## Amp up your ride

**E-bikes don't have to be heavyweight hybrids.**

Richard Hallett tests lightweight e-road bikes from Bianchi and Orbea

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### Frame differences

Equipped with the same ebikemotion X35 drive system, the two bikes offer a near-identical powered assistance experience but are otherwise surprisingly distinct. Paint scheme aside, and the Bianchi’s Celeste livery will float many a traditionalist’s boat, the most obvious difference is in available tyre clearance.

Where the Aria e-Road is very much a conventional carbon-stiff road bike, with clearance for the 28mm tyres fitted but little more, Orbea’s Gain has enough room for 40mm rubber, and could even be considered an e-gravel bike. There’s plenty of room for mudguards too, although only the fork has threading for stays; the rear end doesn’t.

The Gain is still the more versatile of the two, and by some margin the more affordable. It’s not obvious why there’s such a significant price gap.

While the Orbea wears the latest Shimano 11-speed 105 group and the Aria gets Ultegra, both feature full carbon fibre framesets, arranged to house the drive system, backed up with decent handlebar componentry and competent wheelsets.

Sure, the Aria’s carbon fibre ‘aero’ seatpost adds a touch of class and enhances the aesthetic appeal of what is an undeniably pretty bicycle, but the Orbea is itself well-proportioned, with fine detailing, a more slender down tube that better conceals the battery and, enhancing its ‘gravel’ credentials, asymmetric chainstays. It’s also available in a choice of colours, like the orange shown on the facing page.

### Components

The Orbea rolls on Mavic Aksium rims and Tişkon tubeless tyres. The front wheel is a standard Alexium disc, while at the back the ebikemotion hub is laced into a 32-hole Alkium rim. Several of the rear wheel spokes are short enough to show thread beyond their nipples which, given that the wheel was fairly true, suggests it was built with inconsistent spoke lengths.

Furthermore, the choice of one-cross lacing seems optimistic for a disc-brake rear wheel transmitting power assist. It didn’t get much chance to demonstrate its durability, since the bike came with a left-hand front brake. It’s easy to forget after a few miles that one is riding brakes set up the ‘wrong’ way, with potentially lethal consequences, and it’s non-trivial to swap hydraulic calliper thru-axle and a flat-mount disc brake, KMC X10-ELT chain. 11 speed, 14-27T. Braking: Shimano BR-R8070 hydraulic disc brakes, 90mm rotors Steering & seating: 31.8mm Reparto Corse Aero Compact aluminium alloy handlebar; Reparto Corse 3D forged 6001 alloy stem, rise 8°. Fsa Orbit C-33 1 1/8”-1” 1/4” headtube. Bianchi Aria Full Carbon Aero seatpost; Selle Royal Sella 31 saddle. bianchi.com

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### Tech Spec

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<tr>
<th>Bike</th>
<th>Price</th>
<th>Size</th>
<th>Weight</th>
<th>Frame &amp; fork</th>
<th>Group</th>
<th>Cassette</th>
<th>Wheel</th>
<th>Tyre</th>
<th>Frame material</th>
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<tbody>
<tr>
<td>Bianchi Aria E-Road</td>
<td>£4500</td>
<td>47, 50, 53, 55, 57 (Tested), 59, 61cm</td>
<td>12.6 kg (57, no pedals)</td>
<td>Aria Disc e-Road carbon, ebikemotion X35</td>
<td>Shimano Ultegra</td>
<td>2×11 dual-cassette, 34-127”</td>
<td>Alexium disc, thru-axle 12×100mm</td>
<td>Vittoria Rubino IV 700×25C</td>
<td>Full carbon disc</td>
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### Dimensions in millimetres and degrees

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hoses around. (Your Orbea dealer could do this for you if you didn’t fancy swapping it.) So I stuck to a shorter but wickedly hilly local circuit on the Orbea and, to avoid confusion, used the front brake only.

