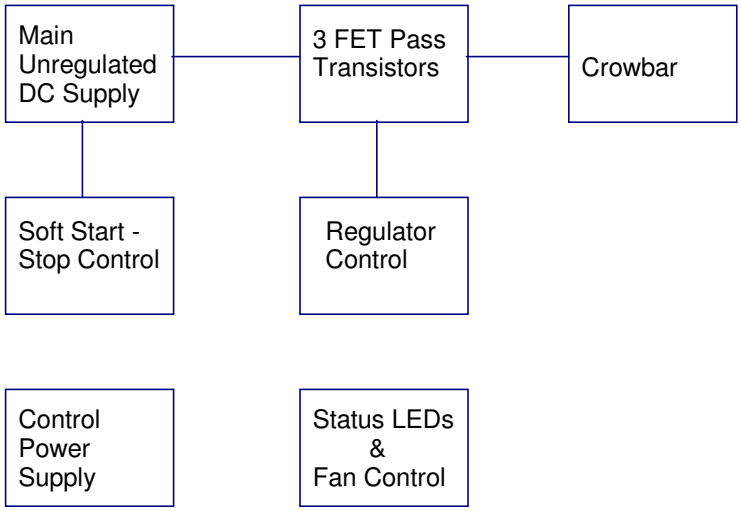
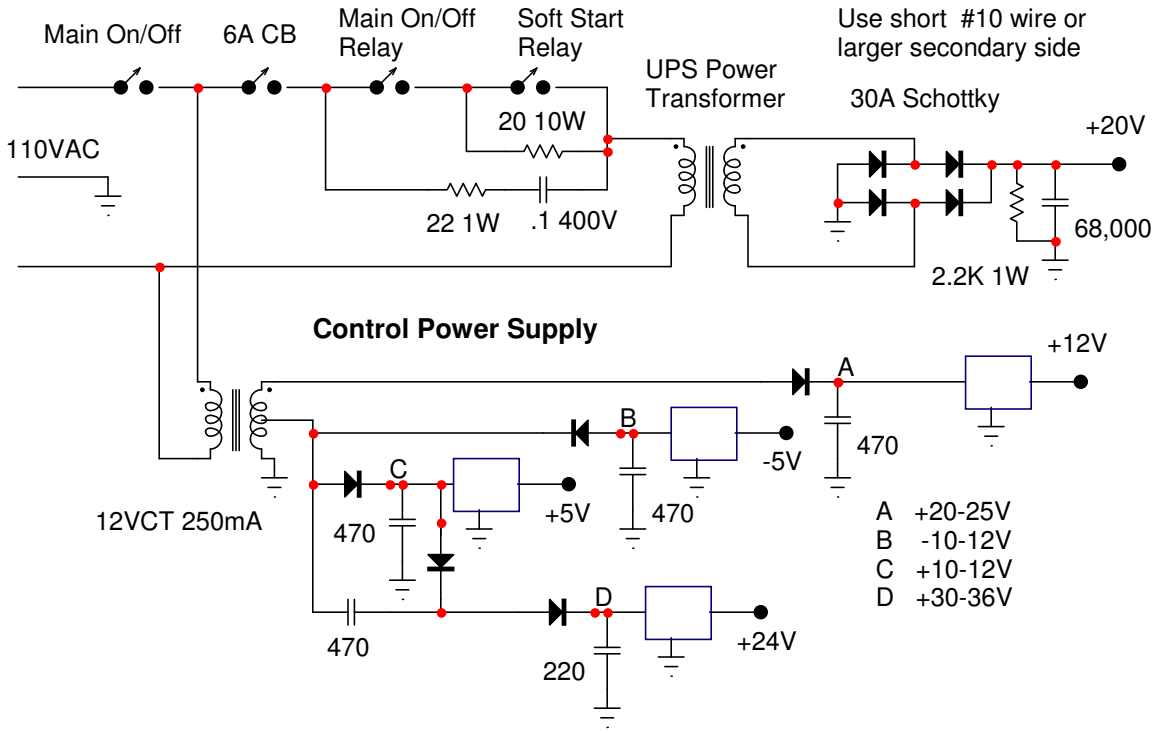
25 AMP PS FROM OLD 600VA UPS

