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Sun Bicycles EZ-3

Sun Bicycles EZ3 Trike

The affordable alternative?

By Jose A. Hernandez, BentRider Online Magazine Webmaster & Co-Founder



The recent rise of budget priced recumbents has not been beneficial to those who, because of certain physical or balance concerns, might need a trike but simply can't afford one. Understandably, a quick look at the price tag of today's recumbent trikes is all it takes for some of us to dismiss them in favor of a balanced household budget. Fortunately, this problem might just go away thanks to the visionary direction of J&B's

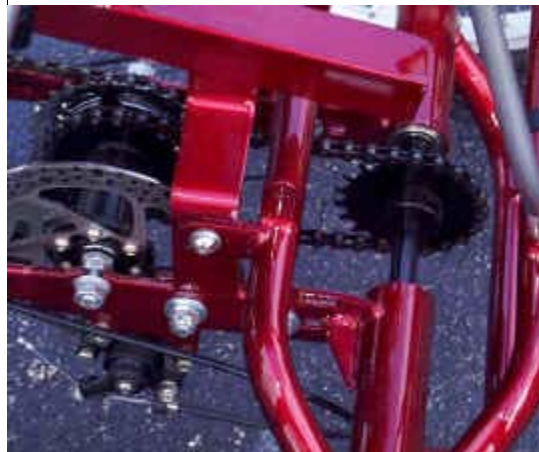
Bill Tannen and the unquestionable expertise of Gardner Martin from Easy Racers. They have recently released the EZ3, a down-to earth delta trike that's aimed at balancing your body and budget at the same time.

Sun Bicycles, in association with Easy Racers, is rapidly becoming a force to be reckoned with in the recumbent world. In a relatively short period of time, this company has managed to release the EZ1, the EZ1 Lite, and the EZ Sport. The release of their EZ Sport LTD aluminum-framed model is right around the corner. Though a number of other companies have also begun to offer their entry-level models at very competitive prices, no other company has come up with more models in a shorter period of time.

The EZ3's roots are deeply embedded in its EZ1 ancestor. At first glance, the EZ3 looks almost exactly like the EZ1 except that, obviously, it has an extra rear wheel. You realize immediately that the EZ3's seat and handlebars are identical to the EZ1 and notice that the EZ3 has inherited the same geometry or ergonomic qualities of the EZ1. The EZ1 and EZ3 have the



same wheelbase (56.5 inches), the same overall length (73 inches) and many of the same components. In fact, a side-by-side comparison will reveal an 80% match in specs. Although the trike's TIG welded steel frame is beefier than the EZ3's, it is ostensibly modeled after its two-wheel predecessor.



height is 22.5 inches, which is 2.5 inches lower than the EZ1, a minor detail aimed at lowering the trike's center of gravity and enhancing its stability. These two measurements also make the trike small and low enough to fit into a minivan.

The designers needed a cost effective and reliable way to connect the frame to its rear axle. Welding the axle to the frame is, of course, an option favored by

most builders but the shipping costs and inconvenience associated with such a solution would result in a higher price tag and negate Bill Tannen's vision of an affordable trike. As a result, this option was ruled out in favor of a "UPS-friendly", bolt-on rear axle. Bill quickly found out that their "solution" was not without its challenges, as the prototypes were a bit wobbly and felt somewhat unstable. As you might expect, BentRider Online was quick to identify these shortcomings when we checked out their pre-production version.

Sun Bicycles responded to this challenge with a production model that firmly braces an oversize and more rigid frame to its rear axle via six strategically placed massive bolts and "Nylock" nuts. A "Nylock" nut is one that has a nylon insert that the bolt thread cuts into and is reputed to be virtually immune to road vibrations. According to Bill Tannen and his "*Nylock Theory*": "the axle/frame assembly should not loosen up under normal conditions"

TRIKE ABUSE 101

*Warning: What I'm about to report is ONLY a test. BentRider Online cannot be responsible for any broken necks, backs or crushed skulls, which may result from going over a cliff while riding a trike like a mountain bike. **Please DO NOT try this at home!!***

Let me start this section by letting you in on a little secret: I happen to be a skeptical SOB. I do not believe **ANYTHING** until I see it, touch it, and confirm it through collective consensus or semi-scientific observation. In fact, my reputed inability to tighten a bolt is only surpassed by my lack of faith. Because of this "malady", the "Nylock Nut" theory sounded a little "nutty" to me. Heck, as far I was concerned the Nylock Theory had as much merit as the "Geocentric Theory". Hence, the pseudo scientist in me simply had to test it under a "controlled environment". I needed to see if road vibrations could shake the bolt-on axle and frame assembly loose so I was compelled to test the trike under pretty severe conditions. The goal was simply to mimic a lifetime of vibrations during a handful of test rides.

I chose Markham Park's mountain bike trail as the ideal place for this test. There I could ride over rocks, gravel, small potholes, and loose sand, shaking the hell out of the trike in the process. Though I don't think the EZ3 was intended for such treatment, I must admit that I was having so much fun; I forgot the trike wasn't ours to destroy.

