

# Dip Switch/ Headlamp Flasher Relay.

By Colyn Firth

I have always struggled with the standard foot controlled dip-switch on the MGA. It's not too bad if you are just cruising along a long straight road but once you are on a series of bends it becomes a real pita! You always seem to need to dip the main-beams at the same moment that your foot is on the clutch pedal! Also, to make things worse, my size 13 shoe would quite often jam up between the clutch pedal and the bulkhead.

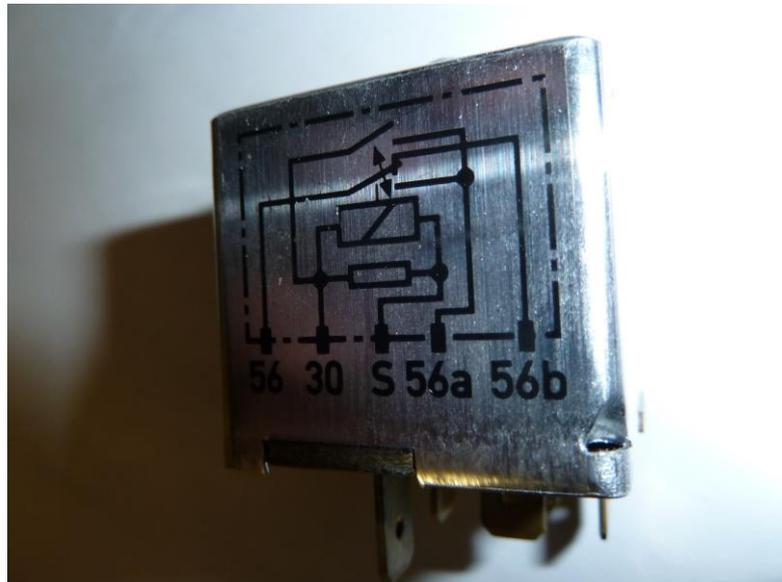
So when I came across Barney's suggestion on MGA GURU of using a special relay and a simple flasher switch to operate the dip switch, I just had to give it a try. (See article AT-113A on mga guru)

The relay was originally a VW Beetle part and this is quite unusual in that it has two separate functions.

- 1 When the head lights are switched **off**, triggering the relay causes the main beam to flash for as long as you hold down the switch.
- 2 When the headlights are switched **on**, the relay then acts as a dip switch with each momentary activation of the relay causing the headlights to alternate between dipped and main beam.

## Parts Needed

You will need the special VW relay (VW-AUDI Part Number 111-941-583) Most VW /Audi dealers will order this relay for you and will probably charge over £30 but I have seen VW specialist parts shops advertise them for less than half this price.



You will also need a headlamp flasher switch, this is a spring loaded "momentary action" type switch which automatically flips back to the off position when released. These are available from most motor parts stores or from the internet and ideally you should try to get one with the long operating stalk.

The dipswitch part of the VW relay that I bought is a latching relay, which means that if I switch to main-beams and then switch off the headlights, they will still be on main-beam when I next turn the lights back on. This exactly the same as the original MGA dipswitch operates. Apparently some of these VW relays are non-latching which means that each time you switch off the lights, the relay then automatically switches back to dipped-beam. This sounds a really useful feature but as yet I have not been able to identify the specific part number of this relay.

### **Fitting the relay and switch**

After first disconnecting the battery, I disconnected the original dipswitch making careful note of the wire colours, then I removed the dipswitch completely.

I found that the original wiring loom for the dipswitch was long enough for me to re-position it across the bulkhead and then half way back along the dashboard brace where I decided to position the new relay without any need to alter the loom. This allowed me to mount the relay on the upper side of the bulkhead brace using a strong double sided adhesive pad. I could then hide the loom and any new wires out of sight on top of the dashboard brace.

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The flasher switch can be positioned wherever you prefer it to be on the dash, on my car it is placed just to the outside of my smaller sports steering wheel within easy extended finger range on the right hand side. If you are left handed you may well prefer it to be on the left and side.

I also moved the indicator lamp into the position above the steering wheel where the panel light rheostat normally fits, this puts the light into a position where I could see it more easily. I then had to move the panel light rheostat to a new position under the dash but on a standard dashboard it would be easier to fit it into the vacated lamp position near the door.



## Wiring up

The re-routed wiring loom will easily reach to halfway along the dash brace where I positioned the new relay. The wires connect to the new relay as follows but you may prefer to double check the operation of your relay before fully connecting it to the headlights. (See Electrical Check below)

Connect the **BLUE** wire to terminal **56**

Connect the **BLUE/WHITE** wire to terminal **56a**

Connect the **BLUE/RED** wire to terminal to **56b**

Connect a main power feed from the battery to terminal **30**, this needs to be at least 16 gauge or thicker as it is supplying the main beam headlight when you operate the switch in its headlamp flasher function. I took the supply from the starter switch terminal and put a dedicated 25 amp fuse into the circuit. This means that the flash function will operate independently of the ignition switch which I prefer as it saves putting even more load onto the already heavily loaded ignition switch.

The **S** terminal connects to the new switch with the other spade connector on the switch connecting to earth.

This relay will work in exactly the same way on both negative and positive earth cars.

### **Electrical Check**

If like me you would rather check that your wiring is correct and your relay is working properly before fully connecting up to the headlights, then you can test these by using a either test lamp or a digital meter.

First connect the 12v power supply to connector **30**, then connect **S** to the new flasher switch and the other side of the switch to earth. With the lights turned off, pressing the switch will make **56a live** for as long as you hold it down. With the lights turned on, each single press will alternately make either **56a** or **56b** permanently live in the dipswitch function.

If everything works as it should you can then connect the remaining three wires as above.

Probably you should easily be able to do this conversion in 2 or 3 hours , or a little longer if like me, you preferred to stop a couple of times for the odd cup of tea!

### **Conclusion**

This conversion has made operating the dipswitch just so easy on my car and dipping the headlights is no longer a stab in the dark! (Ok, maybe I should have called it "a stamp in the dark"! ). Also, having a headlamp flasher switch on the MGA is a real bonus, it's surprising just how often you need to use it in everyday driving. Another bonus is that removing the original dipswitch has left me more space to rest my left foot and this is definitely more comfortable on longer journeys

I like the idea that there was a factory option of a headlight flasher switch available for the MGA when it was in production and so the switch does look right on the dash but it would be possible to return the car to its original dipswitch set up at a later date if anyone wished to do this.

I would say that this is one of the best modifications that I have ever done on my MGA.

(If anyone would like to contact me about this project, email me at [colynfirth@msn.com](mailto:colynfirth@msn.com) and I will try my best to help)