

## Cycling the Pyrenees on a high-end eBike



*Charging up in Arreau town square*

Our trip to Spain and France to ride the famous Cols of the Pyrenees had been in planning for over 6 months. Unfortunately, I sustained some knee and other injuries and then managed a grade 2 calf strain (aka old man's injury) four weeks before the planned departure date. The physical therapist wanted me off the bike for six weeks and then a staged return to cycling. This of course did not fit well with the Pyrenees trip. I decided to hire a high-end carbon e-bike so that I could still participate in the tour. For the record I'm 68 years old and weigh 80kg. I live in Melbourne Australia. My main aim in using the e-bike was to avoid re-tearing my calf muscle through over straining it too early.

I wrote this review to give an unbiased opinion of the bike I ended up hiring and the hiring experience. I have included links to some of the manufacturers and service providers I dealt with, these links are purely for reference and I have no financial connection to any of the products reviewed.

After some research I decided on a bike using the ebikemotion x35 motor system.

<https://www.ebikemotion.com/web/x35-light-smart-ebike-system/>



At the time of writing there are 4 high spec road bikes using this system that I became aware of:

- Bianchi Aria e-Road
- Orbea Gain M20
- Wilier Cento1 Hybrid
- Ribble Endurance SL e

I initially decided on the Orbea Gain M20 mainly because our trip commenced in Barcelona and the Orbea is made in Northern Spain so there should be plenty available - right? Wrong. I could not find an Orbea M20 for hire anywhere near Barcelona. I managed to locate a Bianchi Aria e-Road for hire in

Barcelona from Cuesta Cycling Barcelona <https://cuesta.cc/>, but these bikes are marketed as a race bike with a motor and the ride position looked more aggressive than I'm used to. Eventually I contacted Wijko Farnholt at Cycle Classic tours who managed to help me out and locate a Wilier Cento1 Hybrid from a hire shop in Tuscany (Tuscany ride-a-bike) and they were happy to ship the bike to Barcelona for pick up and drop off. I was very happy with the help I received Cycle Classic Tours in finding a bike for me. I was not so happy with Tuscany ride-a-bike as I detail further on. The Orbea, Bianchi, Ribble and Wilier are all high-end carbon bikes with Shimano Ultegra level components including hydraulic

disk brakes. They all weigh around 12kg and use the same propulsion system. I was pleased to find the Wilier had Di2 when I picked it up in Barcelona. I was not pleased that the bike did not come in a bike bag as promised. It also came with zero instructions. There was no tool kit (an 8mm allen key is required to remove the back wheel) and no spare tube all of which I had been assured would be provided. Luckily, I'm a competent home bike mechanic and took the time to do as much reading as possible about the ebikemotion system and the app before I left home. There is an excellent review of the Wilier here: <https://ebiketips.road.cc/content/reviews/electric-road-bikes/wilier-cento1-hybrid-1805>.



iWoc ONE

- ON, OFF & LIGHT Control
- Battery & Assist Level
- Information by RGB LED

You can read a review of the Orbea here: <https://www.bicyclingaustralia.com.au/news/e-biketest-we-ride-an-orbea-gain-in-the-adelaide-hills>  
and the Bianchi here: <https://roadbikeaction.com/italian-deception-at-its-finest/>  
and the Ribble here: <https://ebikechoices.com/ribble-endurance-sle-review/>

You can google information on the ebikemotion x35 system from the link above (the 35 stands for 3.5kg all up weight penalty including battery, motor and controller). It is a very stealthy system, almost indistinguishable at a casual glance. The only control is the IWOC ONE button on the top tube which serves to turn the system on and then cycle through three levels of boost with successive presses. A long press switches the system off again. I soon found this system intuitive and easy to use. There is no display other than the IWOC button has a led surround (which is quite visible in bright daylight) to show current battery status and boost level. There is also a companion app which gives much more detailed information including exact battery status. The app also functions as a navigation system, ride recorder and it has the ability to upload to Strava. I did not use any of these features (except checking battery level) as I use a Garmin 1030 for navigation. One cute feature of the ebikemotion app is that it can pair up to a Bluetooth HR strap and then be set to automatically adjust the level of assistance to keep you HR below a present threshold. I did not test this feature. One feature of the ebikemotion app that I used extensively is the ability to remap the motor boost levels. This feature is very poorly explained in the exceptionally badly written ebikemotion documentation I managed to find on-line but here is how I think it works.

There are three boost levels (green, orange and red on the bike and 1, 2 and 3 in the app) and the boost can be set from 0 to 100% for each level. I think this is 0 to 100% of some pre-set percentage of motor output, as initially all three levels were all set at 100%. Because I was doing long rides with large amounts of climbing (in some cases far in excess of the stated range of the bike) I wanted to conserve battery wherever possible, so after a few changes I settled on the following:

Level 1 = Green = Minimum boost. 30% I did almost all riding at this level.

Level 2 = Orange = Mid Boost. 60% Used for climbing over 8%

Level 3 = Red = Full boost. 90% almost never used.

