



Technical Details and Schematic: A simple Regulated Power Supply for Test Bench

A Simple Regulated Power Supply:



Project Introduction:

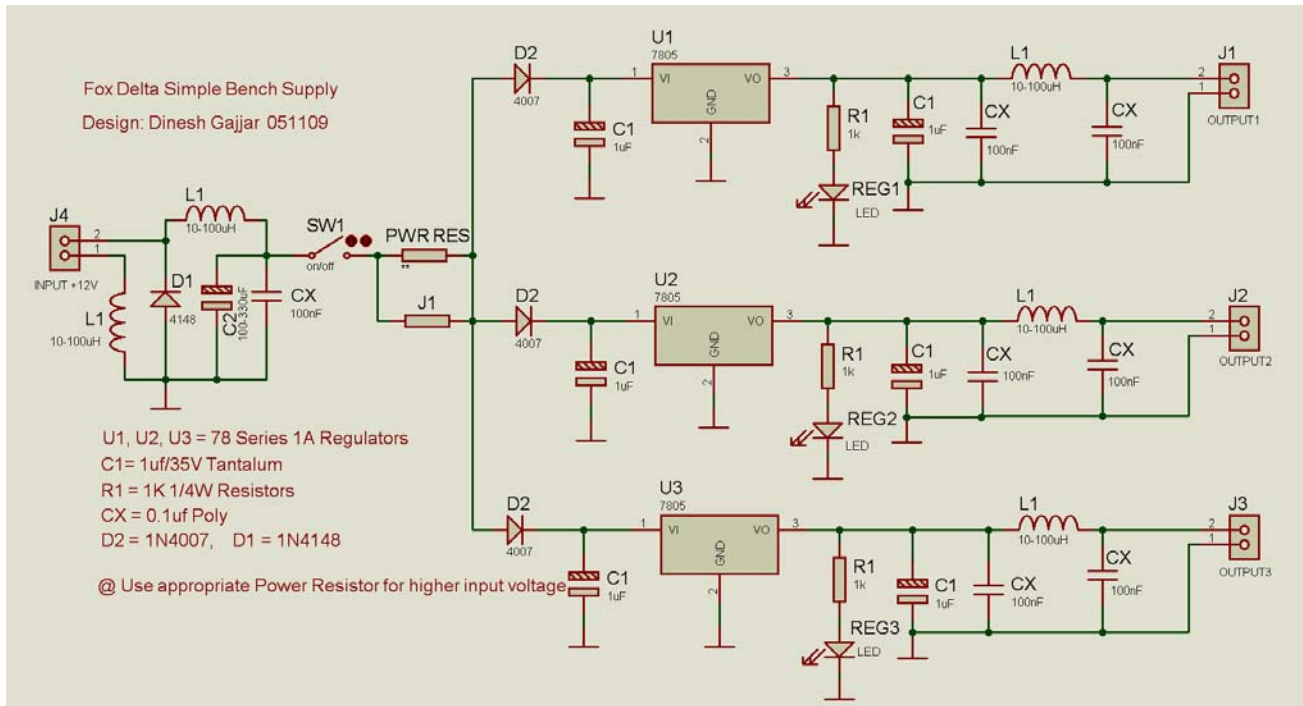
Most amateur workbench will find an SMPS type 12V supply. They are good but tough when they carry a lot of noise along to destination!!

This simple power supply is based on such 12V adaptor as a source to supply 12V at 3A or so and output 3 different (or same) 1A voltages for our under test setup. In fact, input range may be of your choice ranging from just over 5V to an 18V notebook adapter!!

PSU Board:

Board has provision for 3 of the 78XX series of 1Amp regulators. You may use one for 5V, another for 6V and one more for 8 or 9V. You may also have all three of 5V if your setup requires 3 independent supplies.

