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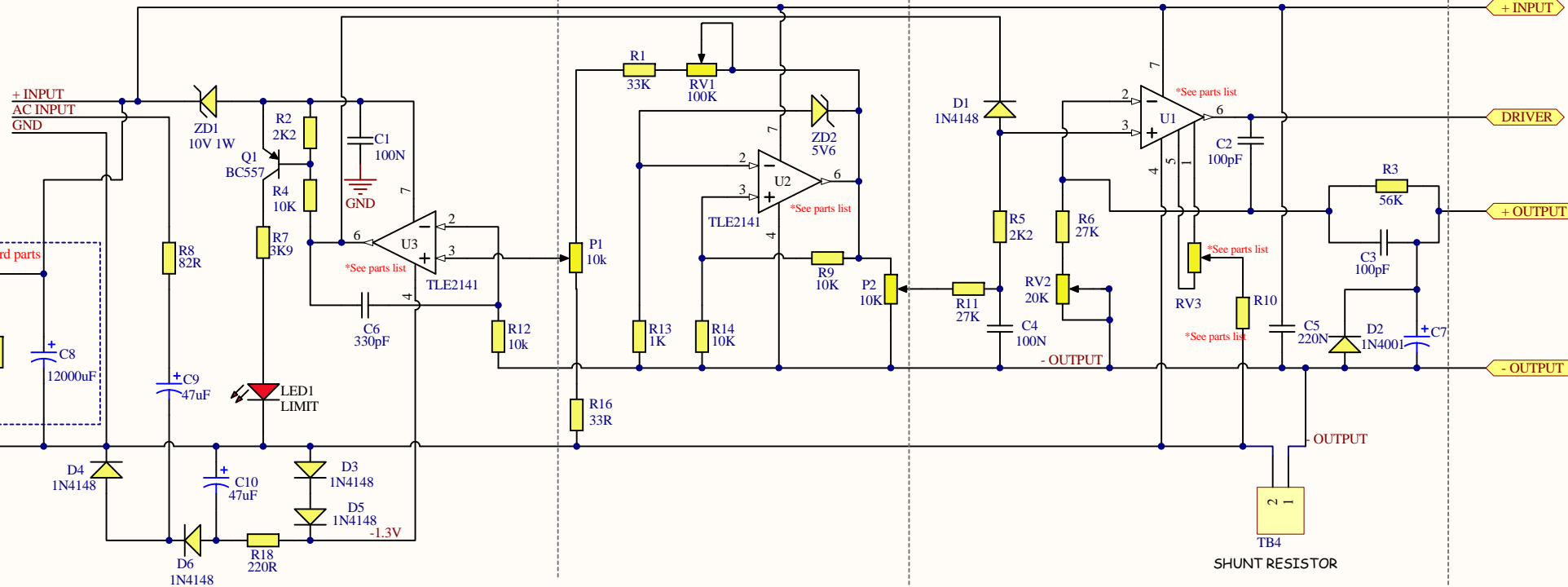
4

# CURRENT CONTROL/ CONSTANT CURRENT/VOLTAGE CONTROL

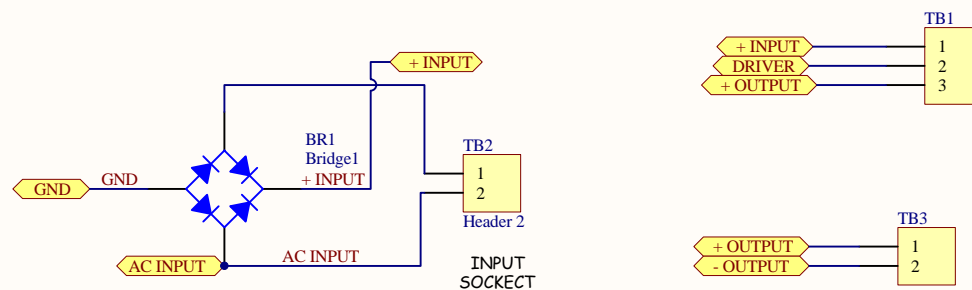
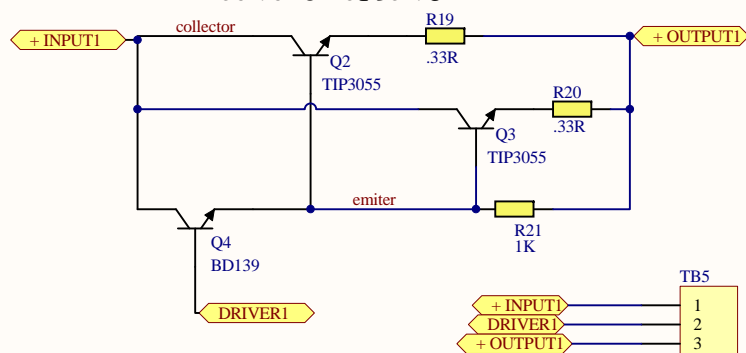
## REFERENCE VOLTAGE

