

ZK1257
BATCH:000000

12N-12S Rear Audible Kit (Pre-Wired) 2 Metres Cable

COMPONENTS

ITEM	QTY	DESCRIPTION
A	1	Flashmaster Audible Relay
B	1	Black 7 Pin Pre-Wired Socket (12N)
C	1	White 7 Pin Pre-Wired Socket (12S)
D	1	5 Metres 28/.3 Cable
E	2	Fully Insulated Blue Female Spade

BOLT PACK

ITEM	QTY	DESCRIPTION
F	3	Earth Terminals
G	6	Red Displacement Tap Connectors
H	7	Blue Displacement Tap Connectors
I	2	Grommet
J	1	Blade Fuse (15A)
K	1	Blade Fuse Holder

FITTING PROCEDURE

- ⇒ Before commencing with installation please read both sides of this fitting instruction carefully.
- ⇒ Ensure vehicle circuits are de-energised and isolated (Important – Always follow vehicle manufacturer's instructions).
- ⇒ Take the 12N BLACK 7 core cable into the boot through the grommet supplied.
- ⇒ Locate the vehicle wiring harness and connect as shown in diagrams A and C below.
- ⇒ Take 12S GREY 7 core cable into boot through the grommet supplied and connect WHITE & BLACK wires to a good earth.
- ⇒ Through a 15 amp blade fuse, connect the 12S GREEN wire to the POSITIVE terminal on battery, using the 5 metres 28/0.3 cable.
- ⇒ If applicable connect the 12S RED wire through a fridge relay and 15 amp fuse to the battery.
- ⇒ Plug trailer unit into 12N socket and operate indicator switch, an audible buzz will sound on each operation of the car and trailer unit indicators. If the relay fails to sound this warns the driver that the trailer unit indicators are not working.
- ⇒ N.B. Some vehicle manufacturers provide a fused heavy-duty cable down to the rear of the vehicle to provide power for towing supplementary electrics. Check with manufacturer's wiring diagram.

Fault Finding

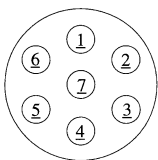
- ⇒ Relay not sounding after fitting: Check all connections and correct wiring pairings.
- ⇒ Relay continually sounding: Check all connections and socket/trailer unit for earth fault.
- ⇒ Relay not sounding whilst indicators working: Check bulb wattage (21W) and earth connections.

SUITABLE FOR USE ON 12V NEGATIVE EARTH VEHICLES

FITTING DIAGRAM

DIAGRAM A

INTERNATIONAL COLOUR CODE FOR 7 CORE CABLE (NORMAL)

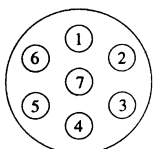


PIN No.	COLOUR	FUNCTION
1. (L)	YELLOW	L/H FLASHER
2. (54g)	BLUE	AUXILIARY
3. (31)	WHITE	EARTH
4. (R)	GREEN	R/H FLASHER
5. (58R)	BROWN	R/H TAIL LIGHT
6. (54)	RED	STOP LIGHTS
7. (58L)	BLACK	L/H TAIL LIGHT & No. PLATE

NOTES:-

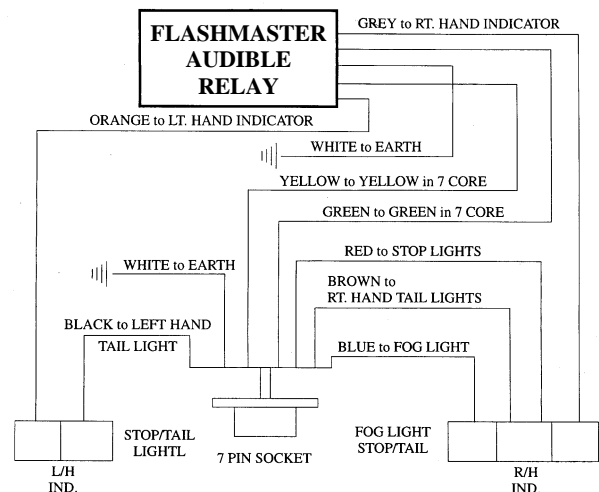
1. Ensure that the earth is connected securely to bare metal free from paint and rust.
2. The auxiliary cable need only be connected when direct power is required in the caravan or trailer for lighting, etc. or a fog light. If not used, tape the end neatly for possible future use.

