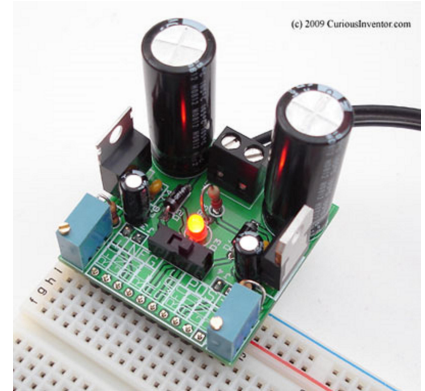


Plug-in Bread Board Dual Power Supply (#ci0261)

This kit provides adjustable +/- DC voltages that are perfect for audio circuits and other projects involving dual supply op-amps. Just attach an inexpensive AC transformer and plug it into a typical bread board.



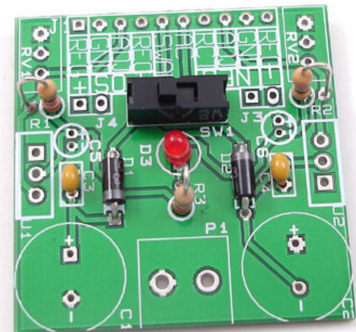
- Both + and – voltages are independently adjustable
- With proper heat sinking and a sufficiently strong AC adaptor, over 1 amp can be supplied to each side. Choose an AC adaptor with at least 30% more AC voltage and amperage than the DC requirements.
- Fits in most bread boards with Elenco-brand spacing, but can also work in others by leaving off the two, 2-pin support headers.
- Overhands board to provide maximum prototyping space.

Parts List: (email support@CuriousInventor.com if anything is missing or damaged).

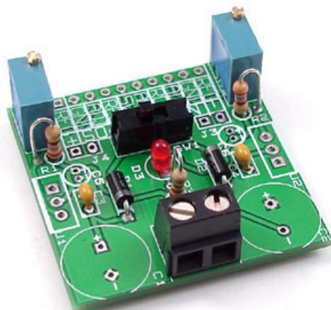
- C1,C2: 680uF Electrolytic capacitors (large cylinder)
- C3,C4: .1uF ceramic caps (yellow)
- C5,C6: 1uF electrolytic capacitors (small cylinder)
- D1,D2: diode
- D3: Red LED
- P1: Screw Terminal
- J3,J4: 2pin headers
- J1: 10pin header
- R1,R2: 270 Ohm resistors (red purple brown)
- R3: 2.2kOhm resistor (red red red)
- RV1, RV2: 5k trim pot
- SW1: SPDT Slide Switch
- U1: LM317
- U2: LM337

Build Instructions:

Start with the short components: C3,C4,D1,D2,D3,R1,R2,R3 and SW1. Insert them, bend or splay their leads outwards, and then turn the board upside down so the table holds them in place. Going in order of height lets you continue to use the table as a helping hand to hold the components in place. **Make sure the lines on the diodes match the lines on the board! The longer leg of the LED goes in the square hole.**

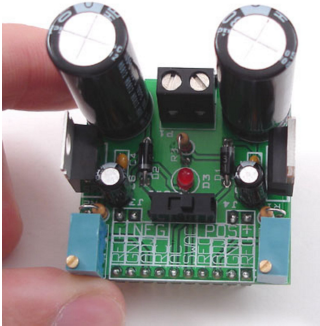
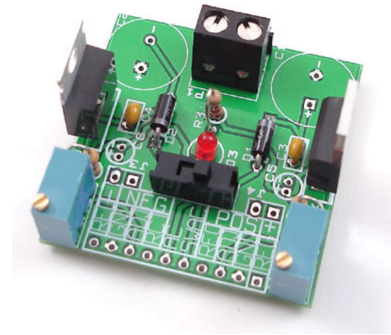


Trim the leads after soldering the components (do this after each step).



Install P1, RV1 and RV2. The screw on the trim pots should be in the corner.

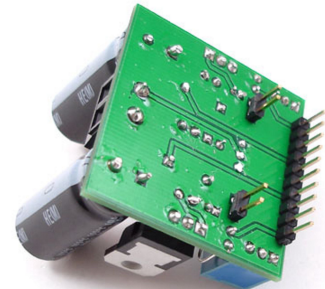
Install the voltage regulators: U1 and U2. Be sure to face the heat sink towards the outside. **Note that U1 is the LM317 and U2 is the LM337.** This design enables adding additional heat sinks to the regulators if necessary. Solder one leg first and then check alignment. Re-melt and adjust if necessary before soldering the other pins.



Install the remaining electrolytic capacitors: C1,C2,C5,C6 (the cylinders). Be sure to put the longer pin in the positive hole.

Check fit of your bread board, then install headers on the bottom side. BEFORE soldering the 2pin headers, insert all headers and test to see if they

fit in your bread board. If not, just leave off the 2pin headers. The headers have a tight fit and may require some wiggling to install. This helps keep them in place during soldering.



Strip the ends of an AC transformer / wall adaptor and secure wires in the screw terminal. It doesn't matter which wire goes into which position.

How to Use:

The final regulated DC outputs are the last holes on each end of the 10pin header. The other pins give access to various points in the circuit, including the original AC signal, the signal after the switch, the +/- rectified but unregulated signals (RCT+/-), and the adjustment points. The adjustment points can be used by leaving off the trim pots and installing your own potentiometer elsewhere.

Schematic:

