

INTO THE RIDE #13

A NEW RANS SHORT WHEELBASE

By Randy Schlitter

In the last two installments the topics were racing, organizing a new group and finally the hardware. As you might have guessed the third article is adding another choice to that hardware.



The Force 5 is a new dual 650c wheeled short wheel based recumbent due out this March. The bike will be produced at our Hays Kansas plant, so the supply line will start out at a few per week, increasing, as demand requires. There will be two versions the Force 5 XP and the Force 5 LE. Each will feature the same frame in two sizes and colors, Silver Bronze as shown, and Rush Red. In either form you will find this bike light, fast, user friendly, great handling, and top quality. The goal was to create a dual 650c wheeled bike, similar to the Rocket, apart enough from the V-Rex that would be light, equipped with road bike components, and have cruising speeds at or above the V2 Formula.

Our new Zephyr Seat will be featured on the XP version and the stock RANS seat on the LE. The seat height at 23" to the top of the cushion at mid rail point on the XL version. The seat is 22.5" high on the standard size frame. The boom extends a pinch more forward and up to clear the front wheel with less overlap. Sizing of the frame is on par with our current standards, meaning a four-inch shorter wheelbase will be offered for the standard size model. Another advantage of US production is we can offer two sizes of the Force 5 without increased cost.

Comparing the Force 5 to other bikes like Volae and Bacchetta, the most striking difference is we have a trussed frame. I am not turned on by "stick" frames simply because they offer little advantage other than they are cheaper to produce. Such frames suffer from having no depth of structure. This means heavy thick wall tubes if they want to avoid future frame cracking problems.

Another property of the "stick frames" is they flex more which equals a loss in power transmission. Even the curved stays will flex some since a curved tube acts like a spring under load. The Force 5 has straight seat and chain stays, this makes for a light bike with good power transfer.

In the case of the Force 5 a lot of thought was put into each frame tube to get maximum performance with as little weight as possible. We sculpted more than half the tubes to accommodating shapes. The seat and chain stays are ovals for better load transfer and chain clearance. And perhaps what will become a signature aspect is the Y chain stay. It blends from a single tube that is also shaped from round to oval intersecting with the two oval chain stays that shoot straight back to the dropouts.

The drop outs happen to be our traditional design that work perfectly with the oval tube, and create just enough chain clearance at the cluster, again offering the most direct load path and least weight.



We chose a double idler system again for performance reasons. The single idler like used on the Bacchetta requires more chain (more weight), plus creates more friction and noise. The top idler is placed to deflect the drive chain from a straight line the least amount possible and still have clearance. Each idler is supported on a massive 8mm bolt and is free to slide side ways 15mm. This 8mm bolt mounts into the frame using bushings buried into the tubes, providing a very rigid mount.

Shown is our 47" wheel base version, with an X-seam of 39" to 49". This bike is a light 28.5 lbs. WITH the stock seat and 25.15 lbs. with our new Zephyr seat. The 43" wheelbase is actually my size and handles even sweeter and is lighter yet. The x-seam range on this bike is 35" to 45".

Dual pivot calipers provide front and rear braking. The frame is designed to handle many brands of dual pivot caliper but the Shimano 105's will be stock on the Force 5 XP version with a lower cost brake set on the LE. A special converter is used that allows the brake cable to enter from below the brake. The converter brings the cable up the center as per original design of the brake.

The handle-bars are the B-37 with a shorter riser sans the cable stops. There is no flip-it, nor do we feel it required. The bar placement seems to be well within reach of most riders. Fore and aft distance can be altered with other bars, tilt, or turning around the riser. There is plenty of up and down travel. The ideal setting is just above the knees, and with moderate seat tilt the bar is well below the sight line.

On my test rides of the Force 5, I was able to capture a long quested goal, the acceleration of a light road bike. I expected the bike to be less friendly in the mount and go department, but it was not as bad as expected. The solid feeling bars may have a lot to do with it. I notice I use them to help throw my feet to the pedals. So in a flash you can be up and running. At first the high BB is novel but after awhile it becomes no biggie and is a good trade for the steady handling the dual 650c wheels provide. Like a road bike it has very little need to steer. In fact I have pounded up and down hills, swooped through curves, never touching the bars. Dare say steering is optional! For fun I will take my hand and feet off and hold my arms high overhead, dangling my legs off the pedals, steering with "butt swings". Of course you need to understand this is only for testing purposes and don't try this at home! Also we are not quite sure just what we are testing with this move. Maybe the "spread eagle geek move?"

Speed was a big part of the goal on the Force 5, and it will prove it out once in the hands of a few good engines. From the slow roll to the top end this bike has a friendly nature. From our testing group none had much trouble jumping on and riding, even the very new to recumbents found the bike natural in the handling.

As one would suspect the road will come through a bit harsh on this bike, but it is of a quality I cannot place, similar to the suspension of a BMW, stiff, in control, but certainly acceptable. Some will want to opt out for the thicker cushion no doubt, which will insulate the road vibes, but it may pay to try the intended cushion since it does hug the ground equipped as such.

Production is underway and bikes should be hitting the stores mid Feb to middle March. It is made in USA, and priced to excite. With the frame being identical between the XP and LE, you could enjoy the essence of this fine bike at a very reasonable price and up-scale components, seat and such later. There are no short-comings in quality or specs (soon to appear on this site). The Force 5 will soon be a new force to reckon with in the line up of new breed of racing recumbents. Now if we can just get some force behind staging these races!





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