OVERALL DIAGRAM

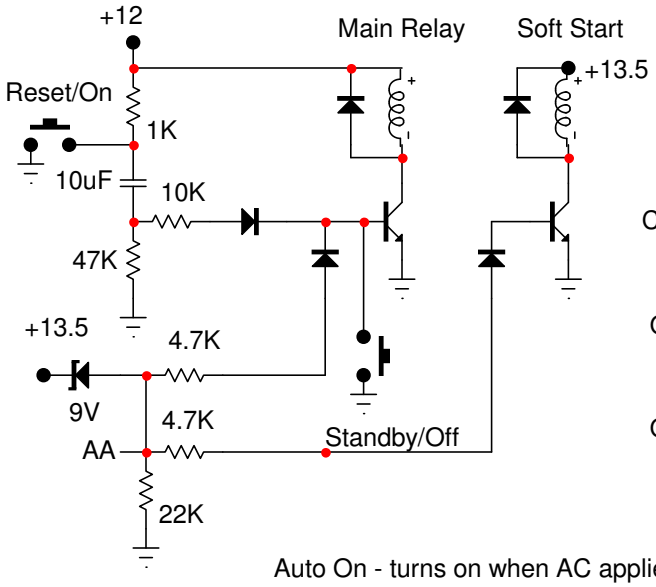


Main Unregulated DC Supply

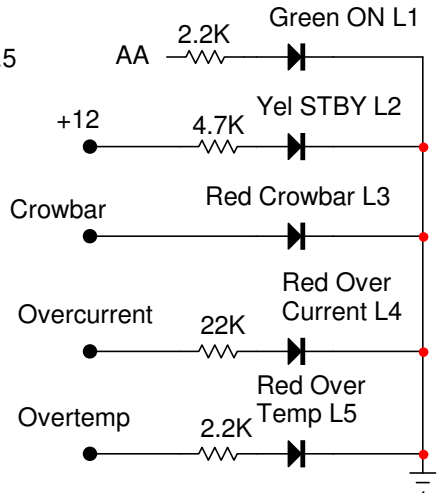


Note - Schottkey diodes and low Rdson FETs needed because UPS inverter transformer barely produces enough voltage for 13.5V at 20-30A.

