

# Raleigh Dover Deluxe

The Dover Deluxe from Raleigh takes a European design and combines it with their well-established dealer network to create a potentially attractive package. But how does it perform in practice?

Raleigh is of course one of Britain's best-known cycling brands, with a history stretching all the way back to 1890. A series of corporate takeovers has led to a number of overseas operations working under the Raleigh brand too, sometimes selling quite different bikes compared to the UK range. The Dover Deluxe clearly originates from Raleigh Germany: look closely and there are even 'www.raleigh.de' stickers on the frame. It's had just minor tweaks for the UK market.

Raleigh UK have thrown their full support behind this bike, and a network of over 60 dealers are stocking it, backed up by training to cover any possible repair work.

The Dover Deluxe is available either as a gents design (53 cm frame size) or as a 'unisex' low step-through version (45 cm). Either version costs £1799. Spare battery costs are to be confirmed. There's a one year general guarantee, with five years on the frame, plus a two year warranty on the electrics and battery (that it will retain 60% of its capacity after that time).

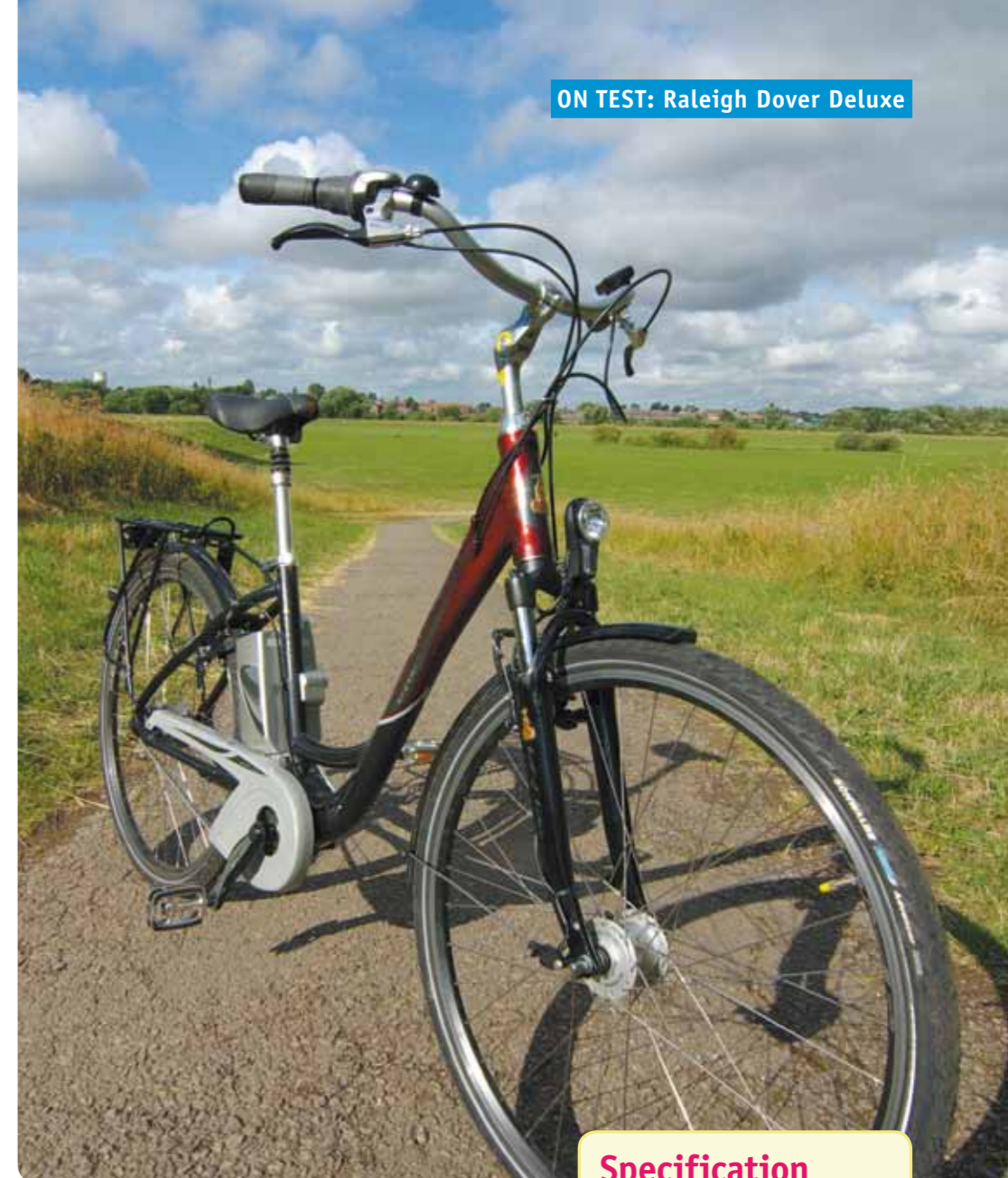
Our test bike had been lightly used as a demo machine before we received it, so the battery had already been 'conditioned' with a couple of full discharge cycles to bring it to full capacity.

