

# Circe-Helios Shimano STEPS-Equipped Tandem



## RTR Product Review #257

By Jackie & Allan Winter  
Photography by John House

Jackie and I have been riding a tandem for more than 40 years and consider ourselves to be strong riders. Now retired, we tend to ride at least twice every week with 45-50 miles being the norm. We live in Dorset, a county on the South coast of Great Britain, which is by no means flat and our rides regularly include over 3000 feet of climbing at various gradients. Cycling is supposed to be fun, not a punishment, so we are happy to push the tandem up any hills with an incline of more than 20%.

Although an E-assisted tandem was in our long-term plan, we did not feel we were ready to try one yet and so when the request came for this review, we were

initially slightly dubious. We were about to embark upon a tour of the Yorkshire Dales, a hilly area of Outstanding National Beauty in Northern England, and we wondered if riding an E-assisted tandem would cut down our enjoyment of the holiday and reduce the



pleasure of overcoming the challenges we would face.

We decided to try the Circe out a week before our tour, hoping that an initial assessment on our local roads would help us reach a decision.



## Collection from Circe

I had given Circe Cycles' Richard Loke some details of the sort of equipment we would expect if we were planning to buy the tandem, and these were all included on the machine that awaited us in the showroom. We were made welcome and given a cup of tea before Richard went over the specification and operation of the Shimano steps system fitted to this model with the eight speed Alfine hub gear. Unfortunately, I had failed to give our current seat height and reach to the bars, etc., and it was clear from our short ride near the shop that some adjustment was necessary.

I'm still a boy racer at heart so I like a long reach and low handlebar position. The design of the Helios is such that this was sorted within a couple of minutes of our return, with the addition of a slightly longer stem. Given time, Richard would have liked to shorten the cable lengths but this did not become an issue



*The Shimano STEPS (Shimano Total Electric Power System) motor and battery are the two key elements aboard the Circe tandem. The locking battery pack is removable and can be charged while still on the bike. Green lights visible indicate battery level. Our test team found the center-stand to be a very handy feature.*

### Helios-STEPs Tandem (E-Bike)

Frame	Helios-STEPs	
Fork	Cro-Mo Disc & V Mt	
Crankset Captain	Shimano STEPs 38T	
Crankset Stoker	Tiagra 50 / 38T 70mm	
Brakes Fron	Deore Hydraulic Disc/160mm	
Brakes Rear	Deore Hydraulic Disc/160mm	
Shift Lever	Shimano Di2	
Brake Levers	Deore Hydraulic Disc	
Bottom Bracket Captain	NA	
Bottom Bracket Stoker	Tiagra Cups (BT)	
Chain	KMC 8sp	
Timing Chain	KMC Chain	
Front Hub	Shimano Deore 32h	
Rear Hub	Alfine Di2 8 speed	
Rim	Circe CH-240/Ch-213 32h	
Tyre	Schwalbe. Big Apple 2"	
Handlebar Captain	Straight	
Handlebar Stoker	Stoker Bar	
Stem Captain	.2B 120mm (changed to 150mm)	
Stem Stoker	Adjustable	
Saddle Captain	.2B Comfort	
Saddle Stoker	.2B Comfort	
Seat Post Captain	One piece	
Seat Post Stoker	Telescopic	
Headset	Tange	
Steerer Extender	Q/R	
Cassette	Nexus 18T	
Tandem comes fitted with Mudguards, Racktime Rack and Pletscher Stand. Drive Unit: STEPs (6 series), Battery: Li-Ion 36V, 11.6Ah, 418Wh. Weight		24.5kg

for us. Most riders and rider styles can easily be accommodated with this tandem design.

### Transportation

Previous experience of a Circe told us it could fit inside our BMW 1 Series and memories of how that was achieved soon returned. Our method of fitting it in and securing it can be seen in the photograph. Different methods can be used in other small vehicles, and it is a feature of the design that it can so easily be reduced, with the removal of seat tubes, etc. to become a very compact unit indeed. It is quick and easy to take apart and reassemble with just basic tools. Even the pedals were quick release, meaning we could put a suitcase and my guitar in the car alongside the tandem. Circe also supplies a version in which the frame splits and enables the bike to be transported in a case suitable for air travel, etc.. However, the battery is not appropriate for air travel.