Soft Start - Stop Control

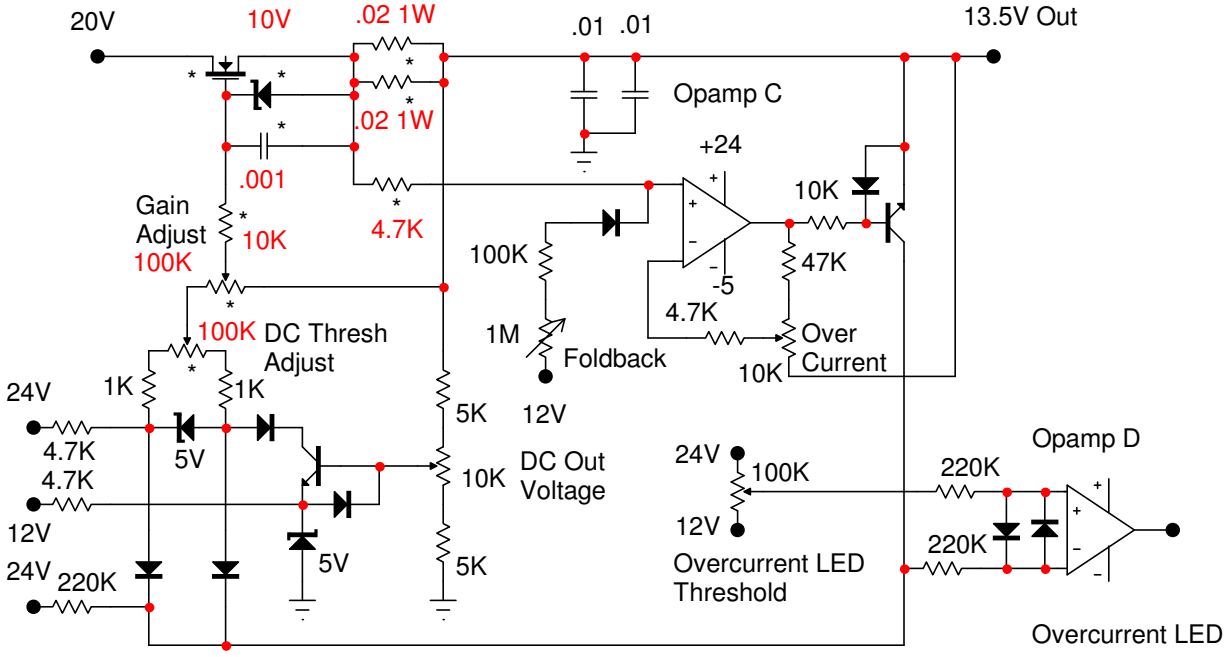


Status LEDs



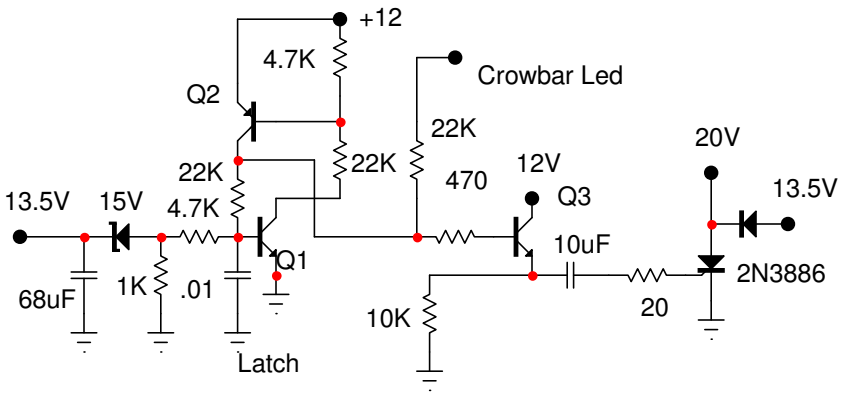
Auto On - turns on when AC applied or main switch turned on
Reset On - pushbutton (release) turns on after crowbar
Standby - pushbutton turns to standby (off) (hold 10S)
Crowbar - drops both relays

Regulator Control & 3 Pass Transistors

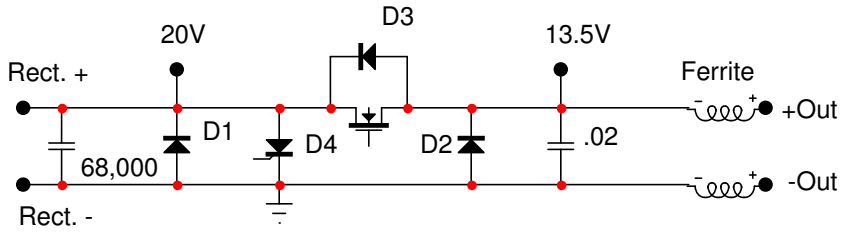


* Parts in triplicate for current handling, thermal conduction.
DC Thresh & Gain Adj used to equalize FETs if needed,
at high curremt. Normally fully right and left, respectively.

