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Electric Bike Company's beach cruiser is the perfect \$1300 e-bike for summer

Jameson Dow - Jun. 29th 2017 3:40 pm ET



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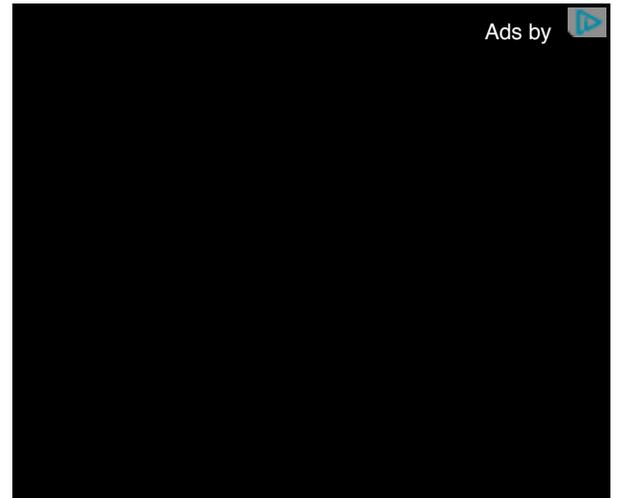
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Electric bicycle companies are a dime a dozen these days, so when we were contacted by the somewhat-

unimaginatively-named “[Electric Bike Company](#),” I didn’t expect much. I hadn’t heard of them before, but found out they were headquartered nearby, in sunny Newport Beach, California, so figured why not take a trip to the beach and have a look at what they have to offer?

What I found is a small company that makes a real gem of a bike, with good quality components, well-thought-out design, and at a very reasonable price point (starting at \$1,299) compared to the competition.

So far, Electric Bike Company sells two bike designs, both variations on the beach cruiser theme. They’ve termed them the *ahem* “Model S” (for “step-through”) and “Model C” (for “classic”). The difference is the top bar on the bicycle frame – classic has a high top bar, and step-through has a low top bar. The latter can offer easier operation if the rider is shorter, wearing a long skirt or dress, or if the bike is being used for cargo purposes (as it might be harder to swing your leg over the back of the bike if something is attached to the included cargo rack). These designs are available in variety of frame, rim and seat colors, or a “[personalized model](#)” where individuals or companies can add their own designs to the frame.



DESIGNED FOR THE BEACH



Though they don't offer much variety in their designs, they've executed on the beach cruiser theme extremely well. The bike comes standard with a rear cargo rack, which the battery slides into (some other bikes put the battery on top of the rear cargo rack, making the cargo rack useless when the battery is attached – not so here). It has a large, comfy seat for cruising, and comes standard with a suspension system inside the seat post itself (photo below). Coupled with the bike's heavy weight and large tires, this makes for a very smooth ride of the type you would expect out of a beach cruiser. The bike isn't particularly nimble, but that's not what it's going for.



The bike's heavy weight means that many of the components are particularly rugged. The wheel rims are double-walled, tires are puncture-resistant and self-sealing, and the aluminum frame is 3mm thick (most are 1.5mm thick).

Another aspect of the bike's increased durability is that nearly all of its components are aluminum or stainless steel to prevent rust and corrosion, since the bikes are meant to be used at the beach, where salt in the air tends to corrode metals worse than in drier, less-salty areas. It uses hydraulic disc brakes instead of cabled brakes, again because of corrosion risk, and because the bike's electrical wiring goes through the frame, and a moving brake cable could possibly cause damage by repeatedly rubbing against wires.





The optional (\$49+) basket also has a clever feature. Anyone who has ridden a bike with a full basket before will know that adding weight to the handlebars can make a bike's handling unpredictable, and can sometimes result in the bike falling over when parked. So Electric Bike Company has added a bracket to the frame, so that the basket attaches directly to the frame and thus doesn't turn along with the handlebars. It comes with a motorcycle-style kickstand to help support the bike's heavy weight, especially if loaded with cargo.

