



The majority of these tips have appeared in club newsletters over the years. Please note that you use them at your own risk as neither the Bristol Austin 7 Club nor the authors can be responsible for the results of trying to follow the instructions given.

### Electric switches - dim headlamps v volt drop - by John Finch

#### THE FACTS

Old switches offer more resistance than modern switches. A German friend of mine suggested that Lucas did more for the German car industry than anyone else! The dip switch used in the early 30s is only an edge contact device and cannot conduct the 12 amps that two 36 watt headlights need to use.

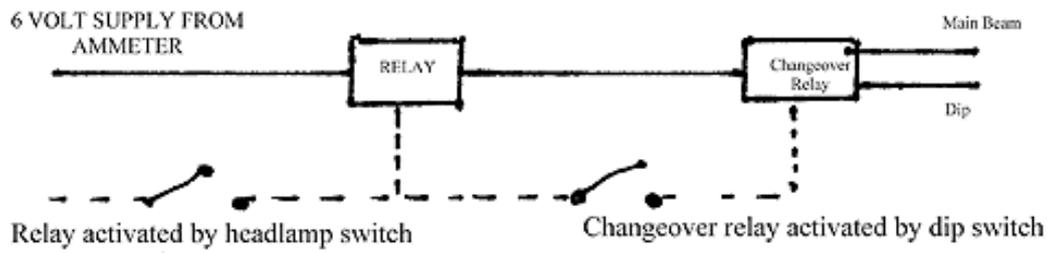
If you have driven for more than an hour you will find both the dip switch and the main headlamp switch will get warm or hot, current used to heat these switches will not find its way to the headlamps. Ohms law says that if you have a current of 6 amps at 6 volts and have just half an ohm of resistance caused by loose connections or old switches then you will have only 3 volts at the output, i.e. 3 volts at the headlamps. Cable size can make a limited difference but as the cable lengths are short little effect should come from this.

#### A WAY FORWARD

Using the switches only to control relays just like modern cars do, will result in a better performance. 6 volt relays are readily available on the internet.

#### WHAT I DID

Firstly I used a 30 amp relay to control the ignition, so the spade or key was only switching a small amount. The ignition current and ancillaries were switched by a relay. I used another 30 amp relay to switch the headlamps on from the usual Lucas switch. I then connected a third changeover relay controlled by the dip switch to handle main beam and dip.



The relays can be mounted on the back of the fuel gauge, thus keeping the wiring short and together. Relay connections are best done with quarter inch crimp spade connectors. I bought my relays from AES in Worcestershire, T: 01584 819552. They can be found on the internet at [www.AutoElectricSupplies.co.uk](http://www.AutoElectricSupplies.co.uk)

#### RESULT

Brighter lights.