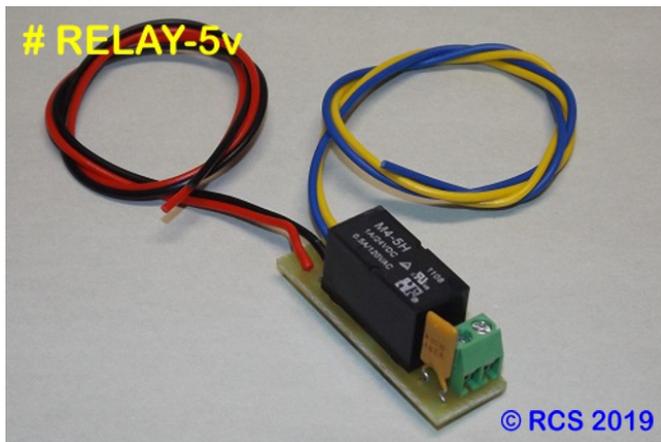


PO BOX 578 CASINO, NSW 2470, AUSTRALIA
 PHONE: INTERNATIONAL ++614 2902 9083
 AUSTRALIA (04) 2902 9083

Web: <http://www.rcs-rc.com> Email: rcs@rcs-rc.com

RELAY-5-12-24v.

1 AMP RELAY KIT TO REVERSE
 A CONSTANT VOLTAGE.



This 1 amp relay device is designed to change the polarity of a fixed voltage supply. It is intended for use with RCS **OMEGA-10**, **COBRA-260** ESC's. It can be powered by the 5 volt supply of the above ESC's and controlled by their lighting outputs.

The output polarity is determined by which lighting output is switched on at the ESC.

RELAY can be used in different ways:

1. It is ideal for situations where you desire the front marker lamps to stay lit even though the front headlight is off.
 2. Instead of rewiring USA Trains® locos. Re-use some components to permit reversing the polarity of PCB's fitted in USA Trains® locos, so the Red/Green marker lamps will now illuminate correctly.
 3. For greatly simplifying battery installations in LGB® locos.
 4. For greatly simplifying the Bachmann® Shay R/C installation. Saves rewiring the Shay. The lights cannot be turned off completely by the TX handpiece.
- There is a 1 amp Polyswitch® fuse on the pcb for circuit protection.

INSTRUCTIONS FOR USE WITH RCS 100 WATT ESC's.

INSTALLATION.

Always match the # **RELAY** to battery voltage.

- # **RELAY-5v** = Batteries 3 volts up to 8 volts.
- # **RELAY-12v** = Batteries 8 volts up to 15 volts.
- # **RELAY-24v** = Batteries 15 volts up to 30 volts.

You can mount the PCB with double stick tape. Do not allow metal objects to touch the rear of the PCB. Damage to the PCB may result.

Insert the Yellow wire onto the reverse light output terminal on the 100 Watt ESC.

Insert the Blue wire into the Batt+ terminal on the 100 Watt ESC.

Connect the Red/Black wires into the fused battery voltage into the terminals marked + (Red) & - (Black). The # **RELAY** coil is off in the forward direction.

CONTROLLING LIGHTING OUTPUTS.

