

Time Delay Device Files Documentation

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All of the documentation concerning the auxilliary files for the project is assembled here. What follows is a description of the contents of each directory.

- **adjustable-delay**: Schematics and ideas for implementing adjustable delay in the circuit. The subdirectory **Linear** contains a tentative schematic (KiCAD files and PDF) of a circuit that implements the different clock frequencies by counting, while **Arbitrary** gives what I have so far in creating an arbitrary delay circuit.
- **arduino**: The code uploaded to the Arduino Due.
- **characterization**: Contains many different parts of the code used to analyze the characterization data for the device, and includes instructions on how to program the history.
- **doc**: The top-level documentation directory (this one).
- **fifo-p3f**: The KiCAD files for the device, as well as a schematic PDF and the gerber files that I sent for manufacture.
- **figures**: The images and GNUPlot code used to create the figures for the paper.¹
- **program-rescaling**: The code used to calculate the gain and offset resistor values to be optimal, given the constraints of E-series values and the overall resistances needed.
- **triangle**: The code used to generate the spumpus (initial history signal) for the triangle-DDE (relay-control) circuit in the paper. This is a good starting point if you want to program something different.

¹*Spumpus* stands for spiky lumpus, where *lumpus* refers to a lumpy-looking signal. We want a strange signal for the programming to demonstrate that it is really *arbitrary*.