



Fitting relays to protect the headlights switches

With MGBGV8s now approaching the 50 year milestone, modifications that help preserve electrical components like switches are well worth considering as they are not difficult to install or costly. Here we have a useful upgrade using relays to take the load and potential damage off the switches.

Chris Bound highlighted in a V8BB posting a useful upgrade saying "while you are working on replacing the original sealed beam units with H4 Halogen headlamps it is well worth considering adding a relay (or pair or relays) into the circuits. In standard form, the feed to the head and side lights goes via the main light switch and the headlight dip switch, both of which with age can sap the power reaching the headlights".

Mike Howlett responded "definitely fit relays, not only because you minimise the voltage drop but because it preserves your original switches. Clicking on your headlamps puts a 10amp load across the puny ageing brass contacts in the main switch and the dip switch. Some sparking must occur and eventually the contacts will fail - they are 50 years old after all. Using relays means the switches only have to pass a milliamp load, and the relay handles the big load. Relays are cheap and easily replaced, unlike your switches.

Chris Bound highlighted there is a simple modification to insert relays into the circuits so that you get full power directly from the battery. There are even handy kits available which contain everything you need to do the job. Moss Europe says "any British classic car can benefit from adding headlamp relays. Your **headlights will be significantly brighter, and the useful life of the lighting switch will be extended considerably** with this easy to install kit. Relays are especially beneficial (and strongly recommended) if you have fitted

Halogen headlamps. This kit adds an inline fuse to the headlamp wiring, reduces switch temperature by up to 44%, reduce the loss of headlamp brightness due to voltage drop from 38% to 9% and features accurately coloured wires and connectors with two relays". It is available at £36 including VAT. See [Moss webpage](#)



With a replacement lights switch at £10.50 and a main beam dip switch (part of the combined indicator/main beam dip stalk) at £23.90 that is a total including VAT and postage of just over £39.

Installing the headlight relays kit

Moss Europe provide a useful guide which is available online, [Moss installation guide](#). In summary:

1. Disconnect the battery before working on the electrical system.
2. Choose the location to install the relays in the engine compartment near the headlight harness, making sure the relays can be installed from that location. It is also wise to confirm that there is enough wire to reach the existing headlight wiring harness. Fitting to the offside inner wing near the main fuse box is a convenient location. [Photo](#)
3. Remove the actual relays from the assembly. Use the plastic relay holder as a guide to mark the hole locations.
4. Drill the holes and use the included screws to fasten the relay holders into place. Once they are secure, reinstall the relays.
5. Connect up the wiring. The ground wire can be soldered or attached to an existing ground cable using the supplied ring terminal (most cars have a grounded bolt on the top side of the steering rack).
6. The blue/white and blue/red wires are connected to the regular wiring harness. The wire from the light switch (on the main harness) connects to the wire with female bullet adaptor. The wire from the headlamps connects to the wire with the

male bullet connector which is the larger wire.

Note: The factory wire going to the low beams and the factory wire going to the high beams each split so they can feed both sides of the car. You need to connect the leads (with the male bullet connectors from the relays) before from the split, otherwise, only one side of the car will light up.

7. The long red wire is for the power to the headlamps. We suggest wiring this to the starter solenoid using the supplied ring terminal. This will provide direct battery power to the headlamps when they are turned on. When you have found your power source, cut the wire to length and crimp or solder on the appropriate connector.
8. Confirm that all your connections are secure and sealed. There should be no exposed connectors.
9. Re-connect the battery and test the headlamps. There will be a small click from the activating relay when you switch on the lights. If everything works correctly, proceed to the next step.
10. Clean up the wiring using the supplied cable ties or electrical tape.
11. Do a test run to check all works well.



Combined indicator/main beam stalk switch



Connectors at the back of the light switch

Photos & guide acknowledgment: Moss Europe