DIAGRAM B



Pin No.	Colour	Function
1. (L)	Yellow	Reversing Lamp and/or Reversing catch or Inertia Brakes
2. (54g)	Blue	No Allocation
3. (31)	White	Earth.
4. (R)	Green	Power Supply
5. (58r)	Brown	Sensing Device (i.e Warning Light with Common-Return)
6. (54)	Red	Caravan Refrigerator
7. (58)	Black	Earth

DIAGRAM C





FITTING INSTRUCTION

ZR1220

The Volton Combi Relay

Type Approval Number e11 03-4897

PRODUCT DESCRIPTION

The Volton Combi Relay has been designed to switch a live 12 volt input feed to supply the supplementary socket on the vehicle's caravan. This unit stops the drain of the vehicles battery when the ignition is turned off as the relay senses the voltage of the vehicle and switches off. It also switches itself on when the vehicle starts up and reaches the required voltage.

COMPONENTS

ITEM	QTY	DESCRIPTION
A	1	Volton Combi Relay

FITTING PROCEDURE

- ⇒ **Attention:** The ZR1220 is not a watertight product and must be installed in a clean and dry location using the fixing tabs moulded on the body of the plastic enclosure or double side adhesive pads or cable ties to secure the ZR1220 in position.
- ⇒ Ensure vehicle circuits are de-energised and isolated before commencing the installation (Important - Always follow vehicle manufacturer's instructions).
- ⇒ Connect the Green wire from 12S supplementary socket to the ZR1220 permanent live output terminal.
- ⇒ Connect the Red wire from 12S supplementary socket to the ZR1220 switched output terminal 1.
- ⇒ Connect the Blue wire from 12S supplementary socket to the ZR1220 switched output terminal 2.
- ⇒ Connect the ZR1220 chassis earth terminal to a chassis earth terminal on the body of the vehicle (This connection must be made direct to the vehicle chassis and NOT to a chassis earth wire)
- ⇒ Connect a single core cable from the vehicle fuse box or battery through a 16 amp continental fuse or a 15 amp blade fuse to the +12VDC terminal (The single core cable MUST be 44/0.3mm (3mm²) and insulated).
- ⇒ Insulate the input and output terminals using electricians pvc insulating tape.
- ⇒ If the ZR1220 Volton Combi does not switch on after 10 to 15 seconds with the engine running, an adjustment pot can be found near the earth connection. Turn the adjustment screw clockwise until the Volton Combi turns on.
- ⇒ The caravan battery should be in good working order and fully charged before connecting to the towing vehicle.
- ⇒ **WARNING** All cables and wires used in the 12S supplementary electrics circuit must be of the correct cross sectional area to carry the current (amps) the connected load will cause to flow.

SUITABLE FOR USE ON 12V NEGATIVE EARTH VEHICLES

FITTING DIAGRAM

WARNING The 7 cores of the grey 12S supplementary cable must be able to carry the current the load connected to each core will cause to flow and also in fault condition the maximum current the supply fuse will allow to flow before it ruptures. The PCT manufactured 12S pre-wired sockets are wired with 6 x 1.5mm² (rated 12.75 amp standard insulation, 21 amp thin wall insulation), 1 x 2.5mm² (rated 21.75 amp standard insulation, 29 amp thin wall insulation).



IMPORTANT PRODUCT INFORMATION & GUARANTEE

(TO BE RETAINED WITH THE VEHICLE AND PASSED TO SUBSEQUENT OWNERS)

Thank you for purchasing a PCT Automotive product. Please read the following information carefully before fitting or using your PCT Automotive product.

GUARANTEE

We shall free of charge either repair or at our option replace defective goods where the defects appear

- i. if the goods are a towbar manufactured by us, during the economic lifetime of the vehicle it was first fitted to
- ii. in the case of all other products manufactured by us, within 3 years following the date of your order

PROVIDED THAT (in each case) such defects shall be found to our reasonable satisfaction to have arisen substantially from our faulty design, workmanship or materials and have not arisen by reason of a failure to follow our instructions (whether written or oral), any modification, misuse, neglect or interference with the installation, any damage or abuse to the goods or vehicle by impact or vandalism or by a failure to carry out reasonable inspection, maintenance and/or adjustment.

At all times, the above guarantee is subject to our standard terms and conditions of sale a copy of which is available upon request from our offices.

TOWING LIMITS

Our towbars have been designed for towing up to the vehicle manufacturer's maximum recommended trailer weight and nose load limits for your model. Towing with gross weights above that recommended at any time will invalidate the guarantee and cancel any liability for damage. Towing a twin axle trailer, towing over rough ground or using a bicycle/motorcycle carrier, etc, exerts extreme loads on to a towbar and extra care should be taken in these situations not to exceed the vehicle manufacturer's maximum recommended limits.

