

## THE USE OF VOLTAGE REGULATORS IN BOATS, MOTORHOMES, CARAVANS, SOLAR POWERED HOMES

### **12 volt (consumer) models.**

Many appliances, such as Flat Screen TV's, are mains operated, but in fact the mains supply is reduced and regulated down to 12 volt in a plug-pack (wall-wart) and this is then plugged into the appliance. These appliances are popular with Boaties and Motor-homers.

At first sight it would seem that the mains plug - pack could simply be substituted by the 12 volt boat or camper supply.

However, that boat or vehicle battery supply will vary from perhaps 11 volts to 14.8 volts, depending on many factors.

Voltage drops are caused by turning lights on, water pumps or fridge turning on, toilet etc, and of course the state of battery charge.

Conversely, voltage increases when some of the above loads are turned off, and of course when some sort of charging system is operating: eg Solar, Wind, Genset, Mains, or the vehicle engine is running (or you may just wish to operate a 12v device from a 24v Battery).

Many consumer appliances are not designed to cope or operate for any length of time with these voltage variations.

Initially all may seem to be well, but longer term damage can be occurring, such as TV screen pixel damage, overstressed power supplies, components etc.

A limited range of more specialised appliances claiming to be designed and intended for the RV/Marine market are sometimes available, but at greatly increased prices.

These Cruising Electronics economical converters will regulate and stabilise your boat or camper supply to a rock solid 12 volts.

If your battery voltage is down, it will step it up to the required 12 volts

If your battery voltage is up it will step it down to the required 12 volts, all instantly and automatically.

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