Crowbar

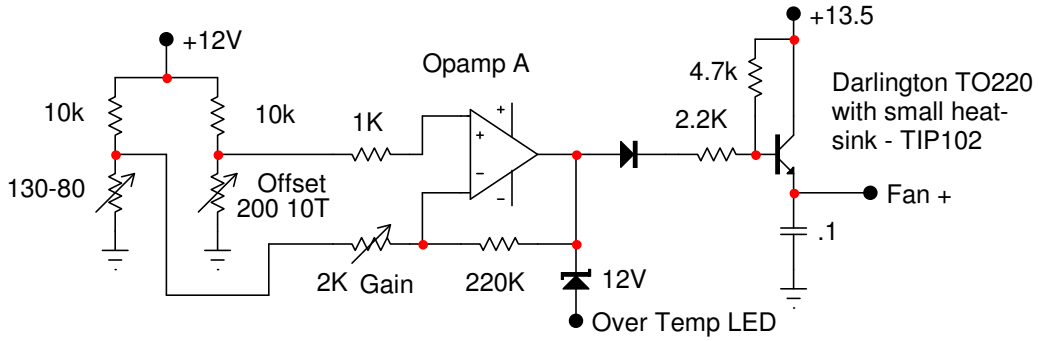


Simplified Main Low Voltage Path



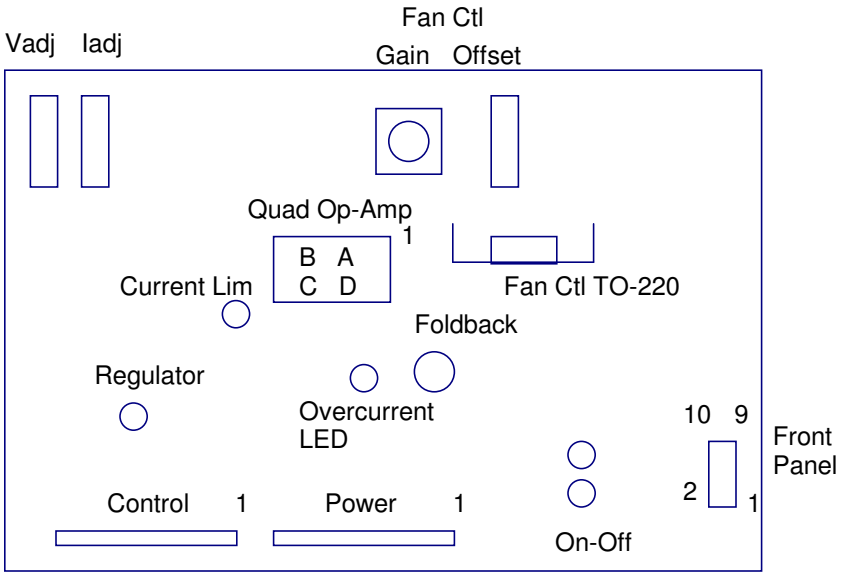
Diodes protect against 1) shorted rectifier diode, 2) external voltage applied
3) reverse ext. voltage. D3 also lets crowbar get output as well as unregulated.

Fan Control

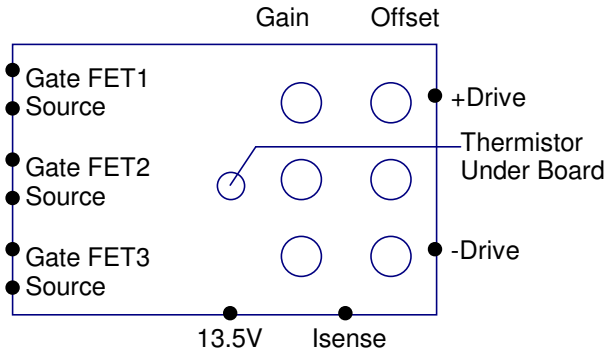


Thermistor 130 room temp
80 Ohms hot

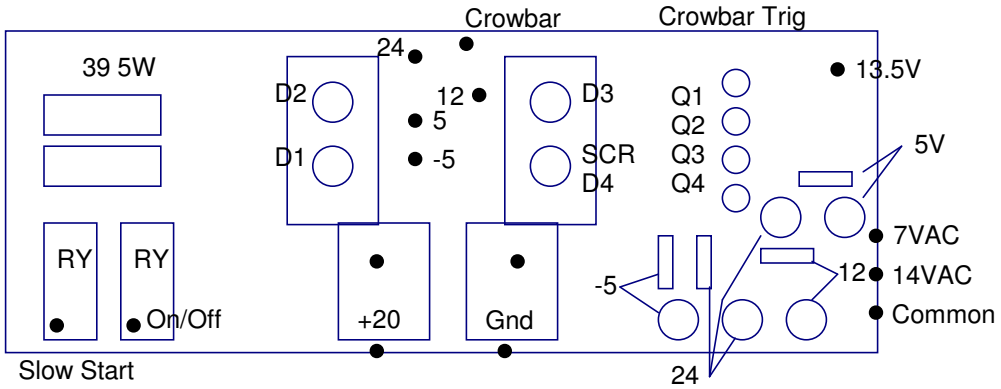
Control Board Layout & Connectors
All boards shown component side



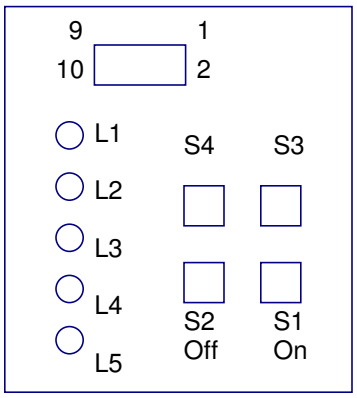
FET Equalizer Board Layout



Crowbar & Power Relay Board



Front Panel



Connectors

PIN	CONTROL	POWER	FRONT PANEL
1	Over current sense	Gnd	Switch common
2	- Drive to Fets	-5V	L5 Red (Over Temp)
3	+ Driev to Fets	+5V	S2
4	Crowbar fired	+12	L4 Red (Over Current)
5	-	+24	S1
6	-	-	L3 Red (Crowbar)
7	-	Main relay	Led Common
8	-	Slow start relay	Led2 Yellow (Standby)
9	Thermistor	-	-
10	Thermistor	13.5V	Led1 Green (Normal)