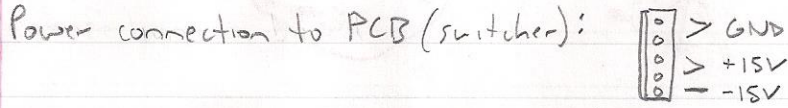
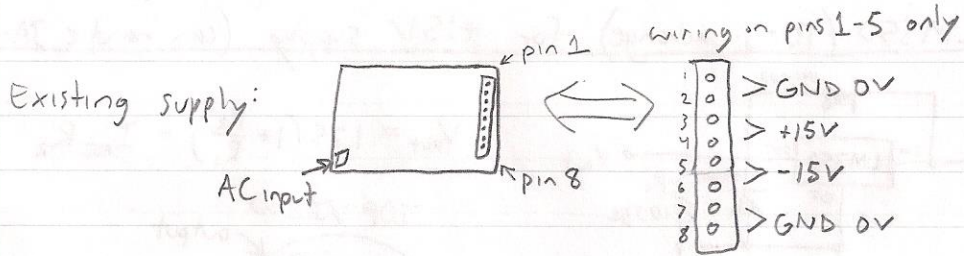


Power Supply Repair

Extron 8x8 RGBHV Matrix Switcher

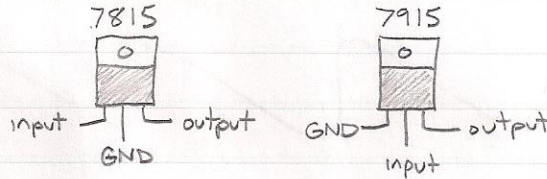


Switcher Power Requirements (tested w/ Benchtop DC supply)

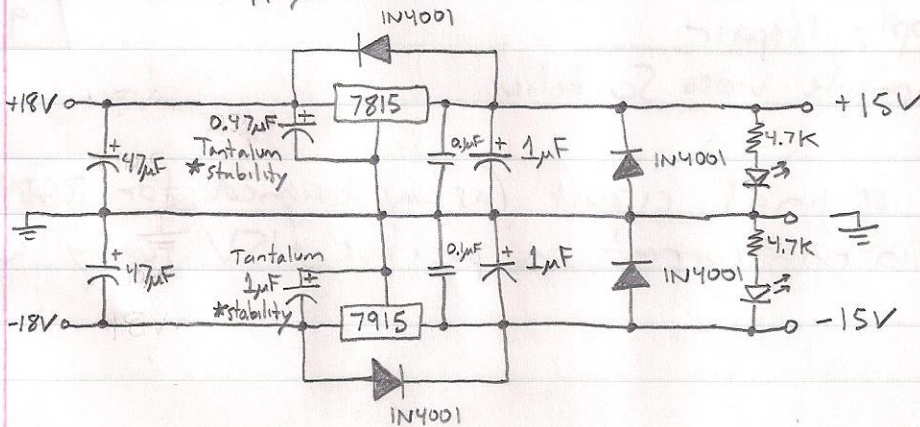
+15V → 0.7 Amps (no AV load)

-15V → 0.5 Amps (no AV load)

15V Regulators:



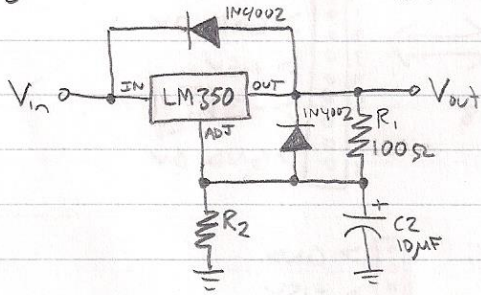
±15V Power Supply:



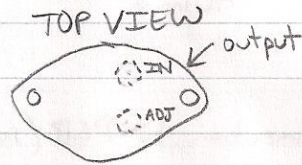
PROBLEM: the in-rush current drawn from the 7815 exceeds 1.3A, forcing the regulator into short-circuit protection mode.
 - will pursue other regulators for positive +15V supply.

- tried LM317 (TO-220 package) but it entered overload protection even quicker than the 7815.

Using LM350 (TO-3 package) for +15V supply (can handle 3Amps)



$$V_{out} = 1.25 \left(1 + \frac{R_2}{R_1}\right) + I_{ADJ} R_2$$



Final values: $R_1 = 100\Omega$ $R_2 = 1.1k\Omega + 56\Omega = 1.156k\Omega$

Power Supply Repair

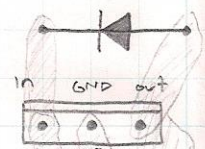
8x8 Composite Video Switcher

9-7-2013

★ used original circuit (as was designed for RGBHV switcher)
b/c in-rush current on positive +15V supply was minimal.

Heatsink

+18V +15V



7815
0.1µF
Tantalum

47µF

1µF
0.1µF



Jumper

47µF

1µF
Tantalum

7915

-15V -18V

Heatsink

+18V
GND
-18V

+15V
GND
-15V

-5

-10

-15

-20

-25

-30

-35