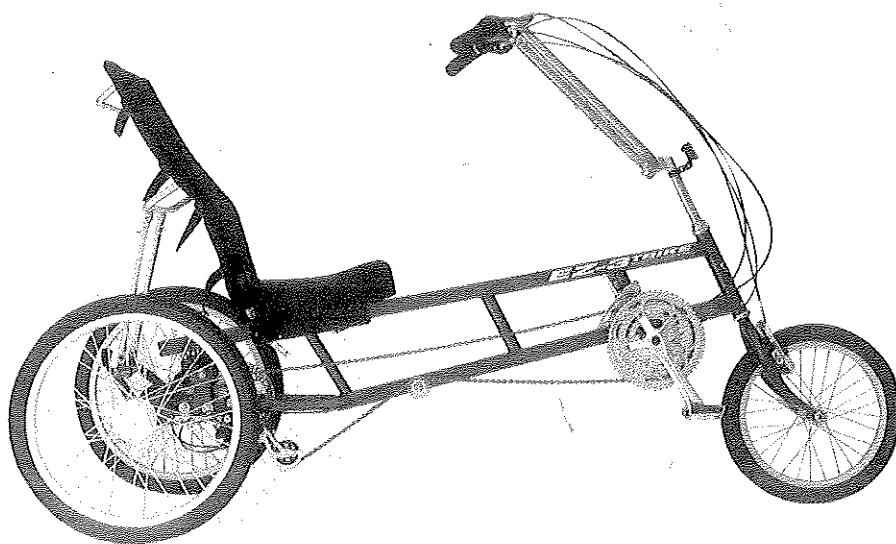




The Best Selling Recumbent in the World: The Sun EZ 3

By Rick Higginson

It might be a surprise to many, but one of the hottest selling recumbents on the market right now isn't a bike. It's the Easy Racers EZ-3 tricycle. Current reports are that EZ-3s are selling almost as fast as the shops can get them in. One might speculate that the biggest factor driving this sales success story is the EZ-3's relatively low price of \$725. Consumers tend to be a bit suspicious of something that seems too low in price—especially a recumbent bicycle.

I took an EZ-3 out for a test ride, not being really sure what to expect from a 'bent trike with such a low price. Granted, I've a favorable disposition towards the EZ line of recumbents, as my wife rides an EZ-1, and purposed to give it as objective a review as possible.

Systems

Frame and Fork — The EZ-3 is a delta configuration (two wheels in back) trike, based in part on the proven frame design of the EZ-1 bicycle. The frame and configuration from the seat forward is nearly indistinguishable from its two-wheeled sibling.

Thinking logically, this contributes to the price break on the EZ-3, as the designers and builders did not need to invest capital to either design a specific forward frame, nor to gear up a new production line for this part of the trike.

The frame is constructed of hi-ten TIG welded steel. The fork employs hi-ten steel blades coupled to a CroMo steer tube. The rear portion of the frame, supporting the split rear axle and intermediate drive shaft, is beefy and does not leave the rider wondering if the trike will be strong enough. One might even consider it *over-engineered* in that department, but frankly, I'd rather have a frame that was too strong than one that wasn't strong enough. Easy Racers has not specified a rider weight limit for the EZ-3, but based on their track record with the EZ-1, and the appearance of this frame, I'd guess that few potential riders would come close to over stressing the frame.

Paint — The EZ-3 is available in either blue or red powder coat finish, matching the color choices available for the EZ-1. The samples I've inspected in the shop are smooth and nicely finished. The EZ-3 decal decorates the top tube near the headset, identifying the trike without being garish.

Steering — The EZ-3 uses the steel handlebars common to many of Easy Racers recumbents. Reminiscent of the ape hanger handlebars of years past, the over-seat steering configuration provides not only a solid steering feel, but also a convenient location for bottle cages, with the two pairs of brazons attached to the handlebars. Adjusting the handlebar height and angle requires a set of allen wrenches, but a fair range of position is

available to accommodate the needs and tastes of most riders.

Weight — The stock weight of the EZ-3 tips the scales at 52 pounds, merely 13 pounds heavier than the EZ-1 SC. This is around what one would expect for a trike of this configuration and load capacity. Considering the price, I really expected the EZ-3 to weigh more.

Drivetrain — The EZ-3 employs a basic 21-speed drivetrain utilizing lower end Shimano components. At the price of the EZ-3, the lower-end components are to be expected. SRAM shifters accomplish the gear selection adequately. A floating idler keeps the slack side of the chain efficiently and quietly guided away from the ground. The EZ-3 uses an intermediate shaft just forward of the rear axle, coupling the power to the right rear wheel axle through a pair of fixed cogs and a very short loop of chain. This is a point of careful adjustment, since tightening this final drive chain too much can lead to noise, drag, and vibration, as we learned on the test ride.

Braking — A Promax Linear pull brake is mounted to the front fork, while a Promax mechanical disc brake is mounted to the intermediate drive shaft in the rear (not on the rear wheels). While braking was adequate, I found the feel of the rear disc somewhat annoying. I could feel vibration when the brake was applied. This has to do with the secondary chain's lag as the brake slows the intermediate shaft, which slows the chain, which slows the rear axle, which slows the rear wheel.

The EZ-3 is the locking tab on the front brake handle. Depressing the button locks the front brake — which then acts as a parking brake — so your trike won't roll away on you. Knowing that the trike won't roll during such actions can be very reassuring, and may help prevent mishaps. The brake lock is released simply by squeezing the lever again.

Wheels and Tires — Like its two-wheeled sibling, the EZ-3 sports the 20" (406 mm) rear/16" (305 mm) front wheel combo. The Kenda Kontakt 16 x 1.75" front tire is mounted to a 28 hole alloy rim with 14 gauge stainless steel spokes. While Sun specifications call for an alloy bolt on hub, my test trike was equipped with a quick release hub instead.

The 20 x 1.75" Kenda Kontakt tires on the rear are mounted to a pair of 36-hole alloy rims with 14 stainless spokes. Sealed bearing alloy trike hubs are used to mount the wheels to the axles. These tires should be fine for casual riding, but for any kind of distance or touring, I'd be inclined to change over to a high pressure road slick for the decreased rolling resistance.

Comfort

Seat — The seat base is a Lycra covered foam

combined with the Sun's imported version of the Easy Racer Koolback seat back. This is a proven seat that produces a secure, comfortable seat for riders of various sizes and body shapes. The Sun EZ seat bases don't have the same layered and contoured foam as the USA-built Easy Racer seats. Only heavier riders and those who plan to spend long stints in the saddle should notice.

The entire seat assembly slides forward and back to adjust for rider height, clamping into position using two quick release levers beneath the seat base. The seat back recline angle can be easily adjusted by pulling two locking pins from the telescoping supports and sliding the supports to the desired position. This is nice in that no tools are required to accomplish a quick *field adjustments* to fine tune the position while out on a ride.

Ergonomics — This is another place where the EZ-3 excels. Once properly adjusted for the individual rider, everything is right where it needs to be. The low bottom bracket should minimize foot numbness for the majority of riders, while the compact LWB design minimizes potential interference between the feet and the steering.

For those using water bottles, the handlebar braze-ons will place the bottles in easy reach, as opposed to fumbling for a bottle either behind or below the seat, especially convenient for replacing the bottle while moving. The handlebar design provides ample options for mounting accessories such as cyclocomputers and headlights without having to perform extensive modifications, and keeps them accessible during the ride.

The EZ-3 sits higher than the other similar trikes. This aspect is going to weigh heavily in the selection process for many potential buyers. Riders with physical difficulties that might make it problematic to get into or out of a low trike will appreciate being able to get in and out of the EZ-3's saddle unassisted. In traffic, the higher position will make some riders more comfortable, feeling more visible than they would feel on a low trike.