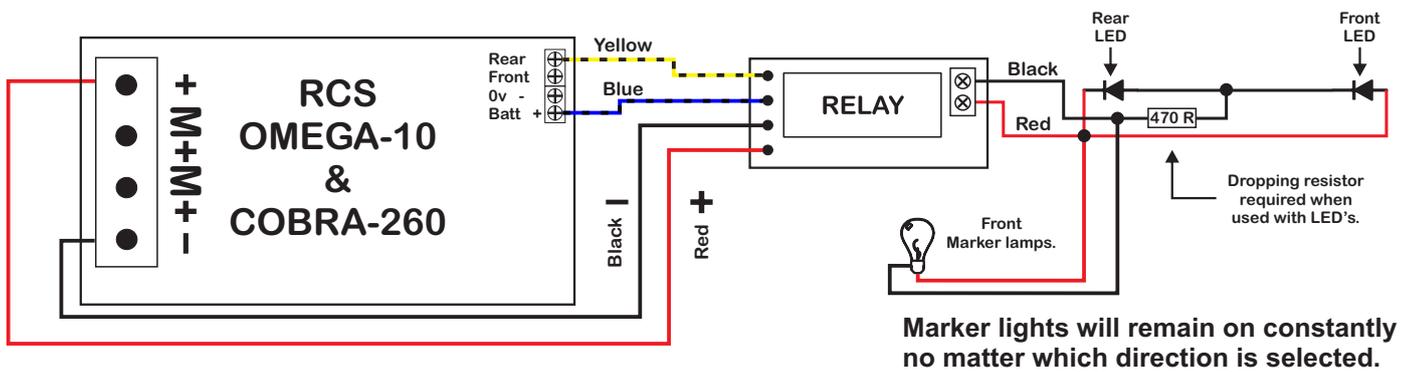
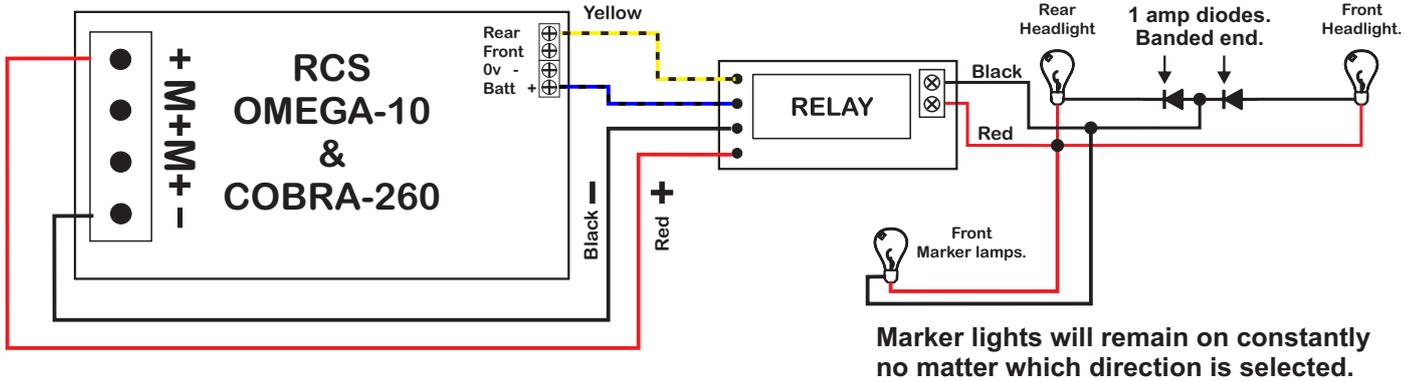
With regular incandescent bulbs use the supplied 1 amp diodes. For Diode lights use a suitable dropping resistor where shown.

Using in USAT locos where the motors are being powered direct from the ESC M+ & - terminals. Remove both Red/Black track pickup cables with locking clip on the plug from the USA Trains® motor blocks and use one of them for version # 2. Connect to the # **RELAY** output terminals as shown in the diagram and plug into one of the two plugs without a locking clip coming from the USA Trains® PCB's.

OPERATION IS AUTOMATIC.

- (1). When correctly wired the FRONT light will illuminate when first switched on. The Red wire is + positive when direction output is set to forwards. (Relay coil will be off).
- (2). With USA Trains® locos the front headlight should come on at start up and the front marker lamp should be green. As you change direction to reverse the front light should go out and the front marker lamps should change colour to Red.
 If not, simply reverse the red/blackwires at the 2 way output terminal of the # **RELAY**.

TWO USES FOR # RELAY VERSION # 1



WIRING # RELAY FOR USAT TRAINS.

MAKE SURE THE RELAY # MATCHES THE BATTERY VOLTAGE BEING USED.

Use the Red/Black cable included with BIK-BGL kit to power the Bachmann® SHAY firebox.

