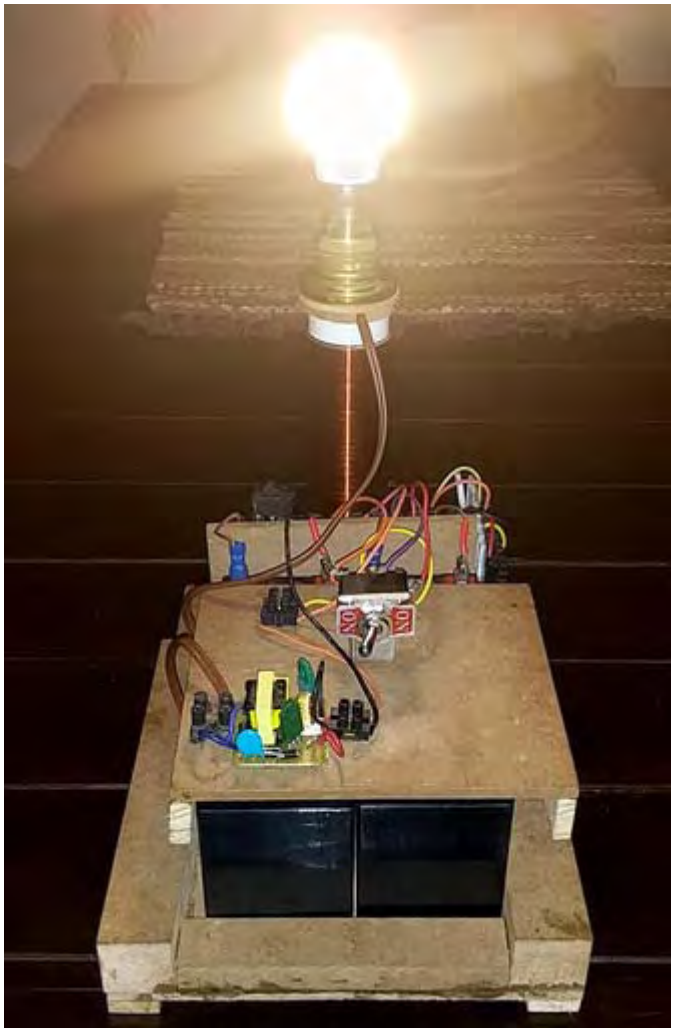
Simple Free-Energy Devices

There is nothing magic about free-energy and by “free-energy” I mean something which produces output energy without the need for using a fuel which you have to buy.

Chapter 33: The Simplified Perpetual Light

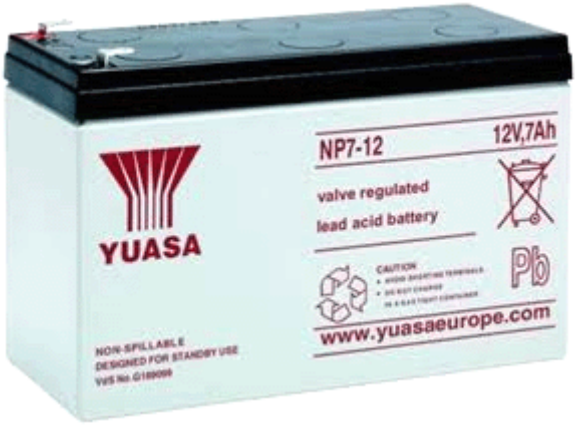
There has already been shown a Perpetual Light system where lighting batteries are recharged when the light is not in use. That design uses a latching relay to swap between two batteries on a continuous basis, but that tends to confuse some people and make the design seem too complicated. So, here is a design from our South African developer friend who shares his work freely and generously. He has daily mains power cuts which average seven hours per day and that brings into play the old saying that “necessity is the mother of invention”.