## VOLTAGE CONTROL

## TO OUPUT BOARD



## OUTPUT STAGE BOARD



Title **0-30V 0-5A POWER SUPPLY**

Size: **A4**

Number:

Revision: **2.10**

Date: 10/10/2010

Time: 16:57:55

Sheet of

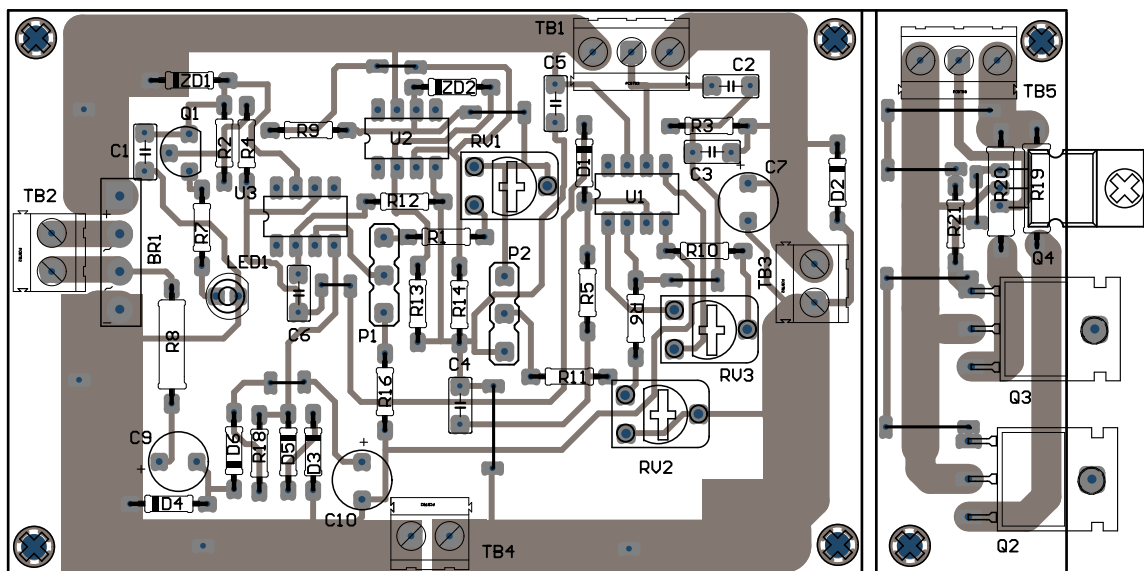
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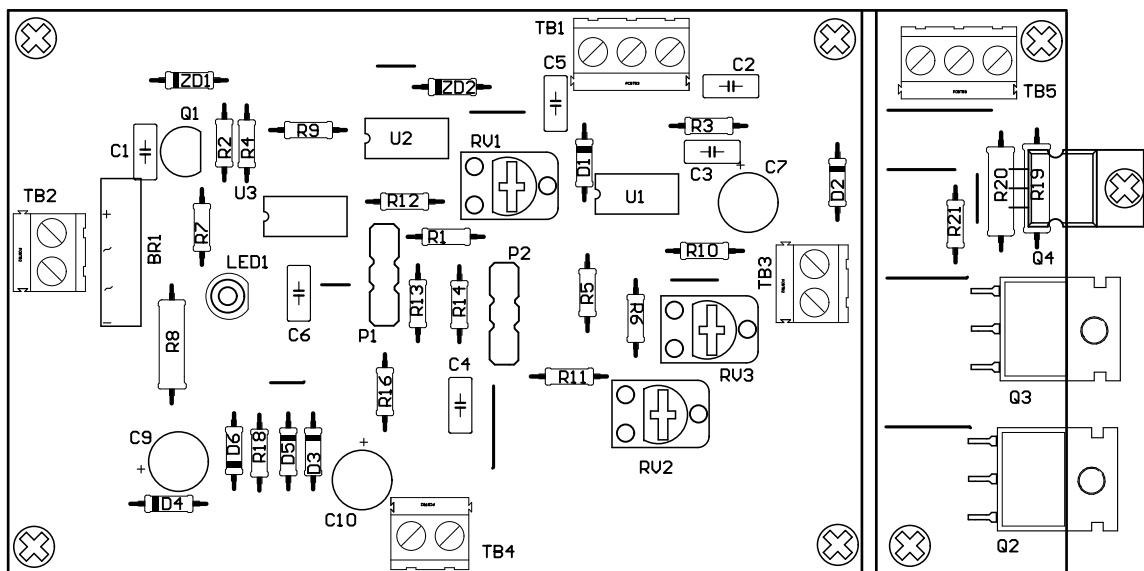
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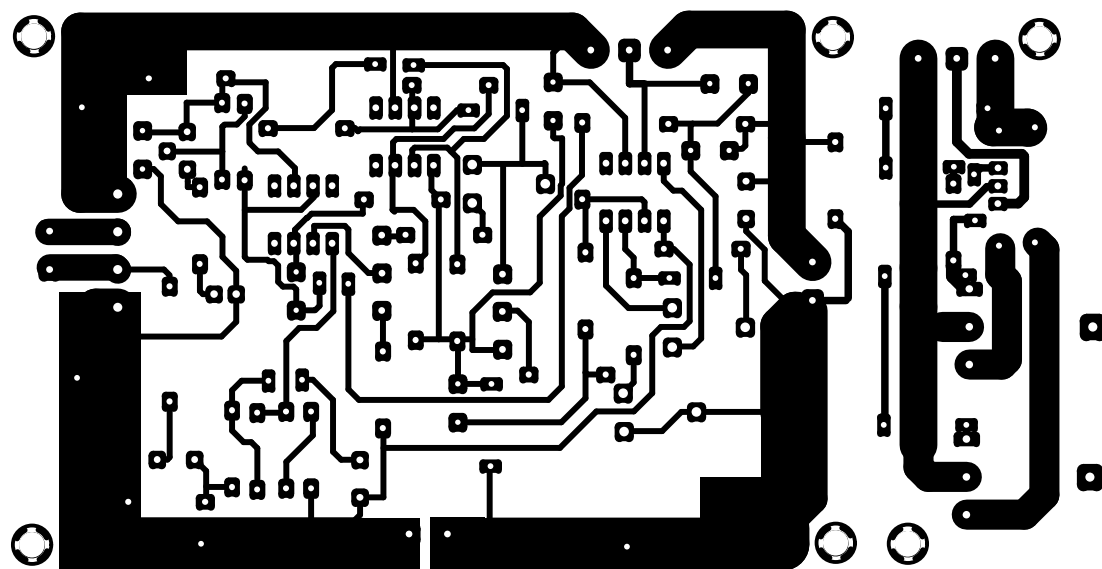
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## Bill of Materials For Project Power Supply.PrjPcb

