



FUTURE KIT

HIGH QUALITY ELECTRONIC KITS

POWER SUPPLY 6-9-12V. 300mA.

CODE 801

LEVEL 1

This power supply circuit is a regulator circuit that controls voltage to be constant. Jumping point is a volt selection. This circuit has rectifier circuit that can be used as soon as giving 220 VAC.

Technical specifications:

- power supply : 220-240VAC.
- max. power : 300mA.
- output DC voltage : 6V, 9V, 12V (select jumper)
- PCB dimensions : 1.66x1.16 inches.

How to works:

From figure 2, transformer T1 will adapting 220VAC to requirement. In order to adapt voltage to 15VAC, D1 to D4 will transform AC to DC. C1 acts as filter. IC1 controls voltage at OUTPUT. Voltage selection is done at pin GND of IC1 by shifting ground of IC up. If 6 volts is required, jumping at "6" point. But if 9 volts is required, jumping at "9" point and 12 volts by jumping at "12" point respectively.

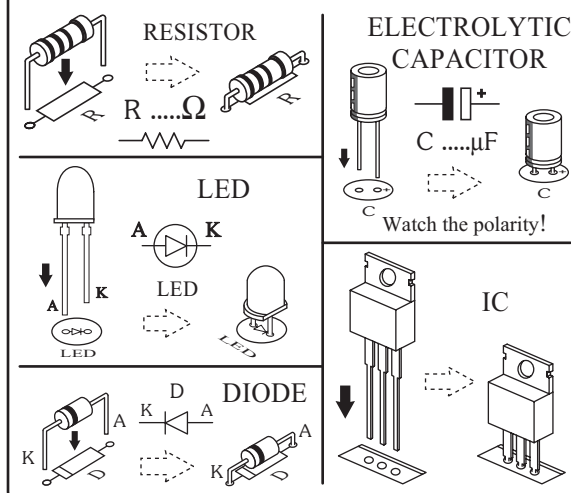
PCB assembly:

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:

Connecting AC with plug to 220VAC on transformer. Selecting voltage value required. Jumping either at "6" point for 6 volts. "9" point for 9 volts or "12" point for 12 volts. If jumping all 3 points, result will be 6 volts only. Plugging on. LED will display. Measuring voltage at OUT, there will be voltage at jumped point. This circuit can conduct current 200 to 350mA. If over 1A. is required, using suitable transformer and having heat ventilating board to IC.

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.

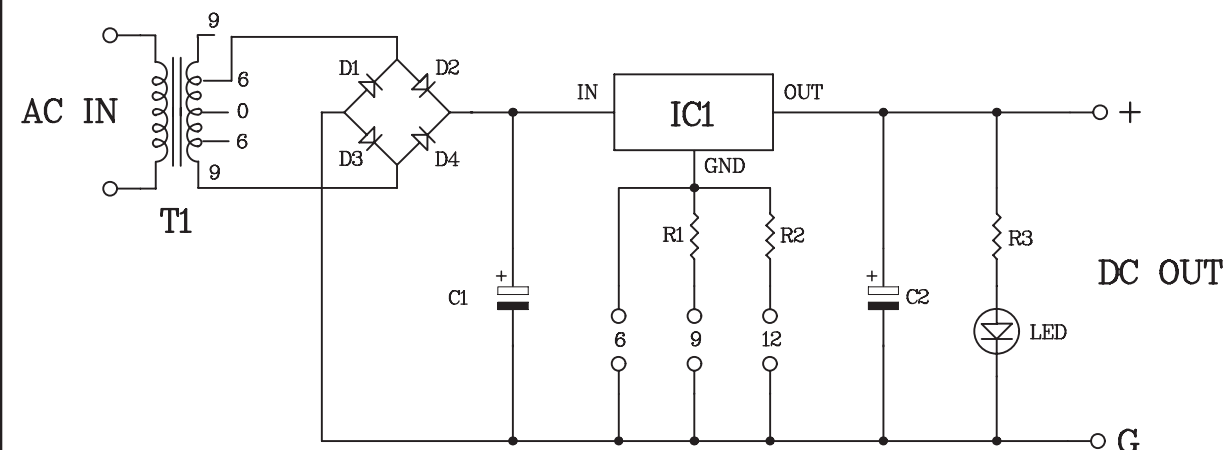


Figure 2. The power supply 6-9-12 volt 300mA circuit

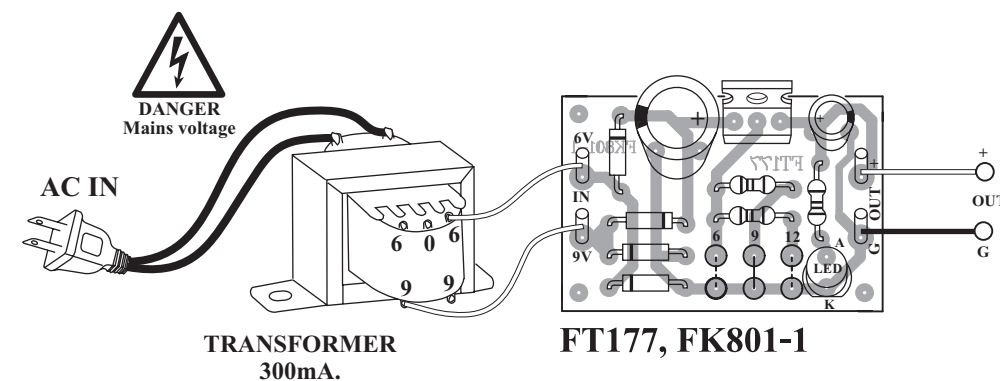
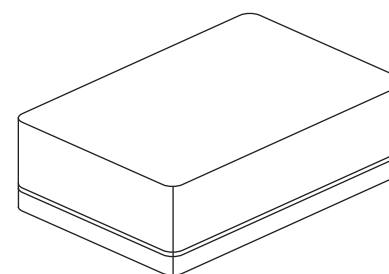


Figure 3. Connections



NOTE:

FUTURE BOX FB04 is suitable for this kit.

NEW KIT SET

CODE FK	DESCRIPTION	POWER
168	NO SMOKING FLASHER 46 LED	9-12VDC
170	DANGER FLASHER 42 LED	9-12VDC
172	THREE STEP FLASHER 19 LED	9-12VDC