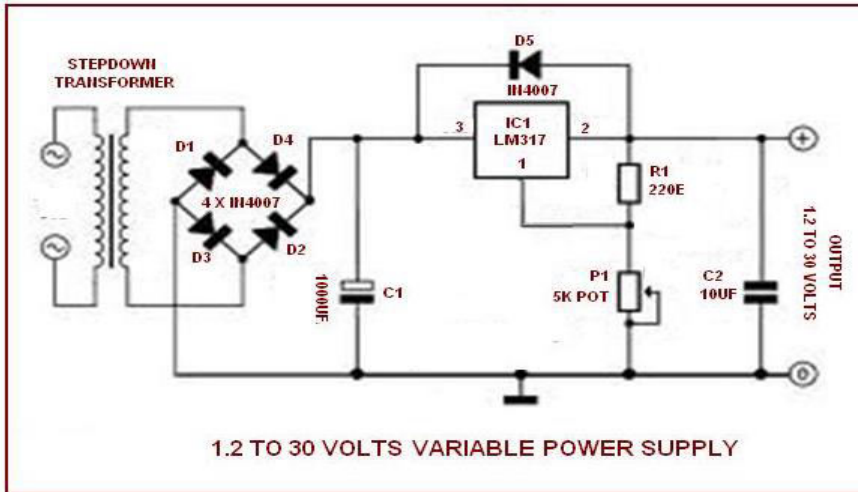


Variable Power Supply:



Circuits using the voltage regulator IC LM 317 is shown here. LM 317 is a three terminal voltage regulator IC from national semiconductors. The IC is capable of delivering up to 1 amps of output current, input voltage can be given up to 40 Volts and output voltage can be adjusted from 1.2volt to 37volt. The Input voltage is fed to the pin 3 (vin) of the IC1 and regulated output voltage is available at pin 2 (v out) of the IC1. Resistor network comprising of R1 and p1 connected in association to the pin 1 (adj) is used to set the output voltage. C1 is the input filter capacitor while C2 is the output filter capacitor. The output voltage of the regulator circuit depends on the equation $V_{out} = 1.25 V (1 + (R2/R1)) + I_{adj} R2$.

Components used: R1 = 220E resistor, C1 =1000uf capacitor,C2-10UF, D1-D5=1N4007 diode, P1- 5k pot, IC 1 = LM 317 (with base),Step down transformer, Battery Snapper, Battery.

