



Kudos Cycles Secret

With its battery hidden as a 'secret' within the frame tubing, the £725 Secret from Kudos Cycles is somewhat out of the ordinary when it comes to budget folders. How did it perform?

Kudos Cycles, based in Swalecliffe, Kent, are an offshoot of a well established auto parts company, Rally Design, and bring in a range of relatively affordable bikes. We reviewed their 'Tourer' in Issue 3. They sell both direct and via a growing network of around 20 dealers around the UK (and there's one each in Ireland and Belgium, too).

The Secret is a relatively new addition to the range. It's available in white, silver or black, and comes complete with a handy carry bag (complete with suitcase-style handle and trolley wheels) and a strap to keep the folded bike together.

The Secret uses 'standard' lithium-ion batteries, rather than the lithium-iron-phosphate (LiFePO4) type used in the other Kudos bikes. The LiFePO4 type, they say, sacrifices a little power density (capacity per unit weight) in favour of long life (typically 3 to 5 years). To keep the weight down and to make the most use of the space available, the Secret's batteries are instead the more usual type of lithium ion (lithium manganese oxide) type, with a typical life of two to three years. This does mean the warranty on the Secret's battery packs is one year rather than the two which applies to the other Kudos batteries. Spare packs currently cost £237.60 inc VAT.

Also in line with the weight saving ethos is the maximum rider weight limit of 100 kg (including any backpack etc.) – a lower limit than some, but one which should still accommodate most riders. Frame warranty (provided presumably that you respect this limit!) is two years.

» ON THE BIKE

The Secret's aluminium frame is neatly put together, and in the matt black version we tested it looks very tidy indeed. Almost all of the other parts such as brakes, stem, mudguards and carrier rack are black too, giving a co-ordinated 'stealth' appearance. Even the Kudos graphics are relatively tasteful. Also contributing to the neat looks are the cable runs: from the handlebar two 'wrapped' bundles run down to the main frame, keeping the front end of the bike uncluttered.

The main frame hinge is also rather elegantly done, with a big polished

lever to lock and unlock, with a plastic safety toggle to prevent unintended operation. Swing the frame open and the 'secret' is revealed: the battery pack within the front part of the main frame. To remove it, there's a convenient folding handle – hook this on a finger and just drag it out, once you've operated the lock below the frame of course.



LEFT AND BELOW: The secret revealed: the battery pack is tucked away within the frame. It can be charged in place, or pulled out for charging away from the bike.



Specification

Weight overall (inc batteries): 19.0 kg
Battery weight: 1.88 kg
Bike only weight: 17.12 kg
Charger weight: 0.53 kg (inc. mains cable).
Battery type: Li-Ion.
Battery capacity: 288 Watt hours (8 Ah 36V).
Gearing: 6-speed Shimano derailleurs gears. 44T ring, 14-28 T sprockets. Ratios 29"-59".
Brakes: V-brakes.
Lighting: front LED, rear LED, both powered from main battery.
Other accessories fitted: mudguards, carrier rack, stand, bell, strap, carry bag.
Price as tested: £725.

it away from the bike. Given the battery placement this isn't quite as easy as on most other designs – you have to half-fold the bike to get the battery in or out, an operation which sometimes feels as if three hands would be handy. But a useful option if there's no power sockets near where you park the bike.

The motor is a 220W Bafang type in the rear wheel, and it's controlled by a pretty standard handlebar unit, offering power on/off, three auto assist levels and a four-stage battery status display. There's also a throttle twist-grip for your right hand, plus a push-button for the LED lights front and rear, both of which run off the main battery.

The saddle is a moderate width type, supported on a black anodised 31.8 mm diameter, 400 mm long alloy seatpost. When I came to adjust this for a ride, I was surprised to see that the maximum extension (marked by a series of grooves on the post) was well short of what I'd expect. It's around 64 cm from top of the saddle to centre of the chainring. A rough calculation suggests that, as usually worked out in cycling circles for efficient pedalling, this would suit riders at most 5' tall.

