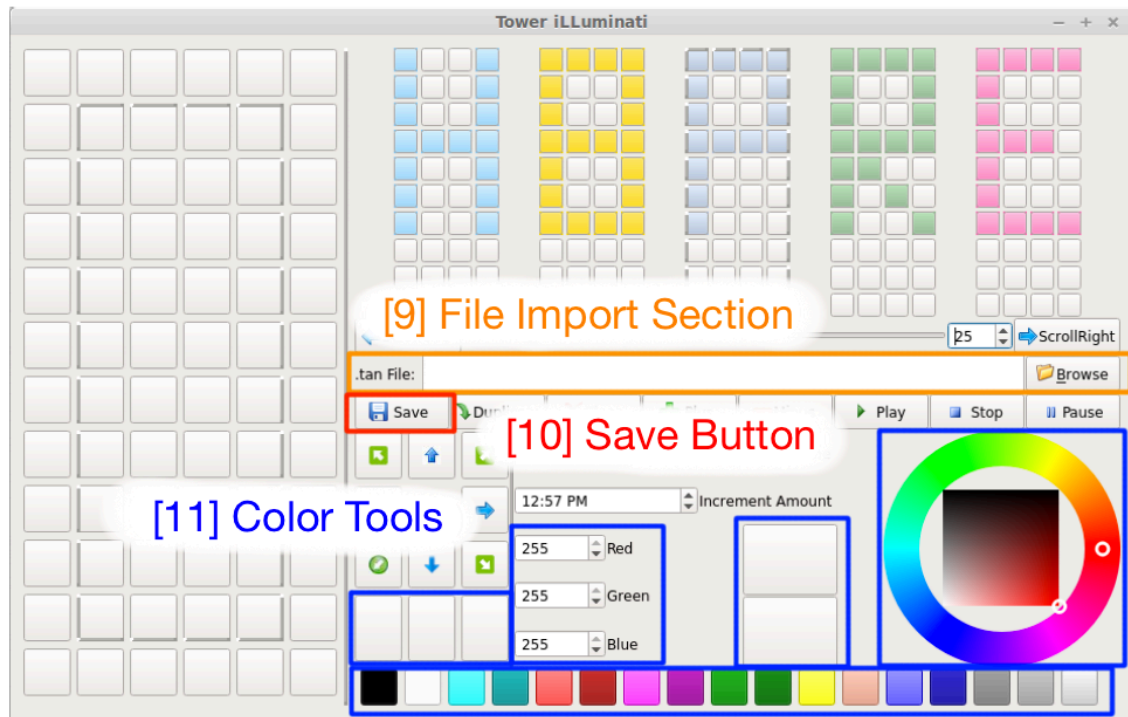
[5] Selected Saved Frame – This frame is used as a reference for a multitude of operations including, copying, inserting and deleting frames. This frame can be copied by selecting the duplicate button, cleared of its current attributes by selecting the clear button, deleted by selecting the minus button, and a new frame can be inserted in into its location by selecting the plus button.

[6] Tools Section – This section contains all of the buttons, sliders, frame manipulators, and color pallets necessary to create a tower animation .tan file.

[7] Object Animation Section – A toggle button will be added in the middle this section. The toggle button will allow a user to switch between Object Mode and Tower Mode. When in Object mode this region is used to move pixel objects across the Working Pixel Region. The pixel objects can be selecting by shift-clicking or control-clicking a group of pixels. Once the objects are selected, they can be moved by clicking the appropriate arrow buttons. When in Tower mode, the Tower Pixel Region can be moved by clicking the appropriate direction arrow.

[8] Frame Animation Section – This section provides tools, which allow a user to manipulate the frame sequences of a light show. The clear, duplicate, plus and minus buttons are described in section [5]. The play stop and pause buttons allow the user to view the light show sequence as it would play out in a real show. The user can select "scroll left" or "scroll right" to move the Selected Saved Frame, one frame at a time in the desired direction. If the user needs to scroll through slides at a faster rate, they can move quickly between slides by toggling the slider bar in this section. The final attribute in this section allows the user to input a specific frame that they would like to become the Selected Saved Frame.

[9] File Import Section – Allows the user to browse for an existing .tan file and import it into the current project.

[10] Save Button – Saves the current animation progress.

[11] Color Tools – The bottom row of this section displays a pallet of common colors that a user may desire to use. There are two additional pallets (a group of three rectangles and a group of two rectangles) pictured in this section, which can also be used to save user selected colors. The user can create a new color with the RGB tool or the paint wheel and add it to either of these palates by clicking on the desired pallet rectangle. To add color to a pixel in the animation, a user can click any color within a pallet, then click on the desired pixel within the Working Pixel Region to change it's color.