Designator	Value	Description	Quantity
BR1	8A	Full Wave Diode Bridge	1
C1, C4	100N	Ceramic Capacitor	2
C2, C3	100pF	Ceramic Capacitor	2
C5	220N	Ceramic Capacitor	1
C6	330pF	Ceramic Capacitor	1
C7	10uF	50V Electrolytic Capacitor(Radial)	1
<b>C8</b>	12000uF	63V Electrolytic Capacitor(Radial)	1
C9, C10	47uF	50V Electrolytic Capacitor(Radial)	2
D1, D3, D4, D5, D6	1N4148	High Conductance Fast Diode	5
D2	1N4001	Rectifier Diode	1
LED1	LIMIT	Red L.E.D 3mm/5mm	1
P1,P2	10k	Potentiometer linear	1
Q1	BC557	PNP General Purpose Amplifier	1
Q2, Q3	TIP3055	NPN General Purpose Amplifier	2
Q4	BD139	NPN General Purpose Amplifier	1
R1	33K	1/4W/.6W 5% or 1%	1
R2, R5	2K2	1/4W/.6W 5% or 1%	2
R3	56K	1/4W/.6W 5% or 1%	1
R4, R9, R12, R14	10K	1/4W/.6W 5% or 1%	4
R6, R11	27K	1/4W/.6W 5% or 1%	2
R7	3K9	1/4W/.6W 5% or 1%	1
R8	82R	2W 5% Resistor	1
<b>R10</b> , R13, R21	1K	1/4W/.6W 5% or 1%	3
<b>R15</b>	2k2	2W 5% Resistor	1
R16	33R	1/4W/.6W 5% or 1%	1
R18	220R	1/4W/.6W 5% or 1%	1
R19, R20	.33R	2W 5% Resistor	2
RV1	100K	Potentiometer calibrate current	1
RV2	20K	Potentiometer calibrate Voltage	1
<b>RV3</b>	See notes	Potentiometer	1
TB1, TB5	3Way	Terminal block 16A	2
TB2, TB3, TB4	2Way	Terminal block 16A	3
<b>U1, U2, U3</b>	See notes	JFET-Input Operational Amplifier	3
ZD1	10V 1W	Zener Diode	1
ZD2	5V6	Zener Diode (Low Current)	1
			56

