
## Multifunction reversing light

Peter Berry has always been keen to keep his V8 as safe as possible, considering modern traffic and driving styles. When he came across a company called **Better Car Lighting**, run by a knowledgeable chap called Gil Keane (they advertise here in Safety Fast!), he became interested in their reversing light conversion kit, to combine reversing lights with additional braking lights AND fog lights, all in one, by using a clever LED package – and very importantly retaining the original reversing lights and appearance. This ticked several boxes for Peter. This note is his account of fitting this kit to his V8.

The reversing lights on Bs and Cs are marginal, to say the least, compared with modern cars. The early original trick was to increase the size of the festoon bulb from 18w to 21w, resulting in a small improvement, which I did many years ago. The "MGB/C Multi-Function Revlight Kit Neg" from Better Car Lighting goes so much further than simply improving the reversing light capability of the original unit. The kit doubles (or trebles) up as an additional high intensity brake light, as well as a fog light. All very handy but do they comply with current legislation? I spoke with Gil at some length and found out that he has looked into this aspect of his products heavily, resulting in a considerable amount of due diligence. He has also taken extensive legal advice on the subject, some of which can be found on his website for those who would like to read it at www.bettercarlighting.co.uk .

On many modern(ish) cars, there is one bulb for the brake light and one bulb for the rear fog light, both inside the same fitting, so essentially (and visually) it is one light with multiple functions; clearly there are many precedents here. In the case of the MGBGTV8 situation, if the extra red light function is turned on by the fog light switch, it cannot be operated by the brake light switch and the original brake lights remain unaffected. This is how it would be if left standard, but with auxiliary rear fog lights fitted. In all incandescent bulb standard installations, the brake lights use a 21w filament, so too does the rear fog light (as well as the indicators and reversing lights). The whole point of rear fog lights is to make the vehicle more visible in poor motoring conditions. When the fog lights are on, and the brake lights are applied, the difference is clear and highly visible. The extra brake light function only works when the fog lights are turned off. All very clever!

What I particularly like about this unit is the fact that visual originality is retained. Not one for the purists but personally I feel if the safety is improved towards modern day standards, then it has to be worth considering.

The kit arrived very well packaged, with all components easily identifiable. Each wire has a small self-adhesive tag attached, identifying the purpose of that particular wire and where it should attach. There is a single sheet of 'fitting tips', showing all components, although the nature of the written instructions is fairly general, rather than a step-by-step guide. The tips make no specific mention of the original car's wiring colour codes, as the kit can be fitted to other classic cars. I found this a little vague so I knocked up my own wiring diagram for the specific V8 application – or any MGB/C - running it past Gil, before proceeding. He gave it his blessing and so the conversion could begin. Being somewhat 'old school' in my approach to auto electrics, LED wiring is new to me. The tiny loads involved in powering LEDs (efficient use of power, which is a good thing) means that the wires are very thin. Soldered connections are advised (carefully) although the crimped and scotch-lock connectors provided work well, assuming your V8 boot remains dry.

The first step is to remove your reversing lamps and prepare them for the LED circuit board and wiring. This involves drilling a small hole at the rear of each of the aluminium units for the wiring. The fitting tips state a 10mm hole, although I found a 9mm hole to be a better fit for the provided rubber grommets. There is a small reflector within the original lamp and this will need to be removed to provide extra space for packing the wiring, bulb adaptor, etc. in behind the LED board. There is quite a bit to pack in to the small space, so removal of the reflector is essential! With the new wiring exiting through the grommet, the lamps can be reinstalled in the car. The supplied ring terminal is then attached to the black wire and a suitable earthing point located. I used a nut on top of the main rear lamp fixing point.

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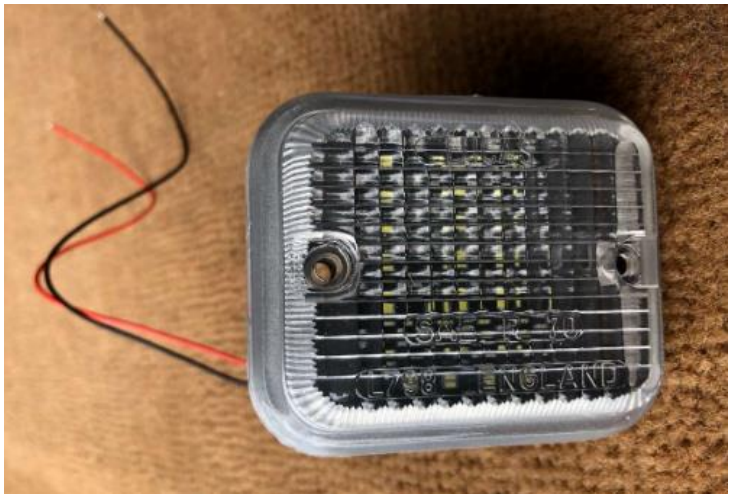
Completing the wiring at the rear of the car, a small harness is provided. This connects in to the existing live supply (green with purple tracer) via a diode using one of the scotch-lock connectors. A more permanent connection can also be used at this point, with soldered joints, if preferred. Two red tails from the harness connect to the two red wires, one from each of the LED light boards.

