

INTO THE RIDE #51

Sailing Trikes and the Trizard Project

by Randy Schlitter



A low flying trike could provide real speed, not only the illusion.

It was good to see Greenspeed's latest entry into the trike market, a delta! Ian Sims and I had a nice talk at InterBike, as we both shared some of our exploits into three wheelers, all which (for us) have been delta designs. His new brainchild reflected him well, being a very straightforward man. The trike was an elegant solution to a sometimes complicated problem. Kudos to Ian Sims and his crew at Greenspeed for what I feel will be a winning entry into the world of recumbent trikes.

That brings us to tipping our hand a bit about a 2003 project called the Trizard. The name is one of those silly things that pop out when you're having fun inventing things. "Tri" for trike and "zard" for... well for lizard. We observed that our little delta machine had its belly so low to the ground, like a lizard, that the name fit (nothing is final about a project name, and often such titles do not make it through the final cut).

As some may recall RANS actually built its original claim to fame making bent trikes, only we had the insanity to attach a 30-square-foot sail and blast down the highway. After making several hundred, and still not showing much of a profit, the fun started to wind down, and the dream of making General Motors move over faded. What did not fade was the fun and magic of those machines, and even today when the wind is howling, which it often does around these parts, the itch to sail a sandy country road comes back.

Now as we fast forward to a better world of manufacturing and design expertise, one begins to think things like, how good of a Sailtrike could we build today? The Trizard was created to test some ideas that could branch into either a wholehearted run at the trike market, or a new millennium attempt at Sailtrike insanity (yeah, right after tort reform!).

The machine itself features a modular design, where components could actually be slid into place on the main tube. This was done to maximize the prototypes experiment potential. Different wheelbases, tube wall, and materials (ti, carbon, aluminum) could be tried.

We tried aluminum; it was light and springy, and then steel, for a more solid feel.

A big debate about needing a differential was lost to the obvious weight and cost issues, and in practice was not missed. In fact deciding which wheel got the drive force was more important. The prototype drives the left wheel, but if produced the right will be driven. We were thinking the last thing you needed in a left turn against oncoming traffic was a loss of traction. Traction improves on the outside wheel in a turn, and provides an extra moment against the loads.

Design flaws abound in the Trizard, and the more we tested the more we got used to them. That is a byproduct of having too much fun with a new toy; you tend to make excuses for the lack of elegance. But design flaws are good in the respects of teaching you what does not work, and what to avoid. Besides, the darn thing was not without merit, and maybe to venture forth into trikedom, provided the design goals are met, might happen. However the exact design goals will need to be updated if the project is reopened, but in general terms we are wanting to provide a simple, cost-effective, semi-high performance delta trike. Why the project never reached production was partly logistics, and partly fear of open road triking. Without a 13-foot mast and 30-square-foot sail to thoroughly grab the attention of motorist, bike trails are a better option.

Hope you enjoyed this rare tipping of our hand about a back room project. Please be clear we are not about to release this product, nor do we have a secret warehouse full of Trizards ready to ship! We are simply shedding a little light on how products may or may not sometimes come to be... Until next month, ride safe, and stay into the ride!

Some interesting details about the Trizard:

1. Custom-made rear wheel hubs, actually molecular bonded, sounds high tech, but anyone with a freezer, hot air gun and a press can do it. The hubs were made extra wide; I guess we have sailing in mind? Wider hubs would also last longer in terms of wheel trueness, due to the diminished loads. We are talking hubs about 5" wide.
2. Sliding components allow the frame to shrink or expanded; this could work well to customize a size. All that would be needed is a tube cutter or hack saw.
3. Free elbow skinning provided by being too close to the rear wheels; you learn about this when "banking" really hard.
4. Vertical storage, just lift the front wheel.
5. Expandable into trains, like the Hase.
6. Off-the-shelf drive components, which could keep prices down.
7. Small shipping package, due to sliding components.
8. Not as hard to ingress and egress as we thought, being so low!
9. Chain management is still iffy.
10. No brake-steer, or need for a front wheel brake. In fact that could be dangerous, inducing a skid and loss of traction.



Seat height is only 7"



Vertical storage is standard



A very stable platform, with the wheelbase of the Tailwind.

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