Eric Lazarski
Lights Program Test Plan

Opening a properly formatted .tar.gz file ('File'->'Open Song') will load a song into memory and the song title will display on the list on the right side of the window. Inside of a .tar.gz is a set of files without extensions. The ones that begin with 'i' followed by a number are input. The number represents the input channel. The files that begin with 'o' followed by a number are for output. Again, the number represents the channel. The files that have only 'p' or 'm' are for measures or parts. In order for these files to be properly formatted, they have a time followed by the note numbers on a single line. They are sequential based upon time, the order of the notes does not matter.

Opening up an improperly formatted file will result in an error.

Clicking on the 'MIDI' option will bring up a MIDI Selection window. Selecting ports to act as input and others to act as output should be reflected when playing a song.

The PLAY button will start listening for keyboard input. It is disabled if a file is not loaded in memory and MIDI devices have not been selected. If a control keyboard was not specified during MIDI selection, the program starts 'playing' the song immediately. If one was specified, it waits for note 37 (C#3) to be played as a start signal.

Playing the expected song specified by the file on the input keyboards will result in output being played over the output port that was specified during MIDI selection.

When incorrect notes are played, the program will attempt to find where the musician is most likely at in the specified song. If a possible note is found within the next four, it will immediately move there. Otherwise, it waits until 4 notes are played at a possible place until it officially moves there. When it moves to a new place in a song, it will output all of the notes it was supposed to from where it used to be up until where it is now.

If only incorrect notes are played, the program will not output anything over the output port.

When note 39 (D#3) is played on the control keyboard, the program interprets a STOP message and it will stop playing the current song and return to the READY state where a song can be started from the beginning.

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When note 41 is played on the control keyboard, the program moves ahead a 'measure' in the song. The locations of measures was specified in the file called 'm' in the .tar.gz file.

When note 43 is played on the control keyboard, the program will move backwards a 'measure.'

When note 45 is played on the control keyboard, the program will move ahead a 'part' in the song. The locations of parts were specified in the file named 'p' in the .tar.gz file.

When note 47 is played on the control keyboard, the program will move backwards a 'part.'

When note 61 is played on the control keyboard, the program will temporarily stop listening for input and will wait for note 63 on the control keyboard for it to start listening again.

If a note other than the above ones are played on the control keyboard, an error is thrown to stderr but the program continues execution normally.

When the STOP button is clicked the program stops listening for input and resets all songs that are currently loaded.

When a second file is loaded, it will will appear underneath the first one in the list on the right side of the window. These songs can be reordered by selecting one and clicking the up arrow or the down arrow on the left of the list. These changes are reflected in memory when it comes time to play a song.

When a setlist is loaded, it will load all songs specified in the file into memory.