

GROUPTEST

CYCLING JOURNALIST **DAVE BARTER** REVIEWS GPS DEVICES

GPS units with maps

Whatever sort of cyclist you are, GPS devices open up a world of digital possibility for route planning, on-the-go navigation, and more. **Dave Barter** explains

A HANDLEBAR-mounted GPS device with digital mapping enables you to plan, navigate and share cycling routes on road and off. You can also use it to log and analyse your rides, and with online tools such as Strava you can track your fitness or 'compete' against other cyclists.

Many smartphones are now GPS-enabled and also offer mapping – a cost-effective solution if you already have such a phone. Yet there are advantages in using a dedicated GPS device: they're designed to be attached to handlebars, with or without handlebar luggage; they're more resistant to rain, dirt, and the odd knock; battery life is often better when GPS tracking is on; and their GPS receivers may be more sensitive, and so perform better under tree cover or in urban areas.

This GPS hardware is backed up by a plethora of software for mapping and route planning, both free and paid for. We've focused here on units you can navigate with; there are cheaper alternatives without maps if you just want a GPS-based cycle computer.

1 Attachment

Most units will attach either to the handlebar or stem. O-ring fittings offer more flexibility and are easier to replace than nut-and-bolt mounts. GPS devices seldom come loose on road but can self-eject into the undergrowth off-road if the fitting is loose/damaged.



2 Size & operation

At a given resolution, larger screens show you more map and hence more detail. (Note that photos opposite are not to scale.) Touch screens are fine when stopped but are awkward on the move or with gloved hands. The fewer buttons and menus there are, the easier the unit will be to use while cycling.

3 Mapping

Ordnance Survey mapping is very useful off-road as the bridleway/byway network is fully covered. It invariably incurs a cost. OpenStreetMap is supported upon a number of devices and, whilst not as comprehensive, is free to download. Ordnance Survey maps are raster based, which means they can look fuzzy at high zoom levels on smaller screens. OSM-based vector mapping, e.g. VeloMap, works just as well zoomed in.

4 Battery life

Battery life is a key consideration when using a GPS to navigate a long route. Modern units will often last for eight or more hours of continuous use. Some have replaceable batteries, allowing you to ride for days without using a charger. It's also possible to power or recharge units using a hub dynamo and a converter cable system (e.g. Supernova or Pedal Power+).

Add a converter cable and you could power your GPS with one of these hub generators.

ROUTE
PLANNING

Route planning on most devices is possible but time consuming. A good GPS will connect to any computer with a USB port and be supported by route planning software or websites. Free web-based offerings means that desktop software is usually not required and routes can be planned or reviewed regardless of computer type. Other useful websites for those with GPS devices include:

- bikehike.co.uk
- bikeroutetoaster.com
- velomap.org
- opencyclemap.org
- mapas.alternativaslibres.es
- bikely.com
- talkytoaster.co.uk



GARMIN EDGE 800 £399 (inc 1:50k mapping)

The Edge 800 is ready to go out of the box: just insert the supplied SD card containing the Ordnance Survey 1:50k GB mapping and turn it on. The screen is quite small (37mm×55mm), but fine for navigation on the move. It's a touchscreen but this works well enough even with gloved hands. Like other Garmin Edge units, the 800 twist-clicks into a bracket attached by O-rings that will fit any handlebar or stem. You get two brackets. If you register on the free Garmin Connect website via your desktop computer, you can use this to plan 'courses', which are easily transferred to and from the device using the supplied USB cable. Routes are best navigated as courses displayed on top of the map. The device supports automatic route calculation but the algorithms can make mistakes and you're best advised to plan a route yourself. Battery life: 15 hours (integral battery). Weight: 94g. garmin.com

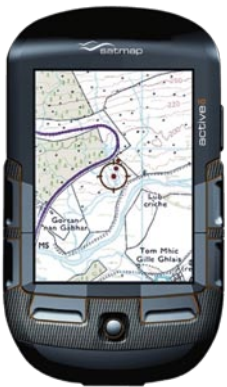
Ideal if you need one unit to cover both fitness training and navigation



BRYTON RIDER50 £269.99 (inc vector mapping)

Even more compact than the Edge 800, with a screen just 34mm×45mm, the Bryton Rider50 is similarly equal parts cycle computer and navigation device. It too fixes to an O-ring-attached plastic mount. Vector-based Naveteq mapping is supplied upon an SD card, which requires online activation. You can choose one map from the list of European countries supplied; others can be purchased separately. The Rider50 is controlled using a series of buttons and a small joystick, which require a little getting used to. Route planning and mapping is handled by the Bryton web portal. Routes are planned using Google maps, which have the advantage of allowing you to trace lines on top of satellite views as well; this can be useful when planning routes off-road. Bryton owners can share routes by simply knocking their units together. Battery life: 15 hours (integral battery). Weight: 108g. brytonsport.com

An all-rounder that's like a smaller, budget alternative to the Edge 800



SATMAP ACTIVE 10 BIKE £340 (most mapping extra)

The Satmap Active 10's large screen (53mm×70mm) means more visible mapping, so it's particularly useful for navigation on minor roads or off-road tracks. It's bulkier than the Garmin or Bryton, attaching to the bike via a hefty mounting bracket (with a security strap). It's operated by a joystick and button combination, which is okay in gloves once you're used to it. It's preloaded with 1:250k OS road mapping. Larger scale maps are purchased separately on SD card – which costs £210 for the whole of Great Britain at 1:50k. Smaller areas are available for less, especially on OpenCycleMap. The Active 10 supports OS mapping down to 1:10k scale and will change scale as you zoom in. Routes can be easily planned and altered upon the unit itself, so you could use this without a desktop computer. Battery life: 15-18 hours (via replaceable rechargeable battery or 3 x AAA disposables). Weight: 225g. satmap.co.uk

Bulky but versatile. Large screen provides excellent mapping detail



MEMORY-MAP ADVENTURER 3500 £299 (inc 1:50k maps)

This Memory Map device is aimed at the outdoor market rather than at cyclists specifically. It's controlled by a touchscreen that requires precision – ideally via the stylus supplied. This is attached by a lanyard so won't get lost but it will prove tricky to use on the move; you'll want to stop. The screen is large (56mm×74mm) and bright. Mapping is supplied in Ordnance Survey format and is available in scales down to 1:25k, although 1:25k tiles cost extra. GB 1:50k mapping is bundled with the unit. Routes are usually planned with Memory-Map's desktop software, which requires a Microsoft Windows PC but does have the advantage of working without an internet connection. You can also create routes directly on the device, and more easily than you can on any of the other units here. Battery life: 8 hours (replaceable rechargeable). Weight: 210g. memory-map.co.uk

Great route planning but stylus usage and battery life are drawbacks