He has built some of the earlier light design which uses a latching relay and those work very well, this one uses a tiny 12V to 220V inverter and a mains LED bulb:

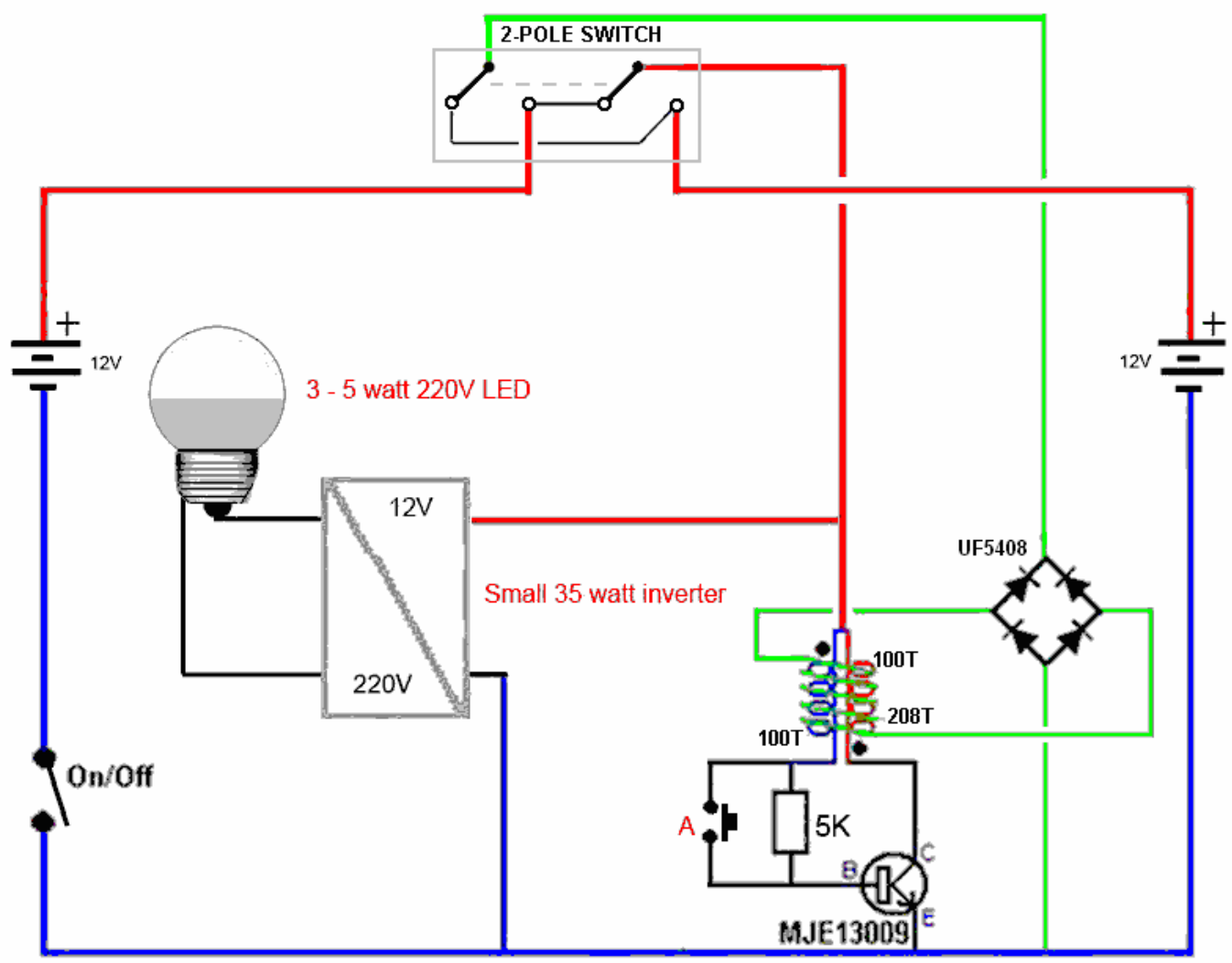


However, looking for an even more simple version has led to the following design which has few components and yet which works very well. It uses the same principle of operation used by Carlos Benitez in his two kilowatt self-powered design, namely the circuit drives both the load to be powered (a light in this case) and at the same time drives a battery charger which charges a second battery which will be ready for use when the driving battery needs recharging. The circuit is switched entirely off

when the light is not in use. The developer has easy access to many discarded 12-volt batteries and so he uses batteries like this:

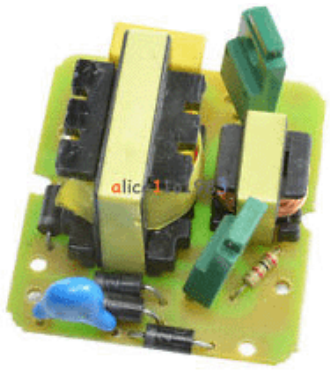


The heart of the very simple circuit is a bi-filar coil wound on a 40 mm diameter coil former using two strands of 0.71 mm diameter solid enamelled copper wire. Each coil has 100 turns and the two strands of wire are wound side by side. The start of the first winding is connected to the end of the second winding. Then, a third coil of 208 turns is wound on top of that bi-filar coil. The circuit is like this:



For the light, the developer has chosen to use a 220-volt bulb, rated at anything from 3 watts to 5 watts as that is easy to organise and gives really good lighting. Ignoring the coil circuitry, the circuit is extremely simple with a small inverter powered by either of the batteries.