Ride/Handling

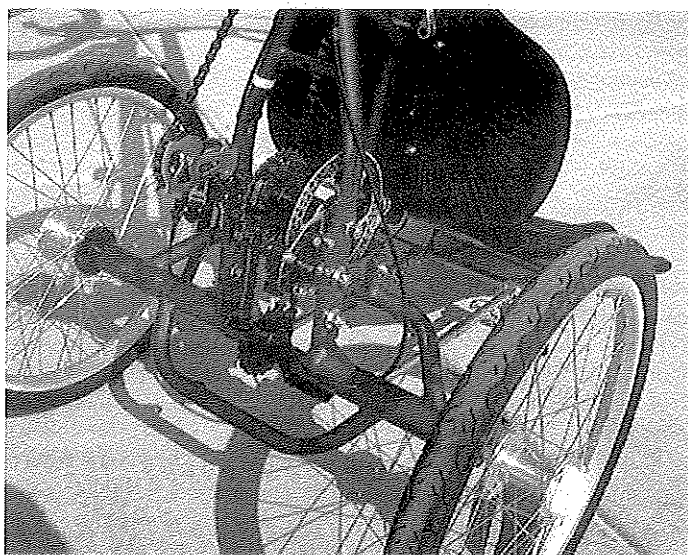
Stability — Any higher center of gravity trike is going to lose some points in this field. All trikes have a tendency to want to tip in a tight turn at speed, and the higher the center of gravity (CG), the lower the speed required to lift the inner wheel in the turn. If the rider leans into the turn, this can be combated, but it is a characteristic that must be remembered and respected, lest the rider find him or herself falling to the outside of a turn towards a painful landing. While the EZ-3 was the best steering and tracking trike of those that I've tested so far, it is also the one most likely to tip in a turn, simply because of its higher CG. A new rider should take some time to get the feel of the trike in the turns, and to not exceed the safe speed of any particular turn. That said, the EZ-3 was the easiest trike to keep on a straight line, and the least *squirrelly* feeling at faster speeds. It also has the tightest turning radius of any.

With the right wheel being the drive wheel, the front wheel can be turned to a 90 degree angle, and the trike will literally pivot in place. The right wheel will drive forward, while the free spinning left wheel will turn backwards. You can turn the EZ-3 around on a trail or path that is no wider than the trike is long. I probably looked pretty silly doing so, but I was having a good time spinning circles in place on the EZ-3.

Speed/Efficiency — I can't imagine anyone buying an EZ-3 with the thoughts of high performance. While the EZ-3 was easy to ride and rolled right along, you're not going to break any records on it. Between its weight and the higher forward profile, you're presented with some inhibition to any really fast riding. But again, speed isn't why you ride an EZ-3 style of trike. This is the kind of trike you're going to get if you want to ride for fun, fitness, and run some errands. It has a practical efficiency apart from the ability to go fast. When measured in utility potential, the EZ-3 gains points. The EZ-3 is an efficient vehicle for the student, commuter, or shopper.



The author rides our EZ3 test trike



The EZ3's rear axle, jackshaft/ mid-drive and rear disc brake. The new 2003 upscale aluminum version will have 3 disc brakes, one on each wheel (Rick Higginson)



The EZ3 has twin 20-inch (406 mm) rear wheels and a 16-inch (305 mm) front wheel. The new 2003 aluminum version will have 3 20" wheels. This will not be a second model. Much like the EZ1 SC Lite is to the EZ1 (Rick Higginson)

My wife took a spin on the EZ-3. She didn't notice any real difference in pedaling difficulty due to the added rolling weight. She did comment on the cornering ability (she rides an EZ1 SC Lite) in contrast to her bike.

User Friendliness — This is perhaps one of the most user friendly recumbents I've ever ridden. For anyone not sure about recumbent riding, the trike is an ideal introduction to the position of bent riding, since it's difficult to fall over. The EZ-3 steers simply and confidently, and about the only thing that the rider needs to get accustomed to is the aforementioned speed in the turns. You don't need a few slow spins around the bike shop parking lot to feel confident in riding an EZ-3. Get on and ride, and you're on your way. Go ahead and put the clipless pedals on to maximize your pedal power, since you don't have to unclip for a stop. If grandma can walk, she can ride this trike, it's that easy.

Fun Factor — The EZ-3 may not be as high on the fun-o-meter as the sporty handling tadpole trikes. Comparing the EZ-3 to those is something like comparing the family sedan to a Porsche or a sporty coupe. It's still a fun ride, but you're not going to get as much wow factor from it.

Owning/Purchasing

Versatility — The EZ-3 leans more towards the utility trike market. Its suitable for recreational rides and human powered errands, and fits these roles very well. It could serve as a touring trike, though I'd be inclined to make a few upgrades before any kind of distance riding.

Shipping/Assembly — Sun has more potential dealers than any other recumbent manufacturer (parent company is J&B Imports who sells bike parts to bike shops; nearly every bike shop has their with color pics of their recumbent line).

If you'd rather, Easy Racers will sell you an EZ3 direct. For assembly reasons, it's probably best to buy a recumbent from a local dealer (if possible).