## » ON THE BIKE

The Raleigh's alloy frame is a deep gloss red fading to near-black: it's a handsome look without being too showy.

The motor system is fitted in the pedal area, with the battery behind the seatpost. The system is the latest version of the well-proven Panasonic pedal-assist unit, with some tweaks by Raleigh to increase the rate at which you can spin the pedals before the assist cuts out at the legal limit of 15.5 mph. The unit includes a guard which keeps trousers well clear of the chain.

The battery is locked in place of course, but it's easily removed with the key provided: it just swivels out sideways. It clicks and locks when you replace it, again the work of moments. On the side of the battery is a five-stage charge indicator. The charger is a moderately sized unit into which the battery 'sits': very easy to use and silent.



ON TEST: Raleigh Dover Deluxe

It's a bike you'd be happy riding without assist for some distance if necessary



The charger is of the 'docking station' type: easy to use but not the most compact.

The handlebar control for the electric assist has just two buttons, one for the power and another to cycle through the three modes. 'Low' apparently instructs the motor to measure the effort you put on the pedals and add half. In 'Medium' it adds the same as you put in, and in 'high', the motor contribution is one and a half times the work you do. As ever, these contributions tail off as you reach the 15.5 mph maximum.

The system is built very 'cleanly' into the bike, with all wires and cables running inside the frame. This should bode well for reliability.

So to the 'bike' aspects. The transmission is via the 'Premium' version of Shimano's 8-speed hub »

## Specification

**Weight overall (inc batteries):** 24.19 kg  
**Battery weight:** 2.43 kg  
**Bike only weight:** 21.76 kg  
**Charger weight:** 0.7 kg (inc. mains cable)  
**Charge time:** About 5 hours  
**Battery type:** Li-Ion  
**Battery capacity:** 260 Watt hours (10Ah 26V)  
**Gearing:** 8-speed hub gear (Shimano Nexus Premium). 41T ring, 19T sprocket. Ratios 31-95".  
**Brakes:** V-brakes front and rear.  
**Lighting:** Lumotec front halogen, rear LED, both powered from hub dynamo  
**Other accessories fitted:** Mudguards, carrier rack, stand, pump, bell.  
**Price as tested:** £1799.

gear – this has upgraded bearings and seals compared to the standard version. It's controlled via a twist grip shifter, and like most modern hub gears it can be shifted both as you pedal and while stationary. While it will shift under pedal (or motor) pressure, it's smoother and kinder to the internal gears if you ease off a bit.

The brakes are straightforward V-brakes, which give powerful stopping. Heavy users might prefer a lower-maintenance option such as drum or roller brakes, but with regular adjustment and servicing V-brakes are fine.

A full lighting system is fitted to the Dover Deluxe, consisting of a hub dynamo in the front wheel, an LED rear light (which stays on when you stop) and a halogen front light. All of the parts are from good brands, and there's a handy 'Auto' mode which uses a light sensor to switch the system on automatically. This gives you one less thing to think about, and also kicks the lights into action when you go into a tunnel, for example. The whole system is independent of the drive electrics.

Suspension comes in the form of some own-branded Raleigh forks, with adjustable pre-load so you can tune them to match your weight. There's also a Post Moderne Glide suspension seatpost, also adjustable, supporting the saddle. This is a rather narrower and less cushioned model than on the other electric bikes reviewed this issue, although still quite wide and padded by most cycling standards.

The other main contact point is where you grip the handlebar. The Raleigh has a wide swept-back set of bars, supported in an angle-adjustable stem which lets you set them closer to you (and higher) for a more upright position, or lower and further away if you prefer to be more leaned-over and aerodynamic. Shaped rubber grips provide generous palm support, although I did find they tended to creep round on the bars under the pressure of your hand. They're better than those on most bikes anyway, but if you find the movement irritating then a dealer could easily upgrade these to shaped grips with a proper clamp system ('Ergon' make good ones).

Finally, the extra accessories fitted include an alloy carrier rack, a good side-stand, and mudguards.

A mudflap on the front one would have helped keep the bike cleaner in the wet, but it's a minor quibble. A dealer can fit one, or you could even make one yourself from an old inner tube if you're handy at DIY...

