

INTO THE RIDE #8

Stratus, How a Classic Was Born by Randy Schlitter

This is the year the Stratus turns 26 years old. What is it about a product that can endure 26 years and still resemble the original first year production? I would have to say it is because the problem was solved correctly. The problem being how to build a lightweight long wheelbase recumbent, at the time short wheelbase was not enjoying any good favor, this was the time of the Hyper-cycle. For a long wheelbase recumbent the Stratus is the industry flagship. It is what a long wheelbase recumbent is expected to look and function like. I am sure some will cry foul here and point out the virtues of other brands, but I can point to those early risings as more or less re-hashed diamond frames, not a from the ground up design like the Stratus. Here the Stratus was alone.

By 1982 RANS was up and running. The Sailtrikes had been in production since 1974, and RANS went from a one-man shop to a growing concern with several full time employees. The Sailtrikes were our bread and butter, but the cyclist in me longed for something more pure. The bicycle was my main mode of transport then. In fact until 1976, I had never owned an automobile. So riding a lot was the norm. Being only 25 at the time, I was quite amazed at the numbness in my hands, and just a hint of pain coming from the rear and neck. The Sailtrikes, I noted, even after hours on the road, left us tired but not sore or numb.

Always looking for new cool things to build, in a matter of hours the notion to take a Windhawk frame, one of the more popular Sailtrikes, and cut here, tuck there to accommodate a single rear wheel, turned into our very first recumbent two-wheeler. The local roadies immediately regarded that crude, but effective attempt as a rolling joke. Having no road bike flavoring for them to identify with, I immediately began revising the design.

As I poured over my homemade drafting table, a triangulated round tube frame, which simply dripped with elegance and pleasing form emerged. It felt more like discovery than invention, obviously this same solution for a recumbent bike frame would occur to most any designer. My naive nature was and is still amusing since the Stratus has yet to be cloned.

It was a good combination of tradition and fresh new territory. That warm fuzzy feeling that we were on to something grew. My imagination raced ahead to the thought of selling thousands. Of course the timetable for this was a little off! Who could ever account for the steadfast traditionalism that would constantly thwart our crusade.

After a mere seven different prototype frames, an effort to nail the geometry, we had a frame we felt worthy of production. Those first bikes were built from the ground up. I was determined to make the Stratus look the part of a purpose built product. This meant we had to create frame and seat parts from scratch. There was no catalog with the right drop out, Bottom brackets, forks, or anything in the way to help the recumbent frame builder much.

This is why early Stratus bikes had some seemingly out of the ordinary ideas. The 20" Ashtabula forks that served well for the Sailtrike were to prove too heavy for the Stratus. The search for a nice road style fork in 20" resulted in no bounty. We resorted to making them. Finger shifters mounted to a stub directly in front of the seat seemed natural and un-alarming at the time, plus the cable routes were short, so shifting was quick.

Bottom brackets, simple straight gauge bottom brackets, were also hard to come up with. Before we began tapping our own from stock tube, we made a press in bearing type using some really nice sealed bearings. Thank Philwood for these.

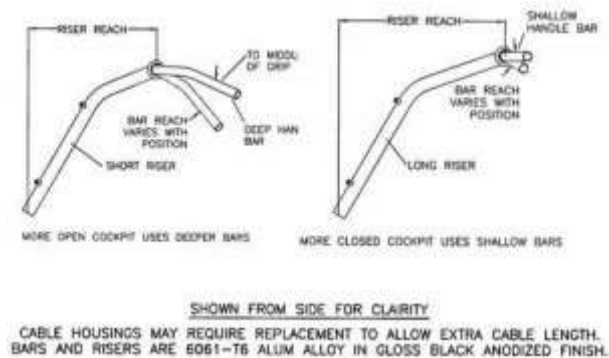
The seat always was and always will be the make or break of such a bike. After our brief and embarrassing use of a plastic kitchen chair, the nifty little fiberglass seat was used up until the mesh seat appeared.

The bars have varied but the first bikes used a closed loop, with an optional clever fabric fairing that actually worked well to reduce drag. In this form the Stratus was taking poetic license in enough areas to avoid comparison. This came in handy when trying to explain a new art form we ourselves were still learning.

The marketing of the bike proved far more of challenge than building. We got the orders, but the numbers were only dozens. We found bike shops the hardest place in the world to sell a bike. There was no easy road to riches making recumbents in 1982. But giving up was never on the menu, we loved what we did, and making a profit, although required, never seemed the prime motivator.

I remember sitting through one or more sales pitches from well meaning (and expensive) consultants, all of them claiming to know ways to increase profits. Imagine their look of disgust and amazement when I told them profit was the by-product of solving the problem, not the mission here. If you solve the problem well, you will be rewarded. To that extent the Stratus has been an outstanding success. It solved the problem well. It is the poster child recumbent. And the profits did happen, since the Stratus even 26 years later is still selling very well. In fact we predict a record production for the bike in 04. This is a far cry from the early days, but that warm fuzzy feeling about this bike and what it would do, has never gone away.

As for those local roadies, some are still insisting recumbents are a passing fade, but every now and then one of them succumbs to the pleasures of the low down road bike born a breed right here in their own back yard.



STRATUS FRAME nomenclature

A quick glance at the Status frame one sees something familiar. Even as a frame alone it looks like a bike. It is perhaps no accident this reaction occurs since the inspiration for the frame design was the everyday typical diamond frame.

The considerations that resulted in the frame geometry were quite simple. The seat had to stay in perfect geometry with the pedals, no matter bar position, and some limberness was desired. This required the larger 1.5" seat tube to angle down hill directly to the bottom bracket.

The chain and seat stays with the set tube form the rear triangle. The forward triangle of this laid-back diamond frame is formed by the down tube, top tube, and seat tube. The only new member was the addition of the tube to retain the front derailleur. There is the ff of the bottom bracket

What is interesting about this design was the choice to not make a pure triangle from the front tubes. The top tube shamelessly falls short on the seat tube. The result is some give to the frame. Yet the

power transfer is not compromised, since the large seat tube and rear triangle are plenty stiff.

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