Quality/Durability — While the EZ-3 is still a new model, both Sun and Easy Racers bikes have very good track records. The original owner receives a lifetime warranty on the frame, while other components carry limited warranties. The basic *no frills* design based on the time proven EZ-1, incorporating many common parts, and an extensive dealer network, should make owning an EZ-3 about as stress free as owning a trike can get.

Cost/Depreciation — According to my local bike shop, the EZ-3 is their hottest seller from a nicely varied selection of recumbents, including tricycles. At \$725 MSRP, it costs less than many lower level recumbent bicycles, and considerably less than most recumbent trikes. If the popularity of the EZ-3 holds anywhere near its current level, it's a reasonable

bet that the value of second hand EZ-3s should remain high.

Options/Accessories — Sun offers many accessories for the EZ-3. There is a fender set, under-seat pannier rack, rear messenger bag (See RCN 72), a new rear basket (fits all EZ seat backs) and a new lightweight canopy.

A new 30" fairing will be available from Sun/J&B dealers in late spring. Zzip Designs fairings will fit and are available. They will require "T" bracket upper mounts and bolt-on lower mounts.

My suggestion for *bike shop* options would be a set of high-pressure tires, such as the Kenda Kwest to lower rolling resistance. We installed a set of these on my wife's EZ-1, and were very pleased with the results. The EZ seats accommodate most hydration packs just fine, and the handlebars provide ample space for cyclocomputers, headlights, and other such after-market accessories that the individual rider may need or want.

Market Competition — Peers for this trike barely exist. The closest competitor is the Haluzak Triumf, costing more than double that of the EZ3. Pricier competitors are available from: Hase, Penninger and Lightfoot.

My Analysis

Verdict — The biggest detractor that I found on the EZ-3 would be the final drive and disc brake combo. This is probably more of a concern to recumbent enthusiasts than it would be to the casual rider for whom the EZ3 was designed. This new upper line aluminum EZ3 will have three disc brakes (one per wheel).

Dollar for dollar, the EZ-3 is easily the best value in a recumbent tricycle currently available, its higher seating position and profile will make it a battle to keep it out of the *granny trike* category. Those with *sporty* aspirations may overlook it in favor of the sportier low slung trikes (or wait for the new aluminum EZ3). However, this doesn't mean that delta trikes cannot be sporty or performance oriented. The Hase Kettwiesel is a 34 pound performance delta and there is that new aluminum EZ-3 coming soon.

I like the EZ-3. Perhaps part of that is the image and preconceptions of it versus the other trikes I've ridden and reviewed. With the sportier trikes I reviewed, I went into the test rides with the idea of quick, fun sprints and having a blast zipping around on them. In some ways, the realities just didn't live up to my expectations (which, granted, may have just been too high).

In contrast, with the EZ3, my expectation was for a relaxed and mellow ride. I received that, plus found that it picked up speed just fine, maneuvered nicely, and was still fun to ride. For those seeking to get in better shape, for those tired of feeling irrevocably tied to the internal combustion engine, for those who want a relaxed ride to help relieve stress, and

INFO AT A GLANCE

Specifications

Model—Sun EZ-3
Type—delta trike
Steering—OSS
Wheelbase—56.5"
Seat height—22"
Bottom bracket height—n.a.
Frame sizes—one-size-fits-most
Weight—52 pounds
Weight limit—300 pounds

Frame—Hi-ten TIG welded steel
Fork—Hi-ten blades with CroMo steerer
Stem—240 mm alloy
Handlebar—steel with 2 bottle braze-ons
Seat—Sun/EZ mesh back foam base

Components

Crank—alloy 30/42/52 (w/steel rings)
Bottom bracket—loose ball
Headset—1" steel
Deraileur (front)—Shimano Ty-32
Deraileur (rear)—Shimano Acera
Shifters—SRAM MRX-200
Cassette—SRAM 11-28 7-spd.
Chain—KMC
Gear inch range—18-90
Wheels (front)—305 mm 16"
Wheel (rear)—406 mm 20"
Hubs—alloy bolt on
Rims—Sun CR-18
Tires—Kenda Kontakt
Brake (rear)—Promax disc (mid-drive)
Brake (front)—Promax V-style
Pedals—Wellgo LU-982

Incidentals

Priced from—\$725-\$775
Warranty (frame)—Lifetime (orig. owner)
Colors—red or blue

