Mains Dimmers

And how (not) to work with mains voltage

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DMX

- Previous talk on DMX
- Now I've made the other end
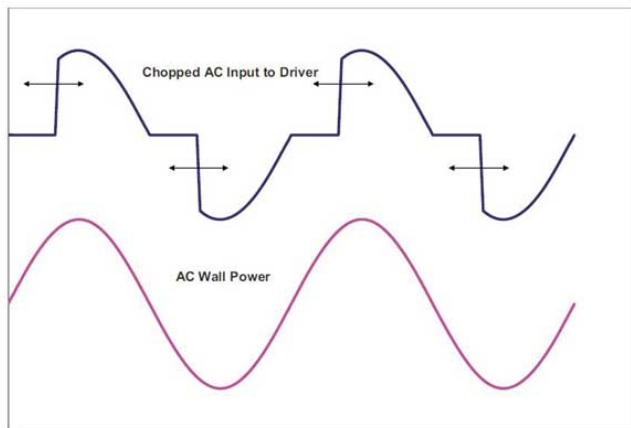- A mains dimmer

Background Approach

- BIG potentiometer (used to work that way)
- Instead we slice the waveform
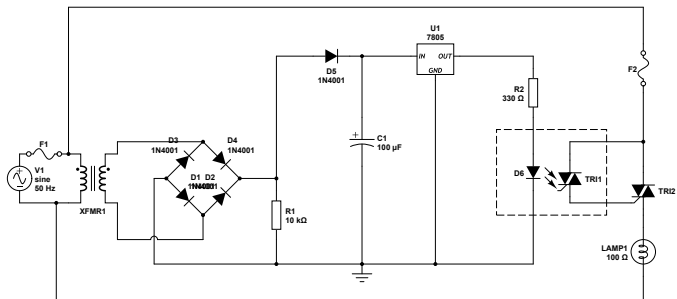- TRIAC work for this

TRIAC

- TRIACs are (essentially) 2 back to back thyristors
- Turns on when triggered
- Turns off only when supply hits 0v (ish)

Waveform Slicing

- Mains hits 0v 100 times a seconds (twice a cycle)
- Detect the 0 cross and time as far as you need

Chopped AC Input to Driver

AC Wall Power

Waveform Slicing

The Internet

Slides Available at `http://sucs.org/~eclipse`

Questions?

Any Questions?