Our trains in the UK rarely accommodate tandems, but the Circe can be small enough to fit in the space provided for solo bikes without causing any undue objections.

### Initial rides

We took the tandem on a couple of our regular rides to help us decide whether or not

to treat it to a holiday in Yorkshire. Never having had any E-assist before, we thought it might considerably reduce the amount of effort required. However, as we are able to choose when to engage the battery and which of the three levels to use, we found that the rides could be just as challenging as we wanted. We cycled a couple of hills we would normally walk but still needed to put in plenty of effort.

The decision to take the Circe on tour was easily made, especially taking into account ease of transportation, a big factor when contemplating the eight hour drive to Yorkshire. Carrying a bike on top of the car for a long distance is always a worry, particularly in view of inclement British weather.

### The Bike

Accustomed as we are to tandems with 26 or 27-inch wheels it seemed strange to be riding 20-inch ones that feel and act the same. Once on the bike, we quickly became unaware of any difference in performance, and we found that this tandem was every bit as comfortable to ride as our own machine. The Schwalbe Big Apple Plus tires coped well with all the potholes. we were unable to miss and helped by the Cane Creek Thudbuster at the rear gave us a really smooth ride.

The Sportif saddles provided on this machine are comfortable but having cycled with the same leather saddles for 40 years we decided to change to these.

Our own tandem has a striking color scheme and often attracts people's attention. We found this to be also true for the Circe, especially as it is E assisted. One cyclist we met thought assisted bikes were bringing more people to cycling, which could only be a good thing. We chatted to a couple of motor bikers who were impressed with the quality finish of the Circe. They asked if the E-assist cuts out at a speed of 15mph for an electric-assisted tandem in the same way as for a solo machine, and we confirmed that this is the case. *(Editor's note: maximum e-assist speeds vary from country to country.)*

The cyclists we spoke to were very interested and none were at all disparaging. But how are long-term, cycling in the blood, tandem riders such as ourselves likely to feel about e-assist? Well, any doubts Jackie and I might have had soon disappeared. Tandems are not as easy to ride uphill as solo bikes, so finding we could increase our cadence on the hills and ride them rather than walk was an unexpected pleasure with longer, hillier rides now achievable.

## Handlebars

Wide straight bars with bar ends for the captain made for easy control, particularly at slow speeds and the Circe stoker bars provide enough positions to remain comfortable. The Shimano E system and Alfine electronic gears did all that we asked of them on this challenging tour, which incorporated some climbs ridden by professional riders in the recent 'Tour De Yorkshire' including the famous Buttertubs pass. On one ride, taking in Fleetmoss with its long 20% climb into the teeth of a gale, followed by beautiful



*Internal runs for cabling helps clean up the frame; our test team felt removing the extra lugs and mounts for unused equipment would help the bike's aesthetics. Rubber retainer between the frame and fork can be used to keep the front wheel straight when the bike is parked on stand.*

Coverdale even longer at 20 to 25%, we cycled just over 50 miles. For the last 16 miles of undulating terrain, into the headwind and with plenty of battery left, we indulged ourselves and used up all but 10%. It was a tiring but spectacular ride.

The information display was clearly visible and included current speed, time, battery level and which of the three power output modes had been chosen, as well as an indication of the power being provided and the current gear selected.

Riders can scroll down for other information such as distance traveled on a day ride, overall distance, time spent riding, etc. By using the selector buttons riders can find a menu for changing the time and settings such

as from Km to Mph.

Front bag mounting systems such as the Ortlieb or our own KlickFix will fit directly on top of the display mounting. Particular care should be taken when fitting these to ensure none of the cables are trapped or impeded.

## Lighting System

There is a lighting system available using the controller and battery, but these were not fitted to the review tandem.

As with any cycle gear system it is best to anticipate the need to change down for hills etc. Being in too high a gear will be a challenge, and it takes a brave stoker to ease off long enough to allow a gear change when power is being applied. The electronics

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did seem to cope with most lapses in concentration!

Although possibly very useful for many, we found the automatic gear change option did not suit our riding style. We much preferred to use manual mode as our cadence is generally higher than the automatic selection. The Alfine 8 gears ranging from 30 to 90 inches seemed to cope with all the terrain we have encountered so far.

