



Fitting a Battery Master Switch

Chris Bound, who is carrying out a V8 conversion on his 1977 MGB GT has fitted a battery master switch as part of his upgrades. Here he explains why he chose to do it and how he went about the job.

Why do it?

The location of the battery (or batteries) on any MGB makes it inconvenient to gain access to them in the event that the batteries need maintenance or there is a need to disconnect them. There are several reasons why owners might wish to fit a master switch to isolate the car's entire electrical system. These include:

- Safely carrying out maintenance work without the risk of sparks or short circuits;
- Preventing any unexpected draining of the battery during long periods of lay-up;
- Providing a simple (albeit rudimentary) security device;
- Minimising the chance of fire in the event of an accident by (manually) shutting down all the electrical circuits.

Parts Required

A quick internet search reveals that there are many battery switches available and the choice will depend upon how the car is used and the individual owner's preferences.

For those involved in competitions, it will almost certainly be necessary to fit an FIA approved isolator which incorporates secondary switches to cut the ignition and avoid damage to the alternator when it is used. This type generally has a big red key and is hard to miss. For most of us who are simply using our cars on the roads, something more discreet is appropriate.

I chose the **Durite Type 0-605-02 switch**, which is a close copy of the Lucas Type SSB-103. The switch is rated at 100 amps and has 10mm metric threaded terminals. I bought mine from an auto electrical specialist called H Bowers. They have their own website <https://www.bowerspartsonline.co.uk/> or you should be able to find the item [on eBay here](#).

I only needed two other parts:

- **A terminal** with a 10mm hole to replace the original positive battery connector. This needs to be able to accommodate a cable of about 25 square millimetres cross section area;
- **A short battery cable**, about 12 inches long with a 10mm terminal on one end and a battery connector on the other. This could be bought ready made from a good auto factor or else made up at home. Given the restrictions on shopping currently in place due to Covid-19, I once again turned to eBay and bought from [here](#).

Locating the switch

Since my main reason for fitting the switch was to be able to isolate the electrical systems for maintenance and safety purposes, I

decided that the simplest place to install the switch was in the vertical bulkhead behind the driver's seat.

This is just in front of the battery carrier and is also just above where the main battery cable runs forward to the engine. It is quite well protected from spray thrown up under the car.

Of course there are other places a switch could be fitted but these would involve more extensive alterations to the existing wiring.

Installation

The installation work was straightforward and was completed in less than a day.

First I removed the rear seat, the carpet under it, the battery cover and the battery. I then pushed the driver's seat right forward and peeled back the carpet and foam backing on the vertical bulkhead.

Working from above, I marked a point on the rear of the bulkhead which was central to the battery carrier and about 2-3 inches above the floor. I drilled a small pilot hole through the bulkhead to check that I was happy with the position and then enlarged this to about 20mm in diameter. The switch was fitted from behind and the first of the two nuts fitted to the threaded portion which was projecting into the car. I cut a neat circular hole in the carpet and slipped this over the switch before fitting the oval shaped escutcheon (or cover plate) and the second nut. The escutcheon has two small holes in it. I drilled through these and the carpet into the bulkhead and used a couple of stainless steel self-tapping screws to fix it. These help to hold the escutcheon in position and prevent the switch from turning when it is operated.

Next I turned my attention to the wiring – see the wiring diagram on page 2. I removed the original battery terminal from the main cable which runs under the car and I replaced this with the round terminal. I don't have crimping tools sufficiently powerful to handle a terminal of this size, so I chose to solder the terminal on.

This was surprisingly easy using plumber's solder and flux in conjunction with a blowlamp. A short length of heat shrink tubing threaded on first and then heated with a hot-air gun ensured that the job was finished neatly. I connected the cable to one of the terminals of the new switch and looped the surplus cable out of the way of the battery. Finally, I connected the new battery cable to the other terminal on the switch and to the positive terminal on the battery.

Optional Permanent Live Feed

One optional refinement, which owners may wish to consider, is the installation of a permanently live feed from the battery.

This does not pass through the isolator switch and is therefore able to feed electrical items which require continuous power even when the battery is switched off. Examples might include the memory in an audio system or a tracking device, both of which only consume a few milliamps of power and are unlikely to cause any significant drain to the battery. Another possible use for this permanent live feed is to use it to connect a battery conditioner.

I drilled a small (8mm) hole through the rear bulkhead immediately next to the newly fitted battery master switch. I fitted a rubber grommet, threaded a cable from inside the car and connected it with a 10mm ring terminal to the permanently live side of the switch.

The wire then runs forward in a piece of sleeving along the side of the transmission tunnel and emerges behind the radio console. Here, I have connected an in-line fuse holder so that I can eventually plug in any item which needs an uninterrupted supply.

Note: with two six volts fitted, any cables should be clipped so that they cannot under any circumstances come into contact with the propeller shaft as the consequences could be serious.

