

# 12V electrical ca. €3,000



The light gives 30 to 40W compared to incandescent bulbs. You can use 0.75mm<sup>2</sup> normal wire and 10A fuse. Where there are many lamps on the same wire, go for 1.5mm<sup>2</sup>.



Use good switches.

These says clunk clunk when switched as a very solid switch.

It is not beautiful but, I have only one functional arm and one problematic leg.

The switch must be able to work for at least 20,000 times over 20 years.

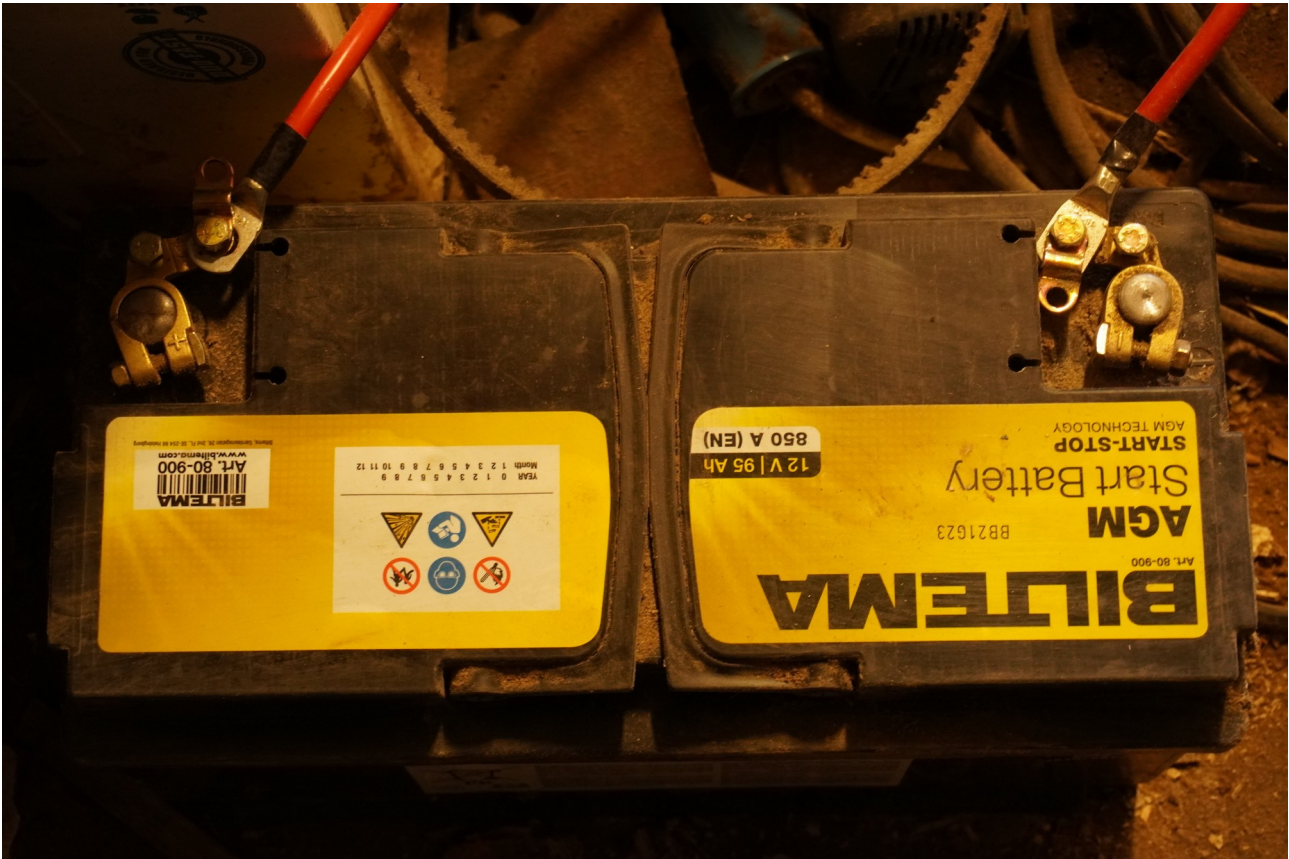
Soldering is best but, crimping is also a possibility. Use flex if there is any chance that wires are touching each other.

In the cellar is a 1000W inverter to create 230V AC sine-wave. In the kitchen we have the on/off instrument you see on the picture.

We have a separate Ethernet cable going between the instrument and inverter. Do not use WiFi or Bluetooth.

A normal wire from inverter to kitchen.





AGM battery is secure. It cannot leak even when a truck drive over it. It cannot burn. It cannot explode. I was going to think about buying Ni-Fe but, they ware too expensive costing 4 times more than AGM. Lithium batteries re very dangerous, the burn by 2500°C by something is wrong or damaged.

Two solid cables goes o few meters to a 150A fuse.



The MPPT instrument controls the charging of the AGM battery. The MPPT also maximize the charging by adjusting the voltage to the generator. The generator can operate from 10V to 75V. Maximum is 20A.

Two 10A diodes makes sure I can generate from solar panels or from transformer.

The 12V is independent of the 230V, so if the grid goes down I can manage with 12V.

I have rechargeable flashlights. Recharge on 12V or 5V from the 12V.