THROTTLE CONTROL VS. PEDAL ASSIST

One neat feature of this bike is that it has both throttle control and pedal-assist modes. Most electric bikes come with one or the other – either a throttle on the handgrip, where twisting the grip or pressing a button runs the bike's electric motor; or a pedal assist mode where the bike judges the speed at which you're pedaling and uses the motor to add extra torque, effectively making you feel stronger.



For example, Bosch's electric bike system, which powers the [Trek Super Commuter +8S](#) which we recently reviewed and which I have ridden and was very impressed by, offers a pedal assist through a mid-motor attached to the pedal assembly, which means the bike can be fit with standard gears, like the

11-speed transmission on the +8S. But since the bike is geared and the motor is in the pedal assembly instead of the wheel hub, the bike doesn't offer throttle control. Likewise, other bikes with the motor in the wheel hub often offer throttle control, but if they have gears then that makes pedal assist difficult or impossible to engineer.

Electric Bike Company gets around this by having a single gear. While this initially sounds restrictive, since the bike offers 5 levels of pedal assist and throttle control, and since beach cruisers often don't have gears anyway and aren't typically meant for particularly hilly areas or high speeds, it makes a lot of sense for this bike. It allowed them to reduce the mechanical complexity of the bike while still offering riders "mechanical advantage" – in the form of an electric motor boost rather than mechanical gearing.

Electric Bike Company's system works differently than Bosch's, in a way that is quite apparent to the rider. Bosch's system works both through torque and cadence sensing, and is very responsive, offering little perceptible lag between when you start pedaling and when the motor kicks in to help you – making you feel like superman as you dart effortlessly up hills. Electric Bike Company's system works by sensing pedal motion rather than torque, so you have to turn the pedal a bit before the motor kicks in to help you out. This results in significant and somewhat jarring lag between when you start pedaling and when the motor kicks in, but they've identified an improvement by adding more sensing points to the front sprocket, a cheap and easy fix which is going into production now should reduce the lag by half. Nevertheless, Bosch's system will probably remain more responsive, but bikes built on that system also command a significant price premium (Trek's bike mentioned above [costs \\$5,000](#), nearly four times as much as Electric Bike Company's cruiser).

THE BATTERY

There are two battery options – 10Ah and 18Ah, corresponding to about 500Wh and 1,000Wh (the latter is a +\$399 option). The battery uses Samsung's newest 33G 18650-format NMC lithium-ion cells – similar in format to the cells used in current Tesla batteries (Tesla uses Panasonic 18650 NMC cells), and the company is partnered with [TurnLife technologies](#), a Shenzhen, China-based battery firm.

As for range, it obviously varies based on several factors, including whether you're using pedal assist or full power from the bicycle, but the "rule of thumb" is that each amp-hour on a 48V battery will carry a 170lb/77kg rider about 2 miles/3.2km, so the total "range" is 20-40 miles on throttle mode, or much longer if you use pedal assist.

These are already large batteries for an electric bike – but they can get even bigger. The company also offers a +\$599 option for a second battery, which takes up about half the space in the bike's front basket (see photo below) and adds even more energy, and thus even more range. It would normally seem a little sketchy to balance all that weight above the front axle, and would make turning difficult – but remember that the basket doesn't turn when the handlebars do, so it shouldn't affect handling as much as

if the basket was attached to the handlebars.



For comparison, the Bosch system's largest battery currently available is 500Wh, though you can install two batteries (one on the bike frame, one on the rear rack) to get up to 1,000Wh energy storage.

Of course, a massive range may not actually be necessary, because it's rare that a person will want to ride a beach cruiser for the better part of a hundred miles per day. But this brings up another one of Electric Bike Company's neat features – the batteries have a power outlet which accessories can be plugged into. One suggested accessory is a small electric cooler, capable of keeping beverages cool for several hours when plugged into the bicycle

The main bike battery also powers the included rear and front safety lights, and there is a USB port behind the information screen on the handlebars which can charge the optional bluetooth speaker or your smartphone (an "upgrade package" is available with bike lock, phone and speaker holder, bluetooth speaker and multi-tool for +\$299).