Fortunately, the trike took my punishment with dignity. Not even a squeak! The trike's seat protected me from the shock in an admirable manner and I was thrilled to discover a new sport: "**Mountain Trike Riding!!**" Though I observed some flexibility of the axle, and the frame did exhibit a bit of lateral motion under these very extreme conditions, a posttest inspection of the bolt-on axle and frame assembly showed them as tight as if they had been welded. Yep, the Nylock nuts do work and a bolt-on axle is indeed an acceptable alternative to welding. Let the record show that the EZ3 trike was still in one piece after my test rides, and, in fact, showed NO signs of wear and tear. Based on this unorthodox test, I think this trike will prove to be durable and reliable.

ROAD MANNERS

We obviously rode this trike on the road before our failed attempt to destroy it. I'm happy to report that under normal conditions, the production model behaves

pretty nicely and in fact, felt considerably more solid and stable than its prototype. The additional bracing and the thicker frame does make a difference and does enhance the stability of this trike. The frame still exhibits a bit of lateral motion, especially if you wrestle the handlebars from side to side, but this is not really inconsistent with that of other delta trikes. It is also important to keep in mind that delta trikes in general tend to feel a bit “tippy” during a tight turn. The EZ3 is no exception. While making a fast tight turn, my body felt the expected centrifugal pull and yes, sudden directional changes at speeds greater than 12 MPH did cause one of the rear wheels to lift up for a brief moment. However, I never felt I would lose control of the trike as the weight of the axle, combined with a sudden decrease in speed, forced the “flying” wheel back to earth in a hurry.

The point is that the trike’s handling is quite nice and controllable provided you keep the limitations of its design in mind and adjust your cornering speed appropriately. I do believe that EZ3 riders in general are probably not going to be interested in performing or emulating my stupid stunts during a routine beer run to the corner grocery store. However, if you plan to use this trike to replenish your beer supply, do be sure to ingest the beer AFTER your ride - otherwise you might want to go mountain triking.

Bryan’s note – Despite our frequent references to “beer runs”, the staff of BentRider Online magazine assures our readers that we do use our bikes and trikes for more than obtaining alcohol. However, if the Bass Ale corporation or the Guinness brewery were interested in buying ads on this site, we would gladly accept payment in “liquid assets.”

As mentioned previously, the trike’s geometry is similar to the EZ1 or Tour Easy products and so is its comfort. The seat is quite supportive, comfortable and highly adjustable. Just snap open a couple of quick release levers and the trike can be made to fit a child or a six-footer in seconds. The trike’s rear axle/frame provides two eyelets that can be used as an additional location for attaching the seat, of value to shorter riders. Also, longer seat struts can be ordered from the manufacturer if necessary for an unusually short rider.

Although the EZ3 was not designed to be a so-called “performance” human powered vehicle, we also noticed that the trike does roll and accelerate quite well. I doubt that EZ3 owners would be concerned with performance, but I don’t think you’ll have to be in top shape to maintain a respectable 10-12 MPH cruising speed. I had no trouble reaching and maintaining 15 MPH on this trike. In fact, while testing the EZ3 prototype, I managed to keep up with the intermediate riders in our group by riding 35 miles at 16 MPH. The only logical explanation for this surprising performance has got to be the genius of Gardner, its designer.

COMPONENT TRIVIA, ETC.

As previously mentioned, the EZ3 uses many of the same components offered as standard equipment on the original EZ1. For a detailed list, visit <http://EasyRacers.com> or <http://sunbicycles.com>. Some of us might think the component list is rather “vulgar”. However, don’t let the lack of Shimano Dura Ace components in the spec list distress you. This should be expected of a recumbent with a \$725 sticker price. The chosen components are indeed qualified to do their assigned chores. In fact, the use of a single Promax mechanical disc brake on the rear drive wheel is a nice touch (Bryan’s note – The EZ3’s rear drive is very similar to the Haluzak Triumph if any of you are familiar with that). Though only one rear wheel has braking capability, the additional Promax Linear Pull brakes on the front wheel will ensure more than

adequate stopping power. A couple of other nice touches are the front wheel's quick release lever and a brake lock. Your parked and locked trike will not roll away while you pick up a gallon of milk (ok, make that a six-pack) from Publix! One more thing worth mentioning is that the selection of Kenda Kontact tires is, in my mind, a good choice as these relatively unknown tires turned out to be reliable (no flats) and appear to roll very nicely.

The drive train is fairly quiet though our test sample did have a noisy headset. Fortunately, our friends at Atlantic Bicycle immediately diagnosed the origin of this noise as a benign need for cleaning and adjustment (probably a byproduct of off-roading). Additionally, I should mention that the drive train is going to be even quieter once skate-type chain guides are employed.

The EZ3 is available in red or blue and offers a pretty good list of available accessories including fenders, racks, longer seat struts, a seat bag and a rear basket.

The trike does tip the scales at more than 50 lbs and is therefore NOT a lightweight. However, this heft is likely to result in a durable and sturdy product. Fifty-plus pounds might be an issue if you live in a hilly area or need to lift the trike on a frequent basis but once you're rolling, you forget the EZ3 is supposed to be heavy.

All things considered, I do think the trike is a good value for anyone interested in riding for recreation, fitness, or commuting. More importantly, the EZ3 represents an excellent attempt to include more folks into our recumbent world that is, as far as I'm concerned, a very good thing indeed.

Sun Bicycles EZ3

Highs: Comfortable, Affordable, Durable

Lows: Heavy, a bit "tippy"

MSRP: \$725

More Info – www.sunbicycles.com, www.easyracers.com