How to retrofit a rev counter to your dash

Upgrade your classic with a seamlessly-installed tachometer

YOU WILL NEED...

EQUIPMENT Wiring connectors, side-cutting pliers, insulating tape, drill, tin snips, files.

TIME (HRS) 3

MONEY (£) FROM 10

DIFFICULTY RATING

TECH TIP
Make sure homemade mounts are shake-proof and positioned where they won't cause injury.

There's nothing more useful than a rev counter for perfecting your gearchanges. Sure, you can judge the speed of the engine by ear – but you can't beat that extra visual cue.

A tachometer, to give it its proper name, is a very useful tool in other ways, too. It's handy for precisely setting your engine's idle speed, particularly when you're making carburettor adjustments at a specific rpm. Plus, a look in your classic's handbook will show you the engine speeds at which the highest power (acceleration), torque (slogging up a hill) and economy is achieved.

Only higher-spec classics usually left the factory with a tachometer. If you want to retrofit one, the wiring is easy. The hardest part is finding an instrument that will visually match your existing ones and finding somewhere to fit it.

Some cars were built with a huge blank space or an oversized clock in the instrument cluster in lieu of a rev counter. It should be relatively easy to swap the cluster for a higher spec one. If you're lucky, wires you need will already be in the multiplugs and wiring loom.

Cars with old British instruments are easy, too – there are plenty of Smiths and similarly-styled gauges around. The most difficult installation – for the purist at least – is where there's no allotted space and nothing that really matches your existing clocks. In this case, your best course of action may be to buy a pod-mounted rev counter, which can have its pedestal temporarily attached for easy removal.

Period rev counters are available in a wide range of shapes and sizes from classic specialists. We're fitting a genuine 1980s add-on accessory, picked up for £5 at the Beaulieu Autojumble.

Ed says...

Ensure your rev counter is designed for the correct number of engine cylinders. Some are switchable between four, six and eight.

ED HUGHES TECHNICAL WRITER

WORDS ED HUGHES

MOUNTING YOUR REV COUNTER

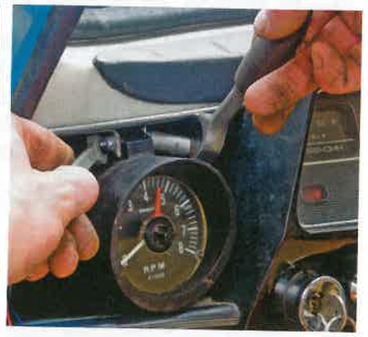
1 Location, location

You can buy supplementary instrument panels, make a hole in the existing dash, use an instrument with its own pod and pedestal or make your own panel. Consider how you'll mount it.

TECH TIP
Make a plastic drill collar to stop the chuck damaging the panel.

2 Drill with care

If you're drilling holes in the dash, centre-punch them first. To make a large hole to house the counter, chain-drill 6mm holes around the outline then cut and file it smooth. Or use a hole saw.



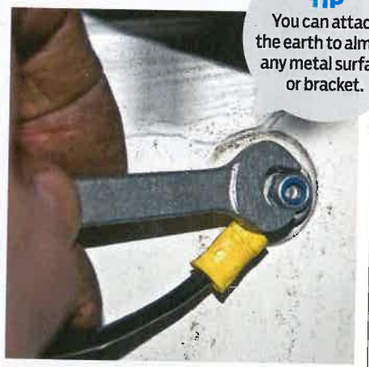
3 Test fit for position

Fit the rev counter and make sure it's easily visible from the normal driving position and not obscured by the steering wheel or control stalks. Don't permanently fix it until the wiring is completed.

WIRING IN YOUR REV COUNTER

1 Follow the loom

Disconnect the battery before you start. Follow the loom to make a logical job of the wiring. Push the wire through existing grommets. Tape the wire to the wiring bundles to keep it tidy and safe.



TECH TIP
You can attach the earth to almost any metal surface or bracket.

2 Find a good earth

The tachometer has four wires: +12V; earth; wire to coil; a wire to the instrument lighting. Use crimp terminals or Scotchlok-type connectors. Start by attaching the earth wire to the bulkhead.

3 Attach the positive wire

Join the positive wire to any accessory circuit that's only live when the ignition's on – or join it directly to the output terminal of the ignition switch. It's a good idea to fit an in-line fuse (3A or 5A).

TECH TIP
Note that a short circuit in this wire will stop the engine running.

4 Connect to the coil

The wire to the coil is attached to the terminal marked CB, – or 1. You may need to extend this wire, especially on a rear-engined car. Use a proper connector or solder the joint and insulate it well.

5 Connect the backlight

The backlight of the rev counter needs to be spliced into the instrument lighting. Some backlights have two wires – supply and earth. Others have one wire and share the earth with the rev counter.

6 Tidy up and test

Make sure there are no bare wires, then connect the battery and start the engine to test the instrument. Test the lighting, too. If all's well, tidy up the wiring and put back any removed panels. ■