The next task is to fit the fog-light switch in a convenient place in or under the dash and connect it to an ignition live feed. The toggle switch is designed to appear in keeping with the original switchgear on the car. It comes pre-wired and has a bright LED, indicating when it is switched on. An optional under-dash mounting bracket is also included, together with all connectors and fittings. A cautionary safety note on the packing requests that the fitter gives some thought towards where the mounting bracket is fitted. The statement reads “In an accident you would have little control over where limbs and knee caps will go, neither will a passenger.” Worthwhile advice! The long wire is run to the rear of the car and connected to the remaining tail from the supplied harness.

And that really is it. You will now have three lights in one! The reversing lights give a bright ‘white’ light, which, although not to everyone’s taste can certainly be seen very clearly at night – and is much better than the original lights in my opinion. When the brake pedal is applied, the red LEDs within the lamps illuminate at a similar brightness to the existing brake lights. And finally, when the fog light switch is activated, the red LEDs illuminate permanently, giving a clear bright light, clear and distinct from the brake lights.

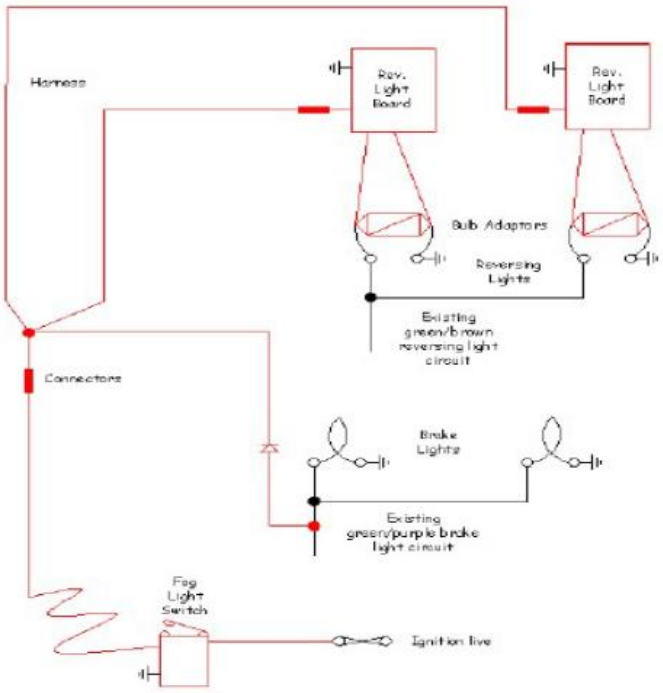
Standard ‘thin-wall’ wire is used for all in-house manufacturing, although LED factories use thinner wire as the circuit board only has room for such wiring. The difference in thickness has no effect as the loads are small.



The only small criticism I have of the package is that the bulb adaptors, which replace the festoon bulbs are slightly shorter than the original bulbs. This necessitates teasing the connectors within the lamps towards each other slightly to obtain a good fit. The more you ease the connectors, the less they face each other. As previously mentioned, there is a fair amount of wiring etc. to fit into the small lamp, so the bulb adaptors are prone to dislodging. So far, I’ve found the sweet spot for fitting purposes. A recent long trip to the Spa Classic and everything is still working on my return!

The wiring diagram for the B/C/V8 application which I prepared (which Peter Ellis kindly tidied up on his CAD package) is more explanatory than the ‘fitting tips’ which come with the kit. If you would like a larger copy, please email me and I will send you one.

Contacts


Harness
Rev. Light Board
Rev. Light Board
Bulb Adaptors
Reversing Lights
Existing green/brown reversing light circuit
Connectors
Brake Lights
Existing green/purple brake light circuit
Fog Light Switch
Ignition live