

## RC Econo Power Panel

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I was approached by one of our club members who is in the process of acquiring all of his equipment to be flight line self-sufficient. He was interested in making his own electrical panel for his flight line box rather than purchase a pre-assembled panel.

He asked if I would design a rugged yet inexpensive power panel for him. Attached are the results of that design which we have named the RC Econo Power Panel.

**Input power:** 12 V C 7AH battery

**Outputs:** Adjustable 3 amp glow plug power  
(1.2 – 8 V C) with indicator

12 V C Electric starter power

12 V C Electric fuel pump power  
with pump direction control.

### Materials

The first panel built was constructed from spare components I had in the shop. Construction time was less than an hour. I called two of the local electronic surplus stores, in both cases, the estimate for all materials was under \$15.00. Parts may also be obtained through Newark Electronics, Igi-Key or Radio-Shack at a slightly high cost.

Depending on the desired look and feel, switches and LED colors and sizes may be substituted. Likewise, if the builder was interested in eliminating the pump fill push button switch that may also be replaced with a spring loaded P T toggle switch of your choice.

### Assembly

This assembly does not require a printed circuit board or vector board. Although it is not required I do recommend using a heat sink structure for regulator U1. Glow driver circuit

The glow driver circuit utilizes a 3 amp adjustable regulator U1. Voltage adjustments to the regulator are made using adjustment pot R2. LE 1 will illuminate when the glow plug is being driven.

### Fuel pump and electrical starter circuit

This circuit is mostly wire with a set of switches to switch the fuel pump flow direction. A push button switch is incorporated into the circuit to prevent overfilling of fuel tanks. Reversing the positions of the pump switch will pump the fuel tank dry.

### Fuse and battery protection

Unlike any of the power panels I have purchased, I have incorporated a fuse into the circuit to protect the battery and circuit from damage. Should the fuse clear (open) the red LED 5 will illuminate. In a future article, we will incorporate the power panel into an inexpensive flight line box/stool.