The inverter is very small and very cheap and the developer has found it to be highly reliable. It can be purchased through eBay:



12V to 220V Step UP Power Module 35W DC-AC Boost Inverter Module Dual Channel

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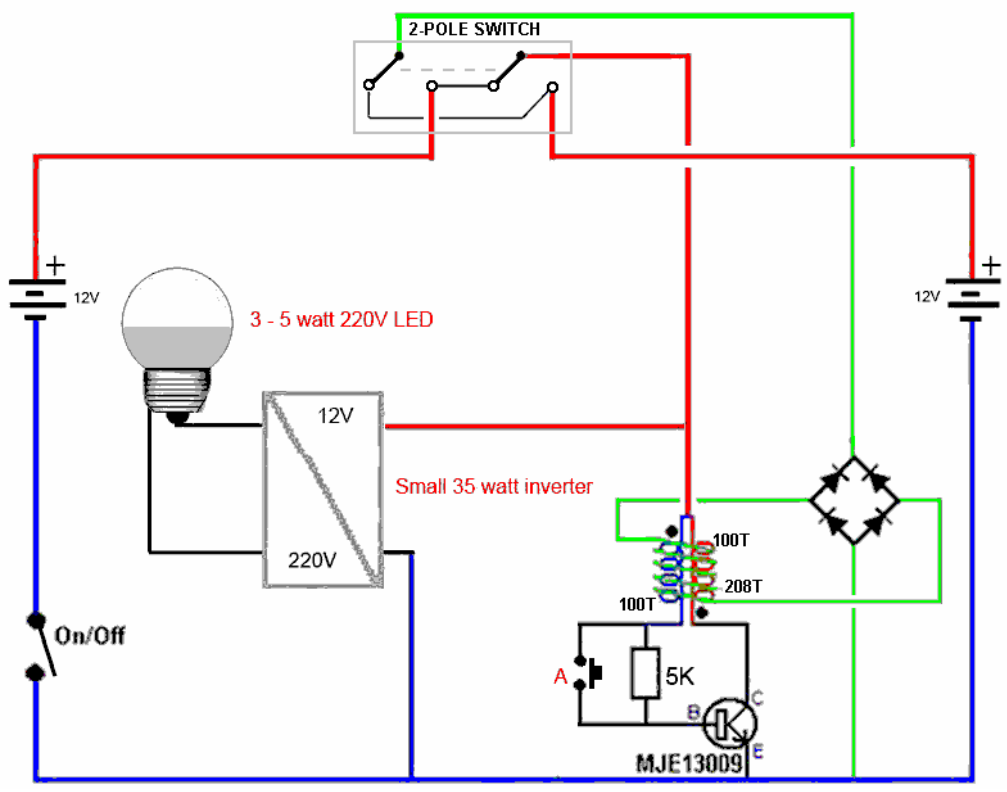
However, although it is so small you need to be **very careful** when setting it up as you could get a serious shock if you are careless. Remember that this tiny board is generating the same voltage and frequency as a 220-volt mains wall socket, so insulate it fully before applying 12-volt power to the circuit.

