

Blinker Splitter

Deluxe

Installation Manual V4.0

Content

| | |
|--|---|
| 1. Introduction..... | 1 |
| 2. Power Rating..... | 1 |
| 3. Resistors..... | 1 |
| 4. Installation | 2 |
| 5. Connection diagram..... | 3 |
| 6. Hints and Tips, Problems and Solutions..... | 4 |

ICOS Technology

ICOS Technology Blinker Splitter.

Introduction.

The ICOS Blinker Splitter has been designed for converting USA Specification car rear lights to European Standard. The American system of direction indication is by blinking the brake lights, which is not allowed in Europe, as all direction indicators must be Amber. Prior to the invention of the ICOS Blinker Splitter the most common method of converting the lights was to wire from the front indicators all the way to the rear. This entails a lot of work concealing wires, and also creates a problem with the lamp fault indicators, and the brake lights.

Now with the ICOS Blinker Splitter it is possible to modify the cars without all this wiring. To achieve this it is necessary to monitor the brake lights to determine when they are indicating left or right turn. When a turn signal is detected the power to the brake light is diverted to either new amber lights or to amber bulbs in the reversing light. By diverting the supply from the Brake light to a new lamp, the problem of fault indication is also solved.

One Blinker Splitter covers both Left and Right turn and Hazard indication, so there is no need of any other relays or parts.

Power Rating.

The Blinker Splitter is rated to supply up to 2 X 27watt bulbs for each side brake light and 1 X 27watt bulb for the indicator light, plus if necessary a resistor to make up the load. When the turn indicator is on and the brake is applied the centre (eye level) brake light supplies power to the brake light that would otherwise be flashing. Likewise, with hazard lights on and brake applied, the supply for the brake lights comes from the centre (eye level) brake light when the hazard lights are in the OFF cycle. Therefore if there are 2 bulbs in either side brake lights the center light supply would be required to power 4 X 27watts extra to the original. If it is felt that this is too much load, the new MK4 Blinker Splitter can now accept a direct connection from the battery or ignition circuit, so that this load is not on the brake pedal switch (centre brake light must still be connected). If the load is not too high then a link wire can be used from the centre brake input to the 12 volt power input see wiring diagram. If the 12 volt power input is used, it is important to use cable with minimum 10A rating, and for it to be fused at this load (10 amp).

Resistors.

Please note, it is only necessary to use resistors if the new amber Blinker bulbs are rated less than the total of the original brake lights i.e. if the brake lights are 2 X 27 watt and the new blinker bulb is only 1 X 27 watt, you will need to use 5.6 ohm resistor each side across the new blinker. If the original brake lights are 1 X 27 watt, and you use LED blinker lights you will need 5.6 ohm resistors each side. Likewise 2 X 27 watt originals will need 2 X 5.6 ohm resistors each side if you use LED blinkers.

1 X 27 watt brake + 1 X 27 watt blinker does not require any resistors.

Installation.

Note.

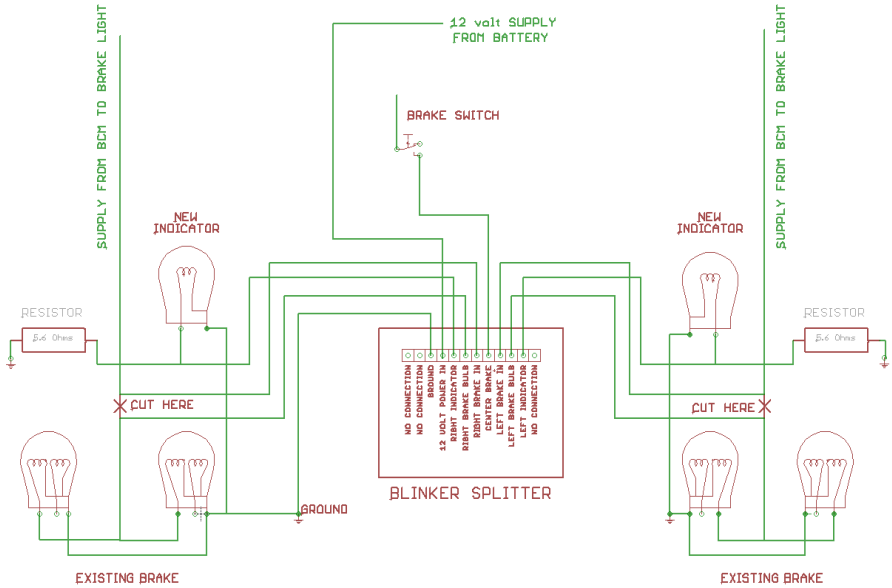
Before carrying out any work on the electrics, it is advisable to disconnect the battery.