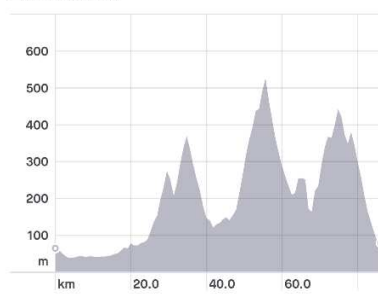
When I refer to boost levels in the following, I will use green, orange and red, because that's what you see on the IWOC button.

I also carried the charger in a musette for some of the longer rides. The charger weighs about 1kg and I didn't find it too onerous to carry it with me. You can see it on the ground in the picture on page 1



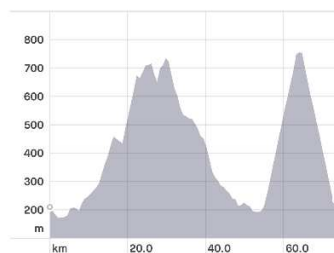
## The rides:

### Elevation



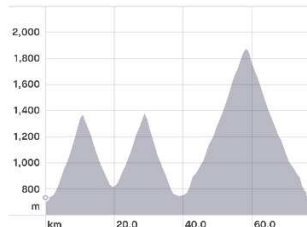
Ride 1 – Hills of Barcelona – 86km and 1408 vertical meters. This was the first ride I did on the Wilier Cento1 Hybrid. I carried the charger but never used it as we did not stop for lunch. The ride wound through the hills at the back of Barcelona up to Tibidabo church. The bike was set up just as it arrived, and I soon found that even green level was providing a high level of boost. Unfortunately, the battery ran out at the last pinch on the final climb and I had to ride up that last 9% pinch with no battery. First lesson learnt – watch the battery level. The lowest gearing on this bike is 34 x 30, considerably higher than my riding partners that have 34 x 34 or 34 x 32

### Elevation



Ride 2 – Montserrat. 74km and 1491vm. Got the battery charger – check. Stopping for lunch – check. The first climb was reasonably gentle at an average 6%. I used the green boost level for the whole of this climb. Battery was at 45% when we stopped for lunch. After about 45 mins on charge it was 65%. After lunch we descended to the bottom of Montserrat and did the harder climb back up at an average 7% to 8%. It was a very hot day (38 degrees C) so I used the orange level of boost and felt very comfortable. At the finish of the day battery was 8%.

### Elevation



Ride 3 – After two days in Barcelona we drove to Bagnères de Luchon in the Pyrenees. For our first ride we chose a very tough day Col de Portillon both ways followed by Superbagnères. 77km and 2367 vm. This is well past the stated range of the bike and I suspected charging up might be difficult on this ride so I wound the green boost down to 30% and the orange boost down to 75% and left red boost at 100%. The climb out of Luchon up Portillon is very tough. I kept the boost in green until my grade meter showed 8% or more then switched to orange – perhaps 4 times on this climb.

Magnificent descent into Bossost in Spain. I was starting to settle into the Wilier and found it very stable and predictable on fast descents. Unfortunately the front disc brake started screaming and shuddering badly after a few harsh braking sessions so I had to ease up towards the bottom. The climb out of Bossost back over Portillon is a bit more steady than the other way and I was able to stay in green boost all the way. Another fast descent back towards Luchon. By this time my battery was well below 50% so we elected to go back to Luchon for luncheon and charge up again. 1 hour charging brought the battery back above 50% and then we set off to do Superbagnères. This is a very long steday climb as you can see from the elevation profile. The bike (and I) handled it very well and I stayed in green all the way to the last 3km where the gradient kicks up to 10% and I switched to orange. The last Km is about 11% and this is when the battery ran out. I wasn't turning back 1 km from the summit so I lugged the beast up that last km, huffing and puffing and zig-zagging all the way..



Ride 4 – Port de Bales 82km 1547vm. This is a famous and very scenic Pyrenees ride. Range is pretty much spot on for the claimed range of the bike and I did not take the charger, buoyed by the fact the return home is predominantly downhill. I was starting to feel stronger after a few climbs so I wound the boost back to 60% for orange and 90% for red. The reason for this is I was beginning to better understand how the ebikemotion motor works. The amount of boost is pretty much constant. It comes in slowly and progressively when you start off but then remains constant afterwards. If you have more boost coming from the motor than you need you find yourself pedaling lightly (and wasting battery) even on quite steep sections.