I asked Kudos about the length of the seatpost, and they said that longer ones are available for those who want them (500 mm length, at "nominal extra cost"), but the current length seems to suit most customers to date. If you're not pedalling, the ideal saddle height is less important – indeed, a lower saddle makes it easier to get a foot down when you stop, and it's easier to get on and off. Also, the longer seatpost won't fit into the 'footprint' of the folded bike, and will prevent it fitting into the carry bag.

Good points all, and indeed I could ride the Secret around quite happily most of the time with the seat (for me) way down low. It's only if you have to pedal to help on a hill, or if the battery dies, that this might be an issue. With the saddle way too low the knees are too tightly bent, which reduces the power available, and pedalling can quickly become uncomfortable. Athletic riders can get out of the saddle and 'stand on the pedals' of course...

Both wheels are 20", and are shod with Kenda tyres (406-50 size) complete with reflective side-walls: a good feature to make you visible at

night to traffic approaching from the side. V-brakes front and rear do the stopping, with proper metal levers on the handlebars. A basic 6-speed Shimano Revoshift derailleur system handles the gears. The (non folding) pedals are nicer than some, too, with rubbery grip pads on top.

Other accessories fitted include a useful side stand, carrier rack, mudguards and the obligatory bell. Weight as tested, including battery, was spot on 19.0 kg according to our scales.

» THE FOLD

The Secret's fold is fairly simple; the main frame folds in half, then you drop the seatpost and fold down the stem. The stem has a neat sliding plastic catch to double-lock the hinge lever, and it all feels solid: there's a smart looking MTB style 'block' attaching the bars to the stem, too.

Unfolding is just the reverse – it can all be done in pretty much any order.

One omission is a little support bracket underneath the chainring; this would help support the bike when it's folded in half without resting the chain or the bottom of the seatpost on the ground. I guess this was dispensed with to save weight.

Commendably, the Secret is supplied with a Velcro strap to keep the folded bundle together, and this makes it a lot easier to lift and place – either direct into a car boot or instead into its carry bag. This is a rather splendid item with little trolley wheels and a slide-out handle, rather like a suitcase. Those are on the rigid back of the bag: once the



folded bike is placed onto it, the sides close via a full-length zip. A really good system, easy to wheel round and protecting other luggage from dirt or sharp bits on your bike. The only minor caveat is that the bag itself is quite heavy (4.1 kg) and bulky – the rigid back means it doesn't fold very small for storage, although it will go pretty much flat.

» ON THE ROAD

Just lifting the bike out of the house and down a couple of steps onto the road, the lowish weight (for an electric bike) is noticeable. The bike balances well when picked up by the frame 'handle' just behind the hinge, which is a nice touch.

On the road, you can use the throttle to set off then, if you wish, gently move the pedals around so that the power automatically kicks in at the level set on the handlebar display. On the flat and on moderate slopes there's no need to pedal even starting off: the motor pulls the bike away eagerly. There's a distinct buzz as it gets you up to speed – it'll disappear under traffic noise, but it's certainly enough to be heard on cycle paths.

I did find that the low saddle made me more inclined on the Secret to simply not bother pedalling at all (to get the 'auto power' to kick in) and just to keep the throttle twisted instead: this does eventually cramp the wrist, but pedalling isn't comfortable either with my knees so bent. Shorter riders shouldn't have this issue.

At some points it would have been nice to have an 'off' mode for the auto power – if you're just using the pedals to gently nudge the bike around bike

path barriers, for example. Turning it all off seems excessive, and there's a delay switching it back on. A workaround is to 'feather' the brakes – just squeeze the levers enough to disengage the contacts, cutting out the motor, without really slowing you down.

Given the saddle height I didn't do much pedalling, but anyway I found the gears way too low to really help with motion anyway. The bike just stayed in top gear, even on hills.