There is some noise from the motor when engaged, but we did not find this to be intrusive and when not engaged we felt that there was very little resistance to normal riding.

**Brakes.** Bringing the tandem to a halt on the type of terrain encountered in the Yorkshire dales can be a challenge. We met fellow tandem riders who said they rarely, if ever allowed the bike to run free. Not so with the Circe, as I could pull up on a 20% slope from a speed of 40mph with every confidence. (*Editor's note: "pull up" is a British colloquialism for "come to a stop."*) The Shimano Deore hydraulic disc brakes did everything we asked of them and are easy and comfortable to use.

## The Frame

Riders need to be confident that nothing is going to fail when traveling in a mountainous region, particularly when using the brakes as described above. The UK designed frame is produced using high-grade aluminum tubing, which is then hand made by a specialist frame builder in Taiwan. The short Cro-Mo forks for the 20" wheels also help ensure that nothing feels under too much strain when put to the test like this. The frame felt rigid at all times even with loaded panniers, despite its small size.

Whilst we can understand the economy of scale, it would make for cleaner lines if some



*Above and right: Shimano Deore hydraulic disc brakes were found to provide more than adequate power in the hills of Great Britain's Yorkshire dales. Frame pump is cleverly mounted above the rear fender.*

of the lugs used on the standard unassisted and differently specified machines, were removed for the E version.

## The stoker position

One of the main benefits of the small frame is that mounting and dismounting the tandem is very much easier, especially for the stoker. There are only two bottle cages on the e assist model. One point is lost due to the motor installation. We tend to use only two and felt that positioning the rear cage 3 or 4 inches further back on the frame would have maximized the low entry feature more fully.



Out of Sync. As the power is delivered to the front bottom bracket, the front and rear cranks are not necessarily in sync, which we thought would be uncomfortable. However, this proved not to be the case, although initially, Jackie found herself still pedaling at times when I was freewheeling! Getting into the correct position for moving off was not so easy as an unassisted tandem, but we soon developed a method for doing this.

## Pedals

The tandem was supplied to us with Wellgo SPD pedals with a quick release. Care should be taken to get them the right way around and in our case correctly installing them front and rear, as Jackie prefers an easier release tension.

## Drive Train

Circe have avoided the use of eccentrics on their tandems by introducing a tensioner,



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which works well and freely. Using the Alpine gear also makes for arrow straight chain alignment, reducing wear and friction.

**The Stand**

This model has a twin legged stand mounted neatly under the STEPS motor. What's wrong with leaning the bike up somewhere like any real cyclist would, I can hear you ask. Well, we found it invaluable both for assembly after transportation and for those short stops for a photo opportunity or to take something out of the panniers, etc. Riders have to make sure that the cranks are in the correct position when engaging the stand, but we quickly learned. A front wheel retainer is fitted to prevent the wheel and bars turning into the frame when lifted onto the stand. The fixing strap for this sits neatly under the battery.

**Weight**

We lifted a friend's solo E assisted bike a short while before collecting the Circe. His was eighth years old and extremely heavy but thankfully things have improved, and

we found the weight of this machine to be surprisingly low at 24.5kg. (56lbs.)

**Available Options**

We spoke to a tandem couple who live in the city of Leeds and do not have a car. They were particularly interested in the Load Carrier because it would enable them to easily collect shopping, etc. The stoker also liked the mirror that Jackie has on the end of her bars, but that is not part of the review! The load carrier has also generated the interest of a friend of ours who again does not drive and would like to transport his Base Viol and other instruments to gigs in his area.

Child cranks and trailers are also available.

**Summing up**

The E assisted tandem contributed enormously to our enjoyment of this holiday in the stunning but challenging Yorkshire Dales. It is the perfect choice for tandem riders who are looking forward to pleasurable cycling well into their later years. For info on Circe: <http://www.circecycles.com/>



*Above: Ease of transport is a key concern for any potential tandem purchase; our test team found it quite manageable to fit the Circe into their BMW 1 Series. Below: A nice feature of the center stand is the ease of removing wheels for packing the bike, or for tire repairs on the road.*



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