Pro

Exceptional value
Strong frame design
Comfortable, easily adjusted seat
Stable steering
Maintainable, common components

Con

High center of gravity
Touchy final drive adjustment
Mechanical disk brake feels odd
Low-end components and tires may prompt some riders to upgrade

Contact

Sun Bicycles
www.sunbicycles.com

Easy Racers Inc.
www.easyracers.com
Phone Tel. 831-722-9797

Ajo Bikes
www.ajobikes.com
Tel. 520-294-1434

C&C Industries sells an electric-assist kit for this trike e-mail: cg@visi.com

Brown Cycles offers a hand crank special needs version of the EZ3 Tel. 970-245-7939

for many others, the EZ-3 will offer an affordable solid option. I think we can expect to see many more of them out on the road in the coming years. ♦

A special thank you to Ajo Bikes in Tucson, Arizona for supplying our test trike. Frank at Ajo says that the EZ3 is his best selling recumbent model. Ajo is also doing electric conversions to the EZ3.

Late update:

Sun Set to Introduce EZ3 Aluminum Trike

For 2003 Sun will be introducing a more up-scale delta trike. An aluminum frame will replace the steel frame. The split rear axle will have 7-8 degrees of camber (canted rear wheels). The handlebars will be upgraded to aluminum (instead of steel). The seat slider, seat back and struts will all be aluminum.

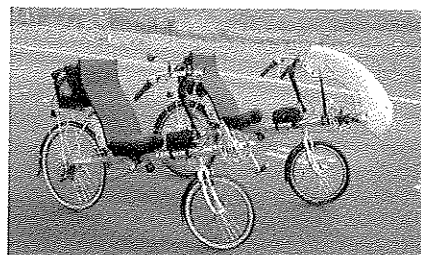
The 16-inch front wheel will be upgraded to a 20-inch and there will be Shimano disc brakes on all three wheels. Gone is the jackshaft mounted single rear disc brake.

The trike will have upgraded components with Sun rims, a Shimano crank, and a SRAM 11-32 8-speed cassette shifted by a Deore rear derailleur.

The seat will be 2-inches lower and bottom bracket 2-inches higher. This new model should be ready to ship in April. ♦

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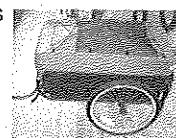
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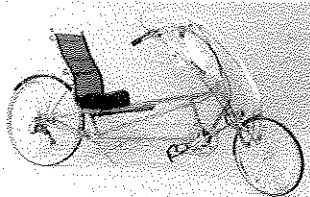
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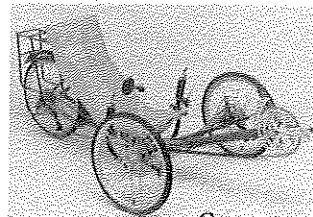
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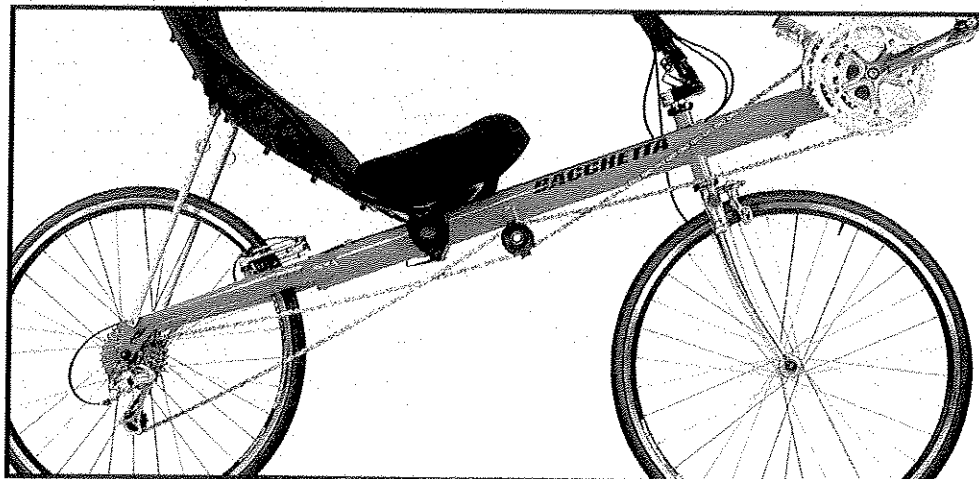
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