Ride 5 – Luchon – Arreau via Peyresourde return 66km 1778m. This ride had a bit more climbing, so I took the charger. The climb from Luchon to the top of Peyresourde is magnificent. The descent down the other side would rate as one of the best descents I have ever done with fast sweeping corners on a magnificent road surface. You can view a video of it here: <https://www.youtube.com/watch?v=S7nt9b122S8&t=52s> The Wilier handled this beautifully. We stopped in Arreau for lunch and I was able to find a power outlet in the town square. I charged the battery for 45 mins, leaving about 70% battery when we started the return trip. The climb from

Arreau back up Peyresourde is gentler than the other way and I was 5km from the top with the battery just under 50%. It was exceptionally hot 39C and I was really suffering in the heat, so I decided to use red boost (for the first time) to get to the top as quickly as possible. I think this was a mistake because it just ate the battery and within 3km the IWOC was flashing red meaning less than 20% battery left. Once the red flashing starts only green boost is available. I switched back to green boost and climbed the last 2km (at 10%) in green boost. Tough, and hot. Fast descent down the other side and got home in Luchon with battery showing 10%



Ride 6 – Argeles-Gasost – Hautacam. 40km 1210vm. This is a punishing climb with sustained sections over 10%. The climbing starts about 2km out of Argeles and it was here I switched to orange boost. I was feeling strong and kept it in orange boost all the way despite some seriously steep sections up to 16%. The bike handled this climb very well. I was taxed all the way and got a great workout but the battery assistance made the impossible possible.

The last ride I am going to comment on was Argeles - Tourmalet. This is a long (80km return) climb to the highest pass in the Pyrenees at 2115m. I was feeling strong and left the motor off for the first 10km which was 2%-5% gradient. This means I was working a lot harder than my riding partners on their 8kg bikes. As the climb started in earnest past Luz Saint Saveur I switched to green boost and used that all the way except for a few 10% sections where I used orange boost. I arrived at the top of Tourmalet with the battery above 50% so this was a very satisfying result.

We did several other rides, all hard, all hot but once I settled into a routine with the Wilier I found it a very capable and enjoyable bike to ride and I was able to do all the climbs without re-tearing my calf or suffering too much knee pain.

### Final thoughts:

- The brakes on the Wilier were a real problem. I examined them closely after the first steep descent off Portillon and found the pads were not the ice-tech pads specified for the bike. I think the hire shop had replaced the pads with MTB style pads designed for an older caliper. They definitely were not the correct pads for the Shimano 8000 series calipers on the bike. Consequently the bike was dangerous in fast descents. I obtained a set of ice-tech pads and replaced the ones that came on the bike. I then found the pads on the bike were almost completely worn out despite me requesting the hire shop to supply the bike with new pads and a spare set of pads as I know disc brake pad wear can be severe on long mountain descents. So for me I would not hire from Tuscany ride-a-bike again as the bike just was not prepared correctly and safely. Replacing the brake pads with an inferior part is completely unacceptable. With the ice-tech brake pads braking performance improved markedly but I was still plagued with squealing and shuddering of the front brake on hard braking on steep descents. For some reason the Wilier does not use ice-tech rotor, but instead an inferior looking 6 bolt design. You can see the rotors in the picture on page 1.
- The gearing on the Wilier is a bit high for climbing (for me). It has compact cranks (50-34) but a short throw derailleur and 11-30 cluster as standard. The Orbea M20 and Bianchi Aria e-Road for example have long throw derailleurs and 11-32 cluster which I would have preferred. An 11-34 would have been nice when I was lugging it up Superbagneres with a flat battery.
- Even with the extra weight of the motor and battery the Wilier is a well-balanced and predictable bike. I found the seating position a bit less upright than I am used to with my trek SLR 7 and consequently my neck was a bit sore in the first few days, but I soon got used to it. The 28mm tyres and compliant frame give a smooth and comfortable ride.
- The electric boost cuts out at 25km/hr. This is no problem climbing, and I never used the motor on descents. When the motor is switched off it contributes negligible drag and I would easily coast past my lighter riding partners on their lighter bikes when descending. If you were considering buying one of these bikes to help you keep up with your younger/faster/tougher mates on the Saturday morning coffee ride, I think it would be a mistake. Most of the bunch rides I go on are 28km/hr+ so with a bike like this you would be bringing along a lot of extra weight and no battery benefit. Apparently, some of the ebikemotion equipped bikes sold in the US have the limit set at 20mph (32kph) as this is legal in the US. This would be much more acceptable but for the rest of the world (including Canada) we are apparently stuck with the 25kph boost limit.
- I didn't hire a Bianchi Aria e-Road because Bianchi market it as a race bike with a motor and this scared me off. I found the style of the Wilier quite aggressive and in hindsight the Bianchi probably would have been fine. At the time of writing I believe only the Orbea M20 is sold in Australia.
- I have now done 4 trips Europe to ride the big climbs. Usually at the end of each riding day it's a matter of gobbling down some food and wine and off to bed. This time I definitely felt better after each ride due to the lower effort levels. I chose the e-bike to compensate for my calf injury and that was an excellent choice. Whenever I felt my calf tightening up in the first few rides, I'd just up the boost and proceed without problems. After a week or so my calf felt fine. Usually, when I finish a tour I'm pretty much wasted and ready for a holiday from riding. This time, I certainly feel less tired than on previous tours so I think using the e-bike to lower the amount of effort contributed to an overall better riding experience. On my next trip to Europe I will definitely consider using an e-bike again.