# Model Aircraft Glow Plug Driver

This would have to be one of the easiest electronic devices you could make for you hobby. The parts can be bought from almost any electronics store and you could build this into your flight box quite easily. A printed circuit board is not needed and all the parts can be just wired together.
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The regulator can't be damaged by overheating (but don't push it too hard) as it will just stop when it gets to 125 deg C and start when it cools down.
The best integrated circuit would be the TO3 case as it will dissipate more heat but they are both the same, the TO3 being a little harder to mount.

## Parts required:

-240 ohm 1 watt resistor
-500 ohm trim potentiometer
-LM350 voltage regulator
-alligator clips- for glow plug
-to power source
-case
-hook up wire
-solder and iron
-assorted bolts and nuts

***Optional***

-amp meter approx 5 amp rating
or
-Led indicator- 3 diodes and a LED (see diagram 2.)
-on off switch

An Amp meter is a good indicator of what is going on and is a better choice than the LED indicator but costs a little more. It will only work one way so if you find it indicates backwards just swap the connections on the back.

The black bar marked on the diagram corresponds to the black band on the diode and needs to be orientated that way. Use at least a 4 amp rating diode and use wire thick enough to carry 4 amps. (car wire is ok) If you use this LED indicator the input voltage will need to be from 5 volts and no higher than 28 volts. A little less at the lower end without the indicator. (3v to 28v) This usually isn't a problem as most people will use the 12 or 6 volts they power their starter with.

Screw the IC to some metal heatsink usually aluminum. You can see the way it's wired by the diagram 1 on the next page. A case with a metal lid is good but note on the TO220 IC the case is *out* as well as one of the legs so if you touch the other glow lead on the lid it will spark and be shorting.
I've found in normal use it doesn't get so hot just screwed to a bit of aluminium.

Adjust the 500 ohm pot to what you think is right for the glow plug. It can go up to 2.2 volts so watch you don't do it too high. There will be 3 legs on the pot, use the middle and one of the outside ones.

**Diagram 1**

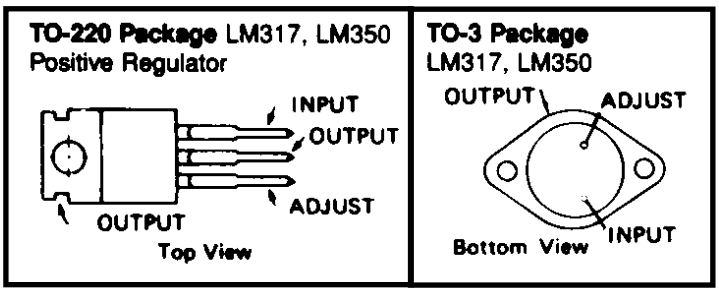


**Diagram 2**

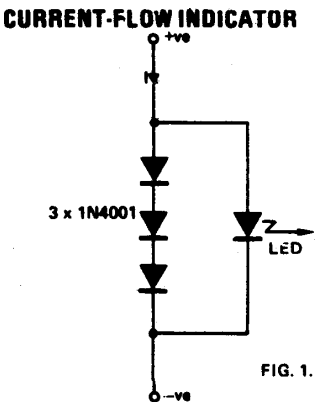


**Diagram 3**