The only thing not powered off of the bike's main battery is a small LED light integrated into the bike's bell, which has its own battery (which a rider would generally save for emergency purposes, if the main battery runs out).



As for charging, the bike has a removable battery (with lock to secure it to the bike) and a 5amp external charger, which means it can be charged to full in 2-4 hours. Another distinguishing feature is that it also has an onboard 2amp charger (5-9 hour charge), with a retractable charging cord so you don't have to carry the external charger around with you. The retractable charge cord is a nice touch which we haven't seen on other bikes, and is patent pending.

PERFORMANCE: WEIGHT VS. POWER

All of these features do come at a cost though: weight. The bike is extraordinarily heavy, coming in at over 70 pounds with all the bells and whistles. For lifting, or for manual riding, this makes it a bit of a dog. Luckily, since the electric motor is so powerful and the battery is so large, there's always plenty of extra oomph to help move all that weight around. One of the largest hills in town (in the background of the photo below) is just down the street from Electric Bike Company's office, and riding up the hill even with pedal assist set to the lowest setting still made me feel like I was on a casual ride across flat ground. I also tried riding it up an exceptionally steep driveway with the motor turned off, just to see how hard it would be, and the weight was definitely apparent when I did that.



The power available from the bike's "500 watt rated" motor is very impressive. Even at low power settings it felt like it was as much as I would ever need or want. While riding, the bike's computer allows fairly easy switching between 5 levels of strength and turning pedal assist on and off. The battery/controller/motor are technically capable of putting out up to 1300W for short bursts, but only rated for 500W for an extended period of time. Typical riding will use ~200-300W.

The power delivery is further customizable through some fairly arcane menus on the bike's computer, so that a rider can configure their preferred max power settings if the default ones are too strong – but this is a "set it once" kind of thing, not something you would want to do while riding.

With all this power, the bike can be set to have a top speed of up to 28mph with pedal assist, which would make it a "class 3" bike. The bike's top speed and throttle/pedal assist functions can be modified through the settings menu, letting it be used as a class 1 or 2 bike as well. Check your local laws and regulations for how this might affect the legality of where and how you can use the bike (some places only allow e-bikes to be operated at certain speeds without a license, or require helmets or riders to be a certain age).

“DREAMS OF GLOBAL IMPACT”

Electric Bike Company's principal, Sean Lupton-Smith, is from South Africa. It's possible that this is part of what inspired him to get into the electric vehicle business, given another [well-known South African who is doing quite well for himself](#) in the industry.

Being from Africa, Lupton-Smith's dream is to eventually provide a sustainable, simple franchise model for entrepreneurs in Africa to build businesses while providing low-cost electric bicycles to their communities. In the dusty, hot parts of Africa, with spread-out villages and little reliable infrastructure, a reliable, durable bicycle with a large battery and lots of power could be useful for trips between villages, particularly for carrying heavy things, like water. While electric grids are often not reliable in these villages, the bike could be charged via distributed generation with solar or wind power. We've seen others with [similar ideas](#), so it's not so far-fetched.

Lupton-Smith figures that the cost of commuting is \$2-\$5 per day in much of the world, so if an e-bike can be offered at a price competitive to that, then it could possibly replace a vehicle. With the relatively low cost of these bicycles, this seems attainable, especially if financing solutions become available. Lupton-Smith expects he will be able to offer bikes at a lower price in Africa than the US, primarily by taking a hit on margins – offering bikes with a standard markup to make the necessary profit in richer markets, then offering bikes at cost or just above cost to less-privileged markets.



Bikes can be ordered online at [their website](#), and can be picked up locally in Newport Beach, CA or shipped for a flat rate of \$249 anywhere in the US. This is pricey for shipping compared to some other bikes, but the bikes come fully assembled, and only require [a minute or two of setup](#) to straighten the handlebars and get riding.

If you are interested and the specs make sense for you, I highly encourage you to give this Electric Bike Company a ride.

Guides

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FEATURE

About the Author



Jameson Dow