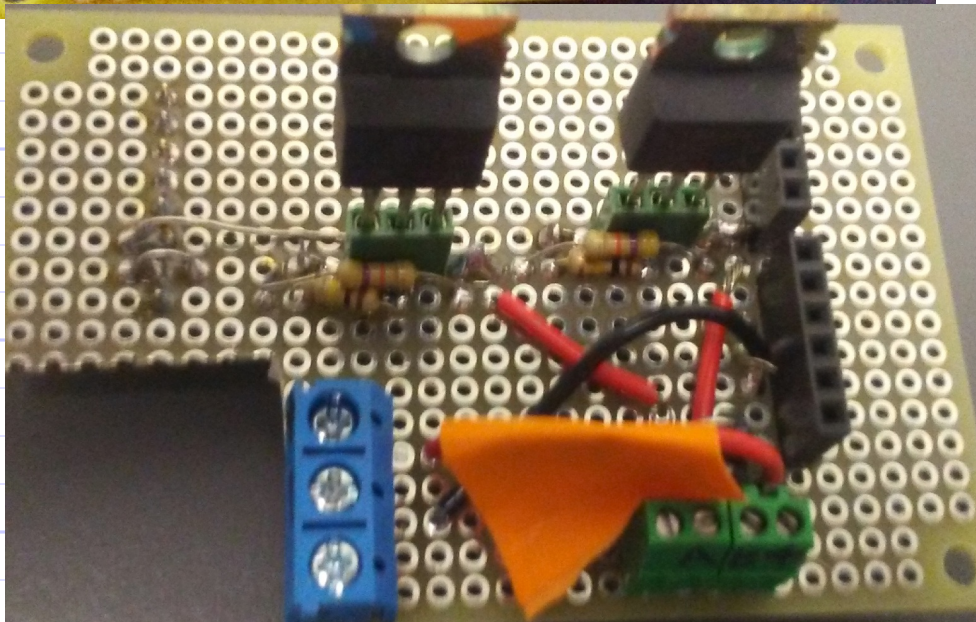
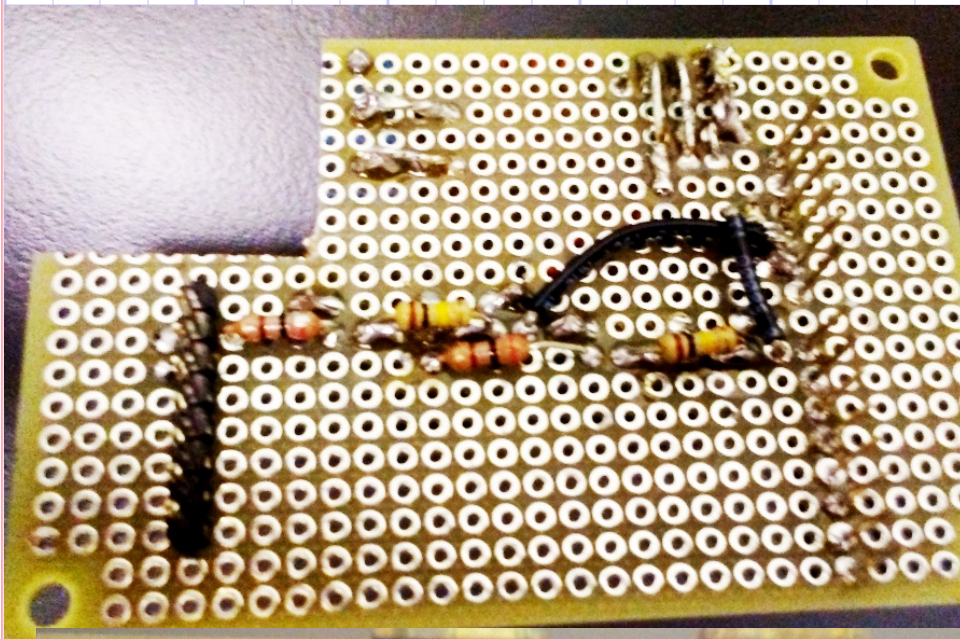
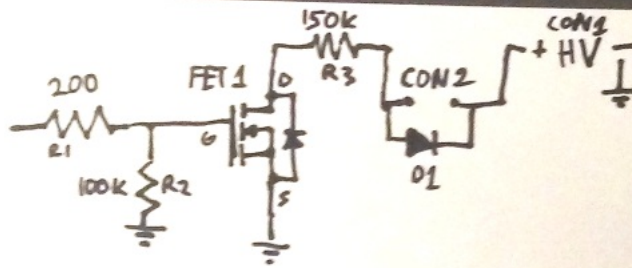


Tom sent me several photos for his fly shocker:



>



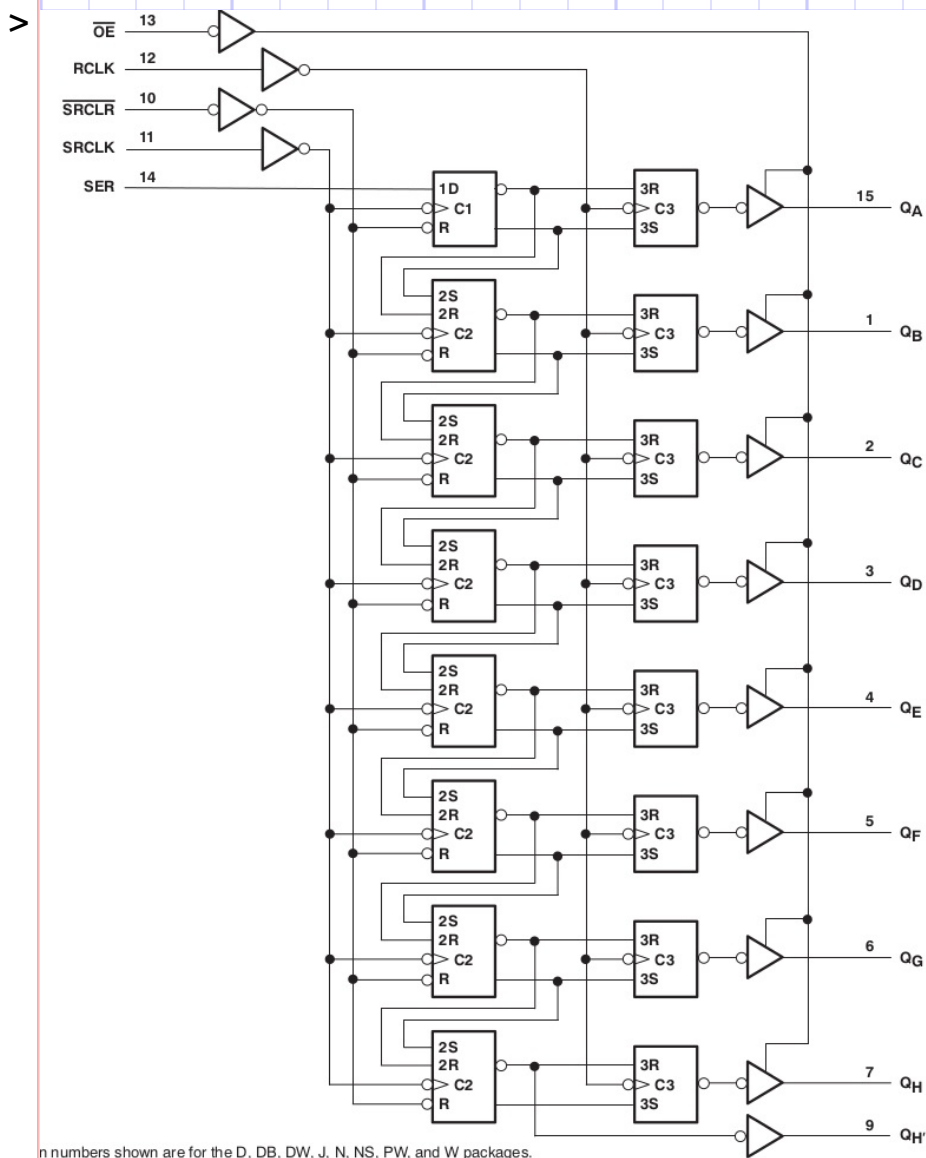
R1 - limit dV/dt on gate, while minimizing switching time
 R2 - keep FET off if circuit gets disconnected
 R3 - standin for resistor to measure current with
 D1 - dissipate voltage from inductance in long connection wires
 FET1 = IRL620

- $V_{DS(MAX)} = 200V$
 - can use 2-5V logic as input

And a paper, 17-DRGS.

He wants a 16-channel version of this, with each FET individually addressable. Ideally, he wants to use only 2 control pins. So I would think a shift register is the best choice. I also want an optoisolator, because I am scared of the 200 V. Measuring the voltage across the R3 resistor should similarly be protected.

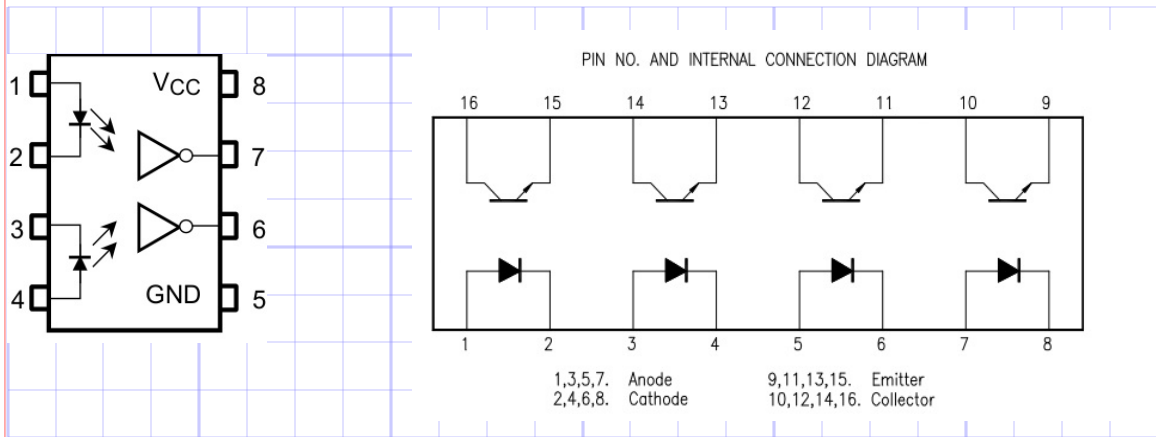
For switching, I could use a shift register like the **SN74HC595**. Thanks to the "QH" output, it is possible to daisy-chain these. Still, 5 control inputs are required:



(The Q_H' output of chip #1 could be connected to SER of chip #2; other than that, all inputs are shared. It is allowed to connect RCLK to SRCLK, in that case, output is simply one step behind. Of course, that means that /OE must be high while loading voltages.

I could use a MAX398 to gate the voltages in banks of 8. CD4051B is a cheaper option.

> TLP2630 (left) is a 2-channel optoisolator with logic output:



LTV847 (right) is a 4-channel optoisolator with transistor output.