

DAWN CONVERTER 12V TO 6-9VDC
CODE 805 **LEVEL 1**

This dawn converter circuit can decrease 12-15 volts to 6 or 9 volts as per requirement. If 6 volt is required, connecting with J. if 9 volts is required, do not connecting J. This circuit can conduct maximum 1 amp. current.

Technical specifications:

- power supply : 12-15VDC.
- voltage output : 6 or 9VDC (jumper select)
- max. current output : 1A. (transformer 1.5A)
- PCB dimensions : 1.60x1.19 inches.

How to works:

As per figure 2, IC1 is the main function of this voltage. Normally this IC can conduct 6 volts by connecting pin G of IC1 to ground. If a volt required R1 has to increase IC ground from 0 to 3 volts, so pin OUT of IC1 will have 9 volts. Giving only DC to "IN" between 12 to 18 volts. At OUT is regulated DC which makes OUTPUT voltage clean.

PCB assembly:

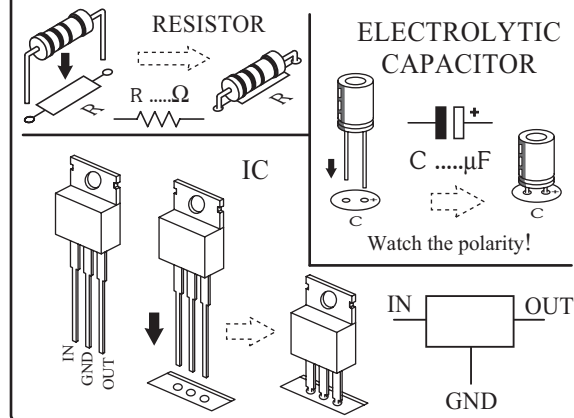
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be carefully 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:

Do not connecting J if require 9 volts. Connecting J together if 6 volts required. If requiring selecting switch, connecting the circuit according to figure 3. If using over 300mA. current, you have to install heatsink with IC1. Power supply can be from either adapter or car battery.

For the power supply circuit is 220VAC transforming circuit that decreasing to 12-0-12 VAC and non-smooth DC. If it is passed transforming circuit, voltage will be smooth and consistent. It requires 500mA with 12-0-12V for not lesser than 300mA current out.

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.

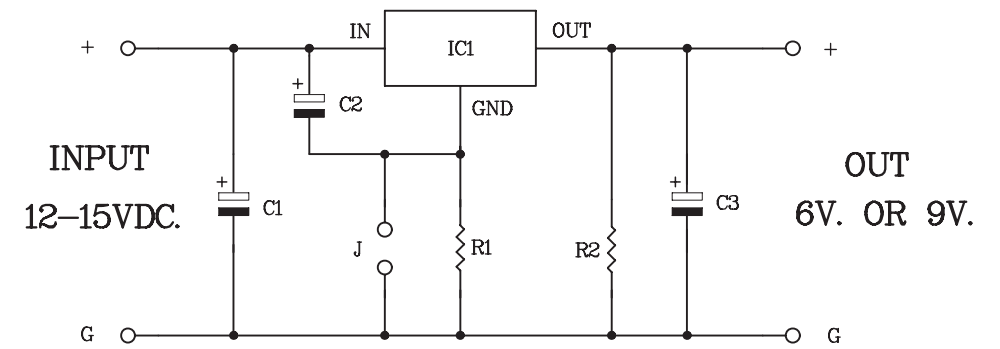


Figure 2. The dawn converter 12V to 6-9VDC circuit

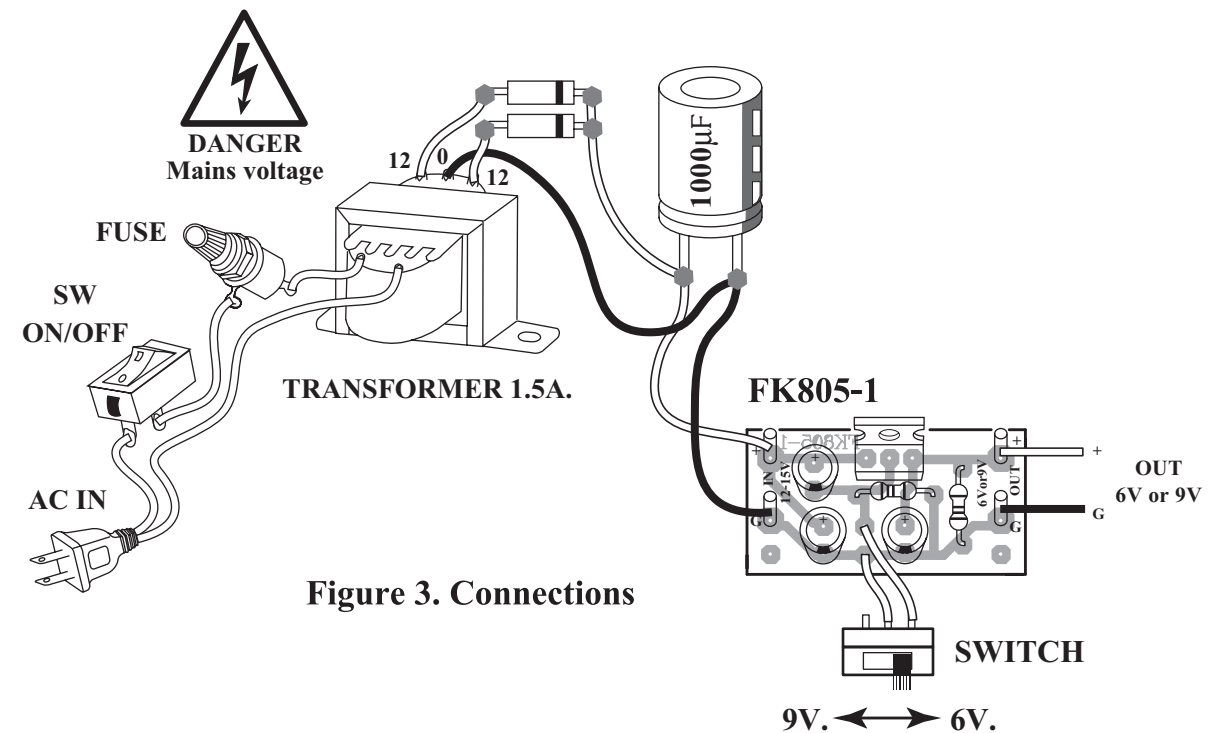
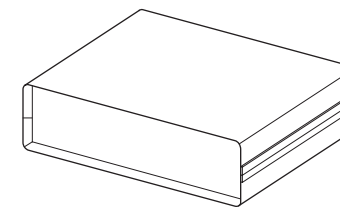


Figure 3. Connections



NOTE:
FUTURE BOX FB06 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