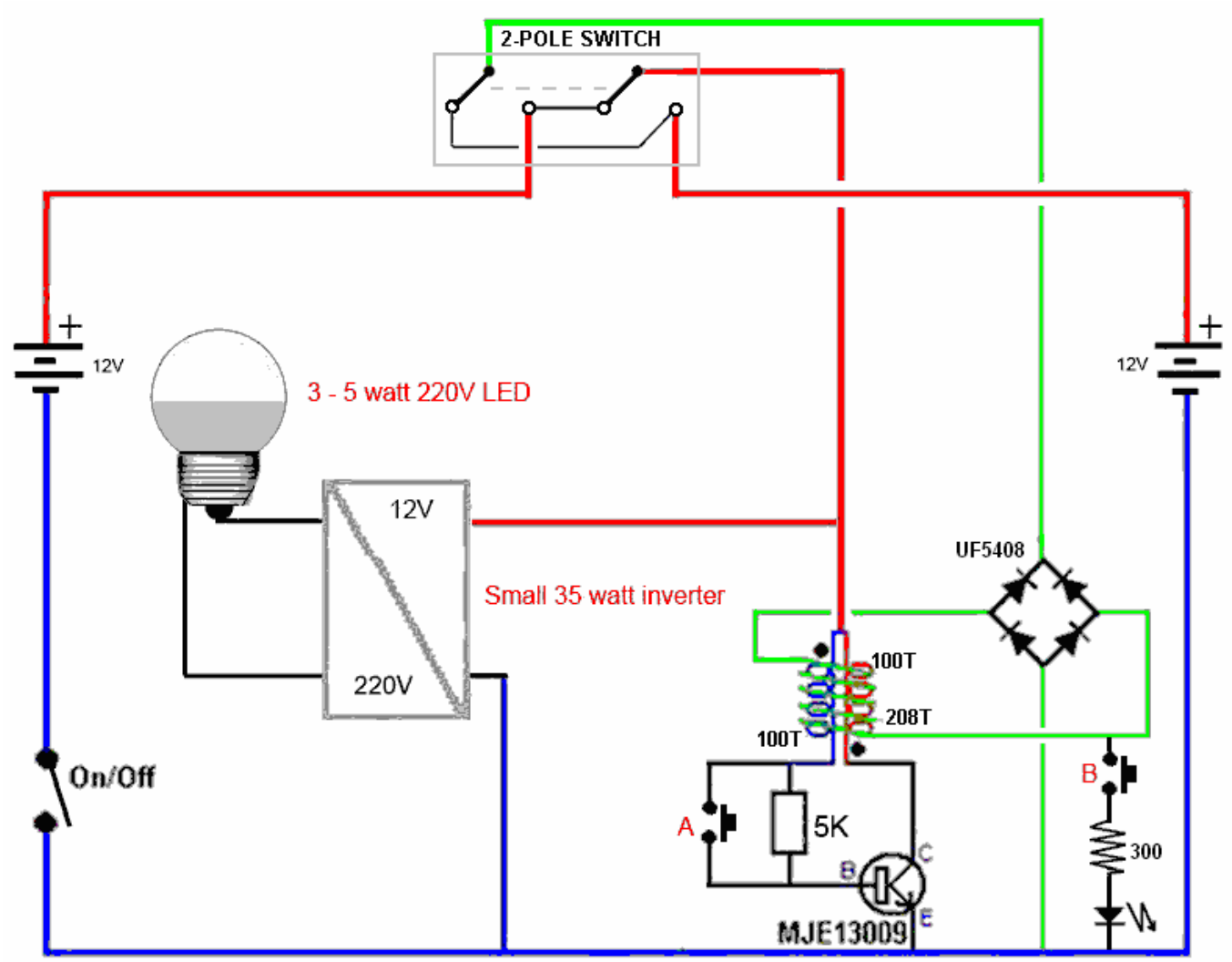
An ordinary 2-pole 2-way toggle switch allows you to switch from one battery to the other. You don't do that until the battery driving the circuit needs to be recharged.



The charging circuit is an ordinary Joule Thief circuit with an extra FLEET-style winding shown in green. The voltage developed in that winding is rectified by the diode bridge and passed to battery which is being recharged. This light is always available and never needs external charging.

The press-button switch marked "A" is included because the MJE13009 transistor is sometimes reluctant to start with its 5K resistor and so a quick tap on the switch always gets it started. If it doesn't start, then the light will work fine but the second battery doesn't get charged. To allow a quick test to

show that the oscillator is actually running, the developer has added a check light to the circuit. The final circuit then looks like this:



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Pressing button switch “B” will light the indicator LED if the Joule Thief charging circuit is oscillating and if it isn’t running, then a brief tap on button “A” will get it running as that uses the blue winding directly to feed a large current to the transistor.

As well as generating the 220-volt AC which the bulb needs, the small inverter also acts as a sensor for the state of charge of the battery which is powering the circuit. The inverter starts the light bulb flickering when the battery voltage drops to 12.5 volts. The developer has found that batteries work much better if they are not discharged below 12.5 volts (which is about half charge for a lead-acid battery). So, when the light starts to flicker, the two-pole switch is operated to swap the batteries over.

Again, our thanks are due to the South African developer who shares his working circuits with us.

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