

K248 12-14VDC UP INVERTER FOR LED LAMPS



12VDC to 14VDC INVERTER INSTRUCTIONS.

This kit is designed to be used with up to five LED lamps. These lamps are typically used with a down-light transformer that outputs nominally 12VAC. When converted to DC via a rectifier in the LED lamp the rectified DC voltage is higher than the AC supply voltage. In order to power these lamps with DC from a battery, the voltage needs to be increased to around 14VDC.

CONSTRUCTION

Construction is simple as there are few components. Start with the resistors and diodes, followed by the IC socket, ceramic capacitor, screw terminals, electrolytic capacitors and then inductors.

HOW IT WORKS

The explanation of how this circuit works is best left to the manufacturers. This is a standard application for a

MC34063A IC. Data and application information is commonly available on the Internet along with calculators to determine component values for different voltages. We have not included current limiting in this kit. If you want current limiting connect a resistor between the points marked A and B on the PCB. Also you will have to cut the track between these two points on the underside of the PCB. To determine the value of the current limiting resistor check the data available on the Internet. The only deviation from the standard application is we have added a noise filter to the front and rear ends of the circuit to prevent any possible interference with AM radio reception.

PARTS LIST

MISC.

- 1 PCB CODED K248
- 2 2 WAY SCREW TERMINAL
- 3 68uH INDUCTOR

SEMI-CONDUCTORS

- 1 MC34063 IC
- 1 8 PIN IC SOCKET
- 1 IN5819 DIODE

CAPACITORS

- 4 ELECTROLYTIC CAPACITORS 100uF/25V
- 1 CERAMIC CAPACITOR 680pF

RESISTORS

- 1 180R RESISTOR 1/4W
- 1 10K RESISTOR 1/4W
- 1 100K RESISTOR 1/4W