**» ON THE ROAD**

Because the Panasonic unit simply measures your effort and adds to it, there's no throttle on this bike. If you want assistance, just make



sure the system is switched on. Similarly, if you want to just pedal unassisted to save power (or boost your fitness!) you need to switch the whole thing off. You can do this as you ride along.

Without the assist engaged, this bike rides fairly responsively: some flex in the step-through frame is inevitable if you pull at the bars, but it handles well with precise steering (the wide bars no doubt help) and an appropriate range of gears. The extra weight of this bike over a non-assisted one is noticeable, but on the flat especially it's of little consequence as it rolls along. It's a bike you'd be happy riding without assist for some



**TOP LEFT:** The hub dynamo powers both front and rear lights, which can be set to switch on automatically as it gets dark.

**TOP RIGHT:** The Panasonic motor unit is a well proven system. It also usefully incorporates an effective chainguard.

**ABOVE LEFT:** Swept-back, wide handlebars and well-shaped grips give precise steering and a comfortable, upright ride.

**ABOVE RIGHT:** A simple control unit selects the power assist mode.

distance if necessary. Ride comfort is also good, with the suspension systems both contributing well.

But it's with the power switched on that the bike really comes alive. It defaults to 'normal' mode (the motor adds as much power as you put in) so it effectively halves the effort you need to attain any give speed. That feels like a constant tailwind on a lightweight bike: it surges forward as you accelerate, and powers you through headwinds with ease, but all under control. It's close to silent, too, and only if you ride next to a wall or in dead quiet does the sound intrude. I've heard many unassisted bikes which are louder.

The assistance is applied very smoothly, with an effectively instant response to changes in your pedal pressure, and if you stop pedalling, the motor stops in just a fraction of a second. It also starts immediately, even from a standstill. You do need to use the gears to make the best of it, and for me (a fairly heavy rider) that meant starting off in 4th or 5th, then changing up swiftly to top gear as I built up speed. It's well worth changing down for hills, too.

The unit is set to taper off at a higher-than-usual rate of pedalling (also known as cadence) and accelerating away from the lights was the only time I felt it cut out for this reason. In general use it was great to be able to spin my legs as usual, at 70 or 80 rpm. Newcomers to cycling tend to pedal slower, and some experienced riders prefer to as well, but as you add miles it tends to be easier to spin faster to reduce the stress on the knees. This bike is optimised for the faster pedaller, with the motor's peak power and cut-off points set accordingly.

**HIGH POINTS:**  
 Sporty ride  
 Assists even with fast pedalling  
 Local sales and support for many buyers  
 Proven and sophisticated Panasonic system  
 Quality bike components  
 Auto lighting system

**LOW POINTS:**  
 Only one frame size in each version  
 Somewhat bulky charger  
 Minor niggles: grips creep, no mudflap

**GOOD FOR:**  
 Experienced cyclists going electric  
 Sporty riders or those who like to spin the pedals  
 Anyone who likes to ride in near silence

**Available from:**  
 Via Raleigh eBike dealers: Tel 01773 532680 or see [www.raleighbike.co.uk](http://www.raleighbike.co.uk)

For low speed manoeuvring, such as threading through those annoying barriers on cycle paths, it was often easier to go to 'low' mode or switch off entirely: this gives you more control. In higher modes even a brief push at the pedals can give rather more of a surge of acceleration than you need. Some riders found 'high' mode a bit much for most circumstances, feeling that the bike surged away too hard, needing to be held under control. It's perhaps best applied on steep hills or in headwinds. In these circumstances you need to change down the gears a bit too, so that the motor can benefit from the lower ratio and work at its most efficient speed.

The range is said by Raleigh to be 'up to 50 miles' which is certainly achievable if you're sparing on how much you use the electric assist. With me as a 95 kg rider, in stop-start traffic and over mainly flat roads (and with the power always on, mostly in 'normal') I found it would last a good 30-odd miles of commuting.

**» SUMMARY**

The Raleigh is not a cheap bike, but it's a strong performer which offers an enticingly lively ride and has few weak points. The price also reflects the local support on offer from a network of dealers. It does also use the not-inexpensive Panasonic motor system – which to its credit has been around for many years and is a reliable design and a good performer.

Although it's a bike which most riders will enjoy, it's particularly good for anyone moving to an electric bike after riding a 'normal' cycle. It enhances your usual pedalling cadence. The motor noise level is also low enough not to disrupt your enjoyment of a quiet ride.

So, this is something of a cyclist's electric bike. Look elsewhere if you don't want to pedal, don't get on with gears, or if you want a super-wide saddle. But otherwise, the Dover should be on your shortlist for sure.

**Peter Eland**

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