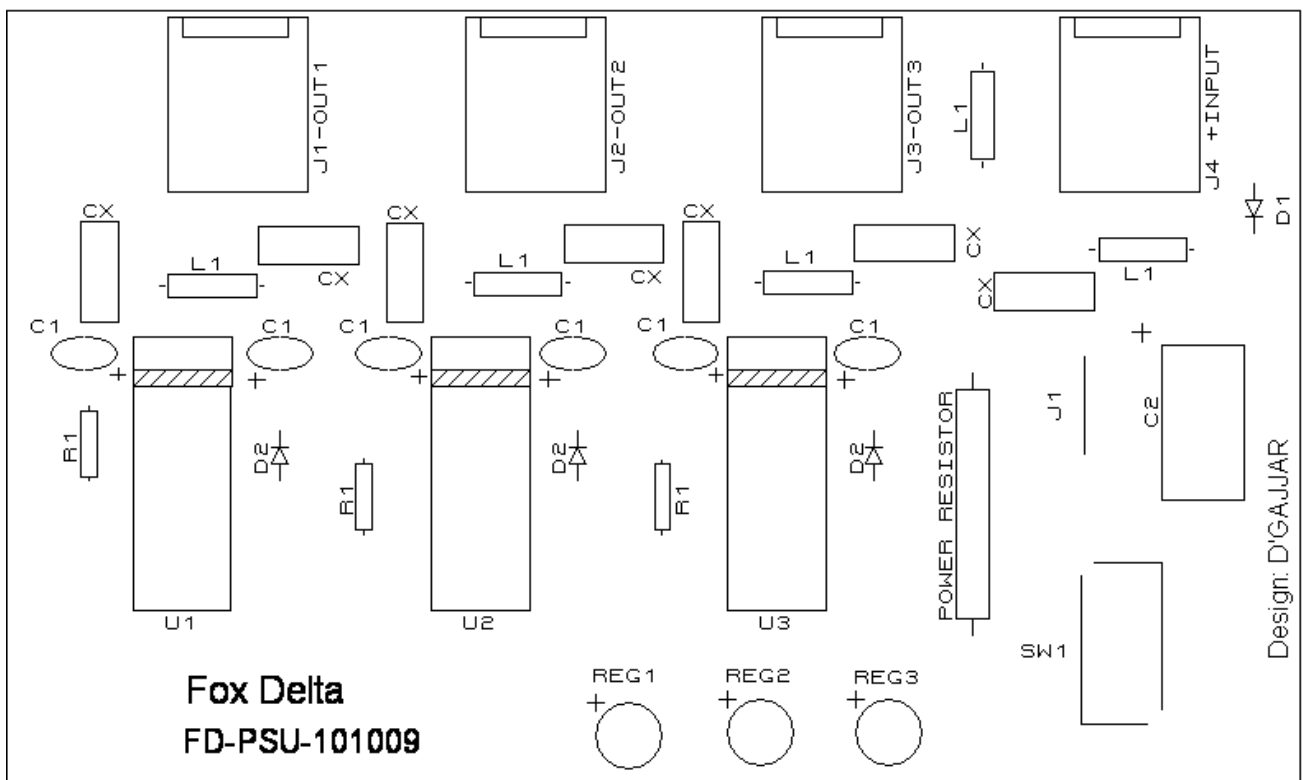
Schematic:



J4 is the input connector where we will apply any available voltages from 5V to 24V (or beyond). J1 is a jumper or a fusible low ohmic resistor.

L1 at input and outputs are Toroidal or simple RFCs to decouple noise.