### Notes:

**C8, R15** are mounted off the board with R15 soldered across the capacitor, See assembly drawing

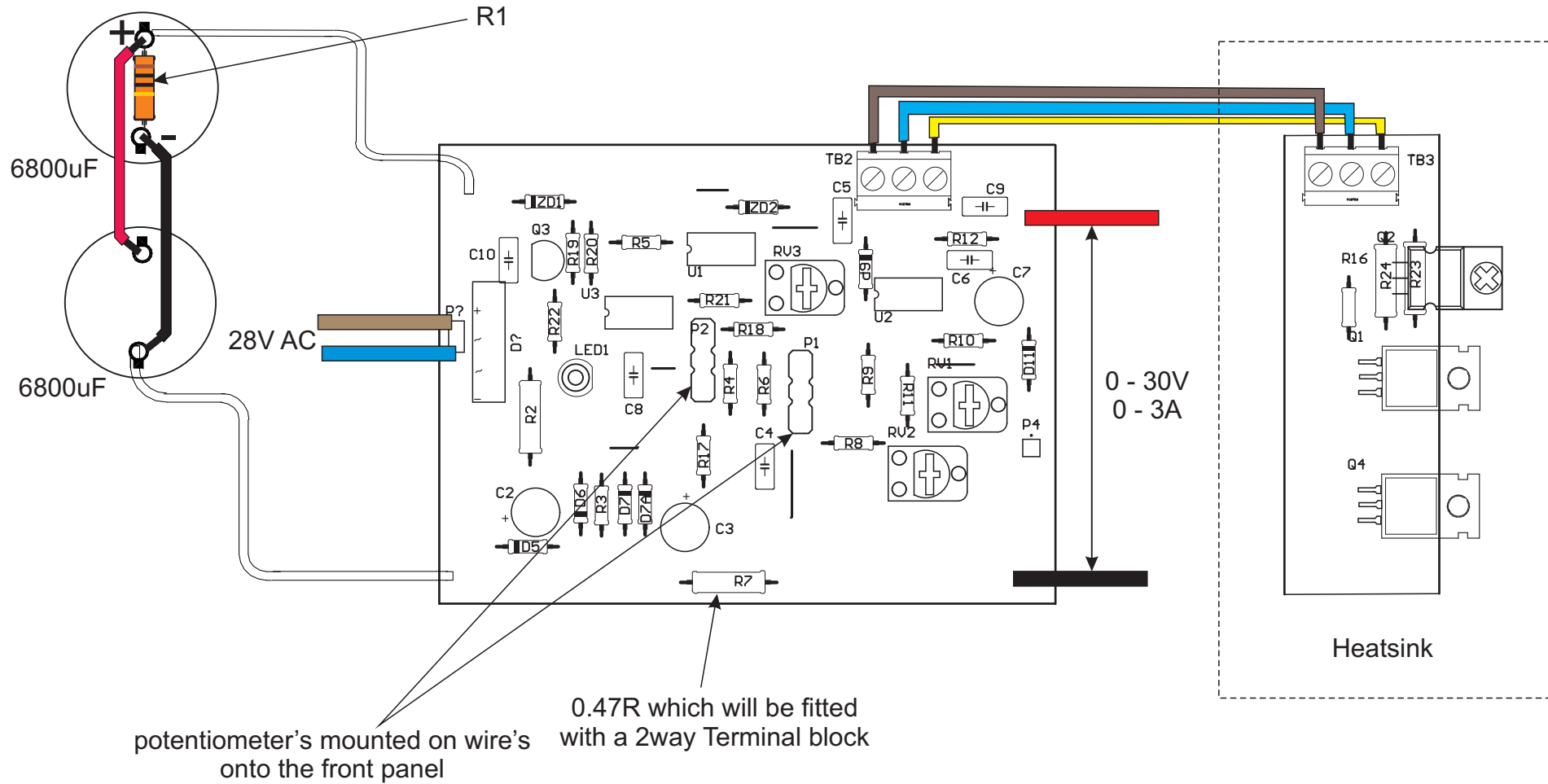
**R10** Use 1K Resistor for for TLE2141 or a wire link for MC34071 op-amps

**U1, U2, U3** TLE2141 or MC34071 Operational Amplifiers

**RV3** use 5K for TLE2141 or 10K for MC34071 Operational Amplifiers

# Power supply connections

Capacitor's are C1 either 2 x 6800uF  
or one 12000Uf



Electronic Labs 2010

Picmaster