On said circuit, the Orbea proved to have a very pleasing ride: it’s stable, with precise steering and a stiff bottom bracket. However, the wide top tube, a common feature on contemporary lightweight diamond frames, rubbed my thighs. A deal-breaker for me, this will be of no consequence for many.

There is little to indicate that either cycle is carrying a motor and battery. Fitted with complete Shimano groupsets, both machines offer impressive performance when shifting, braking or pedalling, with no discernible difference in feel between the 105 and Ultegra components. On test, the Aria’s hydraulic discs offered greater initial bite, no doubt because the bike is a well-used machine and the discs have undergone the required break-in period. Its Vision Trimax front wheel is nicer than the Orbea’s Aksium, but the assisted riding experience is remarkably similar, as you might expect given that the two bikes share the same drive system.

E-road riding

The bikes’ drivetrains differ significantly only in gearing, with the Aria e-Road boasting a semi-compact 52-36 chainset rather than a 50-34. If only because it came fitted with a right-hand front brake and is closer in size to my regular ride, it proved the more attractive machine with which to assess the X35 drive’s performance over longer rides. As ever with a pedelec, the immediate temptation is to select maximum power and scoot up the nearest hill at some improbable speed. Which is great fun, but not necessarily the best use of the motor’s capabilities. Having enjoyed my regular commute – 15km and 300m of climbing each way – on full boost, I set out on a longer ride
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Verdict
Both bikes offer a hugely rewarding assisted-riding experience, especially in hilly terrain, and work amazingly well even without assistance. While the Orbea offers keen value and tremendous versatility, including all-roads riding, Bianchi’s offering would not look out of place in a sportive, where either might go unremarked – at least until the first climb!

Other options

**PINARELLO NYTRO RED ETAP EROAD**
£10,000
Dogma-based e-road bike with SRAM’s wireless RED eTap gearing and the Fazua Evation drive system.
[pinarello.com](http://pinarello.com)

**GIANT ROAD E+1 PRO**
£3,499
Well-equipped and powered by Giant’s powerful SyncDrive Pro mid-motor, but with a substantial and obvious battery.
[giant-bicycles.com](http://giant-bicycles.com)

This can mean either moderating effort to stay below the cutoff – or working harder than desired. In Eco mode, the ‘transition’ gradient is shallower and the sensation of drive cutting in or out almost imperceptible, unlike the surge from more powerful modes.

Obviously, Eco mode greatly extends battery life, but the iWoc One nevertheless turned red with 10km and a big hill remaining. Satisfied that I had some juice available should I want it, I tackled the climb in Off mode. Riding unassisted, e-road pedelecs are very different from heavier utility machines; their three or four kilo weight penalty is barely noticeable. Since unassisted riding is fine, range anxiety need not put you off longer rides where there’s a risk of exceeding battery life. And it’s possible to fit one or two auxiliary bottle cage-mounted batteries, which extend the assisted range to as much as 250km...

without recharging (via the port above the bottom bracket). Halfway up the next climb, the top-tube mounted iWoc ONE control switch’s indicator button turned orange. Obliged by circumstances to complete what would be a 60km ride with another 700m of climbing (this is west Wales), I felt the first icy pang of range anxiety.

Had I uploaded the Bianchi app (there’s a similar one for the Orbea), which allows the user to integrate the drive with heart rate and such stuff and offers features like mapping and GPS tracking, I would have had a clear picture of battery level. The app isn’t needed to ride the bike, but without it I only knew that the battery had been depleted.

Fear of having to get over a hill or two without assistance took hold, and I dialled back to ‘Eco’ – the lowest power setting. This gives 30% of the available power, or 75W, which doesn’t sound much but turns out to be surprisingly welcome on most climbs.

It’s not clear precisely how assistance is delivered. Does it vary according to pedal pressure or do you get 75W right up to the 25km/h cut-off? Probably the latter, as soft-pedalling produces pronounced assistance.

Turning to Eco mode resolved a burning question. Inevitably, for any rider, there’s a specific gradient where they can easily reach the speed cutoff with assistance but struggle to exceed it by even a small amount without.