

SELECTED REGULATOR 1.5,3,5,6,9,12V 1A.
CODE 815 **LEVEL 1**

This circuit is small regulator. It has current limiter and thermal overload protection are included in the IC. This kit is suit all kind kits requiring a regulated power supply between 1.5 to 12VDC. and no more than 1A.

Technical specifications:

- need transformer : 0-15V 1A.
- voltage output : 1.5,3,5,6,9,12VDC (selector)
- power maximum : 1A.
- PCB dimensions : 2.49x2.32 inches.

How to works:

Figure is the circuit diagram of the small regulator. When the voltage 15VAC is fed to bridge rectified by D1 to D4, that the voltage is charge from AC voltage to DC voltage and then DC voltage is filter by C1. The DC voltage is fed to the "IN" pin of IC. IC steps down the input voltage to 1.5,3,5,6,9 and 12V follow adjusting at pin "ADJ" of IC. After the voltage adjusted by the selector is fed to "DC OUT" point.

PCB assembly:

Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be carefully bent to fit the position on the PCB and then soldered into place. Make sure that the electrolytic capacitors are inserted the correct way around. The LED has a flat spot on the body which lines up with the line on the overlay. Now check that you really did mount them all the right way round!

Testing:

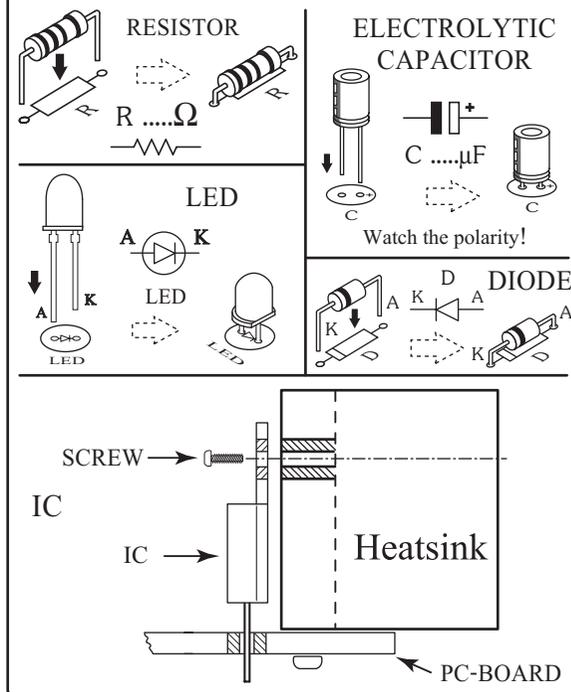
Connect the transformer 0 and 15VAC to "0" point and "15" point. Adjust the selector to "1.5" point

and then supply the voltage 110 or 220VAC. to the transformer (see the transformer). LED1 is light on. Measure the voltage at "OUT" point, this point has about 1.5VDC. After then adjust the selector the other voltage. It has the voltage follow adjusting.

How to use:

- If you want to use the voltage not more than 5VDC., you can use the transformer 6VAC./1A.
- If you want to use the voltage not more than 9VDC., you can use the transformer 12VAC./1A.
- If you want to use the voltage not more than 12VDC., you can use the transformer 15VAC./1A.

Figure 1. Installing the components



Troubleshooting:

The most problem like the fault soldering. Check all the soldering joint suspicious. If you discover the short track or the short soldering joint, re-solder at that point and check other the soldering joint. Check the position of all component on the PCB. See that there are no components missing or inserted in the wrong places. Make sure that all the polarised components have been soldered the right way round.

