



## **CONTROL PANEL SERIES**

## **INSTRUCTIONS FOR USE**

**Zig Electronics Ltd.,  
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## BATTERY CHARGING FROM THE MAINS

None of the ZIG Control Panels covered in this publication incorporate any facilities for battery charging, their function is confined to the safe control of the low voltage circuits in your caravan together with system and battery state indication. These products were however designed to be used in conjunction with the ZIG DCU3 and DCU15 AUTOMATIC REMOTE BATTERY CHARGERS.

## BATTERY CHARGING FROM THE CAR

Most modern installations allow charging of the caravan battery when the vehicle is connected to the caravan (and the vehicle engine is running), the wiring for this is usually incorporated in the caravan during manufacture. However it is unfortunately true that very few car manufacturers make provisions for proper operation of caravan electrical supply and it is usually left to the owner of the vehicle to make his own modifications in order to take full advantage of the sophisticated electrical systems available in today's caravan. Fortunately these modifications are not too difficult or expensive and can be completed by the owner in a few hours. Full details follow in the next paragraph.

## WIRING YOUR CAR

The most important aspect of any modification to your car's wiring is safety; there is no possibility of getting an electric shock from a 12 volt supply but low voltage/high current supplies are the ideal way to start fires, and a fire in a caravan is probably even more dangerous than one in a car. **PROPER FUSING IS ESSENTIAL.** The complete system requires three separate cables to be run from the car battery positive terminal to the 12S socket fitted on the towbar. It is very important that the proper cable is used, the **MINIMUM** recommended size of cable is 2mmsq (27.02) and thicker cable will give higher current capability if physical space allows. Wiring should commence at the 12S socket by first ensuring a good earth connection to the car chassis to Pin 3 on the socket, this is most easily accomplished by running a cable direct to bare metal a short distance away from the socket. The other three wires should be run either underneath the vehicle or through an available channel directly back to the engine compartment. It is most important that these cables be protected by a proper fusing system and the easiest way to accomplish this is to fit an in-line-fuseholder in each cable before it is connected to a supply.

Note: The fuses must be fitted as close to the battery as possible, any cable between the battery and the fuse is unprotected and therefore a potential fire hazard.

The cables from No. 4 and No. 6 of the 12S socket should be connected through the previously fitted fuse links to the **POSITIVE** terminal of the vehicle battery, using proper terminations to the battery posts.

The cable from Pin No. 2 of the 12S socket should be connected through a relay switched via the ignition switch of the vehicle, fitting will depend on the relay used; (full fitting instructions are included with the ZIG RM12 relay, only four connections are required). When all the connections are completed and carefully checked, insert a 25 amp fuse in each fuseholder and checkout the system.

## **CONTROLS**

All the accessory switches are clearly marked with their functions, except the auxiliary switches these outlets allow for a choice of equipment when the panels are fitted as standard by your caravan manufacturer. These switches, together with their separate fuses serve to isolate the various 12 volt outlets in your caravan and allow you to choose which circuits you wish to use at any time.

The main control switches are the "Caravan Battery/Car Battery" control and the "12V ON/OFF" control this is in the centre position on some panels and their operation is as follows:

### **BATTERY SELECTOR (Caravan battery/Car battery)**

This switch does exactly as its name implies; it allows you to choose the source of 12 volt supply to your caravan, it is a feature of all ZIG control panels and will be found very useful, especially when on sites without a mains supply for battery charging. The ability to utilise your car battery to run your caravan accessories will allow much longer times before recharging. At the same time the facility will allow you to be independent of your car by using the caravan battery only.

Note. Permanent use of the car battery only will inevitably result in the infuriating situation of a fully charged caravan battery and a car which won't start!

### **THE 12V ON/OFF SWITCH**

This switch serves to isolate all 12V circuits in the caravan and also the ZIG battery condition indicator, it is similar to the main circuit breaker in your house, the one you turn off before you go away on holiday. N.B. Some caravans which are fitted with electrically controlled heating systems need to have a permanent supply to thermostats etc., if you have such a system check your instruction book before turning off the 12V supply during periods when the caravan is in use.

### **THE BATTERY CONDITION INDICATOR**

This device is fitted to all ZIG control panels, its purpose is to warn that the batteries are becoming discharged and to allow remedial action to be taken. The red light will glow when the battery voltage is below 11 volts, above this voltage the green light will glow. No harm will come to the system or the battery if the accessories are used when the red light is on, and it will be found that possibly another few days reserve of current is available after the red light first appears. A true reading will only be given when all the 12 volt equipment is switched off and when no charging system is in operation. The red light may come on when an appliance is switched on, this is normal - current surges cause momentary voltage drop. It is important to remember that the battery monitor is not a charging indicator. The fact that the green light is on does not mean that the battery is fully charged. Even with a flat battery the green light will glow if a charging system is operating, due to the high terminal voltage present at the battery.

## **FUSES**

All the control panels are fitted with easy access fuse holders and these are fitted with standard radio quality 10A 1.1/4" glass fuses. If a fuse blows, first investigate the cause, when found replace the fuse with exactly the same type as the original. **UNDER NO CIRCUMSTANCES ATTEMPT TO FIT A HIGHER VALUE FUSE THAN THE ORIGINAL.** It is important to remember that a fuse never blows without reason and the cause of blowing should always be ascertained before the circuit is used again. A feature of the ZIG control panels is that they allow all other circuits to function normally in the event of a fault in one circuit.

## GUARANTEE

Thankyou for purchasing a ZIG product.

Peter Everard Ltd., and its subsidiary Zig Electronics Ltd., Guarantee this product against failure due to faulty workmanship and/or material for a period of 12 months from the date of original purchase.

This Guarantee will be extended when the product is fitted to a caravan or motor-caravan by an original equipment manufacturer, the term will then be 12 months from the date that the caravan first became the subject of a retail sale.

It shall be at the company's discretion to determine the method of rectifying the fault.

This Guarantee is not transferable and any claims made under the Guarantee MUST be made to the supplier from whom the product was purchased; (or to the dealer who supplied the caravan originally). It is important that proof of the date of purchase is supplied by the customer.

In the event of a claim under this Guarantee please do one of the following things:

1. Return the product or the caravan to the original supplier together with proof of the date of purchase.
2. Contact the dealer for information about repairs in situ.

Please check the section on "Fault Finding" before making any claim under the Guarantee.

### IMPORTANT

This guarantee will be invalidated if any attempt has been made to open, modify or repair by unauthorised personnel.

Fuses and fuseholders are not covered for failure or damage by whatever cause.

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What to do if a problem occurs outside the Guarantee period:

1. Ask your local caravan dealer if he can service the unit for you.
2. Contact a qualified electrician (or if the problem is confined to the 12 volt circuits), a qualified auto-electrician.
3. If 1 and 2 above are not practical or unsuccessful, you may return the product to the manufacturers: Peter Everard Ltd., at Cashes Green, Stroud, Glos. GL5 4RA subject to the following:
  - (a) The product is packaged in accordance with Post Office requirements, i.e. a minimum of 2" (50mm) of packing material around the parcel. Peter Everard Ltd., will not be responsible for any damage in transit.
  - (b) A letter describing full details of the fault, including how and when it occurred.
  - (c) A cheque for £17.50 (incl. vat) made payable to Peter Everard Ltd. This is to defray charges for checking and return postage. If any repairs required exceed this figure you will be advised in writing before repairs commence. Should you decide not to proceed the above amount will be returned to you less the cost to return postage.

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This Guarantee does not in any way affect your statutory rights.

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