



Bipolar Power Supply Project

Version 2005December11

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Here's a simple Bipolar Power Supply project that can be used to create any output voltage, dependent on the variety of regulators available. This layout offers plenty of room for the large filter caps and is also designed to accommodate various types of heat sinks for the regulators. Some power supplies have a small value in-line resistors after the regulators. Space has been provided for this option, just cut the traces between the pads that are along the output side of the PCB and solder the resistors in. The size of the regulators varies slightly from type to type, so use the regulators you have as a template for drilling the bolt holes.

The parts list table gives the values of the parts needed for the common voltage ratings available. The transformer is a non-center tap AC voltage secondary. **Make sure the voltage rating of the capacitors is greater than the transformer secondary voltage output.**

Bill of Materials

<i>Output Voltage</i>	<i>Transformer Secondary</i>	<i>Rg1 (78xx)</i>	<i>Rg2 (79xx)</i>
5 volt	9 volt	7805	7905
9 volt	12 volt	7809	7909
12 volt	15-18 volt	7812	7912
15 volt	18-24 volt	7815	7915
18 volt	24-30 volt	7818	7918

In addition to the transformer and regulators, here are the other parts needed:

Capacitors

2 – 1000uF Aluminum Electrolytic

4 – 0.1uF film

Other

2 – 1N4004

3-way power jacks/connectors

2 – Regulator Heat Sinks

Thermal Compound (heat sink grease)

Copper-clad board, etchant, 22 gauge stranded wire

Enclosure

AC Cord/plug

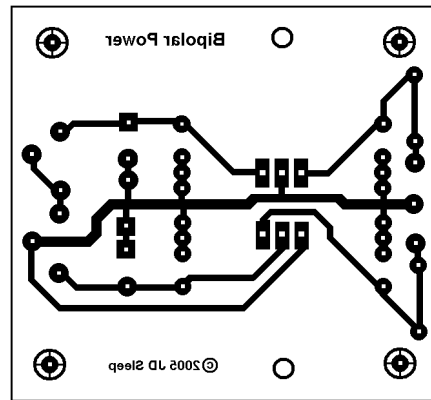
2 – sets of nuts and bolts to bolt down the regulators or to bolt the regulators to the heat sinks.

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Size 5.6cm x 5.2cm