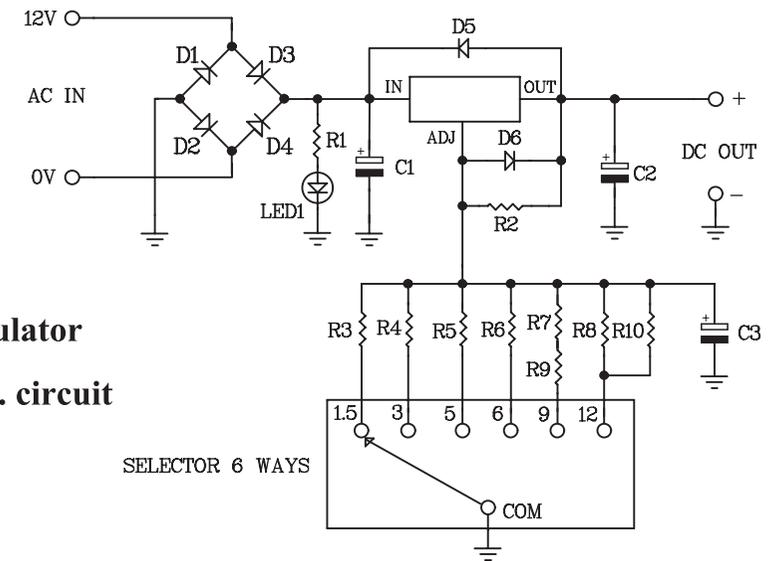


Figure 2.
The selected regulator
1.5,3,5,6,9,12V. 1A. circuit

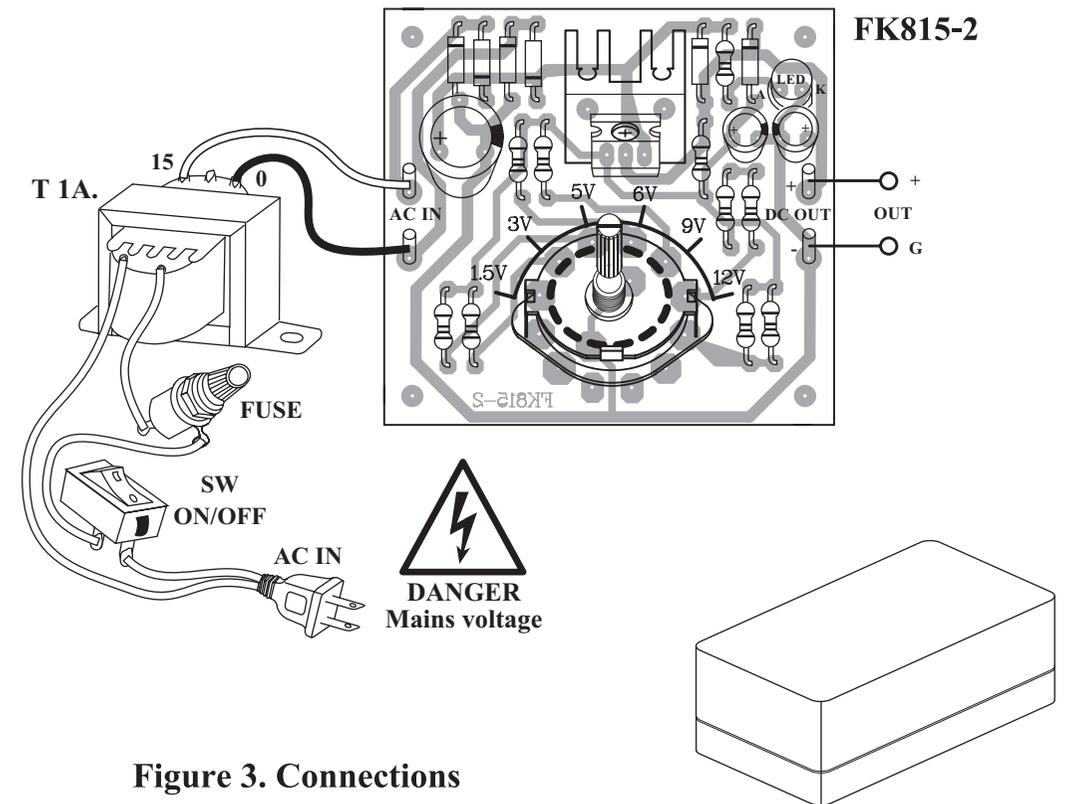


Figure 3. Connections

NOTE:
FUTURE BOX FB18 is suitable for this kit.