First locate a suitable position to install the Blinker Splitter, remember that it is not waterproof so should be sited inside the vehicle. There is also a very low level clicking noise from the unit when operating, so it is best placed in a position outside of the sound proofing i.e. between sound proofing and outer skin of the vehicle. An ideal position would be either under the boot carpet or inside one of the rear light access panels. It is not necessary to screw the unit in place, simply wedge it with some foam or similar material after wiring.

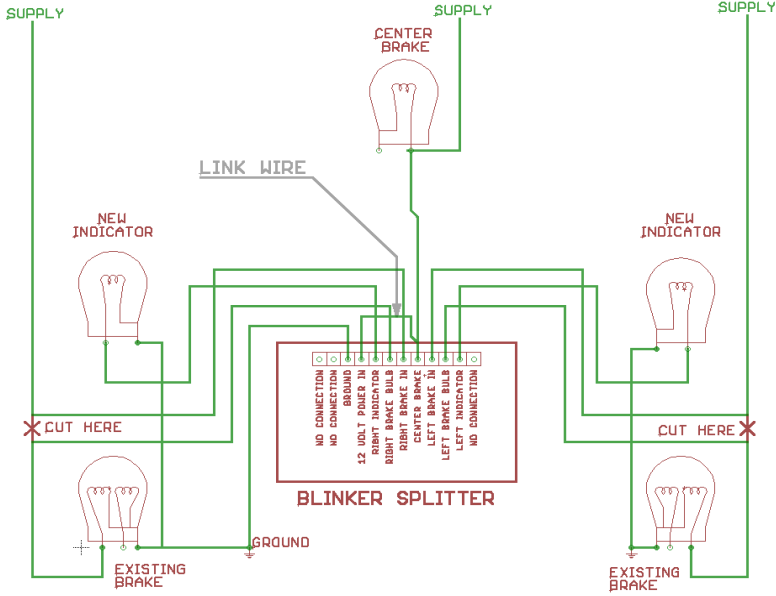
Having decided on the best position, next locate the supply to the centre (eye level) brake light or return wire from Brake Pedal switch. Connect a wire from this capable of carrying the required load (if you are not using separate power feed this should be 10A wire), and route it behind the upholstery to the Blinker Splitter and connect to the appropriate terminal (see back page). If you are using separate power feed then you need to run from the battery or suitable point on the ignition circuit via an inline 10A fuse and connect to the power input (see back page). If you are not using separate power feed, link power input to centre brake input (see back page).

Next find a good earth point, this does not need to carry much load (less than 1 amp) but does need to be a good connection, generally the best point to pick up is from one of the rear lights. Connect from there to the Blinker Splitter earth terminal (see back page). Now locate the wire to the brake lights on either side of the vehicle. Cut this wire and using a 2 way terminal block connect each of the cut ends to one side of this terminal block. Do this for both sides of the vehicle.

Next connect wires from the terminal blocks at each brake light to the appropriate connection on the Blinker Splitter i.e. from the brake light power feed to the input of the Splitter and from the output of the Splitter to the brake light bulb terminal. Finally connect wires from the Indicator output of the Splitter to the new Amber light i.e. amber bulb in the reversing light or new amber light fitting.



EXAMPLE OF CIRCUIT WITH 2 BRAKE LIGHTS EACH SIDE



EXAMPLE OF CIRCUIT WITH SINGLE BRAKE LIGHT EACH SIDE USING POWER FROM CENTER BRAKE LIGHT

Hints and Tips

Always use good quality new wire, and terminal blocks.

Problems and Solutions

- P. No brake lights or indicators at all.
- S. Check Ground (Earth) connection.

- P. Left or Right hand Indicator not working.
- S. Check bulb, Check wire to non working lamp, check incoming connection for non working side.

- P. Left or Right hand brake light not working.
- S. Check bulb Check wiring from Splitter to non working lamp,

- P. Incorrect signalling.
- S. Check all input wiring and ground connection.

- P. Lights blinking too fast.
- S. Check bulbs not blown or incorrect wattage.

Additional information and solutions to problems will be added to these pages, please check the website for updates, which can be downloaded when available.

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