MP3879B
24v Vehicle to 12v Trailer 7 Way Bypass Relay with Buzzer TEB7A-24

Description
This 7-way bypass relay may be used on 24v negative earth vehicles towing 12v trailers or caravans. A 12v source from the vehicle is required, which may be taken from the central 12v tapping of the battery or preferably from a 24v-12v switched mode converter if towing is a regular occurrence.

Procedure

Warning.
This relay should be fitted to negative earth vehicles only.

The relay must be located where there is no possibility of moisture ingress. This is very important with vans where the relay should be positioned well above the lamp cluster.

Great care should be taken if the relay is fitted to a vehicle having multiplexed circuitry, and no attempt should be made to interrupt or interfere with the BUS, the ESUs or the power cable of a multiplexed system. Power should be taken from the main fuse box or battery and signal sampling from the regular 12v system directly feeding the rear lamp clusters.

Prepare the Socket and cables.

- Fit the prewired 7 pin socket (or 13 pin socket as appropriate) onto a back plate fitted to the towing hook mounting points.
- Drill a 13mm hole, or larger dependant on the size of the multicore cable used, into the floor of the vehicle adjacent to the socket. Protect the bare metal with rust inhibitor.
- Slide correctly sized grommet onto the cable. Pass the cable into the vehicle and make a seal with the grommet at the entry point.
- Strip back a portion of the cable outer sleeve and strip the wire ends. Connect a ring terminal to the white wire.
- Route 2mm^2 cable from car battery or fuse box to the boot, fitting an inline 15a blade type fuse holder. Do not insert the fuse at this stage.

Make connections from relay into the vehicle loom.

- Using scotch locks, solder joints or similar, attach the various signal wires coming from the side of the relay into the car loom, teeing in at a point close to the vehicle's lamp circuit that is being sampled and avoiding any multiplex wiring or other devices.

Signal Wire	Connection to Vehicle Loom
Yellow	Near Side Flasher
Blue	Fog Lamp
Green	Off Side Flasher
Brown	Off Side Tail Lamp
Red	Brake Lamp
Black	Near Side Tail Lamp
Grey	Reverse Lamp
White	Secure firmly to vehicle chassis via ring terminal (Combine with 12N earth ring)

Connecting 7 core cable (or 13 core cable) and power cable to the relay.

- Offer up the 7 core cable and the power cable to the relay and make secure connections into the terminal blocks on the relay according to the chart below.

Relay Terminal	**Connection to Relay**
12v	2.0 sq mm cable from vehicle battery centre 12v tapping or from 24v tapping or circuit via 24-12v switched mode converter.
TT	If TT(C2) function required, connect to panel lamp on console via fine signal wire and then from the panel lamp to earth.
1	7 Core cable Yellow Lead
2	7 Core cable Blue Lead
4	7 Core cable Green lead
5	7 Core cable Brown lead
6	7 Core cable Red Lead
7	7 Core cable Black Lead
R	13 Core cable where fitted Pink Lead 12S Cable where fitted Yellow Lead

- The ring terminal of the white earth lead of the of the 7 core cable should be connected to a convenient earth lug on the chassis. The relay white earth lead may also be connected to the same earthing point. If necessary, drill and fit a new earth lug and protect with inhibitor.

- Secure the relay to the harness or similar preferably using a tywrap,

- Insert the inline fuse and test. If a test board is used, it should have 21w bulbs on the flasher circuits as the TT function only works under load conditions.