Brakes on the other hand were good, and the fairly wide tyres soaked up bumps well. If it were my bike I'd be tempted to upgrade the hand grips, which are a bit hard, to ergonomic ones offering palm support. I might also go for an even wider saddle: if you're just sitting on it without pedalling, it may as well be a wide squishy one. Then again, a wider saddle would add extra weight...

The bike's range seemed very much as you'd expect from the 36V 8Ah battery: it took me around 20 fairly flat miles before I felt it wise to re-charge. A lighter rider might get more, or in the hills any rider would likely

get less – but try not to run out of power as it'll be a long pedal home! The battery charger is small and light, so if you have a longer or hilly commute it might be worth taking that with you for a top-up half way.

» SUMMARY

The Secret has a lot going for it. The key feature is that it's light for an electric folder at 19 kg: that makes it a lot easier to lift and generally manoeuvre. Yet it's still well equipped with rack, mudguards, stand and lights (which could all be easily removed if you wanted to make it lighter yet). There are no suspension forks, but I didn't miss them.

This low weight is all the more commendable on a relatively budget £725 bike, as is the inclusion of the strap and carry case.

The in-frame battery is very neat and tidy, and of a decent capacity too despite the packaging constraints. The motor may be a tad less powerful than some (220W instead of 250W) but it didn't seem to make much odds in practice. There's a buzz from the

HIGH POINTS:

Light weight
Very tidy appearance
Comes with good carry bag
Good basic electric assist

LOW POINTS:

Modest 100kg rider limit
Gearing too low
Standard seatpost too short for most to pedal efficiently
Saddle a bit narrow for a 'pull you along' bike

GOOD FOR:

People who need a light bike to lift
Riders who prefer not to pedal
Shorter riders, weighing under 100 kg.

Available from:

Kudos Cycles and their dealers: Tel or see www.kudoscycles.com to locate your closest dealer.

motor but it's not too bad.

The bike as bought is very much a 'sit on it and let it pull you along' design, as evidenced by the short seatpost and too-low gears. The very short seatpost did bug me rather as a long-time cyclist, though if pedalling isn't your thing anyway it may be a non-issue, and besides, Kudos do offer a longer one. That and the grips are about all I can really criticise at the price.

Pedalling enthusiasts might just be tempted to get a Secret, select the longer seatpost and then add a larger chainring – this would, I think, make it into a very different and more capable machine for a rider keen to pedal, and one hard to rival for the money. Not sure it would remain in warranty, though... so do this at your own risk!

In any case, the Kudos Secret in its stock form offers a very attractive package as a discreet electric bike which packs down well and pulls you along. And at a modest price, too.

Peter Eland

Subscribe to **Electric Bike** magazine

If you'd like future copies of *Electric Bike* delivered to your door, why not subscribe? It costs just £7.50 (including UK postage) for three issues. Back issues are also available while stocks last.

TO ORDER:

- Call us on 01904 692800 with card details
- Order securely online: www.electricbikemag.co.uk
- Send a cheque (to 'Velo Vision Ltd') to Velo Vision, Freepost RSBT-TLTE-RBHU, YORK YO30 4AG with your name and address. Please specify with which issue you'd like the subscription to start.

Readers beyond the UK should order via the website. We can send *Electric Bike* to anywhere in the world!



Introducing **Velo Vision** - *Electric Bike's* sister publication

The publishers behind *Electric Bike* have for the last ten years published *Velo Vision*, a premium subscription cycling magazine covering bikes for transport and touring, with a particular emphasis on innovative and specialist designs. It's an international forum for transport cycling culture and bicycle design. You can read much more (and there's even a free sample issue to download) on the *Velo Vision* website: www.velovision.com

Want to try a sample copy? Simply add £1 to any subscription order and we'll include a recent *Velo Vision* issue. Or send £3 for a sample copy by itself.