PRODUCT IDENTIFICATION MARK

Your product carries a product identification mark. This mark carries important product and batch code information and if the product is type approved it also carries the type approval details which are required by law. Under no circumstances should this mark be defaced, removed or damaged.

INSTALLATION, INSPECTION, MAINTENANCE AND ADJUSTMENT

GENERAL INSTALLATION

- ⇒ All products should only be fitted by competent persons. Electrical products must only be fitted by an experienced auto-electrician.
- ⇒ Read the product fitting instructions carefully and check all components are included in the fitting kit before commencing installation.
- ⇒ Check vehicle for corrosion and/or accident damage. Towbars should not be fitted to any vehicle suffering from corrosion or accident damage or which is not in a roadworthy condition.
- ⇒ Clean off all road dirt, underseal and sound deadening mastic where parts are to fit to ensure correct seating of all components.
- ⇒ Bumper cut information is given as a guide only. Variations in models may occur therefore the fitter should always check that the bumper cut is necessary and of the correct size and shape before commencing with the cut.
- ⇒ All drilling swarf should be removed from the vehicle and all holes drilled in the vehicle should be treated with an appropriate rust inhibitor.
- ⇒ Do not fully tighten bolts before towbar is completely fitted unless instructed to do so in the fitting instruction, this will allow some variances to be overcome before final tightening of bolts.

PAINT & CORROSION

Towbars manufactured by PCT Automotive undergo a phosphate chemical pre-treatment prior to a polyester powder coat finish being applied. For long lasting good looks and in order to prevent corrosion the towbar should be regularly inspected for paint damage and wherever necessary re-painted in an appropriate finishing paint or underseal. The vehicle should also be regularly checked for any corrosion that could affect the towbar installation. Towbars should not be used on any vehicle suffering from corrosion that could affect the towbar installation.

BOLTS

All towbar fixing bolts should be checked initially after the first 300 towing miles, or the initial 500 miles of driving uncoupled, and then every 3,000 towing miles or to coincide with the vehicle manufacturer's recommended service intervals, whichever is the sooner. All towbar fixing bolts should be tightened using an appropriate torque wrench to the settings specified in the towbar fitting instruction.

ELECTRICAL INSTALLATION, TEST/COMMISSIONING AND MAINTENANCE

Failure to comply with the following instructions may cause damage to the towing vehicle's wiring loom and/or towing electrics installation.

Where displacement tap connectors e.g. Scotchlocks, are the preferred method of connection, always use the correct colour coded tap connector for the size of cable to which it is to be connected. All towing relays and modules manufactured by PCT Automotive have cabling with a copper cross-sectional area in the range 0.5mm² to 1mm².

After installation of the 12N/12S sockets, prior to testing, a water displacement agent e.g. WD40 should be applied into the rear connection void through the water drain hole at the bottom of the sockets and also into the front pins under the socket flap. This socket maintenance should be carried out at least twice a year in the spring and autumn.

The towing electrics test procedure must be undertaken with the engine running. If any of the towing relays fail to function correctly, with the engine running and no other vehicle electrical systems turned on, check that the voltage across the vehicle's battery is between 13V and 14V approx, if this voltage is not correct, check the condition of the vehicle's battery/alternator.

Always ensure that the trailer/caravan/lighting board's own electrical systems are installed and functioning correctly before coupling to the vehicle's 12N/12S sockets.

Every six months (spring and autumn recommended) the battery and alternator of the vehicle should be checked to determine correct electrical functioning. All connections of the electrical installation including the earth should be checked for mechanical soundness and electrical quality. Plugs, sockets, relays and fixings should be checked for water ingress, mechanical soundness, electrical quality and general wear and tear.

Please complete the following information to validate the guarantee and for future reference.

VEHICLE OWNER NAME & ADDRESS:

VEHICLE MAKE & MODEL:

VEHICLE REGISTRATION NUMBER:

FITTER NAME & ADDRESS:

DATE TOWBAR FITTED:

If you have any comments or suggestions about the PCT Automotive product fitted to your vehicle, please address them to PCT Automotive, New Street, Holbrook Industrial Estate, Sheffield S20 3GH or email techsupport@pctautomotive.com
Your comments will help us in our aim to continually upgrade our products to meet the high standards expected by our customers.

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