INTO THE RIDE #73

Trizard: Up Close and Personal

by Randy Schlitter

Disclaimer

How many times in the past has what I said here been dragged out (again and again) to only show I changed my mind (usually due to a new development) and had to eat my words? So for this article I will try to refrain from throwing out any trike expertise. From what I have sampled of both tadpole and delta trikes, they are all very good arguments for bent trikes. The delta configuration attracted us for a number of reasons, one being our past experience with Sailtrikes. Another is there are less offerings of deltas; the tadpoles seem to have captured the majority of the market. Instead of thinking the tadpoles are the ultimate and final design solution, it just says to me, deltas need more development. Since in our past we have made hundreds of sail- and pedal-powered delta trikes, maybe some of that past experience could be put to use. Now if that experience entitles us to a bigger mug at the coffee shop, you be the judge. In the meantime please keep an open mind, as we attempt to learn, and maybe re-open a chapter of our history.

Be Seated

At 9” seat height the Trizard qualifies as one of the lowest production delta trikes. Low seat height was part of the design wish list for several reasons: stability, aerodynamics, and appearance. We wanted a delta that looks fast. Hopefully the looks will convey the performance. Entering the Trizard is just like sitting down in a tadpole: stand over the main tube, grab the handlebars, and then make a semi controlled “landing” into the seat. Once seated you are ready to enjoy the jazz factor of this low-seated delta.

Production Version

In our testing we average 15 to 17 MPH cruise speeds; that was in mild hills and low-to-no winds. Experienced trike riders and dealers who have sampled the trike came away with good and bad things to say, and we listened. The production trike reflects this feedback:

1. Seat sway: The two samples at Interbike had a single point of attach for the sprint brace. It moved when you cornered. I thought it was neat, since you could lean into the turns, and the seat came with

you...not! Now the unit has 2 blade type, and really short sprint braces making the seat solid in the turns.

2.New dropouts were also designed to work with the sprint braces; they have several holes horizontally, and have vertical dropouts for the hub, making it easy to take the hub in and out.

Vertical dropouts, and new sprint brace design are some of the changes on the production unit.

3. Wheel release feature: These photos do not show the new hubs, but they are super neato, the disc bolts are extra long and plug into the wheel adaptor, a flip of a QR and a few turns later the whole wheel comes off, leaving the disc on the axle.

4. Adjusting for X-seam: The seat rail allows a small amount of travel fore and aft, about 2 inches; the rest of the adjustment comes from sliding the front end. The range is 8” total for an X-seam range of 34 to 49.

5. Handlebars on bottom, idler on top: We flipped this around to gain a straighter chain line, and overall smoother operation. We also think it will help protect the rear derailleur, since the handlebar pivot is tough enough to take a hit.

6. No homemade wheel hubs: We liked the wheel hubs we cooked up for one of the prototypes; they were 5” wide and made to take very high side loads. But in our testing there was no indication the wheels for a non-sail powered trike needed such strength. In the interest of keeping cost down, we opted for wheels using modified hubs and the custom adaptor as described in #3.

With the handlebar on the bottom the chain line is less deflected.

Modular Design

The Trizard is made of three major components: the rear axle, steering/idler mount, and front end. The placement of the rear end and idler are predetermined. You can easily move the front back 6” (quick links are provided for this move). A side benefit is the trike can be knocked down for travel; no need for expensive S&S couplings! At four feet the boom tube is the longest part to stow.

Being modular also has an advantage when it comes to updates. For example: if some performance-improving idea comes along, and it replaces one of the three major parts, it only affects one component. Example: aluminum or Ti axle assembly or front end, or a carbon boom.

With the front end back 6" the boom will extend ahead.

Hitch It Up

One thing deltas can do is couple together, and the Trizard is no exception. It comes with the hitch receiver standard, with the actual hitch an option. The receiver could be used to hook on a trailer, although at this time we have no hardware to couple any trailers.

Panniers, Fenders, and Other Options (Enclosures)

We have been playing with adaptor racks to allow the use of existing panniers, with so far nothing to show. It may turn out that custom bags will be the best option, or trailers for those needing lots of cargo space.

Fenders have been attached, and there will be an option for this. The test set uses a system of 5 solid stainless steel wires. It is pretty simple and should be easy to setup and adjust and maintain. Another thought is to attach fenders to whatever rack we come up with for panniers.

Disc brakes and fenders mount to integral custom tabs on the ends of the axles.

I keep imagining about three Trizards in full fairings, but the two following units have fairings that couple with the front, allowing the whole string to be a low-drag unit. The sight would be something, two to three bubble canopies sticking out of a long yellow centipede. It would be fun to play with this concept. I know of a couple of dealers planning to make single fairings, and maybe we can find a way to make a factory verison. That is really long range since just building the “Triz” is keeping us hopping.

We are seeing good response to the Trizard. The first shipments should be hitting the shops late this month or mid-Feb. The plan is to continue trike development; we have a whole book of ideas! The Trizard is a strange mix of new and old, and already the weld shop has put together an extra wide rear axle (wonder what that is for?). This project has been very enjoyable, since in a way we are taking poetic license with designing, producing, and presenting the product. It definitely has that flavor of adventure I felt starting RANS, and there had been an explosion of ideas from my staff on where this product could go. Adventure is what we are in for, right? And adventure is what a low-slung delta will no doubt deliver. Check one out at your LBS soon. Until next month ride safe, and stay into the ride.

Into the Ride