

Six Volts or twelve

I was seriously considering changing to a 12 Volt system whilst rebuilding my RN Saloon because I often wish to drive at night and this calls for a dynamo output approaching ten amps to prevent the battery going flat too quickly when the headlights are switched on. However, I recently discovered the amazing reduction in current required by LED 'bulbs'.

An Austin Seven with a standard 6v 11 Amp 3 brush dynamo and the 3rd brush set to give a nominal 10 Amps current means the battery receives a 10 Amps charge even with the lights off which can cause frequent topping up of the battery electrolyte. Turn everything on with conventional filament bulbs all round - two 24w headlamp bulbs will use 48w or 8 Amps and six side, tail and dash panel bulbs will use 4.33 Amps so the total load becomes a whopping 12.3 Amps. This will show as around a 4 Amp discharge on the ammeter with lights on and even worse if the wiper motor is used.

With LED 'bulbs' - turn everything on and two 36 Watt LED head lamps will use 12 Watts or 2 Amps but light output from each bulb is whiter and brighter, claimed to be equivalent to a 40w conventional bulb so that's 80w of headlamp power. Six LED side, tail and dash panel bulbs will use 0.15 Amps and give you brighter and thus safer lights. The total load with LEDs becomes 2.15 Amps.

This means that with LED lights, the third brush can be adjusted to significantly reduce the dynamo output. It seems that you end-up with - brighter lights, a more reliable dynamo, robust 'bulbs' and less topping-up of the battery. However, 'nothing is ever for nothing' and the LED 'bulbs' are not cheap.

I am therefore sticking to six Volts and have obtained my LEDs from 'Classic dynamo and regulator conversions' (with whom I have no connection) and whose LED products carry a 10-year guarantee. Details available from <http://www.dynamoregulatorconversions.com>

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