



# THE ZIG "7" CONTROL PANELS

CF7 & AC72

## CONTROLS

All the accessory switches are clearly marked with their functions, except the auxiliary switch, this outlet allows for a choice of equipment when the panels are fitted as original equipment; 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 (note the on/off switch is not fitted to the CP3 and the CP3V 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 (not applicable to CP3 & CP3V)

This switch serves to isolate all 12V circuits in the caravan and also the ZIG battery condition indicator, it is similar to the main switch in your house, i.e. the one you turn off before you go away on holiday. NB. 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.

## SETTING THE CLOCK (CF7 ONLY)

The ZIG CF7 control panel is fitted with a liquid crystal display (L.C.D.) quartz clock. This clock runs on a single H.P.7 battery which should last approximately 18 months depending on how often the background illumination is used. Insert the battery in the holder fitted on the back of the CF7 case, taking care to check that the polarity is correct. Set the clock as follows. Whilst holding down the 'SET' button, press the 'HRS' button, each press will advance the hours one digit. Similarly while holding down the 'SET' button, each press of the 'MINS' button will advance the minutes one digit. Pressing the 'LAMP' button will illuminate the clock for use in darkness.

## 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 ACU2 AUTOMATIC REMOTE BATTERY CHARGER and most professionally installed systems include this product. A full description of the ACU2 charger and its operation will be found later in this publication.

## 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 average 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 ZIG ACU2 AUTOMATIC REMOTE BATTERY CHARGER

Most manufacturers fitting the ZIG "7" range of control panels fit the ZIG ACU2 Automatic Battery Charger as standard equipment and although the operation of this device is fully automatic, the following points will probably be found helpful to the new owner:

The only user control on the ACU2 is the "ON/OFF" switch, this controls the mains supply to the unit and would normally be left switched on permanently throughout the year, incoming supply being available when the caravan has access to a mains outlet with voltage ranging between 200 and 250V A.C. (This is the standard range available in most parts of the world, the exception being the U.S.A. where the voltage is 110 A.C.). Efficiency will be slightly reduced if the voltage is below 210V and below 200V it will not charge the battery, however, no harm will come to the system if it is connected to these low voltages.

The ACU2 is fitted with two fuses, the smaller one being the mains input fuse, this is rated at 2 amp and is a standard 20mm radio quality glass fuse.

**IMPORTANT** If this fuse blows the design of the ACU2 ensures that warning light still glows to warn of dangerous voltages inside the case.

The large fuseholder is usually fitted with a 15 amp 1 1/4" glass fuse and is not normally connected into the system, it is provided for caravan manufacturers to wire as needed, and is usually wired between the 12S socket Pin 6 and the refrigerator 12V element.

## TECHNICAL INFORMATION

For the technically minded a brief summary of the ZIG ACU2 is given below, if further information is required please contact the manufacturers who are pledged to assist in any way possible to further the cause of HAPPY CARAVANNING

### ZIG ACU2

#### Technical Details

#### OUTPUT

Max: 12 Amps  
Continuous: 4 Amps

#### INPUT

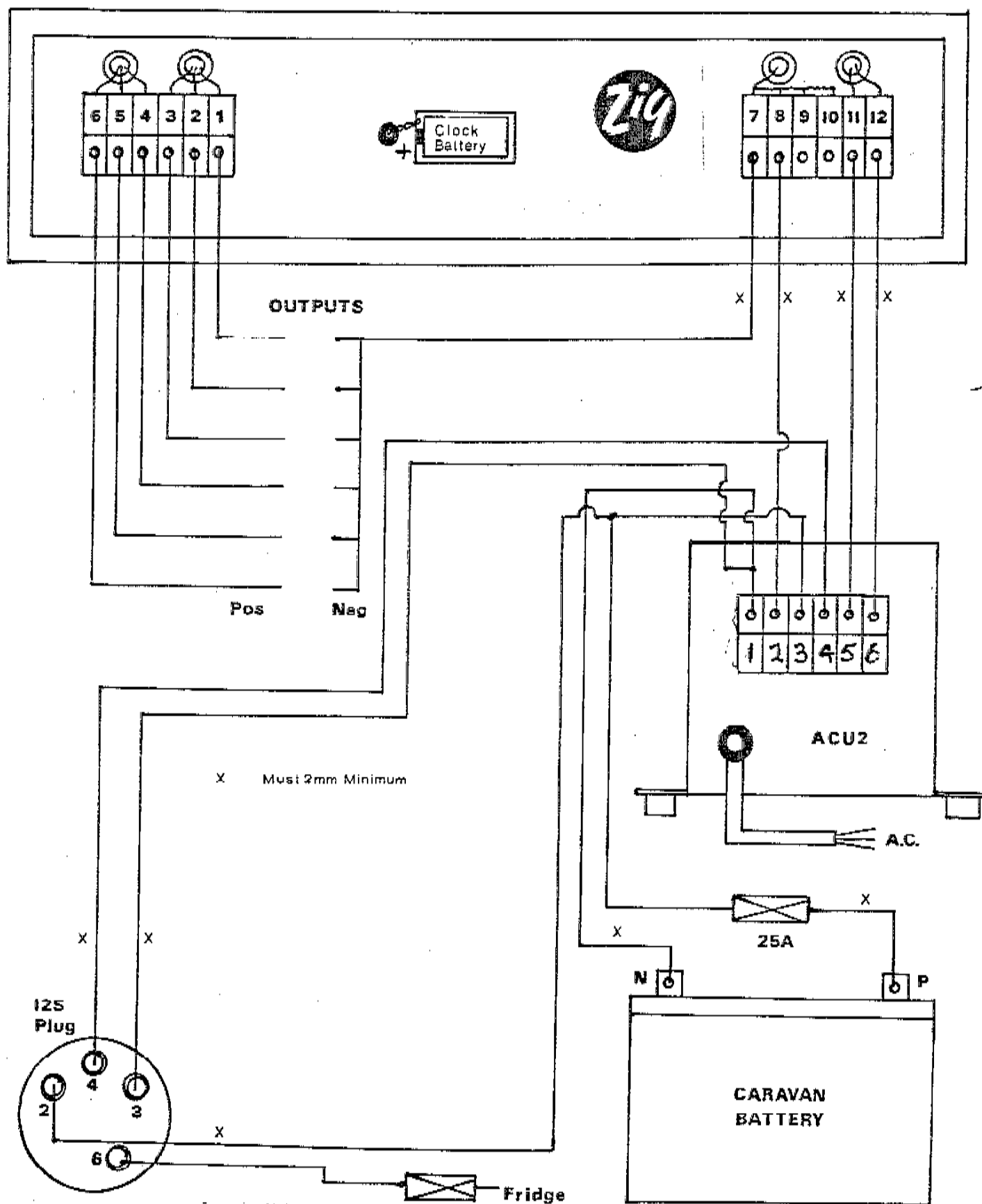
200, 250 volts A.C. 50Hz 0.685 Amps

#### REGULATION

Better than 7.5%

#### PROTECTION

Mains input: 2A quick blow fuse  
Transformer: OTT 30 Automatic thermal switch  
Rectifier and output: OTTE3 Automatic overcurrent switch



**Zig Electronics Ltd**  
Manufacturers of Electrical and Automotive Products

Phoenix Works  
Thrupp  
Stroud  
Glos  
GL5 2BU