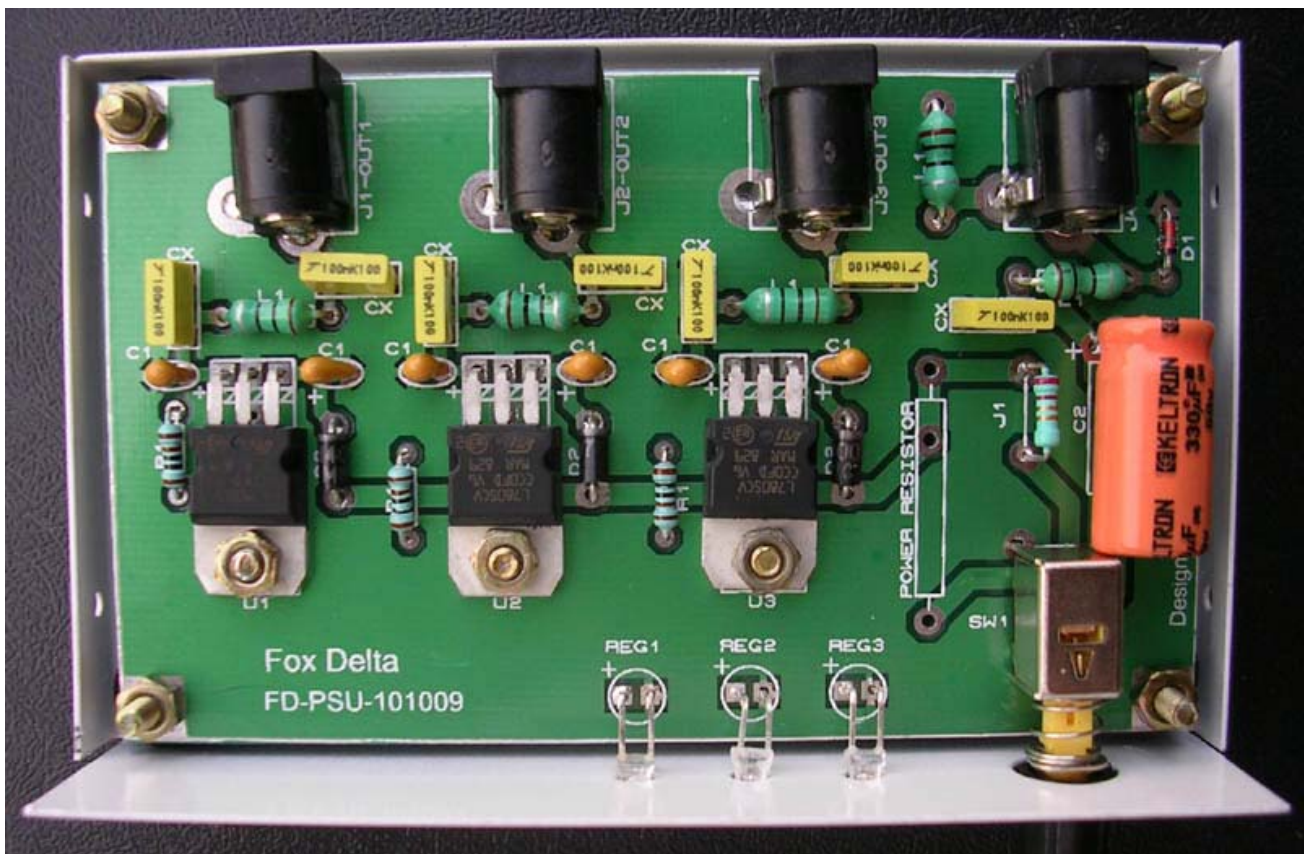
Silk Snap of the Board:



Parts List:

Qty	ID	Details
1	U1, 2, 3	78XX Regulators
6	C1	1uf / 35V Tantalum
3	LED	3mm
3	R1	1K
4	J1, 2, 3, 4,	DC Socket PCB Mounted
1	PCB	FD-PSU-101009
7	Ploy Caps CX	0.1uf
5	L1	10 to 100uh Inductors (RFC type or Toroidal)
1	C2	Electro 220 to 470uf / 40V
1	D1	1N4148
3	D2	1N4007
1	SW1	Power ON/OFF Switch
1	Case	Powder Coated Metal Case
*	J1	A Jumper
#	PWR RES	As required for input voltages over 14V DC

Top View:



Dinesh Gajjar / 5th November 2009

Please visit <http://www.foxdelta.com> for more information on this project.