



TERN VEKTRON

Another stellar folding bike

There are plenty of folding electric bikes on the market today. There are micro-sized ones that are good for commuting only, and some that are slightly bigger that work for a wider variety of rides. Most fold in the middle and, because of that design, flex quite a bit. This can make for a disconcerting ride at times. The micro-sized bikes have tiny wheels and usually never feel quite stable, while larger folders sometimes feel like they are trying to be too many things.

Enter the Vektron, Tern's answer to the folding bike. Tern has made folding bikes before, but this time they had the opportunity to partner up with Bosch and put a mid-drive motor in it. The engineering that's gone into this is mind-boggling. Not just with the motor, but every detail of the bike.

THE BIKE

The Tern looks like something that Batman might ride. The entire bike is finished, stem to stern, in matte black. It features a long rear triangle to accommodate the battery and the adjustable rack. That long triangle adds to the stability, as does the rake of the fork. Braces abound on this frame to help make it stiff.

Tern's Andros stem is uniquely adjustable. Without any tools you simply unlock two levers and adjust the height and distance between the handlebars and the saddle with a cantilevering setup that allows the bars to be positioned in front, above or behind the "handle post" (their term) that comes up from the head tube. It can be adjusted for each rider, or one rider can reposition for more comfort during a long ride.

It also has an ingenious, telescopic seatpost system. Yes, we said "system." Here's why that's important: The larger, outer post is a beefy 33.9mm (another detail that makes this bike feel so rigid) with measured marks on it so you can consistently raise it if you lower it when folded. The inner seatpost is an industry-standard 27.2mm (also marked), so you can raise the seat even higher. The advantage to having the smaller inner post is that you can easily swap it out for a suspension post or any other that you prefer.

Folding the bike and unfolding it is very well thought out and uses their patented hinge lever that sits flat when it's either open or closed so you don't catch it on anything. It's also fully serviceable by any dealer. Where most bikes have plastic folding pedals, Tern opted for metal pedals with plastic cages. They don't fold, but the drive-side pedal is removable with an ingenious release that you press with two fingers. But, where do you put it so you don't misplace it? They've thought of that as well. There's a receiver on the underside of the saddle where you can clip it in.

THE POWER

The motor is a Bosch Line mid-drive. The Active Line motors are

Active

made specifically for commuter bikes to provide constant and predictable power. There's no surge of power like in the Performance Line, so you aren't surprised at a light. The Vektron comes with the Bosch Purion display, a smaller display than the ubiquitous Intuvia display. We like it because it is smaller and still as easy to read, but it's simpler and mounted near your left thumb.

There's a walk mode, which is very useful when pushing the bike up a steep incline. You access it by pushing the bottom button on the Purion display, then holding down the plus button. The hot tip is that you can also use this when the bike is partially folded, like when you are maneuvering it around the subway and want to take up as little space as possible. Fold the frame in half and lock it, but

leave the handlebars up. Tilt the bike back onto the back wheel and use the walk mode to have it push itself around with you steering. It's brilliant!

THE PARTS

The rear rack is adjustable, largely so panniers can be shifted back for heel clearance. They've even installed little hooks on the back to hold the pan-



niers firmly when you go over bumps. It's beefy and is rated to hold up to 55 pounds. Nice, full fenders are included, as is a full chain guard, both of which will keep your suit clean on your commute.

They've used Hermann's LED lights for head- and taillights. The headlight is bright enough to use to see and be seen at night. A long press of the plus button on the Purion display turns it on. A second long press of the plus button turns it off but leaves on two smaller daytime running lights for safety.

All the wiring on the bike is external, except for the wiring for the taillight, which runs internally through the rack.

The Tern rolls on 20-inch wheels fitted with Schwalbe Big Apple tires. They have reflective strips on the side, RaceGuard puncture protection, and, at 2.15 inches wide, they are very grippy and provide a refined ride by smoothing out some of the bumps and vibrations from the road.

There's even a secret attachment point for a front rack or basket hidden under the badge on the head tube. All these little details speak volumes about Tern's years of bike-building experience.

WHO IT'S MADE FOR

This is a perfect commuter bike. It can get you to work or to the train quickly, folds up for easy storage in your cube, and, with the rack, it's even good for carrying groceries and running other errands. But with the comfort and power and as solid as it is, it's also a great touring companion. Throw one or two in the back of your RV and use them to get around wherever you wind up.

THE RIDE

When you first sit on the bike, you feel the quality and engineering at every point. Adjust the saddle, make note of where you've set it, then adjust the bars to where they're comfortable. There's no vertical adjustment on the handle post, so it's all done through their unique stem. The lack of that vertical adjustment actually adds to the stiffness of the bike.

Taking off, you feel the added torque you get with the power delivered to the small wheels. The Active Line motor produces 50 N/m of torque, plus what you provide. There's no jerkiness, just a smooth wave of power helping you

“You completely forget that it's a folding bike when riding it—it's that good!”

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(Top) The beefy rack can hold up to 55 pounds and is adjustable to move cargo or panniers. **(Bottom Left)** The hinge assembly locks solidly and folds flat when open or closed. **(Bottom right)** This bike is so solidly built, you'll forget it's a folding bike. It has structural braces everywhere.

along. There are four power modes—Eco, Tour, Sport and Turbo. We usually liked the Tour mode with the occasional use of Sport for hills. It would have to be a really steep hill to want to go into Turbo, because there's more than enough assist in Sport mode most of the time.

The motor really kicks in when you hit a pedal cadence of around 20 rpm. That can be achieved in less than a revolution of the cranks. The bike accelerates very well up to 18 mph, but then drops off very rapidly from there. There's only a minute amount of sound coming from the motor. As a rider, you'll hear it, but the people next to you likely won't.

Bosch motors have both torque and cadence sensors that are measured

1000 times per second to provide optimal power. They also sense when you shift, so there's a split-second drop in power during shifting. It's so quick that you have to be paying close attention to feel it.

You can toggle through the various display options on the Purion display by holding the minus button down. We liked setting it to show the range. As you set different power levels, it shows an approximation of your remaining range based on that power level and the last five miles you've ridden. If you have been climbing a lot of hills, it will obviously be lower than if you've been riding flats.

The bike is far more stable than most folding bikes. Between the

balanced ride and the solid feel of the bike, you completely forget that it's a folding bike when riding it—it's that good! It helps that the motor and battery are in the center of the bike and the overall weight is well balanced.

THE VERDICT

Tern has hit this one out of the park. This is one of the most impressive folding bikes we've ridden, both in terms of build quality and components, as well as ride quality. It's not aimed at the bargain hunter; it's meant for riders who want quality, durability and fun. It's a great commuter, but it's also a great travel bike. ■

{ VEKTRON }

SPECS

2017 TERN VEKTRON

MSRP: \$3400

Motor: Bosch Active Line

Battery: Bosch, 36V/11Ah/396Wh

Charge time: 3.5 hours

Top speed: 20 mph (with assist)

Range: 30–60 miles

Drive: Shimano Deore XT 10-speed, 11-34t

Brakes: Shimano Deore Hydraulic Disc

Controls: Bosch Purion

Fork: Hydroformed aluminum

Frame: 7005 aluminum

Tires: Schwalbe Big Apple, 20x2.15

Weight: 49.5 lb.

Color choices: Matte Black

Sizes: One size

www.ternbicycles.com



(Left) All cabling is external, which is unusual for a folding bike these days. (Middle) A Bosch Purion display puts everything you need at your fingertips, but you may have to reposition it so the sharp edge doesn't cut into your hand. (Right) This little horseshoe-shaped piece protects the motor and allows the bike to stand when folded up.

